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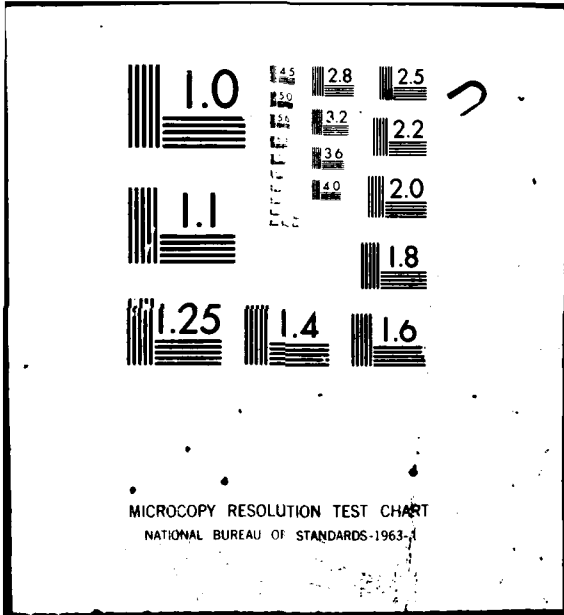
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**THESIS**

MILITARY ORGANIZATION IN TRANSITION  
FROM GARRISON TO CRISIS ENVIRONMENT

by

Shmuel Ben-Rom

December 1979

Thesis Advisor: Richard A. McGonigal

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The amount and the magnitude of changes the military organization suffers when facing crisis might indicate that only a few of the phenomena are addressed in advance through training and by appropriate regulations.

An in-depth analysis is made of the changes through which these factors of the military organization undergo while transitioning from garrison to combat environment.

A questionnaire was administered to two groups of commanding officers in the American and the Israeli military organization. The samples were selected from population of officers with combat experience while in command.

Based on the survey, and the author's own experience as a squadron commander in the 1973 war, this paper is looking at the changes and the shift in priorities the military organization faces when crisis occurs. Recommendation for further research and some practical steps to be taken are proposed.

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Military Organization in Transition  
From Garrison to Crisis Environment

by

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Submitted in partial fulfillment of the  
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the  
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## ABSTRACT

The military organization is crisis-oriented since the ultimate goal of such an organization is to win the war. Yet our past experience with the military organizations show that they change a lot in their behavior and characteristics when the transition from garrison to combat occurs.

Few studies have been made on the behavior of complex civilian organizations when facing a crisis. Some of the phenomena they observe are applicable to the military organization as well.

The amount and the magnitude of changes the military organization suffers when facing crisis might indicate that only a few of the phenomena are addressed in advance through training and by appropriate regulations.

An in-depth analysis is made of the changes through which these factors of the military organization undergo while transitioning from garrison to combat environment.

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TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION-----	10
A. OVERVIEW OF SUBJECT-----	10
B. CRISIS IN ORGANIZATIONS-----	11
C. LEADERSHIP IN CRISIS SITUATIONS-----	13
D. SUMMARY-----	15
II. A REVIEW OF GARRISON TO CRISIS TRANSITION-----	16
A. IMPACT UPON INDIVIDUALS DURING THE TRANSITION TO COMBAT-----	17
B. INSIGHTS FROM CIVIL TRANSITIONS-----	18
C. IMPLICATIONS OF NEW TECHNOLOGIES UPON ORGANIZATIONS-----	20
III. THE MILITARY ORGANIZATION IN CRISIS-----	22
A. THE GOALS-----	24
B. THE TECHNOLOGY-----	26
C. THE PEOPLE-----	28
1. Time Shortage-----	30
2. Anticipation for Direction-----	30
3. Need to Complete Previous Assignments-----	31
4. Uncertainty-----	31
5. Urgency-----	32
6. Loss of Identity or Autonomy-----	33
7. Changes in Personal Priorities-----	33
8. Change in Direction of Feedback-----	34

9.	Changes in the Pattern of Personal Skills-----	34
a.	Technical and Tactical Skills-----	34
b.	Managerial and Human Skills-----	35
c.	Conceptual and Strategic Skills-----	35
D.	THE STRUCTURE-----	36
1.	Centralization of Activities-----	38
2.	Overload of Communication-----	39
IV.	METHODOLOGY AND RESULTS OF THE TRANSITION STUDY-----	41
A.	PROCEDURE-----	41
B.	RESULTS-----	43
C.	ANALYSIS-----	44
V.	CONCLUSIONS AND RECOMMENDATIONS-----	49
A.	FURTHER RESEARCH-----	52
B.	EVALUATION AND PROMOTION-----	53
C.	GROUP BEHAVIOR-----	54
D.	ORGANIZATIONAL ASSISTANTS-----	56
	APPENDIX A: THE ENGLISH VERSION OF THE QUESTIONNAIRE-----	59
	APPENDIX B: THE HEBREW VERSION OF THE QUESTIONNAIRE-----	65
	BIBLIOGRAPHY-----	75
	INITIAL DISTRIBUTION LIST-----	78

LIST OF TABLES

	<u>PAGE</u>
TABLE 1. The Impact the Crisis has on the Organization---	11
TABLE 2. The Impact the Event has on the Military Organization-----	12
TABLE 3. Israeli Officers: Level of Importance I. In Garrison II. In Combat-----	43
TABLE 4. Listing of Priorities of Commanders in Garrison and Combat-----	44
TABLE 5. Level of Significance in Differences in Garrison and Combat-----	45
TABLE 6. Pooled Z Scores for Garrison and Combat Observa- tions in Categories of Technology, Management and Strategy-----	46
TABLE 7. Recommended Activities of the Consultant at Different Levels of Command and Changing Environments-----	58

LIST OF FIGURES

	<u>PAGE</u>
FIGURE 1. Leavitt's Model of Organization-----	23
FIGURE 2. Garrison and Crisis Modification-----	24
FIGURE 3. Level of Anticiapation of Senior and Junior Officers-----	31
FIGURE 4. The Shift of Skill Emphases from Garrison to Combat-----	35
FIGURE 5. Task - Structure Relationship-----	37
FIGURE 6. Relationship to Group Size to Communication Channels-----	39
FIGURE 7. American Shifts from Garrison to Combat-----	47
FIGURE 8. Israeli Shifts from Garrison to Combat-----	48

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## I. INTRODUCTION

### A. OVERVIEW OF SUBJECT

One possible definition of the history of mankind is the record of mankind's social reactions to crises. It seems that man from earliest times found himself too weak to face threats and difficulties by himself and that his ability to survive was based on his skill at organization and unification of efforts.

Organizations were formed to meet particular goals of the group. The main thrust of rules, customs, obligations and rights for the members of these organizations was centered upon goal achievement.

Obviously, there are as many kinds of organizations as there are goals. Each organization has a unique set of assumptions about its environment and the society with which it is associated. The accuracy of these assumptions appears crucial to the organization's ability to survive over a long period of time. History is replete with examples of how difficult it is to predict the phenomenon of the environment in the present (to say nothing of the future). Experience shows us, however, that organizational flexibility increases the probability of successful response to changes and to crises.

Whenever a change in the environment occurs and it turns out to be of a magnitude beyond that which was predicted there is for the organization what will here be called a

crisis. The organization's ability to adjust to the new environmental changes and still accomplish its goals is central to its evolution or extinction.

**B. CRISES IN ORGANIZATIONS**

A crisis situation is created by the sudden introjection of one or more additional commitments into an organization whose life and schedule is already full. The effect of the introjection is to create interference with the activities of the organization and its ability to achieve its goals.

The following model is suggested to illustrate different types of crises which organizations might face and the levels of response necessary to meet these crises.

TABLE 1

		The Impact the Crisis Has on the Organization		
		None	Moderate	Drastic
Levels of skills, equipments, resources needed to overcome difficulties and to accomplish goals.	Little	Wastebasket fire.  Common cold.	Tornado wrecks some small houses.	Tornado wrecks entire residential community.
	Considerable	Building on fire.  Pneumonia case.	Tornado wrecks several multi-story buildings.	Earthquake wrecks entire central city area.
	Very high or beyond present ability	Deep mine fire.  Cancer case.	Dam burst in narrow valley.	Hurricane floods entire area.

TABLE 2

The Impact the Event has on the Military Unit

	None	Moderate	Drastic
Little	Mistakes in routine exercise.	Airplane accident with troops.	Terrorist attack on civilian objective.
Considerable	Accomplishment of training quotas.	Major Discipline problem, e.g., major drug abuse.	War of attrition.
Very high or beyond present ability	High attrition rate	Very high rate of casualties in training.	All out unexpected war.

Level of skills & equipment required to deal with the problem.

This model suggests that in any crisis and at any level of the organization there is a need for different degrees of expertise and resources both in quality and quantity.

Studies of organizations under crisis conditions which look at the ability of these organizations to adapt to the new demands in such a way as to still accomplish their goals divide these organizations into four categories:

1. Established organizations which are doing their original and scheduled work during the crisis, e.g., military or police departments.

2. Established organizations that are doing work for which they were not trained or contracted, e.g., military troops fighting fires or building flood dikes.

3. Emergent organizations that are expanded for the crisis to do scheduled work, e.g., the Red Cross.

4. Emergent organizations that provide nonscheduled work for which they were not trained, e.g., task forces of civilians drawn together to study such natural disasters as earthquakes, mine-fires, etc.

When an organization is well prepared for a crisis there is no need for the second and fourth categories. However, the great numbers of type two and type four organizations in emergency situations suggests that organizations are not often prepared to meet these crises adequately. It is felt that prioritization of goals is especially troublesome to leaders in these groups.

#### C. LEADERSHIP IN CRISIS SITUATIONS

The most difficult and at the same time most important factor in an organization's reaction to a crisis is its selection of its leader. Organizations which are formed to operate in low turbulence environments may find the selection process easier and more predictable. In organizations designed to react to crises (e.g., military, police or fire departments) it is more difficult to predict leadership potential.

Every day activities in peacetime or nonthreatening hours are probably not very useful to predict leadership skills when the organization is in the midst of its crisis.

It will be shown that there is no lack of studies and scales designed to analyze the traits and personalities of great leaders in the past and to suggest ways of identifying people with these traits from a future population.

Study of the history of the Jewish people, for example, suggests two types of leaders:

1. The Prophetic Leader. This leader looks to the future, sets goals to be achieved in that future state, sets uncompromising milestones for those goals and makes great demands of his or her followers. Weber would call this our charismatic leader, observed in many moments in many nations.

2. The Priestly Leader. Wrapped up in the daily dealings with here-and-now problems, this leader emerges to meet the steady demand of a particular organization. Often this leader has greater management ability than the prophetic leader. He will usually possess more interpersonal skills. Hopefully, the two types of leaders will act in consonance, i.e., the priestly will attempt to implement what the prophetic will relinquish to the priestly (that which he could not institutionalize).

The existence of either type of leadership in the organization without the other tends to result in a gap in the organizational structure between future and present needs. Prophetic leaders tend to emphasize future needs and goals and to structure the organization to meet those goals without concerning or compromising with present needs. Priestly leaders tend to solve the problems in the present situation

even if it leads to a large deviation from the planned structure of the organization.

History has seemed to laud the prophetic and to ignore the contributions of the priestly. Without limiting the importance of the goals set by the prophetic leaders much more attention is required toward the ability or inability of priestly leaders to keep the organization directed toward goals accomplishment. Crises are all too good measures of their handiwork.

#### D. SUMMARY

The purpose of this thesis is to look at one type of organization--the military--and to analyze what happens to its organization and its leadership when moving from the priestly to the prophetic, i.e., from garrison to a combat environment. Effort will be made to illustrate the factors that effect this transition.

Attempts will be made to summarize the experience of officers who were made commanders of operational units that took part in combat activities and in garrison life and to observe what happened to their organizations.

No illusion of infallible predictions of the future is imputed. Nor is this to be a model which commanders can use to work their magic in future crises. It is, hopefully, an attempt to begin scholarly dialog upon the subject of the transition from garrison to combat and how younger officers without combat experience might be developed to face this crisis with maximum effectiveness.

## II. A REVIEW OF GARRISON TO CRISIS TRANSITIONS

The purpose of this chapter is to cite some of the theory behind leadership transitions along with military and civilian examples of how organizations adapt to crises. Unfortunately, no single source addressed complex military organizations in this transition period with a focus upon how leaders shifted their priorities. Some attempt is made to look at parts of the process and to infer their application to the military example.

The author looked first to readings in military history to see if one could detect shifts in values and attitudes of military leaders as they moved from garrison to combat environments. Attention was given to the personal experiences of commanders and to the organizational changes within their forces.

The writings of S. L. A. Marshall [12; 13; 14] and of John Keegan [15] revealed examples of how individual leaders modified their personal involvement in ways beyond their tactics and operational strategies. They dealt with fear, feelings, anticipations and frustrations in rapidly changing environments.

Moshe Dayan [1], one of the greatest military leaders in modern times, represents a creative and innovative contribution to this subject. In his book, The Story of My Life, he describes his personal feelings at different levels of command in a series of crises, as a brigade commander in 1948, Chief of Staff in 1957 and as Secretary of Defense in 1967 and in

1973 he illustrates some of the changes a leader experiences in combat along with a maturing process.

The author hoped that a review of the speeches of high ranking officers at different times (i.e., in garrison and during hostilities) might also reveal a shift in values or hierarchies of priorities. The author reviewed Vital Speeches, The Marine Corps Gazette and All Hands for statements by chiefs of services. Surprisingly, no significant difference in their goal statements can be seen between peacetime and wartime.

The author reviewed the literature available concerning Britain's Royal Air Force [16] before and during World War II along with the history of the Quartermaster Corps before and during Pearl Harbor. Again, no significant differences could be ascertained.

#### A. IMPACT UPON INDIVIDUALS DURING THE TRANSITION TO COMBAT

Perhaps the most well documented area associated with emergency transitions is that pertaining to reactions of individuals. It is, of course, easier and cheaper to interview and to study individuals than to observe and to speak for an entire expeditionary force. Biographies and autobiographies also provide rich feedback that includes much of the emotional color of the transition period.

A study of three biographies revealed considerable personal adjustment in the transition from garrison to combat. Ambrose [18] and Donovan [19] described the changes in leadership and decision-making style of General Dwight D. Eisenhower during

World War II. Reginald Thompson followed similar changes in the thinking of Montgomery of Alamein [20]--not only in strategy and tactics but also in his human feelings and considerations. These descriptions are not unlike those recorded by Moshe Dayan in his autobiography [1] during transition periods. However, these accounts, while descriptive, resist qualification.

Military sociologists Charles Moskos [21] and Morris Janowitz [22; 23] described the ways in which individuals and military organizations reacted to changes from stable to turbulent environments. While these accounts are also descriptive they focus more on changes in values and priorities than on the particulars of differing leadership actions.

The "Yom Kippur War" and the hostile activities along the Syrian and Egyptian borders that followed that war (1973) saw Israel employ specialists to observe the stress upon individuals and military units in the transition from peace to war. Greenbaum, Rojovsky and Shalit [24] and Bahad and Solomon [25] reported increased stress to staff and unit commanders. They also suggested ways to make the transition less troublesome in the future. Again, however, quantification was not attempted.

#### B. INSIGHTS FROM CIVIL TRANSITIONS

Some important thoughts are to be in the civilian sector. The Symposium of Emergency Operations [26; 27] held in Santa Monica, California in 1966 and 1967 reported several of these studies. In the introduction to the second symposium it was

stated,

"Disasters, accidents and crises may strike anytime. Internationally, in 1966, major famine, floods, earthquakes and epidemics victimized an estimated 20 million people, of whom nearly 70,000 met an untimely death...These circumstances call for unexpected allocation of resources and manpower to cope with circumstances not present in day to day life...It is hoped that through advanced planning something can be done to make these situations manageable."

Allen H. Barton reported many of the effects of stress upon organization [28]. Enrico L. Quarantelli and Russel R. Dynes reported on how crises operations might parallel military operations.

Still other studies focused upon the different skills which managers must employ when their companies face crises. Robert Katz [30] suggested a better way to select manager.

"This approach is based not on what good executives are (i.e., their innate traits and characteristics) but rather on what they do...The principle criterion of skillfulness must be effective action under varying conditions."

Several comparisons were also made in studying how traditional, hierarchical organizations (like the military) differ in their reaction to stress from matrix and nontraditional organizations.

Of great concern to Max Weber [31; 32] was the role of the charismatic leader in crises environments. His studies of charismatic and situational leadership are classic. Charles Perrow [33] looked at differences in structure and the organization's ability to react effectively to stress.

Beckhard and Harris [33] suggest new ways to look at complex, large system changes as reactions to many stresses. Meyer and Rowan [34] go on to suggest that traditional

structures are ill equipped to react to turbulent environments today and that it may be only nostalgic to think that formal structures could cope.

Related examples can be found in the work of Graham T. Allison in his classic analysis of the Kennedy administration during the Cuban missile crisis [35]. Old forms were discarded and replaced by a small operations center of key leaders.

Another analysis of a government in crisis is given to us by Dov Alexandrowicz who studied the activities of the Israeli government in the immediate period prior to the 1967 War [36]. His psychiatric observations, coupled with descriptions offered by Moshe Dayan [1] give a clearer description of why Israel had to change its operational procedures to face that crisis.

#### C. IMPLICATIONS OF NEW TECHNOLOGIES UPON ORGANIZATIONS

One of the fastest growing areas of concern, which coupled with the tendency of increasing the level of decision-making with the improvement in technology, is the area of C<sup>3</sup> (command, control and communication). Innovations in this area are meant to offer top commanding echelons in the military the potential capability to exercise remote control by communication directly on a real-time basis with combat ready forces in the field.

Numerous studies in this area discuss the involvement of top echelons in local combat decisions [37; 38; 39]. One study [38] found that the President of the United States was involved as a decision-maker in over 73 percent of the cases

between 1947-1875 although this involvement was legally required in only 22 percent of the cases. Furthermore, the fact that extensive interagency coordination was required by existing norms in over 58 percent of the cases (although legally required in only 12 percent), provides a strong incentive to centralize control at the top so as to avoid the critical delays in response. Analyzing the benefits of better use of equipment and technology to indicate better results of top echelons involvement in local combat problems seems to refer solely to technical ability and to neglect the impact this phenomena has upon the local commanding officer and his unit. Technology in this area may have already created organizational problems which will require decades to solve.

In summary, the literature thus far reviewed contains many useful observations about parts of the transition from normalcy to crisis. Thus far, there has not been a systematic and inclusive study of the entire process for military organization in more detail.

### III. THE MILITARY ORGANIZATION IN CRISIS

Military organizations are structures which are supposedly designed to function effectively in emergency conditions. This is especially true for tactical units, of course, where operational conditions usually include turbulence and rapid changes. The function of tactical units is to cope with pressures in this turbulence and to overcome the forces of the changed environment.

Responsiveness to emergency conditions at the headquarters level is seldom a quick or smooth process. Signals may be less clear. A momentum of everyday concerns for a large force in such matters as logistics, training, inspections and policies creates a strange inertia for sudden crisis management.

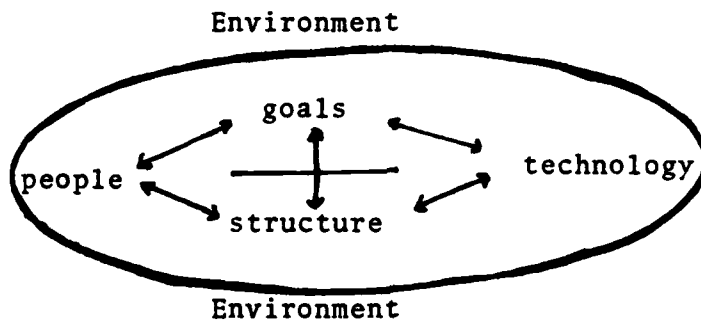
In theory the military organization must be more sensitive to environmental change than civilian forms. The military must simultaneously sense and react to changes in the environment of foreign countries--irrespective of what is happening on the domestic scene--whether or not civilian administrators are sensing these changes.

In the free world where military organizations are led by civilian chiefs of state there is inevitably a delay in reaction time as that which is sensed by the military is processed by civilian officials. The burden is thus greater upon tactical units to sense accurately and to maintain flexibility and speed in transitioning from a garrison to a crisis posture.

It behooves the military leader to study the transition process more carefully if the military organization is to respond to threats and to maintain communication with its civilian superiors if constitutions are to be honored. Focus is needed upon the processes and the variables which constitute this transition.

There are several models which describe the basic variables found in organizations. Here is the general model of Leavitt [2].

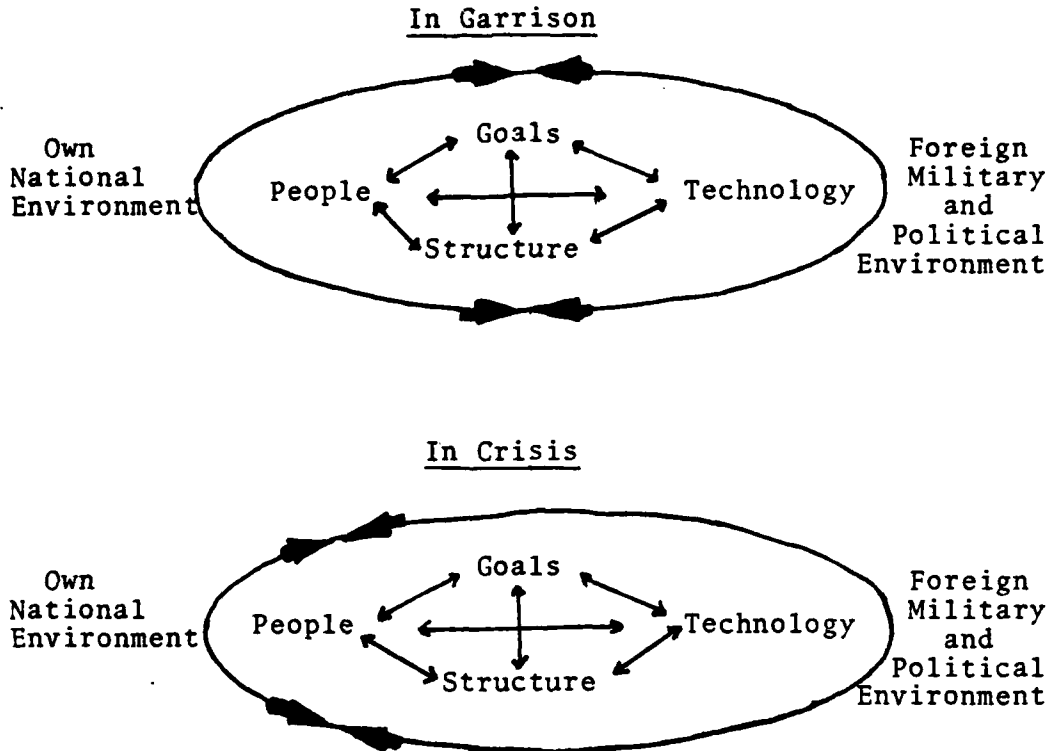
Figure 1  
LEAVITT'S MODEL OF ORGANIZATION



One possible modification for the military organization is that it must react both towards its own environment and to the environment of its enemy. It is the latter environment that is the ultimate target.

Figure 2

GARRISON AND CRISIS MODIFICATIONS



While the outside environments obviously clash in a crisis, the internal factors also go through modification. A closer look at these internal factors is in order.

A. THE GOALS

In a garrison status policy maker set goals and priorities within a fairly stable environment. No easy task-- these priorities affect the distribution of national

resources (money and people). In a crisis status the priorities must shift in the distribution of these resources.

A commonly held idea is that military and diplomatic activities are interchangeable. General Dayan has said,

"God knows how much I hate wars. With all the pains the grief and the casualties it causes. But wars are a natural phenomena in our world. The best way to overcome them is to win them fast and smooth" [1].

In short, time is of the essence.

There is also a need for unified resolve. General Douglas MacAuthur declared,

"It is fatal to enter any war without the will to win it" [3].

This kind of goal obviously requires more energy, focus and commitment than raising recruiting levels by six percent or economizing on third echelon maintenance.

In line with those priorities set by one's department of state military leaders look at all the potential military threats at present and in the near future and attempt to adjust and reequip on a continuing basis. While the ultimate goals of garrison and crisis postures may be identical the necessity of breaking this down in garrison life to milestones and check points invites splintering and detours. It seems almost necessary that as overall combat goals are broken down into enabling objectives that there will be a dilution of concern for the primary goals. There has yet to be a study of a total military organization to describe the total effect of this process. Important studies have been made of individual factors within the garrison environment,

e.g., the budget cycle, accident prevention, retention of personnel, etc. Thus far, we lack a macro-motion-study of the entire organization as it flexes its objectives while keeping an overriding goal.

The task of keeping the ultimate, operational goal primary in combat and in garrison, as is seen in Leavitt's model is made tenuous by the tugs and changes of people, technology and structure. Goals broken into subsets such as the integration of minorities into all branches and echelons or the elimination of human errors in maintenance will disappear in the heat of combat. Yet the attention to these subsets greatly influences the readiness of the organization to respond to a new crisis.

In combat itself there is often conflict between enabling objectives. The need to withdraw in one theatre to minimize casualties may threaten a supply route or decrease the security of an air base. A visit to a command post during an artillery attack will leave one's ears ringing with conflicting calls for assistance from subunit commanders. And yet there can be no hesitancy or uncertainty about the ultimate goal of the military organization in that crisis.

#### B. THE TECHNOLOGY

An immediate liaison for military leaders after assessing present and future threats is 'with what shall we face such a crisis?' The measures and the equipment used today are based on the most advanced technology available from science

and industry. And there is within the military a constant cycling of new weapons, sensing apparatus and delivery systems.

Timeliness is paramount. The lead time for defining the need for a new weapon system, developing and testing it, producing it in the required numbers, delivering it and training people in its use is now considered to be a period of six to eight years [7]. Such a long lead time cannot be expected to match the period of transition we have when moving from garrison to crisis.

It should be noted that the military is assessing, changing and implementing new equipment and technology continually. This is done in an evolutionary way. On paper at least, all the preparations for implementation are proceeding in advance of delivery. Randomly, it may happen that the arrival of a system coincides with the advent of a crisis. However, the impact upon the organization in terms of preparation for the arrival of the system, redistribution of assets, training, etc. may already have taken place. Arrival of new technology may not always produce panic.

At the other extreme it may also be true that a new system may have arrived and for reasons of cost, shortage of supply parts, sensitivity or classification it may currently be in storage. There is a need to deliver the system to tactical units upon the arrival of a crisis. The impact upon the organization may not be severe if planning and scheduling were well done. It has in history, however, not

been unknown that some units have received new weapons for which they had no use, knowledge or preparation. Such an event illustrates the need for horizontal as well as vertical communication and planning.

One should also consider the psychological impact on morale and self-confidence that a sudden and unexpected change in equipment and technology might have on a military unit in crisis situations.

In summary, except for minor changes in existing equipment, military organizations are not likely to face sudden technology changes as an outcome of a short-fuzed crisis.

#### C. THE PEOPLE

The performance of people in military organizations has drawn the majority of attention in the literature and rightly so. Human performance, seemingly vagarious in the combinations of environment, techonolgy, structure and goals, is difficult to predict and troublesome to observe.

In this study we shall focus upon two groups of people: leaders and followers. The impact of their interaction can be summarized,

"Men are neither lions nor sheep. It is the men who lead them who turn them into either lions or sheep" [8].

While Chester Barnard might think this is really a function of sheep letting their leaders become lions, the point is that the interaction bears much study.

A most important facet for this study is the selection and evaluation in peacetime of the best leaders for a

wartime environment. Studies continue to isolate the traits and characteristics of former great leaders in combat. Theorists have not agreed on a model for selecting the best and most versatile leader based on peacetime evaluative data. The situational leadership model is perhaps the most accepted explanation among scholars [9].

While it may not yet be possible to predict effective combat leadership upon garrison performance it does seem possible to identify those traits and abilities desired in combat leaders.

"That quality which I wish to see the officers possess who are at the head of the troops, is a cool, discriminating judgement when in action which will enable them to decide with promptitude how far they can go and ought to go with propriety; and to convey their orders, and act with such vigor and decision that the soldiers will look up to them with confidence in the moment of action and obey them with alacrity."

The Duke of Wellington's description is hardly outdated in its description of desired combat traits for leaders.

Many authorities feel that the people factor of Leavitt's model is the most amenable to change. Certainly there is an amazingly wide span for introducing change through the human element. Through formal and informal channels of communication leaders can sense differences in their environments and modify their orders. Over long and intense periods of time with their subordinates they can introduce expectations, beliefs and rules of engagement which will reflect the specific world views of those leaders. This same breadth also allows, of course, for ample numbers of mistakes in communication and decision making.

One can focus upon particular parts of leadership problems in combat. Some of these are generalizable to any kind of crisis environment.

1. Time Shortage

One of the first casualties of an organization going into combat is the time schedule. As important as the schedule may have been during garrison life its use in combat is ludicrous. In a crisis nearly everything which is relevant becomes urgent. There may be a few priorities but all tasks are to be executed immediately.

Time pressures are especially noticeable to high ranking officers. Theirs is the job of moving the total organization in the proper directions immediately. Their first few decisions are crucial to the success of the transition from garrison to combat. While there is a need for more information and the desire to wait before acting until one has more information all may be lost if some decisions are not made immediately. Tension and time pressures rise exponentially among high ranking commanders.

2. Anticipation for Direction

At the lower echelons there is also a need to react quickly. However, at this level one must wait for the order to attack, deploy or defend. It is obvious to these units what the crisis involves. It has already started. As time and confusion drag on confidence drops. Rumor mongering increases. If clarifying orders are not soon received, subordinates will act on the basis of rumors and anticipate outcomes that may never occur.

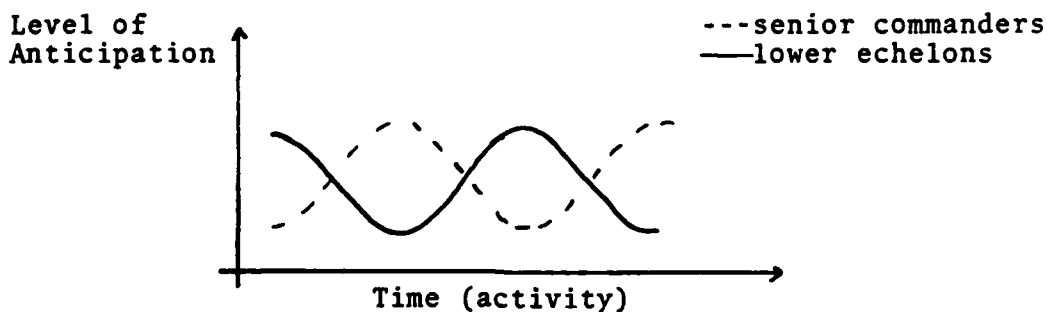
### 3. Need to Complete Previous Assignments

Just as the pregnant wife has been known to want to complete painting a bedroom after her labor has started before heading to the hospital, the author has noted a strange tendency among subordinate leaders to finish old assignments while waiting for crisis orders. Perhaps they relieve their personal tension by addressing jobs that should have been finished prior to the crisis.

Once the crisis orders are issued there is a reversal of tensions. Now the senior levels must wait for feedback saying that their orders have been received and completed. The sine curves of anticipation levels appear to be gapped.

Figure 3

#### LEVELS OF ANTICIPATION OF SENIOR AND JUNIOR OFFICERS



### 4. Uncertainty

It has been observed that no two military crises are exactly alike. One of the first tasks of senior commanders is to collect enough data to determine if their reaction model's assumptions are correct. Variables must be updated. Missing data makes for increased uncertainty.

Top officials tend to centralize activities that are crisis related, to keep more decisions at their level, to use intuition and previous experience as fillers to this uncertainty. It often seems to them that orders need to be issued immediately, hoping that they can be modified later if they prove to be inadequate.

At the same time lower echelons are experiencing conflict between their trust in command and their own interpretation of the crisis situation. They witness the turbulent environment, hear the rumors and try to update their own reaction models. Time lags and ambiguity accentuates the uncertainty.

#### 5. Urgency

The reality to both senior and junior levels is that the immediate environment contains high risk to survival, because both levels need the other's input there is an increase of vertical communication and some acting out without sufficiently accurate information. This leads to even further urgency.

Because of information overload both levels are performing some actions without knowledge to the other level. Occasionally decisions will be made by an authority who happens to be available and not necessarily by someone who is responsible. The thought is that if approval is needed it can be gained later.

This relates to what was covered earlier concerning goals and how the subsets can evolve into conflict and dillution of central goals.

## 6. Loss of Identity or Autonomy

An immediate objective at the outset of a military crisis is to bring all the available resources (manpower and material) under central command to launch an operational effort. Anything not having immediate operational importance moves to a secondary status.

This shift in priorities creates a sudden redistribution of power among individuals within the organization. Generally, those officers in direct operational billets gain power while administrative and support departments may lose resources. In some cases units are "cannibalized" of people and equipment to reinforce other units. This sudden loss of autonomy has adverse effects for some individuals.

Along the same vein, operational commanders with their increased power are able to make more decisions without receiving the approval of staff assistants and they feel more power within the boundaries of their own units.

## 7. Changes in Personal Priorities

In garrison existence one's personal priorities are met in differing degrees. These motivate one to stay with the unit. In a crisis these personal likes must be subjugated to organizational priorities. The magnitude of the crisis will determine the extent to which individuals will relinquish their own priorities, according to S. L. A. Marshall [11].

Reaction to severe crises is a team effort. Marshall believes that individuals are willing to give up personal

priorities such as career fitness reports, family life, etc. in severe times and that they have an accompanying expectation that these needs will be met when the crisis is over.

#### 8. Change in Direction of Feedback

In a garrison environment the attention of juniors is centered toward the reactions of superiors. Coping skills are soon developed to keep seniors happy with one's work. Feedback is needed from seniors to affirm that.

In a crisis the emphasis changes. The central emphasis is to get the job done. Now commanders care a lot more that the organization is working as a team. Commanders need feedback that their orders are being heard and executed. Attention is focused more toward subordinates than toward superiors.

#### 9. Changes in the Pattern of Personal Skills

As we consider leadership patterns in garrison and crisis we note a shifting in emphasis of the kinds of skills needed.

There are three groups of skills of particular interest:

##### a. Technical and Tactical Skills

These are the skills needed to operate a weapon system (flying an airplane, maintenance of a tank, etc.) or to perform standard operating procedures in response to an air attack, how to direct troops in the field, etc. Many of these skills are developed through training.

b. Managerial and Human Skills

These are skills needed to communicate and intervene with other people. The ability to counsel and motivate others is also amenable to training although less is known about this form of training.

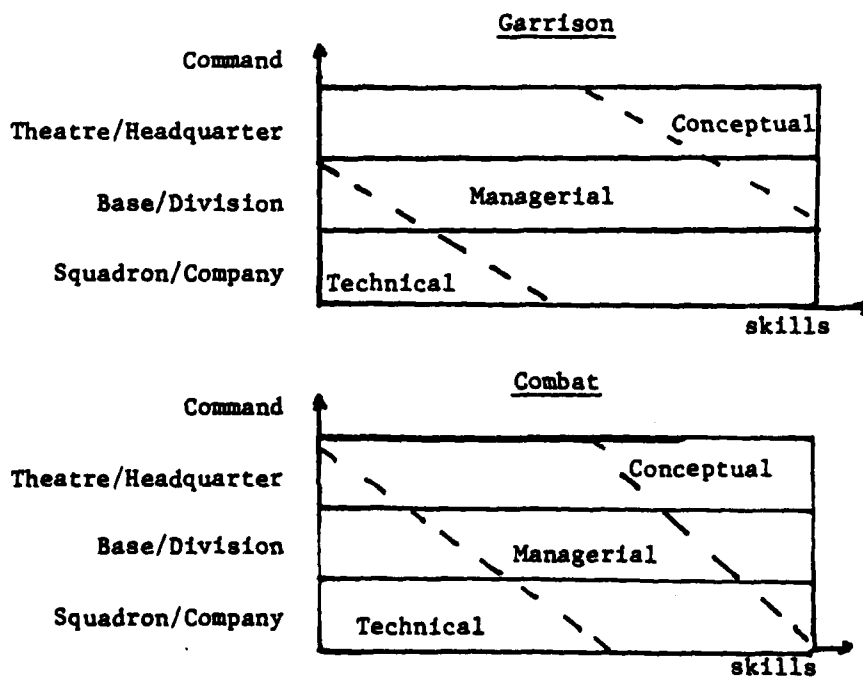
c. Conceptual and Strategic Skills

These skills represent the ability to analyze data, design and implement strategies to meet future problems. Such conceptual ability is influenced by education and experience.

The following theoretical model illustrates the shifting of these groups of skills going from a garrison to a crisis environment for three levels of command.

Figure 4

THE SHIFT OF SKILL EMPHASES FROM GARRISON TO COMBAT



The model suggests that at the lower echelons of commands technical skills and management skills make up the major part of a leader's work. The proportions change and include some conceptual and strategic competency in combat. At this level in garrison one's daily schedule is usually prescribed. In combat the schedule is anything but routine and some conceptual skills are needed to react to the turbulent environment.

At the mid level of command all three groups of skills are needed in both garrison and combat. In a garrison status management skills take up a larger portion of the leader's time than in combat.

Theoretically, at the highest level of command there is hardly any need for technical skills in a garrison status. However, in a combat environment senior leaders must know some technical information to interact more knowledgeably with subordinates.

This model is hypothetical. It is proposed later in this thesis to quantify these emphases. Data at the mid-level of command is reported, analyzed and tested. Future research may test the applicability of the remaining levels.

#### D. THE STRUCTURE

The structure of military organizations impacts their ability to meet goals, utilize people and employ technologies. Formal structures evolve over centuries of experience with changing environments. The heavy majority of this time, obviously, is spent in garrison. Informal structures endure

in both garrison and in combat conditions. Informal structures tend to be more flexible in meeting unplanned events.

Formal structures have blueprints of the relationships of departments, officers, positions and programs. These charts or "wiring diagrams" are accompanied by goal statements and policy descriptions of how the parts of these structures are to interact and support the total organization.

Considerable research has shown that organizations rarely operate according to these formal structures. Dalton (1959) and Downs (1967) located great gaps between formal and informal structures. When facing especially turbulent environments formal organizations are often found to be loosely coupled. March and Olsen (1976) and Weick (1976) found that in crisis situations organizations are often loosely linked, that rules are often violated and many decisions are not implemented.

Enrico L. Quarantelli presented a model to explain the different kinds of organizations that might exist in a crisis.

Figure 5

TASK - STRUCTURE RELATIONSHIPS

		TASK	
		Regular	Non-Regular
Organization:	Established	Type I	Type III
	Emergent	Type II	Type IV

Established organizations, by definition, exist continually in garrison and in combat. Types I and III represent regular tasks.

Type II organizations might describe reserve units. They are emergent organizations called to meet a regular (active) duty task.

Type IV organizations are rare to civilian or to military environments. They would not ordinarily be found in the military unless caught by total surprise or to face a disaster of some sort. Type II organizations are found frequently in military units designed to do civic action or counter insurgency operations. They are frequently disbanded after the crisis is ended.

Changes in these structures may be ordered by appropriate authorities to meet special conditions, e.g., the closing of a training department to economize on funds. They may also be the result of previous combat experience of the commander, executive officer or operations officer.

1. Centralization of Activities

Combat underscores the need to respond quickly to changes in the environment. High ranking officers seem to have a need to be personally involved in tactical decisions. Command centers are established with a higher than usual representation of senior officers. This alters the formal structure temporarily and creates the need for huge communication networks.

## 2. Overload of Communication

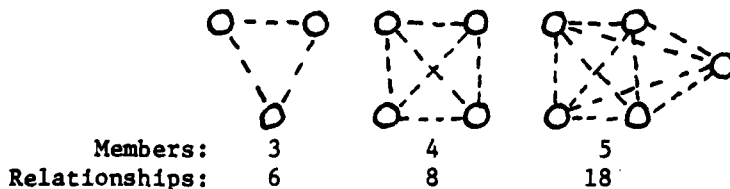
As uncertainty and urgency increase in the combat environment the kinds and amounts of communication increase.

Shaler found in 1974 [6] that the number of relationships (communication channels) may more than triple in combat in a very short time period. These communications include passive information to which no response is required but which consumes a lot of energy in processing and may block other messages. Active communication--to which response is required--can be further divided into operational activities and support messages. Active, response required messages will order, clarify and reduce ambiguity for lower levels. The two way communication also reinforces the expectations of both parties that supplies will be shipped or that patrols will commence.

In the case of Type I and Type III units communication channels already exist and people are trained in their use. Type II and Type IV organizations experience great difficulty in establishing regular communication channels. For one thing the numbers of relationships increase geometrically as reserves are called back or special units are formed.

Figure 6

### RELATIONSHIP OF GROUP SIZE TO COMMUNICATION CHANNELS



If the unit expands immediately the effect may be a communication crisis. In the Israeli military organizations it was found that training 30-60 days a year decreased the trauma to these communication nets because people were trained in what to expect when reserve units were activated.

In summary, the military organization is probably among society's most complex structures. In size and because of its having to operate in garrison and combat environments it has many obvious and many hidden variables.

This paper will not attempt to explain all these variables. What will be explained next is the author's attempt to better understand what happens to the mid level of management in going from a garrison to a crisis environment.

#### IV. METHODOLOGY AND RESULTS OF THE TRANSITION STUDY

As was mentioned earlier, the literature reviewed found no study which traced the transition from garrison to combat environments for military organizations. A hypothetical model was designed from fragments of organizational studies and from experience.

To verify whether or not priorities do shift in this transition a survey was conducted among United States and Israeli officers who had commanded units in both garrison and in combat. It was hoped that additional information might be gathered to increase our understanding of what else may happen to commanders during the transition from garrison to combat.

##### A. PROCEDURE

The main intent of the survey was to ascertain if there is a significant difference in the priorities and energies expended by commanders in garrison and in combat. The null hypothesis was that there would be no significant difference.

The sample selected was small and unique. All the participants were on active duty and had had both garrison and combat experience as unit commanders. The instrument, tested first with a small group of officers from other services, was administered to twenty-five U.S. officers and a like number of Israeli officers.

The instrument (Appendix A) was designed with forced choice and open ended questions. Realizing that officers were being asked to recall their priorities and performances from six to ten years previously it was expected that there would be difficulty in obtaining accurate perceptions from them. To assist in getting a more reliable perception three rankings were asked in both garrison and in a crisis environment: subjects according to importance, subjects according to your involvement and subjects according to time commanders spent on them.

The return rate of 64 percent brought rankings to the following subjects generated by a panel of commanders:

- a. fulfillment of goals and training
- b. flight/shipboard safety in work
- c. enforcement of regulations
- d. research and development
- e. morale
- f. communications and openness between you and your troops
- g. career planning and promotions
- h. keeping your staff informed of the whole picture
- i. planning to face changes in the environment
- j. --open--write in
- k. --open--write in

These subjects were first ranked in importance then graded on a five point scale of importance and graded on a five point scale in terms of the commanders involvement, for both garrison and crisis environments.

B. RESULTS

TABLE 3

<u>Israeli Officers: Level of Importance</u>	
	<u>X</u>
<u>In Garrison</u>	
1. Safety in Work	4.833
2. Accomplishment of Training Mission	4.333
3. Enforcement of Regulations	4.083
4. Morale	3.916
5. Communications and Openness	3.916
<u>In Combat</u>	
1. Accomplishment of Mission	5.00
2. Morale	4.583
3. Safety in Work	4.083
4. Research and Development	3.583
5. Keeping the Staff Informed	3.583

On this comparison one can see the shift in perceived importance for the Israelis. In moving from garrison to combat the subject of safety drops, morale rises and enforcement regulations drops right out of the top five subjects. Mission accomplishment is naturally uppermost in combat.

It was found that there was considerable similarity between American and Israeli rankings of these subjects. The big difference was on overall ranking between garrison and combat.

TABLE 4

Listing of Priorities of Commanders in Garrison and Combat\*

	<u>Garrison</u>	<u>Israeli</u>	<u>American</u>
1. Fulfillment of Goals & Training Aids		9.461	9.333
2. Morale		6.615	8.000
3. Safety in Work		6.592	6.937
	<u>Combat</u>		
1. Accomplishment of Mission		10.000	9.885
2. Morale		7.75	7.375
3. Research & Development in the Unit		6.5	5.6

\*high score refers to high priority

Similarly, there is close similarity of responses between Israeli and Americans in those questions asking how much time commanders invested in these subjects. Americans, for example, spent 47.77% of their time on mission accomplishment and Israelis spent 46.13%. There was more difference between garrison and combat responses.

## C. ANALYSIS

The question arises, are these significant differences between garrison and combat rankings? Since no assumption of normality of the distribution of these responses could be made it was decided to turn to Wilcoxon's Signed-Rank Test of Difference - Score Population Symmetry about Zero.<sup>1</sup>

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<sup>1</sup>James V. Bradley Distribution, Free Statistical Tests, Prentice-Hall, Englewood Cliffs, N.J., pp 96-102, 1968

This test has an A. R. E. of  $3/TT$  or .955 relative to the Matched-Pair Student's Test when both tests are applied under all assumptions of the latter test. The  $H_0$  of the T test is that the mean will be zero. The assumption of the Student's T test is that the population must be symmetric about an axis through its mean.

The null hypothesis for each of the rank comparisons in this study is that the observations will be symmetric about an axis through a mean equal to zero.

The test statistic is:  $\sum_{i=1}^n R_i - W^+ = \frac{n(n+1)}{2} - W^+$ , where  $W^+ = \sum_{s_i=+} S_i R_i$  and  $W^- = \sum_{s_i=-} S_i R_i$ .

Computing this statistic for the three comparisons for the American and Israelis, i.e., ranking of importance, rating of involvement and percentage of time spent on the subjects we get the following levels of significance.

TABLE 5

Levels of Significance in Differences  
In Garrison and Combat Rankings

AMERICAN		
<u>Comparison</u>	<u>Test Value</u>	<u>Level of Significance</u>
Rank of Importance	-.0052	<.005
Rating of Involvement	-.0186	<.005
Percentage of Time	-.006	<.005
ISRAELI		
Rank of Importance	.0224	<.005
Rating of Involvement	.0056	<.005
Percentage of Time	.0398	<.005

The null hypothesis is thus rejected in all cases and it is stated that each of these comparisons of garrison and combat rankings is significant at less than the .005 level.

It is felt that this information might be more useful to military managers if these data were grouped using the model proposed in Chapter III. In order to be able to compare across subjects the author prepared psuedo-standardized scores for each of the subjects by observer, i.e., for each ranking by a respondent. These Z scores were then pooled into three categories: Technology; Management; and Strategy. The following table gives the pooled results and percentages of commander's ratings.

TABLE 6

Pooled Z Scores for Garrison and Combat Observations  
In Categories of Technology, Management and Strategy

AMERICAN					
<u>Garrison</u>			<u>Combat</u>		
	<u>Pooled Z Scores</u>	<u>%</u>		<u>Pooled Z Scores</u>	<u>%</u>
Technology	0.8621	58		0.7399	37
Management	0.4354	29		0.5604	28
Strategy	0.2013	13		0.6980	35
ISRAELI					
<u>Garrison</u>			<u>Combat</u>		
	<u>Pooled Z Scores</u>	<u>%</u>		<u>Pooled Z Scores</u>	<u>%</u>
Technology	0.9468	40		0.9458	64
Management	0.4840	20		0.3632	25
Strategy	0.9282	40		0.1600	11

These results can be displayed in the model suggested earlier in the following figures.

FIGURE 7

American Shifts From Garrison to Combat

GARRISON

	Technical	Management	Strategy	
Division	*			
Brigade	58		29	13
Company	*			

COMBAT

Division	*		
Brigade	37	28	35
Company	*		

FIGURE 8

Israeli Shifts From Garrison To Combat

GARRISON

	Technical	Management	Strategy
Division			
Brigade	40	20	40
Company			

GARRISON

Division			
Brigade	64	5	11
Company			

\*These levels still to be studied

While these data at best are preliminary and are subject to the vagaries of memory by the participants who responded, they do suggest a way of predicting how managers will need to shift their priorities in going from garrison to combat.

It may also be a means toward designing training for unit commanders to better prepare them for combat. With further study this model might also be used to summarize evaluations of an officer and better predict his performance in combat conditions.

## V. CONCLUSIONS AND RECOMMENDATIONS

Basically this paper is an attempt to study and analyse the impact that changes in the environment have upon the military organization.

The first observation is that turbulent environments do cause reactions and changes in the military organization. Those changes are proportionate to the magnitude of the phenomena in the environment and to the interpretation of that phenomena by the military leaders. The impact they have upon the military varies accordingly. Sometimes it is minor and can be dealt with by the local, small unit. Sometimes the change demanded is large, due to the pressure of lack of time and resources and it needs a combined effort of the whole organization to face that change.

A second observation is that the skills and techniques needed to lead the military unit in garrison are quite different in magnitude and priorities than what is needed in a crisis. In fact, this paper shows that there is a clear shift in the priorities of the commanding officer under a crisis environment in respect to his activities and his demands from his subordinates. Surprisingly these differences in skills and personalities of commanding officers in the two environments is not considered as a criteria for evaluation or promotion of officers into command posts.

A third and related observation is that there is also a shift in the attitudes and the expectations of the subordinates

toward their organization and especially toward their commanding officer. Their expectations are highly influenced by their knowledge and understanding of the procedures and the events taking place in the environment. Lack of knowledge and misinterpretation of the events may lead the military unit into increased trauma.

A fourth observation is that there is a gap between the official garrison priorities as ranked by the military authorities and the crisis priorities actually emphasized by local commanders. While the former tend to be future-oriented in support of the ultimate goals of the organization (sort of a prophetic approach), the local commanders will tend to actually spend his time with the everyday problems (the priestly approach). Although both types of leadership are aimed toward the same results on the long run, it seems that often in the short run there is a large deviation from the intended and the actual structure and procedures. Sometimes it is very hard to explain the relevance of that deviation to the subordinates. It should be noted here that the larger the deviation in garrison the greater the adjustment needed when facing a crisis. If this has not been handled well in advance the subordinates may fail to cope with that sudden adjustment process.

A fifth observation, basically related to the survey administered to the commanding officers, is that most of the preparations to face a crisis are done in the area of technical and tactical skills while other needs are not directly

addressed. (It may be done sporadically and individually by local commanders based on their beliefs, experience and personality). All the training, standing operating procedures issued in advance in the military organization are dealing directly with the operational ability of the unit. This is based on the assumption that its operations are the most important and probably the most complicated part. On the other hand, it seems that other issues, mainly in the area of managerial skills, e.g., how to deal with battle fatigue or casualties or how to utilize best your entire resources (people and equipment) are not addressed so intensively. It seems as if there are some general rules or general written regulations in those areas but how to exercise it is mainly left to the interpretation of the local commander. This is basically because of the numerous variables that contribute to this situation and because of the impact the personality of the local commander has on those type of issues.

Another observation is that the increase in the development and the use of the C<sup>3</sup> concept (command, control and communication) in the military offers high ranking officers a tool to exercise their need to control activities and raise the level of decision making when facing a crisis. It seems that too much emphasis is placed on equipment and technology and not enough on the human factors.

Last but not least is the author's observation that there is rejection by the military establishment to build a model of change in priorities to be used by the commanding

officer as a basic common denominator. The main thrust in this resistance is the fear that such a model of behavior might eliminate the creativity and intuition of commanders on the one hand and might be accepted as a prediction of future conflict and thus eliminate flexibility and awareness from the military unit.

Based on this study and the experience of the author the following recommendations are offered to assist the military organization to be better prepared to face crises.

#### A. FURTHER RESEARCH

A thorough and more detailed study within the military organization should be made of the shift of the priorities in the different levels of command when the organization is facing a crisis.

It is felt that a shift in the priorities does exist in the military organization when facing crises. Due to limitations of time and resources the survey that was done to serve this paper dealt mainly with commanders at the brigade level with very few representatives of the other two levels. Even this narrow-base study showed a significant change in priorities of the commanders when facing a crisis. Since crisis and combat experience are never alike, a larger survey is indicated which would relate to larger pools of experience and might explore other areas of interest, e.g., stress and communication loads.

Another aspect of such a study is the analysis of the particular behaviors of commanding officers when facing crises.

The variety of backgrounds in which the commanding officers were involved and the different approaches they chose might help us later in building a model of behavior for a commanding officer in crises.

Since the combat crisis experience might be rare or at least not necessarily under our control, it is suggested that the lesson might also be learned in simulation exercises. It is recommended that sociologists and organization development experts join military units in such exercises and make the necessary studies and analyses to help the local commanders interpret what happens with respect to shift in priorities and changes in behavior due to the crisis.

It is also recommended that mechanicsms that will periodically study the military organization to see if there are any gaps between the charted, planned structure and the one that really exists be created. It is not to say that such a gap should not be permitted but it should be recognized by the members of that unit that there is a gap and they should be aware of the adjustment process that will happen when a crisis occurs.

#### B. EVALUATION AND PROMOTION

The evaluation and the promotion system of officers in command posts should be updated.

It seems that in both the American and the Israeli evaluation sheets (Appendix A and B), there is no difference between skills needed in garrison and in crisis and between skills needed in combat related versus noncombat related

assignments. It seems that the interpretation of these different demands are done according to an unwritten scaling or uncomparable narrative remarks given by each superior according to his experience and understanding.

Although the system is very aware of the importance and the contribution of combat commanders in a crisis, the price for mistakes in nominating the wrong or unsuitable commanding officer is too high.

It is submitted that even though it is very hard to predict in a garrison environment who will be a successful commander in combat we can still go much further in portraying and analyzing great leaders in the past and list necessary skills and traits that commanders in a combat crisis should have.

A further outcome of such a study would be that a greater emphasis would be put on training and developing those skills to build the confidence of both the commanders and the subordinates in them.

#### C. GROUP BEHAVIOR

It is suggested that it is very important to have a model that will predict and analyze the behavior of the military organization in a crisis. Although there is an awareness of the claim that such a model might narrow the creativity and ingenuity of local commanders, it is felt that the combat military experience already exists, is huge and varied with circumstances and that there is no other way to save it for

future generations of commanders unless by building such a model. This model should look at different aspects of the military organization:

1. The behavior of commanders under crisis and in combat.
2. The behavior of subordinates under crisis and in combat.
3. The shift in the priorities at the different levels of command.
4. The changes in communication channels and flow.
5. The change in expectations of both superiors and subordinates from each other.

It is realized that such a model is an ambiguous creature. Each commanding officer in a combat-oriented post has already built his own model based on his own experience and understanding. Sometimes, two commanders of similar units with basically the same background, will have totally different models of crisis-oriented behavior. There does not appear to be any contradiction in having a general model which would combine the past experience of a great number of combat officers in the past with a model to follow whenever the commander does not have the experience or the answer for a certain happening in the environment.

If well explained in advance, there would be no damage to the ability and creativity of officers. We accept, of course, the Clausewitz approach that--

"Friction is the only concept that more or less corresponds to the factors that distinguish real war from war on paper."  
[40]

The best way to preserve combat experience is by simulation

exercises but if it cannot be done the only other way is by building the model.

#### D. ORGANIZATIONAL ASSISTANTS

The military organization becomes more and more complicated and the demands from the commanding officer to be a specialist in an increasing number of areas is less and less realistic. It is suggested that the commander should be given help to deal with the different areas he is expected by his superiors to control. Among those areas the one that has thus far been addressed with least experience and knowledge (although not with less concern) is the human factors of the military unit. Other areas, dealing with equipment, technology and tactics have already been confronted. It's felt that any commanding officer should have an organization specialist to help him in dealing with the complicated areas of the interfacing between the people and the system.

It is clear that there is a difference in the demands for the consultant relative to the level of command with which he is involved. The demands, activities and areas of involvement will be different at the company, brigade, division or the theatre level because of the difference in the environments and the difference in experience and priorities of the commander. There will also be a difference in the involvement and the productivity of the consultant in respect to the amount of turbulence or the level of the crisis.

The following table suggests basic activities that the consultant should concentrate on and perform in the different

levels of command and changing environment. Of course, all those activities and additional ones as needed should be negotiated by the consultant and the commander.

There should be no doubt that in order to succeed the consultant should be a part of the unit throughout all its activities in garrison and in combat. The involvement of the consultant in the different activities of the organization is part of his establishing status and acceptance by the troops. In order to be fruitful in an environment with growing uncertainties and pressures, the consultant should be considered as a natural part of the unit.

As it is often found in command and management theory, there is no one best answer or procedure to solve a problem. It is the author's feeling that the subject of this thesis is very broad and complicated. It is suggested that each of the recommended steps would contribute greatly to the ability of the military organization to better cope with crisis situations. This, after all, is our "raison detre!"

TABLE 7

Recommended Activities of the Consultant at Different Levels of Command and Changing Environment

	Garrison	Mobilization	Deployment	Combat	Post Combat
Company	<ol style="list-style-type: none"> <li>1. Establish Relationship &amp; trust.</li> <li>2. Study the organization structure &amp; people.</li> <li>3. Participate in exercises.</li> <li>4. Sociometric questionnaires &amp; interviews.</li> </ol>	<ol style="list-style-type: none"> <li>1. Information flow.</li> <li>2. Understanding of missions.</li> <li>3. morale.</li> </ol>	<ol style="list-style-type: none"> <li>1. Information flow</li> <li>2. Morale</li> <li>3. Nonverbal communication</li> </ol>	None	<ol style="list-style-type: none"> <li>1. Morale &amp; motivation</li> <li>2. Fatigue</li> <li>3. Information flow &amp; uncertainties.</li> <li>4. Debrief combat activities (goals &amp; achievements).</li> <li>5. Adjustment to post combat environment (discipline, priorities).</li> </ol>
Brigade	-do-	<ol style="list-style-type: none"> <li>1. Assess communication flow.</li> <li>2. Respond to commanders.</li> <li>3. facilitate planning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Assess support &amp; communication (vertical &amp; horizontal).</li> </ol>	<ol style="list-style-type: none"> <li>1. Respond to requests from commanders.</li> <li>2. Assess stress levels of decision makers).</li> </ol>	-do-
Division	-do-	<ol style="list-style-type: none"> <li>1. Information flow.</li> <li>2. Adjustment of communication channels.</li> <li>3. Adjustment of structure &amp; bureaucracy to crisis environment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Information flow.</li> <li>2. Decision making process.</li> <li>3. Stress.</li> <li>4. Nonverbal communication &amp; uncertainties.</li> <li>5. Adjustment to combat procedures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decision making.</li> <li>2. Morale.</li> <li>3. Stress.</li> <li>4. Fatigue</li> <li>5. Nonverbal communication &amp; uncertainties.</li> </ol>	<ol style="list-style-type: none"> <li>1. Debrief combat activities.</li> <li>2. Debrief adjustment processes from garrison to combat environment.</li> <li>3. Debrief communication &amp; information flow.</li> </ol>
Theater	-do-	<ol style="list-style-type: none"> <li>1. Adjustment of structure &amp; bureaucracy to crisis environment &amp; procedures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decision making process.</li> <li>2. Nonverbal communication &amp; uncertainties.</li> <li>3. Stress.</li> </ol>	-do-	-do-

APPENDIX A

23 August 1979

Dear fellow officer:

I am LTCOL Ben-Rom from the Israeli Air Force and of present a student at the Naval Postgraduate School.

This questionnaire is aimed, mainly, to those who served as C.O. or X.O. under combat conditions and whom, I think, have knowledge and experience to compare the situation in their unit under garrison and in crisis.

This questionnaire is trying to compare commanders views of garrison and combat/crisis leadership by measuring the difference in your attitude, as a C.O., to these factors. Questions 1 and 2 are looking at your priorities. Questions 4,5,8 & 9 are aimed at different points of view at what actually has been done by commanders.

There are empty spaces available for further activities that were important to you as C.O. or X.O. Please feel free to use them.

I realize, of course, that you are very busy and that I am asking you to recall memories and feelings but I hope you will be able to spend some time and answer this questionnaire. It will help me very much and might be of interest to you, also.

Please mail this whole package, as soon as possible, to:

S. Ben-Rom  
SMC 2681  
Naval Postgraduate School  
Monterey, CA 93940

Rank the following subjects on a scale of 1 to 5 according to the importance you relate to each one individually.

- 1.- Not important at all
- 2.- Of minor importance
- 3.- Important
- 4.- Very important relating to the situation and the environment
- 5.- Most important

1. In garrison:

- a. fulfillment of goals and training quotas
- b. flight/shipboard safety and safety in work
- c. enforcement of regulations
- d. research and development efforts in your unit
- e. morale
- f. communications and openness between you and your troops
- g. career planning and promotions
- h. keeping your staff informed of the whole picture
- i. planning to face changes in the environment

2. In combat/crisis:

- a. accomplishment of missions
- b. flight/shipboard safety and safety in work
- c. enforcement of regulations
- d. inventing new techniques and tactics to overcome difficulties
- e. morale
- f. consulting your subordinates
- g. promoting subordinates
- h. keeping your staff informed of the whole picture
- i. planning the missions to maximize the survivability of your troops

1. As a C.O., rank (1 to 9) the following subjects according to their importance when your unit is in a garrison status:

- a. fulfillment of goals and training quotas
- b. flight/shipboard safety and safety in work
- c. enforcement of regulations
- d. research and development efforts in your unit
- e. morale
- f. communications and openness between you and your troops
- g. career planning and promotions
- h. keeping your staff informed of the whole picture
- i. planning to ~~face~~ changes in the environment
- j.
- k.

2. As a C.O., rank (1 to 9) the following subjects according to their priorities in a combat/crisis environment:

- a. accomplishment of missions
- b. flight/shipboard safety and safety in work
- c. enforcement of regulations
- d. inventing new techniques and tactics to overcome difficulties
- e. morale
- f. consulting your subordinates
- g. promoting subordinates
- h. keeping your staff informed of the whole picture
- i. planning the missions to ~~max~~imize the survivability of your troops
- j.
- k.

3. Compare the two lists above and write down your thoughts according to the amount they differ from each other between garrison and crisis. I realize that I am calling for the quantifying of feelings and attitudes. What I would really like to find out is how large is the gap between garrison and combat for commanders and which gap is the biggest in your opinion. Please start with the biggest difference in your mind.

8. Estimate the percentage of the time you spent on the following subjects (I suggest that you will consider one day).

In garrison:

- a. fulfillment of goals and training quotas
- b. flight or shipboard safety in work
- c. enforcement of regulations
- d. research and development efforts in your unit
- e. morale
- f. communications and openness between you and your troops
- g. social activities in the unit
- h. career planning and promotions
- i. keeping your staff informed of the whole picture

In combat:

- a. accomplishment of missions
- b. make sure the troops have a good chance to be back safely
- c. morale
- d. enforcement of regulations
- e. consulting your subordinates
- f. ~~attending meetings with your superiors~~
- g. flight or shipboard safety and safety in work
- h. promoting subordinates
- i. keeping your staff informed of the whole picture

9. List the three people (their position in the unit) with whom you most frequently communicated:

In garrison:

- a.
- b.
- c.

Under combat:

- a.
- b.
- c.

10. What do you think the role of a consultant (O/E practitioner) could be under garrison?

4. As a C.O. in garrison, how would you describe your involvement, on a scale of 1 to 5 in the activities listed below:

- a. fulfillment of goals and training quotas
- b. flight/shipboard safety and safety in work
- c. enforcement of regulations
- d. research and development efforts in your unit
- e. morale
- f. communication and openness between you and your troops
- g. social activities in the unit
- h. career planning and promotions
- i. keeping your staff informed about the whole picture

5. As a C.O. in combat how would you describe your involvement, on a scale of 1 to 5 in the activities listed below:

- a. accomplishment of missions
- b. make sure that your troops have a good chance to be back safely
- c. morale
- d. enforcement of regulations
- e. consulting your subordinates
- f. flight/shipboard safety and safety in work
- g. promoting subordinates
- h. keeping your staff informed about the whole picture

6. What were the arrangements you made in garrison to make sure you got the information and the feedback to know what was going on in your unit with respect to the subjects listed in question number 1?

7. What were the arrangements you made under combat conditions to make sure you knew what was going on in your unit with respect to the subjects listed in question number 2?

11. What do you think the role of a consultant (O/E practitioner) could be under combat:

Thank you for your time and cooperation.

S. Ben-Rom

APPENDIX B

סלום ידידי,

מה שלומך ?

בודאי תחפלא כיצד אני, היושב בגולה, מעיז לשלח אליך ניירה נוספת על המנה היומית של כל אותם "כירורקרים" הרוצים לדעת איך ומה. ובכן, אין לי ברירה ואני זקוק לעזרתך.

שאלון זה נכתב במסגרת אסוף חומר רקע לעבודת הגמר שלי במגמה למנהל ובחחום החפתחות מכנים ארגוניים וניהול כח אדם.

כוונתי להציע כיצד יש לספל ולהכין מבנה ארגוני ברגיעה כדי שהמעבר למצב חרום יהיה חלק ויעיל ככל האפשר.

השאלון מיועד למי שהיה בתפקידי פקוד או סגן מפקד ביחידות מבצעיות ובמלחמה ואשר צפוי שתהיה לו תמונה כללית ורחבה לפני ובעת לחימה.

חובבם של השאלון הופץ לקצינים מקבילים לך בצבא, בצי ובחיל האוויר האמריקני.

אני יודע שהשאלות מכוונות לזכרונות ורגשות כחלקן לפני שנים רבות אבל מכיון שאנו מחעסקים בנושא יום-יום אני מקווה שתוכל לענות עליהן גם היום בדיוק רב.

מניין שהנושא רחב ביותר יש מקום הכל שאלה להוסיף נושאים ותחומים בוחאם לדעתו ונסיונו של המשיב, אנא נצלו מקום זה.

הכאלות על תפקידי הסוציולוג אינן מנותקות מהקשר השאלון.

יכנה מבמה בצבא ובצי האמריקני לצרף ליחידות אדם שתפקידו לעזור למפקד לנהל את יחידתו ברגיעה ובחרום.

אדא זה הינו בעל הכטרה בתחום יחסים בין אנשים וחפעול מכנים ארגוניים בתזום היחסים בין האנשים התפקיד די דומה לתפקיד הסוציולוג ומכאן הכאלות בנושא.

את השאלון המושלם נא שלחו כהקדם דרך הנספחות האוירית כווינגטון.

( אמור איסי למכוחב בלבד ).

בתודה ולהתראות

סמואל בן - רום

1. סמן אה מידת החשיבות שאחה מייחס לכל אחד מהנושאים הבאים בסולם

מ 1 עד 5 לפי הפרוט הבא:

1 - זניח

2 - חשיבות מועטה

3 - חשוב

4 - חשוב מאד הלוי במצב ובארועים אחרים

5 - חשוב ביותר

א. ברביעה

1. בצוע משימות אימון  
1 2 3 4 5  
x x x x x

2. בטיחות בטיסה ובעבודה  
1 2 3 4 5  
x x x x x

3. הקפדה על נוהלים  
1 2 3 4 5  
x x x x x

4. פתוח נושאי טיסה ועבודה ביחידה  
1 2 3 4 5  
x x x x x

5. מורל  
1 2 3 4 5  
x x x x x

6. דו שיח ופתיחות בין מפקדים ופקודים  
1 2 3 4 5  
x x x x x

7. פעילות חברתית ביחידה  
1 2 3 4 5  
x x x x x

8. עדכון סגל היחידה בנעשה בחיל האוויר  
1 2 3 4 5  
x x x x x

9. החסוקה בעדכון חוכניה הפעילות הקוספחית  
1 2 3 4 5  
x x x x x

.10

.11

ב. בחרום

1. בצוע המשימה

1 2 3 4 5  
x x x x x

2. שוחפות בתכנון משימות להגדלת סכויי הצלחה

1 2 3 4 5  
x x x x x

3. הקפדה על נוהלים

1 2 3 4 5  
x x x x x

4. פתוח שיטות לחימה ועבודה

1 2 3 4 5  
x x x x x

5. מורל

1 2 3 4 5  
x x x x x

6. החיעצוח עם פקודין

1 2 3 4 5  
x x x x x

7. קידום מנהלים ומובילים

1 2 3 4 5  
x x x x x

8. ערכון סגל היחידה בנעשה בחיל האויר ובצהל

1 2 3 4 5  
x x x x x

.9

.10

2. כמפקד יחידה ברגיעה דרג את הנושאים הבאים לפי סדר החשיבות הנראה לך (1- חשוב ביותר ובסדר יורד).

- א.----- בצוע משימות אמון
- ב.----- בטיחות בטיסה ובעבודה
- ג.----- הקפדה על נוהלים
- ד.----- פתוח נושאי טיסה ועבודה ביחידה
- ה.----- מורל
- ו.----- דו שיח ופתיחות בין מפקדים ופקודים
- ז.----- פעילות חברתית ביחידה
- ח.----- עדכון סגל היחידה בנעשה בחיל האויר
- ט.----- התעסקות בעדכון חוכניה בפעילות החקופתית
- י.-----
- יא.-----

3. כמפקד יחידה בחרום דרג את הנושאים הבאים לפי סדר החשיבות הנראה לך (1- חשוב ביותר ובסדר יורד)

- א.----- בצוע המשימה
- ב.----- שוחפות בחכניה משימות להגדלת סכויי הצלחה
- ג.----- הקפדה על נוהלים
- ד.----- פתוח שיטוח לחימה ועבודה
- ה.----- מורל
- ו.----- החיעצות עט פקודיך
- ז.----- קידום מנהלים ומובילים
- ח.----- עדכון סגל היחידה בנעשה בחיל האויר ובצה"ל
- ט.-----
- י.-----

4. השווה את התשובות לשתי השאלות הקודמות. נסה לאמוד את ההבדלים  
בעדיפויות ובחשיבות שאתה נחח לנושאים השונים ברגיעה ובחרום.  
רשום את רשימת הנושאים לפי גודל או כמות השנוי בחשיבות ובעדיפות  
כתוצאה ממעבר מרגיעה לחרום.

א.

ב.

ג.

ד.

ה.

ו.

ז.

ח.

ט.

י.

5. כמפקד יחידה ברגיעה, כיצד היית מחאר את מעורבותך (בסולם מ-1 עד 5)

בנושאים הבאים .

הערה: במעורבות הכוונה למידת הירידה לפרטים ומידת השפעהך על הארועים בחחום הנדון.

1- התעסקות מעטה מאד והשפעה מעטה על התוצאה.

2- התעסקות מעטה והשפעה בינונית על התוצאה

3- התעסקות בינונית והשפעה רבה על התוצאה

4- התעסקות בינונית והשפעה מוחלטת על התוצאה

5- התעסקות רבה והשפעה מוחלטת על התוצאה

א. בצוע משימות אמון 1 2 3 4 5  
 X X X X X

ב. בטיחות בסיסה ובעבודה 1 2 3 4 5  
 X X X X X

ג. הקפדה על נוהלים 1 2 3 4 5  
 X X X X X

ד. פחוח נושאי טיסה ועבודה ביהידה 1 2 3 4 5  
 X X X X X

ה. מורל 1 2 3 4 5  
 X X X X X

ו. דו שיח ופתיחות בין מפקדים וצקורים 1 2 3 4 5  
 X X X X X

ז. פעילות חברתית ביהידה 1 2 3 4 5  
 X X X X X

ח. ערכון סגל היחידה בנעשה כחיל האויר 1 2 3 4 5  
 X X X X X

ט. התעסקות בערכון חוכנית הפעילית החקוטחית 1 2 3 4 5  
 X X X X X

י. 1 2 3 4 5  
 X X X X X

6. כמפקד יחידה בחרום, כיצד היית מחאר את מעורבותך (כמפורט למעלה בשאלה 5) בנושאים הבאים.

א. בצוע המשימה

1	2	3	4	5
x	x	x	x	x

ב. שותפות בחינוך משימות להגדלת סכויי ההצלחה

1	2	3	4	5
x	x	x	x	x

ג. הקפדה על נוהלים

1	2	3	4	5
x	x	x	x	x

ד. פחות שיטות לחימה ועבודה

1	2	3	4	5
x	x	x	x	x

ה. מורל

1	2	3	4	5
x	x	x	x	x

ו. החיעצות עם פקודיך

1	2	3	4	5
x	x	x	x	x

ז. קדום מנהלים ומובילים

1	2	3	4	5
x	x	x	x	x

ח. עדכון סגל היחידה בנעשה בחיל האוויר

1	2	3	4	5
x	x	x	x	x

ט.

1	2	3	4	5
x	x	x	x	x

י.

1	2	3	4	5
x	x	x	x	x

7. מה היו הסדורים והנוהלים שהנהגה ביחידתך בתקופת רביעה כדי להבטיח שאתה יודע מה קורה ביחידה בהתיחס לנושאים המפורטים בשאלה 2.

8. מה היו הסדורים והנוהלים שהנהגה ביחידתך בתקופת חרום כדי להבטיח שאתה יודע מה קורה ביחידה בהתיחס לנושאים המפורטים בשאלה 3.

9. הערך את חלק הזמן (%) מתוך יום עבודה ( שהשקעה בנושאים המפורטים  
בהמשך) (אנא יודא שמכים האחוזים מסתכמים ב 100)

א. ברביעה

- 1-----% בצוע משימות אסון
- 2-----% בטיחות בטיסה ובעבודה.
- 3-----% הקפדה על נוהלים
- 4-----% פתוח נושאי טיסה ועבודה ביחידה
- 5-----% מורל
- 6-----% דו שיח ופתיחות בין מפקדים ופקודים
- 7-----% פעילות חברתית ביחידה
- 8-----% עדכון סגל היחידה בנעשה בחיל האוויר
- 9-----% התעסקות בעדכון התכנית החקופתית
- 10-----%
- 11-----%

ב. בחרום

- 1-----% בצוע המשימה
- 2-----% שותפות בחנוך משימות להגדלת סכויי ההצלחה
- 3-----% הקפדה על נוהלים
- 4-----% פתוח שיטות לחימה ועבודה
- 5-----% מורל
- 6-----% התיעצות עם פקודין
- 7-----% קדום מנהלים ומובילים
- 8-----% עדכון סגל היחידה בנעשה בחיל האוויר ובצה"ל.
- 9-----%
- 10-----%

10. ציין את שלושה ממלאי החפקידים אוהם היית מחייץ יוחר פאחרים:

ברגיעה	בחרום
----- א.	----- א.
----- ב.	----- ב.
----- ג.	----- ג.

11. מה לדעתך צריכים להיות חפקידי הסוציולוג ברגיעה

12. מה לדעתך צריכים להיות חפקידי הסוציולוג בחרום

## BIBLIOGRAPHY

1. Dayan, Moshe, General, The Story of My Life, Edanim Publishers, Jerusalem/DVIR Publishing House, Tel-Aviv, 1975.
2. Leavitt, J. Harold, Managerial Psychology, Third Edition, The University of Chicago Press, Chicago and London, 1972.
3. MacArthur D., General, A speech before the Republican National Convention, 7 July 1952.
4. Quarantelli, Enrico L., "Organizations Under Stress," Symposium on emergency operation, Santa Monica, California, September 1966.
5. Ainsworth, L. L. & Bishop, H. P., Effect of 48 Hours of Sustained Field Activity on Tank Crew Performances, Humrro, April 1972.
6. Shaler, Zeev, Headquarters in Front Line, Maarachot, Tel-Aviv, October 1974.
7. Fox, Ronald J., Arming Armerica, Harvard University, 1974.
8. Dutourd, Jean, Taxis of the Marne, 1957.
9. Pendergart, James M., "Situational Leadership", Proceedings, June 1977.
10. Wellington, General Order 15 May 1811.
11. Greenbaum, C. W., Rogovsky, I., Shalit, B., "The Military Psychologist During Wartime," The Journal of Applied Science, November 1977
12. Marshall, S. L. A., Battle at Best, W. Morrow, New York, 1963.
13. Marshall, S. L. A., Battles in the Monsoon, W. Morrow, New York, 1963.
14. Marshall, S. L. A., The Military History of the Korean War, F. Watts, New York, 1963.
15. Keegan, John, The Face of Battle, Viking Press, 1976.

16. Churchill, Winston, L. S., Their Finest Hour, Houghton Mifflin, Boston, 1949.
17. Stauffer, Alvin P., U.S. Army in WW II - The Quartermasters Corps: Operations in the War Against Japan, Office of the Chief of Military History, Department of the Army, Washington, D.C., 1956.
18. Ambrose, Stephen E., The Supreme Commander: The War Years of General Dwight D. Eisenhower, Doubleday, 1970.
19. Donovan, Robert J., Eisenhower: The Inside Story, Harper, 1956.
20. Thompson, Reginald N., Montgomery the Field Marshal, George Allen and Unwin, 1969
21. Moskos, C., The American Enlisted Man, Russell Sage Foundation, New York, 1970.
22. Janowitz, M., The Professional Soldier, Free Press, Glencoe, Illinois, 1960.
23. Janowitz M., and Little, R. W., Sociology and the Military Establishment, Sage Publication, Beverly Hills, 1974.
24. Greenbaum, C., Rogovsky, I. and Shalit, B., "The Military Psychologist During Wartime. A Model Based on Action Research and Crisis Intervention," The Journal of Applied Behavioral Science, v. 13, January 1977.
25. BaBad E. and Solomon G., "Professional Dilemmas of the Psychologist in Organizational Emergency," American Psychologist, September 1978.
26. System Development Company, "Emergency Operations-Symposium I," Santa Monica, California, September 1966.
27. System Development Company, "Emergency Operations-Symposium II," Santa Monica, California, September 1966.
28. Barton, Allen H., Organization Under Stress, A paper presented in ref. 27.
29. Quarantelli, Enrico, L. and Dynes, Russell, R., Operational Problems of Organizations in Disaster, A paper presented in Ref. 27.
30. Katz, Robert L., "Skills of an Effective Administrator," Harvard Business Review, January-February, 1955.

31. Weber, Max, On Charizma and Institution Building, University of Chicago Free Press, 1968.
32. Weber, Max, The Theory of Social and Economic Organization, The Free Press, Glencoe, Illinois, 1947.
33. Beckhard, R. and Harris, Rueben T., Organizational Transitions Managing Complex Change, Addison-Wesley Publication, 1977.
34. Meyer, John W. and Rowan, Brian, "Institutionalized Organizations: Formal Structure as Myth and Ceremony," American Journal of Sociology, Vol. 83, No. 2, September 1977.
35. Allison, Graham, T., Essence of Decisions, Little, Brown and Company, Boston 1971.
36. Alexandrowicz, Dov R., "The Psychiatrist in National Emergency," American Journal of Psychoanalysis, Vol. 34, No. 1, 1974.
37. Carlisle, LTC Donald E., U.S. Army, "The Mayaguez Incident - Crisis Management," Military Review, Vol. LVI, October 1976.
38. Hazlewood, Leo, Hages, John J., and Brownell, James R., Jr., "Planning for Problems in Crisis Management - An Analysis of Post 1945 Behavior in the U.S. Department of Defense," International Studies Quarterly, Vol. 21, No. 1, March 1977.
39. Gissin, Raanan, "The Revolution in Command, Control and Communication Technology; Organizational and Institutional Dilemmas for Combat Forces," A paper presented in the Inter-University Seminar on Armed Forces and Society, Naval Postgraduate School, Monterey, California, May, 1979.
40. Von Clausewitz, Carl, On War, Edited & Translated by Howard, Michael and Paret, Peter, Princeton University Press, Princeton, 1976.

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