MX 8601047 6

ABSTRACT

Officer Training in the Egyptian and the United Kingdom Armed
Forces with particular reference to the influences of culture
and changes in the technology of warfare

COLONEL MOSTAFA MUHAMMAD ABAIDO

This thesis is a study of officer training on the Egyptian army in a
time of rapid and fundamental change. It attempts to examine the
extent to which recent developments in military technology have created
the pressures on the Egyptian army to reform and modernise the training
programmes at the Military Academy. It also examines the influence of
social and cultural factors on the form and content of the training
programmes and their effects on the philosophy of those responsible for
the reforms.

These issues are examined on a comparative basis with the British
system. The British army provides a good comparative base for the
study for many reasons. Among them is that it is equipped with the
most modern weapon systems and enjoys a reputation as one of the most
professional armies in the world. It is a useful point of reference,
particularly with the adopting of new Western weapon systems by the
Egyptian army. It should be emphasised that the intention here is not
to assess or evaluate the British system against the Egyptian system,
where the environment is both materially and culturally different. The
purpose of the study of the British system is to help to clarify and
diagnose the Egyptian system.

With Egypt as the main focus of study, the thesis attempts to examine
the army élite structure both within the context of the Egyptian
society and in a comparative basis with the British army élite. This
has been established through an examination of social, economic and
educational factors against their historical background in order to
locate their positions on the map of stratification and power in the
Egyptian society and also to identify their policy towards recruitment
and training.

In Egypt the main influence on military élite ideology is likely to
come from its own organisational necessities, including national
development needs and the necessity of using modern technology as a
means for reform in establishing a modern army. This creates the need
to provide the full amount of education and training to the student
cadets at the Military Academy before they are commissioned. Under-
graduate university degree programmes in administration and engineering
sciences for four and five years respectively have been created to meet
this requirement. Great emphasis is placed on intellectual develop-
ments for assimilation and general level of education, which are useful
for national service projects, rather than on the military application
side.

In the UK the thesis demonstrates that the military élite established
its own ideology based on its own social structure and professional

experience. The courses are of short duration, the cadet has to attend
non-university graduate programmes for eleven months, and an adequate
level of education of the new entrant is assumed. The programmes at
Sandhurst are directed to support specific military skills based on
professionalism and traditionalism rather than on development of new
trends as undergraduate degree programmes are. This conception has
fostered the traditional type of leadership. The implicit assumption
has been that the real professional education of an officer begins
after his being commissioned, in his practical experience and in the
specialised schools of the British army. Technical areas are now
separated off from the military technology course and taught at
Shrivenham after students have been commissioned.

The field work for the study examined the content of the training
programmes, interviewed those responsibile for the design and imple-
mentation of such programmes, and also, through the administering of
questionnaires to cadets and serving officers, tested how far they felt
their training needs had been met.

The study demonstrates that technological change has not had identical
influence on the two systems of training, since differences are due to
social and cultural factors whose effects are not uniform in the two
countries.

The thesis also examines the extent to which recent developments in new
technology have led to changes in the structure and processes of
military organisations and to changes in the content of programmes
concerned with leadership training. It identifies the specific
military skills required by technologically advances military organisa-
tions, especially leadership and technical skills.

It is argued that this analysis should persuade those at the top level
of command in military organisations of the need for restructuring of
military hierarchies, especially with respect to levels of authority
and decision-making at the lower level of command in military
organisations. However, major shifts need to take place in attitudes
and philosophy towards what is required today in training future
officers. Such shifts in the attitudes and philosophy of those who
hold power would make a substantial contribution to the development of
those new skills which army officers need to deal with the complexities
of modern warfare.

OFFICER TRAINING IN THE EGYPTIAN AND THE UNITED KINGDOM ARMED
FORCES WITH PARTICULAR REFERENCE TO THE INFLUENCES OF CULTURE
AND CHANGES IN THE TECHNOLOGY OF WARFARE

COLONEL MOSTAFA MUHAMMAD ABAIDO
B.Sc(Mil), BA, MA

Thesis submitted to COUNCIL FOR NATIONAL ACADEMIC AWARDS
for the degree of Doctor of Philosophy

Sponsoring Establishment: Middlesex Business School,
                             Middlesex Polytechnic.

February 1986

TABLE OF CONTENTS

TABLE OF CONTENTS
(Contd.)

LIST OF TABLES AND DIAGRAMS

Page

CHARTS

APPENDICES

ACKNOWLEDGEMENTS

ABSTRACT

Officer Training in the Egyptian and the United Kingdom Armed
Forces with particular reference to the influences of culture
and changes in the technology of warfare

COLONEL MOSTAFA MUHAMMAD ABAIDO

This thesis is a study of officer training on the Egyptian army in a
time of rapid and fundamental change. It attempts to examine the
extent to which recent developments in military technology have created
the pressures on the Egyptian army to reform and modernise the training
programmes at the Military Academy. It also examines the influence of
social and cultural factors on the form and content of the training
programmes and their effects on the philosophy of those responsible for
the reforms.

These issues are examined on a comparative basis with the British
system. The British army provides a good comparative base for the
study for many reasons. Among them is that it is equipped with the
most modern weapon systems and enjoys a reputation as one of the most
professional armies in the world. It is a useful point of reference,
particularly with the adopting of new Western weapon systems by the
Egyptian army. It should be emphasised that the intention here is not
to assess or evaluate the British system against the Egyptian system,
where the environment is both materially and culturally different. The
purpose of the study of the British system is to help to clarify and
diagnose the Egyptian system.

With Egypt as the main focus of study, the thesis attempts to examine
the army élite structure both within the context of the Egyptian
society and in a comparative basis with the British army élite. This
has been established through an examination of social, economic and
educational factors against their historical background in order to
locate their positions on the map of stratification and power in the
Egyptian society and also to identify their policy towards recruitment
and training.

In Egypt the main influence on military élite ideology is likely to
come from its own organisational necessities, including national
development needs and the necessity of using modern technology as a
means for reform in establishing a modern army. This creates the need
to provide the full amount of education and training to the student
cadets at the Military Academy before they are commissioned. Under-
graduate university degree programmes in administration and engineering
sciences for four and five years respectively have been created to meet
this requirement. Great emphasis is placed on intellectual develop-
ments for assimilation and general level of education, which are useful
for national service projects, rather than on the military application
side.

In the UK the thesis demonstrates that the military élite established
its own ideology based on its own social structure and professional

experience. The courses are of short duration, the cadet has to attend non-university graduate programmes for eleven months, and an adequate level of education of the new entrant is assumed. The programmes at Sandhurst are directed to support specific military skills based on professionalism and traditionalism rather than on development of new trends as undergraduate degree programmes are. This conception has fostered the traditional type of leadership. The implicit assumption has been that the real professional education of an officer begins after his being commissioned, in his practical experience and in the specialised schools of the British army. Technical areas are now separated off from the military technology course and taught at Shrivenham after students have been commissioned.

The field work for the study examined the content of the training programmes, interviewed those responsibile for the design and implementation of such programmes, and also, through the administering of questionnaires to cadets and serving officers, tested how far they felt their training needs had been met.

The study demonstrates that technological change has not had identical influence on the two systems of training, since differences are due to social and cultural factors whose effects are not uniform in the two countries.

The thesis also examines the extent to which recent developments in new technology have led to changes in the structure and processes of military organisations and to changes in the content of programmes concerned with leadership training. It identifies the specific military skills required by technologically advances military organisations, especially leadership and technical skills.

It is argued that this analysis should persuade those at the top level of command in military organisations of the need for restructuring of military hierarchies, especially with respect to levels of authority and decision-making at the lower level of command in military organisations. However, major shifts need to take place in attitudes and philosophy towards what is required today in training future officers. Such shifts in the attitudes and philosophy of those who hold power would make a substantial contribution to the development of those new skills which army officers need to deal with the complexities of modern warfare.

INTRODUCTION

In the last few years in particular there have been important changes
in military technology and systems of communication which have had pro-
found effects upon the role of modern army officers. The responsibi-
lities placed upon them and the levels of knowledge and skills required
of them have changed considerably. The major cause of changes was the
increasing technological complexity of military weapons and equipment
which compelled the armed forces to recruit and promote increasingly on
technical competence.

The purpose of this study is to examine the training programmes in the
Egyptian armed forces, and to evaluate their appropriateness in
relation to the specific military skills which have been brought about
by technological advances and need to be acquired and developed by
commissioned officers from the Military Academy.

Whilst the major focus of this study is on the Egyptian army, an ex-
ploration of the British armed forces will be made in a comparative
way, particularly with regard to recruitment and training systems.
This will help to clarify the process and procedures which exist in the
Egyptian system. It should be emphasised that the intention of the
study of the British system is not to impose the British system on the
Egyptian army, nor to evaluate or assess the British system in relation
to the Egyptian system, where the environment in both is materially and

culturally different. For instance, the British system has developed
gradually in harmony with industrialisation, urbanisation and capital-
ist transformation, compared with the one in Egypt where there has
recently been more radical social change.

The British army is relevant as an example of a highly technological
army which maintains its forces at the highest professional standards.
It is also relevant because of the adopting of new Western weapon
systems by the Egyptian army. For this and other reasons, then, there
are indeed useful methods and techiques which can be learned from the
British system and may be adapted to suit the conditions in Egypt as a
new modern but less developed army.

However, the objectives of the two systems of training are similar in
broad terms, but the means of achieving them are different in terms of
course content and length of the courses. For instance, while the
regular service entrant at the Military Academy of Egypt has to attend
undergraduate University programmes geared towards obtaining civilian
bachelor degrees in administration and engineering sciences for four
and five years respectively, his counterpart at the Royal Military
Academy Sandhurst (RMAS) in the United Kingdom (UK) has to attend non-
university graduate programmes for eleven months in purely professional
military training. An adequate level of education for the new entrant
is assumed.

In this study attention will be directed both to the influence of culture and historical factors and to technological developments. Both of these have effects on the formation of military organisations and the consequences of this for skills and qualifications. It is argued that increasing technological complexity creates a need for an examination of the balance in training programmes between the training of leadership skills and appropriate teaching in technological subjects.

Under the impact of technological changes, the military academies need to ensure that their education and training programmes will provide the knowledge, skills and abilities which serve as a foundation for a wide variety of tasks for their commissioned officers when they have been given their commission and when they hold a command position.

CHAPTER ONE

CHAPTER ONE

THE EGYPTIAN ARMY ÉLITE AND THE IDEOLOGY OF RECRUITMENT TO THE
ARMED FORCES

The aim of this chapter is to explore the nature and the structure of

the contemporary Egyptian army élite in the context of their society,

in order to establish its effects in determining élite ideology,

particularly towards recruitment of those who will attend the

training programmes at the military academy.1

For the purpose of analysis, reference will be made in a comparative

way to the British army élite and its policy of recruitment to the

Royal Military Academy, Sandhurst.

An élite can be defined as a small group which appears to play an

exceptionally influential role in either social, political, economic or

military affairs.

As often employed, the term élite can apply to those who lead in any

social category, such as those superior social groups like the higher

ranks of army units, political or economic leaders.2 The concept also

refers to an observable social phenomenon, and takes its place in

theories which seek to explain social happenings, especially political

changes.3

The most influential study using the concept of élite in recent years is that of C.Wright Mills. He had identified élite as 'those who hold the leading position in the strategic hierarchies of the society.' Mills had the notion of an élite as the power to command the actions of another, or power to reach decisions. Mills saw three command centres; in the economy, in politics and in the military. The élite is only cohesive because it works towards shared goals or in alliance with compatible ones.4

On this understanding an élite can be classified in relation to some specific organisations in the society (e.g. army élites, business élites, intellectual élites etc.). Thus, the structure and the status of an élite can be analysed in the context of the social and economic structure of the society and in relation to the social roles.

Political scientists and sociologists have classified élites in two ways. The first classification is related to some wider hierarchical structures of influence in society such as hierarchies of wealth, power and status.5

The hierachy of wealth refers to the size of income and the ability to possess and accumulate capital. Wealth is closely connected with class which is a more complicated matter. A person's class is basically determined by the position he occupies with others in relation to the production process. Marx's chief distinction was between the class which owned and the class which operated the means of production. In this way class can be distinguished by amount and

form of payment, degree of job security and other types of benefits such as the amount of retirement pension.

The hierarchy of power in this context, refers to one's ability to participate effectively in decisions which substantially alter the balance of advantages and disadvantages of courses of action open to others. Thus, the concept of power is broader than authority since it is based on a mixture of force and legitimacy.

The hierarchy of status refers to one whose activities are valued highly by the rest of the community. Status is basically defined by social opinion. According to Weber a status group will possess its own 'style of life' or the principles of consumption of goods (e.g. cars, dress, club membership....) which distinguish its members from other such groups in the rest of community. Status groups seek, Weber suggests, to make themselves and their life style more exclusive.

I think a useful alternative analysis of élite is given by Nadel, he distinguishes three different categories; social élite, governing élite and specialised élite.7

A Social élite is those whose style of life is imitated by other groups in the society, its influence, then, is indirect. Its imitable qualities vary from table-manners and accent to cultural or sporting interests.

A Governing élite is those who play an important part in political
affairs or what is called political rulers whose powers derives from
legislation and their coercive authority applied over the most general
affairs of the society. According to Nadel, political élites hold
decisive pre-eminence in a society. However, the degree of authority
possessed by the élite is considered the most important factor in
explaining its power.

Specialised élites are those groups who acquire particular professions
or activities, their specialisms are exclusive to them. Some of these
specialised élites might also be social élites or may also overlap
with the governing élite. It is noteworthy that not all such élites
will play an important part in political affairs.

From the above analysis, the intention is to emphasise that in all
societies there are classes either existing or they are in the process
of formation. And while classes represent broad social and economic
classification, élites on the other hand, are corporate groups which
are small in size and aware of their pre-eminent position in the
society.

Within élitist thinking, and before moving to our analysis, one of the
most relevant points to the issue under discussion which has a crucial
role in forming a person's ideology, is the formation of attitudes.

To start with this point it is important to refer to the factors which
influence a person's attitude. There are many factors in a person's

lifetime which can affect his social attitudes. The future member of
an élite may receive his first impression in early childhood from his
parents, his teacher or friends, which may enable him to learn
authority, liberty, participation and so forth. And he may carry such
attitudes with him for a long time or perhaps during his whole life-
time.

The extent to which this happens may also depend upon the culture of
his society.8 Most of the factors influencing a person's attitudes
are bound by tradition or social mobility which, in turn, reinforces
what the person learned in his early years.

In societies which are constituted by a group of families
which remain as its component elements over long periods of time with
traditions transmitted from generation to generation, an individual
tends to follow the same way of life of his parents or at least holds
the same status as that of his father in the society.

In other societies, the movement of individuals and families between
the different social levels is continuous so that no group of
families is able to maintain itself for any period of time. This is
what we mean by social mobility (in the language of more recent
sociological studies), in these societies there exist a multiplicity
of cultures which, to a great extent, will affect the individual, and
alter his attitudes as well as his views which were acquired from
earlier generation of his family.9 However, social class and educa-

tional background are considered by sociologists to be certain factors
which have especial significance in shaping attitudes. And these
factors have consequently been widely studied as indices of the
potential allegiance of individuals to élite groups. According to
Parry;

'a shared social and educational background substantially promotes
the cohesiveness of any élite group' . 10

and John Rex states:

'the maintenance of the old ruling class as a sociological entity
depends upon the preservation of a separate form of education where
that class's values can be fostered and maintained' . 11

In this respect, however, we cannot consider that every individual of
a given class or schooling will develop identical attitudes in his
lifetime, because many influences are highly unpredictable, but we can
consider that there is a mutual relation between social background and
élite behaviour which will emerge.

Following on from the above analysis, let us refer to the most
relevant studies to the issue under consideration in both Egypt and
the United Kingdom.

In Egypt there have been very few élite studies and those that there have been are largely unsatisfactory. This is partly because of the difficulty of carrying out such studies in a country which has often been in a state of war or of general emergency. It is also due to the fact that the 1952 Revolution instituted such changes in Egyptian society that much of the old élite disappeared while it also took time for new formations to establish themselves.

So far, the most successful attempt to summarise what little is known about the subject is that made by Nazih Ayubi in 1980.12 According to his view, the Egyptian civilian élite came mainly from the middle and upper income strata of society. The upper income stratum includes land owners, bankers, industrialists, major businessmen and government and military senior officers. While the middle income stratum includes small landowners, minor civil servants, army officers, merchants and independent professionals.

With respect to educational background, the Egyptian civilian élite (particularly the members of the managerial élite in the new public sector) was found to be largely made up of university graduates. Ayubi has found that the new élite is not basically different from the old one, either in social or educational background. They come from similar homes and they move through similar careers, but they are more formally educated.

As far as the Egyptian army élite is concerned, the most relevant
studies were carried out by P.J.Vatikiotis.13 According to his view,
the members of the Egyptian army élite came mainly from varied social
and economic backgrounds or origins such as minor civil servants, small
landowners, peasant farmers... and because its members share a common
experience, it can be only described as an élite. It would be
erroneous to refer to this élite as a new ruling class. Before the
revolution there was a ruling class in Egypt, whose members were
recruited from members of the Royal Family, big landowners, high rank-
ing state, administrators, professions and the like, most of whom were
related either by blood, marriage or common economic interests to the
rich families.

With respect to educational background, the Egyptian army élite was
found to be state secondary schools educated, before they were given
admission to the military academy.

In Britain, Anthony Giddens has studied the élites in the British
class structure. He concludes that those who go on to important
positions of authority in government, industry and professions are
from particular social backgrounds, mainly from amongst those
industrialists, landowners and others who possess substantial property
and wealth, and who have their own distinct interests and way of life,
inculcated via the public schools and the traditional universities of
Oxford and Cambridge.14

With respect to social class, British society has been categorised as

follows; the landed family (property owners) considered to be upper

class, the military families who have connected with them who have

been considered as upper or upper-middle class, the professional or

business families, such families who are derived from entrepreneural

or directorial functions in finance or industry, families ranked

either as upper-middle or middle classes or part of a Bourgeoisie and

those who are engaged in management or small businesses or who are

civil servants, often classified as lower-middle class.15

As far as the British army élite is concerned, the most relevant

studies have been carried out by C.B. Otley and M. Garnier.

Otley's studies were concerned with the relationship between the

British army élite and the class structure over one hundred and fifty

years. The findings of these studies can be summarised under two

headings, class and caste.16

It has been found that the upper and upper-middle class are more

socially and ideologically suitable for entry to the Royal Military

Academy Sandhurst (RMAS). In particular, those who came mainly from

public schools, were much more likely to succeed than any other

classes throughout the 150-year period surveyed.

With respect to the concept of caste, those who were recruited from

certain military families (usually from families with strongly

militaristic ties, destined from birth for the service) were seen as

the largest single source of senior officers. Again there is evidence

produced with respect to the major contributory role of the public

schools. However, Otley stressed that at the end of the 1950's

Sandhurst was marginally more open to grammar school boys than in the

past.

Garnier's studies on the other hand, were focused on the social

origins in class composition of the cadets who enter Sandhurst. He

also found that the strong class culture still dominates the entrants

to the academy, and he also found evidence of the key role of the

public schools. However, he provided us with evidence on the slowly

declining contribution of the public school's role.17

From the above analysis, one can argue that élites in Britain are

based mainly on particular social origins and are products of parti-

cular educational institutions, public schools and Oxbridge. While in

Egypt, élites come mainly from varied social and economic backgrounds.

It is noteworthy that in Egypt there are no particular élitist schools

or colleges that might have established a reputation for producing

successful managers or leaders as those in the UK.

Let us turn now to a discussion of Egyptian society in order to iden-

tify the ideology of the Egyptian army élite, especially towards

selection of new recruits who will attend the training programmes at

the military academy. It is appropriate from the analytical point of view

to explore and examine the historical background of the Egyptian army
élite and the nature and the structure of the army élite in the
context of the Egyptian society.

Historical Background of the Egyptian Army Élite

Egypt has had three almost completely separate armies in the modern
period.

The first was created by Muhammad Ali and lasted until it was totally
disbanded by the British after their occupation of Egypt in 1882. Its
senior officers were drawn almost entirely from the Turco-Circassian
ruling élite, although there was some scope for native Egyptians to
rise to the rank of Colonel, NCO's and soldiers were drawn almost
exclusively from the peasant population. Training and most of the
equipment was provided by foreigners.

The second army was the Colonial army established by the British.
This was a much smaller organisation and was confined largely to
internal security duties. Once again its senior officers came from
the old landed élite. But some middle-class boys with a secondary
education were allowed to enter, particularly after the rules
governing admission to the military academy were relaxed in 1936. [18]
By the time of the Palestine war in 1948 this army was 20,000 in
size. [19]

Finally, a third army was created after 1952 with the special role of protecting the country from foreign attack. It was very much larger than the pre-revolutionary army and soon began to have to alter its organisational structure and its technical training to accommodate large quantities of most Russian weapons systems. It is the officer corps of this new army which constitutes the subject of this thesis.

It should be noted, however, that the army expanded at such a fast rate to over 315,000 (180,000 conscripts) by 1983/84, and that its officers were drawn from a very much wider social strata, thereby making its analysis very much more difficult.20 At the very least, it took some time for new patterns of professionalism, of technical training and of ideology to develop in such a way that they can become an object for sociological analysis. However, some idea of the speed at which new officers (élite) were recruited can be seen from the following table:

Table I: Social Background of the Egyptian Army Élite 1950-1984

	1950 [a]		1984 [b]	
	No.	%	No.	%
Upper class	11	64.7	3	3.8
Middle class	4	23.5	63	79.7
Lower middle class	–	–	9	11.4
Unknown	2	11.7	4	5.1
Base of percentages	17	99.9	79	100

Sources:

a.   According to A.Hamrush... op.cit. p.124-125.

b.   Egyptian Army, Officers' Department, 1984.

c.   The Military Balance, 1984/85.

Table I shows that the increase in size of the Egyptian army élite by almost five-fold over that of the pre-revolutionary army, reflected the fact that the army organisations expanded from an organisation with 7 brigades to 15 divisions by 1984.

The most significant development was towards recruitment from a greater cross-section of society. Table I shows that the middle and lower-middle class's contribution was 79.7% and 11.4% respectively while the upper class declined to 3.8% only.

The Nature and the Structure of the Army Élite in the Context of the Egyptian Society.

This section will explore in greater detail the nature and structure of the contemporary army élite in Egyptian society through an examination of its social, economic and educational background. The aim is to establish the effects of such background factors in the shaping of a policy for the selection of new recruits to the military academy.

Social and Economic Background

To understand the social and economic background of the Egyptian army élite, it is important to establish how far a greater freedom of social mobility and economic reform, made possible by the 1952 revolution, are helping to transform Egypt from a peasant society to a modern state.

Social Mobility

The revolution of 1952 inherited a society whose social, economic and political situation was frustrated by problems such as mal-distribution of wealth, slow and imbalanced growth of resources, the conflict between the lower and upper halves of the society, all of which resulted in much social, economic and political unrest. These factors, among others, were behind the 1952 coup d'etat by the free officers. The consequent policies, activities and actions undertaken by the military group resulted in many changes in the class structure of Egyptian society.

The implications of the changes have varied over the last three
decades. It is useful from the analytical point of view to identify
such changes and their effect on the development of social mobility.
For the sake of simplicity, one can identify the following periods:

The period from 1952 to 1956 was characterised by attempts by the
group to consolidate their power, establish their legitimacy, gain
full independence from the British, and some reformist policies.
The most significant step, however, was the issuing and implementation
of the land reform of September 1952, limiting landownership to 200
faddans per family (300 acres).21

The major effect of the land reform law was in the class structure,
primarily at the top, aimed at weakening the landed aristocracy of the
previous regime, and near the bottom of the social scale benefitting
those landless and small peasants.

The period from 1956 to 1960 may be described as the pursuit of
vigorous Egyptianisation policies, hand-in-hand with the establishment
of a basis for industrialisation. The most significant steps were
towards nationalisation of most foreign interests, such as banks, the
Suez Canal Company and insurance companies. This has led to the
exodus of many thousands of foreigners who used to own and manage
these interests and necessitated Egyptians moving in to fill the
vacuum. This situation created a greater demand for a new generation
of managers, engineers and similar skilled manpower which had to be

drawn and trained from the middle and lower classes. The major

effects on the class structure was the opening up of channels of

social mobility.

The period from 1960 to 1967 witnessed fundamental social and economic

transformation resulting in probably the biggest change in Egypt's

stratification system this century.22

The fundamental and far-reaching changes in this period were the

issuing of the socialist laws of 1961, and the creation of a National

Charter in 1962. These involved the expansion of the public sector to

lead the country's economic development, the new policy of employing

all university graduates and the promulgation of the second land

reform which set a ceiling of 100 faddans per family.

The significance of these changes on the shape of the class structure

and social mobility were quite extraordinary. The expansion of the

public sector and the creation of new industries substantially

increased the demand for new skills. This demand was met by a corres-

ponding expansion in the state education system. The following table

illustrates the expansion in secondary and university education since

1952:

TABLE 2 - Secondary Schools and Universities Population in
          Egypt 1953-1982

	1953/54	1968/69	1981/82
Secondary Education			
Number of schools	286	671	1641
Number of pupils	111,000	221,000	1,209,000
University Education			
Number of universities	4	-	12
Number of students	54,000	193,000	595,000
Number of graduates	5,000	24,000	83,000

Sources:

- A statistical year book, 1960 & 1981, CAMPAS, Cairo.

- A statistical glimpse, 1983, CAMPAS, Cairo.

Table 2 shows the huge increase in the secondary school and university
annual outputs between 1953 and 1982. Within the general policy of
educational expansion, university education was proportionately more
privileged. Between 1953 and 1982 the number of secondary school
students grew by ten-fold (it doubled in 1969). The number of graduates from
the universities increased by sixteen-fold (it increased five-fold
in 1969).23 The figures are clear in showing that the educational
system has been more oriented to higher education.

This period had marked re-distributive effects in favour of the middle and lower strata. For instance, the policy of expansion in state education at all levels, particularly university education, and the policy of employing all university graduates meant the entry of hundreds of thousands into white-collar and civil service jobs.

The period from 1967 to 1970 was taken up with many difficulties which had serious military and political complications. The six-day war and its aftermath, the drain of the Yemani war and the termination of American aid, among other factors, had seriously and profoundly affected class mobility of the class structure. The increasing military expenditures (averaging between 21 and 25% of Egypt's national product on one hand, and the loss of the Suez Canal revenues and Sinai oil fields on the other hand, resulted in the slowing down of Egypt's rate of growth.24 The implication for the shape of the class structure and social mobility was stagnation with no further moves towards socio-economic developments.

The period from 1970 to 1977 witnessed the October War in 1973 and the institution of open-door economic policy. The flow of foreign aid and Arab capital, the resurfacing of the private sector in medium and small industries, among other factors, characterised this period as one in which socialism began to find itself stagnating.25

The period from 1977 to 1984 may be characterised as a mixed one. The open-door economic policy increased, the flourishing of the private

sector and the call for dismantalling of the public sector, among other factors, made this period one of variety. The most striking social and economic events in this period may be considered to be the large-scale academic, technical and skilled workers' migration to neighbouring Arab countries, estimated in 1982 to total 2,300,000 people. The economic consequences of this migration were that the volume of remittances had grown from $268 million in 1974, to $2,000 million in 1980.26 This represents a 200-fold increase in one decade.

The impact of these events on the class structure was to increase enormously upward social mobility for both rural and urban emigrants. Dessouki and Ibrahim et. al. argued that any income redistribution taking place in the 1980's favoured the wealthier classes or those benefitting directly or indirectly from emigration, while the existing policies lowered the real income of the traditional middle class.

As we have seen, each of these periods is profoundly different from one another and have, in fact, left a deep imprint on Egypt's economic and social structure. However, in order to obtain a closer picture of the social and economic background of the army élite, it is important for our general purpose and for the analysis, to examine the income distribution of Egyptian society.

As far as the class structure is concerned, the Egyptian economist Ibrahim Saad Elddin, carried out a survey in 1979 to dipict the 'stratification configuration' of the city of Cairo. Although the

survey was of the city of Cairo, the data captured most of the picture

for other cities in the country and offers the best available data

with respect to our investigation.27

From his data, Egypt's class structure can be classified in the
following table:

Table 3:   Income Distribution Among Urban Families in Egypt in
           1979. (percentages)

Class	Income Categories (Egyptian pounds)	Percentages
1. The lowest stratum	Less than 300	11.2
2. The low stratum	300 - 500	10.3
3. The low middle stratum	500 - 1000	26.5
4. The middle stratum	1000 - 2000	36.1
5. The upper middle stratum	2000 - 3000	15.3
6. The upper stratum	Over 5000	0.6

Source: Ibrahim.... op.cit., 1982 pp.421-425

It should be noted from the outset that the overall annual growth rate

increased the average of family income in Table 3 above by 8.5 per

cent according to the last five year plan from 1977 to 1981, while the

current plan 1981/82 to 1986/87 represents an annual rate average of

11.11 per cent.   So all figures of family income in Table 3 must

increase by this percentage. On the other hand, all figures must be deflated 15 to 20 per cent for the rural families in the villages and hinterland. Finally, it is useful to bear in mind that the poverty line in 1979 was 500 Egyptian pounds.

The poverty line relates to the income necessary to provide a family with its basic needs of food and housing. The concept of a basic need relates to the minimum diet to maintain a healthy existence as defined by such organisations as the Food and Agriculture Organisation and the World Health Organisation. Returning to our theme, Table 3 indicates that more than 21 per cent of urban families fall below the 500 Egyptian pounds category of annual income. This means that more than one fifth of all urban families in Egypt are below or near the poverty line. And if the figures presented in Table 3 are deflated by 15 to 20 per cent for the rural families, this will draw a dimmer picture of income distribution of head of households in rural areas. However, this situation made it quite obvious to the government to intervene on behalf of the poor.

Moreover, the dynamic of economic and social changes brought about by open-door economic policy, has been speeding up, particularly in the period since 1975. The open-door economic policies contributed to setting free the internal forces by reducing or eliminating numerous restrictions imposed on Egypt's private enterprise sector. The government's economic and social policy is pushing for Egypt's re-integration into the system of industrialised countries, and requires

international economic, scientific, technological and cultural co-
operation.28

As far as the social and economic background of the Egyptian army
officers is concerned, they have been found to come from income strata
4 and 5 in Table 3. According to Ibrahim, income strata 4, (the
middle stratum) comprises 36 per cent of families whose annual income
is 1,000-2,000 Egyptian pounds. The heads of the household are likely
to be middle executives, professionals or in senior clerical
positions, most of them having had college education. Their children
seem to have more opportunities to attain a better education.

Income strata 5 (the upper-middle stratum) comprises 15.3 per cent of
families whose annual income is 2,000-3,000 Egyptian pounds. The head
of the family is likely to be college educated and an established pro-
fessional or executive. Most of this stratum are born to fathers from
the middle strata. Their children have attained a better education
than their parents.

However, to understand the extent to which the Egyptian army officers
enjoy élitist positions, it may be useful in the light of our con-
ceptualisation in the first classification of élite at the beginning
of this chapter, to consider the economic status enjoyed by these
officers.

The Economic Status of the Egyptian Army Officers

With respect to the economic status of the Egyptian army officers, the following table illustrates their salary scales and annual increments since July 1983.

Table 4: Salary Scales of the Egyptian Army Officers

Rank	Annual Salary	Year Increment
	£E	£E
Field Marshall	3,180	
General	2,954	99.6
Lieutenant General	2,899	99.6
Major General	2,784	84
Brigadier General	2,592	84
Colonel	2,280	72
Lt. Colonel	1,968	60
Major	1,711	48
Captain	1,433	48
Lieutenant	1,175	36
2/Lieutenant	828	24

Source: Egyptian Army, Financial Department, 1983

If one considers more specifically, the economic status of the army officers at the top echelons in Table 4 above, one will find it to come from the upper-middle income strata of the Egyptian society. In conditions prevailing in Egypt in 1979, people with an estimated annual income ranging between £E2,000 to 3,000 were considered to belong to the upper-middle income stratum.

According to Table 4, the annual income of other ranks in the Egyptian army means that they belong to the middle income stratum.29

It should be noted that the army salary scales, considered alongside those of the rest of the Egyptian salary system, are in a relatively privileged position. It is a position of what has been called a "special" cadre. It is noteworthy that the army shared this position with the police, university staff, judical bodies and members of diplomatic and consular service. They may be seen as the most privileged groups and strata in Egyptian society.30

It should be emphasised at this point that the social and economic background of the Egyptian army élite is being examined in relation to Egypt's socio-economic situation. With respect to what exists in richer societies like the British society, it should be remembered that the social background of the British army élite since the nineteenth century have been based almost entirely on an aristocratic strata. The social and the ideological domination of the army over the rest of society was by a landed element tied by bonds of kinship and connected with each other ideologically by upper class relations. They asserted the primacy of aristocratic values in the military life. As Otley pointed out:

"Courage, honour, dash as opposed to expertise, national calculation and bureaucratic efficiency"31 may be seen as the characteristics which set the army officer apart from other men.

The army élite considered themselves as a superior social class, their superiority did not come so much from position as an officer, but from their family standing. Thus, entry to officerships were granted to individuals largely on the basis of their social origins, wealth and power. The contribution of class in the British army élite, at this stage, is strikingly high between different categories of the aristocratic class. Otley found that a third of all British army élites between the 1910-59 had upper class origins or connections.32 However, the urban and industrial growth of the nineteenth century profoundly affected the social structure of the British armed forces. The military organisation emerged as a modern organisation in a separate bureaucratic form and with a professional structure.

The most important change related to the issue under investigation was in the methods of entry to the RMA Sandhurst. The entry to the academy has been placed on an open competitive basis. However, Otley argued that the rapid industrial and urban growth of the nineteenth century did not affect the pattern of recruitment until the beginning of the twentieth century.33 While Janowitz argued that it was a pattern which generally linked the military to conservative traditions in the English context,34 the social class in the military organisation had to be transformed either by reform from within or by the incorporation of new class elements. The following table illustrates the social origins of the British army élite:

Table 5: Social Origins of the British Army Élite 1959-1984

	1959 [a]		1971 [b]		1984 [c]	
	No.	%	No.	%	No.	%
Upper class	12	33	30	25	15	17
Middle	24	67	91	75	68	77.2
Lower middle	-	-	-	-	-	-
Unknown	-	-	-	-	5	5.7
	36	100	121	100	88	99.9

Sources:
a. According to C.B.Otley, 1973
b. According to J.Wakeford, 1971
c. According to Who's Who, 1984/85
   and J.Whitaker, 1985
   and the British Army List, 1984

It should be noted that 'Upper Class' refers to those officers with a specifically landed or property background while middle class refers to officers with other backgrounds.

Table 5 shows that the composition of the élite which had been drawn from upper class is declining from 33% in 1959 to 25% in 1971, while in 1984 it was 17% only. The middle class contribution, on the other hand, has risen from 67% in 1959 to 75% in 1971 and in 1984 was 77%. The data suggests that in terms of social exclusiveness there was no change with respect to the lower class.

It is clear that the mobility of reform was within the upper and middle class.

Comparing the social background of the British and Egyptian army élites, the following features emerge.

Since the turn of the century, industrial development in Britian had resulted in a social transformation of society. As far as social background of the British army élite is concerned, the British army is shifting its social base from a narrow relatively high social base (upper class) to a broader lower status base (middle class). By contrast, the Egyptian army élite fundamentally has only altered since the 1952 revolution in favour of the middle class. But this is not to suggest that the middle class in Britain is equivalent to its counterpart in Egypt, nor is it to infer that the consequences of this transformation have been similar. For instance, the changes in social structure of the British army élite towards the middle class has taken place at a slower rate, while in Egypt the shifts have radically altered society since 1952. On the other hand, income differences between the Egyptian and the British army officers are quite substantial. The following table illustrates these:

Table 6: Salary Scale of the British and Egyptian Army Officers
         in 1983

	British Annual Salary	Egyptian Annual Salary
Field Marshall	By rank	3,180
General	" "	2,954
Lieutenant General	" "	2,899
Major General	" "	2,784
Brigadier General	25,001	2,592
Colonel	22,970	2,280
Lt. Colonel	19,738	1,968
Major	15,830	1,711
Captain	12,144	1,433
Lieutenant	9,216	1,175
2/Lieutenant	6,500	828

Sources:

   a. The Daily Telegraph, Friday, 13th May 1983

       It should be noted that annual salaries are derived from
       daily rates in whole pence and rounded to the nearest £
       and E£.

   b. Egyptian army.... op.cit. 1983

Allowing for the fact that it is difficult to compare salaries in
absolute terms, and although these figures say nothing about differ-
ences in cost of living, it is still obvious that there exists an out-
standing disparity between salaries for army officers between the two
countries, Egypt and the U.K.

By looking at the salary scales in Table 6 above and comparing the highest
salary of Brigadier General in the British army with his counterpart in
the Egyptian army, the income differential will be found to represent a
ratio of more than 1:9, higher for the British officers.

This indicates not only social distinction, but also relative degree of financial affluence.

Educational Background

The second element in the Egyptian army élite is its educational background. To understand the educational background of the army élite, before entry to the military academy, it is useful to take a look at Egypt's system of education from which the élite recruited.

Egypt's System of Education

Egypt's system of education comprises four levels, the six-year primary school (compulsory), the three-year preparatory school, the three-year secondary school which consists of general secondary school, technical secondary school (industrial, commercial and agricultural) and technician training school, and, finally, the university and higher institutions.

The transition from one level to the next depends on the results of the final examination. It is noteworthy that the standards are so moderate that as many as 50 per cent of the general secondary school students have access to the university level. The following table illustrates the distribution of Egypt's population by educational level.

Table 7: Distribution of Population (over 10 years old) by
Educational Level, 1947-1976 (in thousands)

Educational Level	1947		1960		1966		1976	
	N	%	N	%	N	%	N	%
Illiterate*	10,900	78.0	12,726	70.5	13,770	65.3	15,611	56.5
Read and write	2,911	20.8	4,356	24.2	5,886	27.9	6,923	25.1
Intermediate certification	113	0.8	801	4.4	1,193	5.7	4,475	16.2
College or higher cert.	57	0.4	170	0.9	235	1.1	606	2.2
TOTAL	13,972	100.0	18,053	100.0	21,084	100.0	27,615	100.0

* Including not classified

Sources: Population Censuses, 1947, 1960, 1966, 1976, CAPMAS, Cairo
and Dessouki & Ibrahim & et.al.... op.cit. 1984, p.195.

Table 7 shows that those who read and write alone rose from 2.9

million in 1947 to 6.9 million in 1976. (For 1982, it is estimated

the literacy rate was 8.5 million).35 This represents a four-fold

increase in the last three decades, compared to only a two-fold

increase in total population. In 1952, only one out of every ten

Egyptians was in school, the proportion was one in five, thirty years

later.

The growth has been most impressive in intermediate education (pre-
paratory and secondary schools) from only 0.8% in 1947 to 16.2% in
1976, and in the higher education, from 0.4% to 2.2%.

Illiteracy rates (among the population over 10 years old), have
declined from 78% in 1947 to 56.5% in 1976, this trend is likely to
continue in the future. (For 1983 it is estimated at 45%).36
But the sad fact remains that with population growth, from 13.9
million in 1947 to 27.6 million in 1976, the net numbers of
illiterates have in fact grown from 10.9 million to 15.6 million.

With respect to the educational background of the army élite, before
admission to the military academy, it was found to be at GCE level
(equivalent to 'O' level) with suitable grades (55%) from state
schools.37 It should be noted that state secondary schools offer a
number of curricular options in two broad categories, general and
technical. The general student may study either a scientific or a
literacy programme. The main features of the general secondary pro-
grammes are academic while technical secondary programmes are offered
in a variety of vocational programmes such as industrial, commercial
and agricultural. The entrants to the military academy come from the
first category. Moreover, since the 1950's, these schools have
provided their boys with basic military training. Military training
was compulsory in all Egyptian state schools, offering elementary
pre-service training in an attempt to introduce proper candidates for
entrance to the military academy until 1970.

As far as educational background of the British army élite before admission to the RMA Sandhurst is concerned, it was found that the entrants to the military academy under open competition who achieved the ranks of Major General, Lt.General, General and Field Marshall, were almost all young men from independent schools which were members of the Headmasters Conference, i.e. they were schools which are popularly known as public schools. The following table illustrates the contribution of the public schools in supplying members to the British army élite:

Table 8: Educational Background of the British Army Élite 1959-84

	Public Schools		Grammer Schools		Others		Unknown		Total
	No.	%	No.	%	No.	%	No.	%	
1959 [a]	29	80.6	4	11.1	2	5.6	1	2.8	36
1971 [b]	88	72.8			17	14.1	16	13.1	121
1984 [c]	57	64.7	10	11.4	16	18.1	5	5.7	88

Sources:

a. According to Otley, "The Educational Background of British Army Officers", Sociology, Vol.7, No.2, 1973, pp.70-73.

b. According to Wakeford, "Educational Background of Members of the British Army élite in 1971", Sociology, Vol.7, No.2, 1973, p.199.

c. MoD (UK) Statement on Defence Estimate, Cmnd.9430, No.II, 1985.
and Who's Who, 1984/85
and J.Whitaker, 1985

Table 8 above shows that the role of the public schools in supplying the British army élite has been remarkable, particularly in the evidence given by Wakeford in 1971 which represents the highest ever number in the army élite educated via public schools at any time in the past twenty-five years.

Otley has pointed out that:

"The public schools, reformed and expanded in the last century, had become a character training centre for the personnel required by the new middle classes and by developing Home and Imperial State apparatus". Boys were trained to be leaders, absorbing an ethos combining notions of command duty and privilege via a modified classical curriculum and ordered corporate living. They thus naturally gravitated towards service careers, which in any case had long been endorsed by the aristocratic ethos as suitable occupations for "gentlemen".38

The structure and culture of the British public schools since the last century are structured on semi-militaristic lines as a system of preparation for service entry and have associated facilities and training for this purpose. In general, there was a close relationship between the schools and the services regarding officer entry, and the relationship was overseen and scrutinised by official bodies under the general guidance of the State. Certain schools have a long connection with the services and the army's image has become an integral part of school tradition through the generations.

The school military training was provided via the system of junior units of the Officers Training Corps (OTC) accompanied also by Combined Cadet Force (CCF) contingents, which as the name implies, combine air-force, army and naval units.

The school cadet system has functioned to orientate boys towards military service to encourage them to take up military careers, to equip them with a basis of necessary skills and implant habit of thought and action consistent with military roles. It has been clear that the public schools were significantly militaristic in character.

From the above analysis of the educational background of the British and Egyptian army élites, it is clear that in Britain the prestigious public schools still enjoy considerable dominance in the army élite structure. While in Egypt, no particular schools have established themselves as specific educators of the Egyptian army élite in any similar way. Nor is the educational system characterised by a distinction between two kinds of schools such as public and grammar schools, whereas in the British system, one of them is unmistakably élitist.

In short, the interplay of social origins and educational background in Britain still provides the two dimensions constituting the base of the British army élite structure. By contrast, in Egypt the two dimensions seems to be working in opposite directions, by neglecting recruitment to the army élite from the upper class in favour of the lower social class.

The Relationship Between the Military and Egypt's Ruling Élite

Two elements in the army elite structure in the context of Egyptian society have been examined so far, socio-economic background and educational background. To complete the picture it is useful to consider the relationship between the army élite and the ruling élite. This relationship had developed through four major periods as follows:

A period of military rule existed from 1952 to 1955. The Revolutionary Command Council (RCC) assumed power in 1952 and a new era of Egypt's political life started. Political parties were requested to purge themselves of corrupt elements and in January 1953 they were banded and a mass organisation, the Liberation Rally, was launched in an attempt to fill the vacuum.39 In June the monarchy was abolished and the Republic of Egypt established.

This was followed by a period of growing dual power from 1955-1967. The abolition of political parties was to be followed by revolution in the social, economic and political life of the country aiming to bring in unity, order and work. The military élite found themselves in key positions reponsible for the planning of social, economic and political policies. This made it impossible for them to remain confined to the military jobs. To avoid the duplication, Nasser, as a leader of the RCC, suggested that the RCC members must choose between a civilian or military career; most chose civilian. Nasser, in his effort to re-establish civilian control over the state apparatus,

including the army, formed the Arab Socialist Union (ASU) in 1962 to be the nation's single political organisation and to represent the interests of all popular forces.40 With respect to the armed forces, Marshall Amer, the most trusted free officer colleagues to Nasser, was promoted from Chief of Staff to Minister of War and later appointed to the new office of First Vice-President. The appointment of Amer in this civilian post implied that the army has a role to play in the society but, on the other hand, denied it the chance of developing the army's professional ethos.

In his long tenure as Chief of Staff and Minister of War, Amer made the armed forces his constituency - one with which he could and apparently did threaten Nasser's power. Roger Owen has studied the situation which developed and pointed out that it is a period of dual power in which Field Marshall Amer was able to use the military as a base from which to extend his own power into the rest of the government apparatus.41 For instance, in the War in the Yemen of 1961-1967 Amer has had a greater freedom to promote and assign military personnel according to his political ambition and in order to build military loyalty.42 What was significant about this trend which became fairly widespread throughout the Yemen War was the promotion of officers without adequate time or training in their ranks and this upset the army's hierarchy of ranks and career expectations. The rout of the Egyptian forces in the 1967 war was due, in part, to this trend.

A period of re-professionalisation of the armed forces took place
between 1967 and 1979. One of the most important lessons learnt from
the 1967 war was that victory cannot be won without preparing the
armed forces for the battle properly. If preparations are well made,
victory will be secured. Immediately after the 1967 setback, prepara-
tion for the October 1983 war had begun. Great emphasis was placed
on expanding the organisation as well as on the technical competence
of the armed forces. Nasser declared that re-equipping of the armed
forces was the first priority and he appealed to all Egyptians and the
Arab oil-exporting countries to participate in the struggle against
the country's enemies. The defence expenditures increased to 25 per
cent of Egypt's national product. (9.5 billion). Moreover, Nasser had
re-organised and trained the armed forces with the help of the Soviet
Union, the main supplier of Egyptian arms. In obtaining Russian
armaments, one purpose was to achieve the balance of equipment against
that of the Israeli army. It is interesting to note in this regard
that, whenever Israel or America spoke of the military balance in the
Middle East, they meant a balance weighted heavily in Israel's favour,
and the USA was always ready to supply arms.43 In any case, the
Egyptian armed forces had extensively re-organised, trained and well-
equipped with sophisticated defensive weapon systems. The successful
war of October 1973, under Sadat, including the storming of the
Israeli fortifications on the East Bank of the Suez Canal, the so-
called Bar lev line, proved that some of the reforms had had an
effect.

The 1967 and 1973 wars should be considered a turning point for the
promotion of combat readiness in a scientific and technological sense.
This signified the need for new weapon systems. Egypt adopted a new
policy of diversification of its arms supplies. The country's pro-
curement programme now includes arms and military equipment from
France, the UK and others such as the USA and Italy. Moreover, the
Egyptian arms industry has also been given a big boost with the idea of
exporting part of the output to Egypt's partners. In collaboration
with European countries, an initial deal with France ($2 billion) was
made in 1975 for a wide-ranging purchase of weapons and equipment and
the provision of technical know-how to the first Egyptian aircraft and
armament industries.44 The recent launching of the sophisticated
Alpha-Jet aircraft produced by the Arab Industrialisation Organisation
in October 1982, and the production of artillery, missiles, anti-tank
guided missiles currently by the Arabian-British Company for Dynamic
Industries attests to the success of this venture. The implication of
adopting a new weapons system was that there would need to be a major
re-organisation of the army units as well as a revision of the army
training to keep pace with new acquisitions, as we will be discussing
in a later chapter.

Sadat, after the October War of 1973, built up army prestige, giving
it a place of honour in society at the same time discouraging its
participation in politics.45 In 1975 the ASU Congress resolved to
establish political groups called "Manabir". It was time for a change
including a proposal for strengthening civilian participation based on
a wider involvement of a new generation of civilians, mainly engineers,

academics, lawyers, economists in the cabinet. Engineers constituted

the second major source of recruitment for the ruling élite. Under

Sadat government, engineers represented 20.5 per cent of all ministers

as compared to 14.5 per cent under Nasser. Many of these engineers are

highly qualified technically, and have used their position as members

of what Ayubi has called the emergent Egyptian "technocracy" to gain

power and status. Egypt, according to Ayubi is a "curious case of

'technocracy' in an under-developed country".46 However, the power of

this technical group should not be exaggerated because members of the

élite derive support from the President of the State who is always a

military man and has always enjoyed superior power and the final say in

vital decision-making. This does not suggest, however, that the

members of the élite are completely unable to defend their own

interests or to influence policies and programmes.

As far as the Egyptian policy is concerned, by 1976, Sadat had set the

guidelines for introduction of controlled multi-partyism. It is the

multi-party system which exists in the current phase (six political

parties will contest the coming general elections in 1987).47

The period 1979-1985 has seen the development of a large professional

army with an important economic role. An acute observer of the

Egyptian society has written:

"One aspect of Egyptian society in which change and development has

come about is the army. It has provided a means of education and

social mobility and of reaching the top in politics. It has
emphasised the concept of discipline. It has fought at least four
campaigns or war in which national prestige was at stake".48

Pressing demands made on Egypt's armed forces by the Arab world and
for national security constituted a greater necessity of professional-
ism for the army officer corps. An officer's level of professionalism
has increased over the years, through having command forces in
full-scale modern warfare at every stage of his career, as a junior
officer in 1956, a middle rank officer in the Yemen in 1962 and Sinai
in 1967, and a senior officer in the October war of 1973. This
permitted more development and a greater sense of professionalism among
the army officers. Moreover, all Egyptian army officers must attend
the four or five year undergraduate degree programmes (bachelor degree
in administration and engineering science plus military training at the
military academy). As a middle rank official to be eligible for
appointment to the general staff of any unit, an officer must pass the
extremely difficult entrance examination to command and staff college,
and then attend a course of two year's duration. Finally, those senior
officers who will have command responsibilities, must attend the two
year's course at the high Nasser military academy. In addition, there
are opportunities for study abroad, mostly in Britain, France and the
USA, but after 1956 they have shifted to the Soviet bloc countries, and
since 1973 they have been mainly in the West once again. This
certainly does tend to broaden an officer's perspective at middle and

senior level and make the level of professionalism equal to that of his counterpart in both the East and the West.

The formal training plus the acquisition of technical skills derived from the experience of wartime has made the army officer corps fully equipped for the complex role they have to play in military institutions, as well as in Egypt's social and economic development process. For instance, the war experience, particularly for those who served in the engineer units, developed their skills in such a way that they were able to bridge the Suez-Canal as a water barrier and destroy the so-called Bar lev line. Such experience qualified them for building bridges, roads and communication systems, which are also important to development process. There is little doubt that the armed forces will play an important role in the future with regard to social and economic development in Egypt.49

This role of the military is taken by some sociologists as evidence that the military institutions are adopting new tasks. In fact the broadening of the officers' role may constitute a phenomenon that has little to do with the professions and far more to do with the power of a given organisation to spread its sphere of influence.50

However, the economic problems facing the country made it necessary to use the military establishment for economic and social development. This self-image supplements the main objective of the military as an organisation with a mission to defend the nation. In other words, this

partial use of the military establishment for development tasks must
be organised in such a manner that, on one hand, its defence pre-
paredness is not impaired in any way and, on the other hand, to act in
co-ordination with civilian institutions in order to prevent any
potential conflict.

Thus, the main influences in forming the ideology of the Egyptian
army élite are likely to come from its own organisational necessities
(including nation building needs), its own professional needs
accentuated by having fought four wars, and by sharing international
norms via frequent training abroad, and the necessity of using modern
military technology.

The combination of these factors is what has given the Egyptian army
élite their ideology of recruitment and training at the military
academy.

With respect to the British army, the relationship between the military
and the civilian ruling élite has not been a sharp turning point as in
Egypt, since the formation of a permanent force over 300 years ago, it
has owed allegiance to the monarch while being effectively controlled
by politicians.51

Progressively, industrialisation has brought a rigorous hierarchy in
both the civilian and the military sectors which delineated both the
course of authority and prestige of the army élite. The common

ideology was that the military will embody the views of the ruling
élite in British society. Political control is civilian control;
correspondingly, the military is responsible because it is a part of
the social structure. This ideology has led to the development of
effective civilian control. It is worthy of note that this pattern of
control by the British army has continued to the present time. It is
still the responsibility of Parliament to pay for the army through the
annual Defence Estimates and to renew its terms of discipline through
the Army Act.52

Many observers agree that it is this, above all else, that has success-
fully prevented military intervention in British politics over the last
three centuries.53 This might be mostly related to the depth and
authority of civilian institutions in this country which have
decisively prevented the military from playing any role in British
politics. As S.E.Finer once explained; the British army élite put in
a context of full legitimised civilian control. In other words, it
lacked both the disposition and opportunity to intervene in domestic
affairs.54

The significance of such relationships between the military and
civilian ruling élite, with respect to our investigation, is that the
military élite established its own ideology, based on its social com-
position and professional experience, accentuated by extensive combat
experiences, almost continual operational experience (World War I and
World War II plus colonial wars) where officers have had opportunities

to demonstrate their talents through an impressively high level of professional achievement. For instance, British army units have a long history that, unlike several other European military organisations, has not been marked by a serious disruption (such as defeat, in the case of France and Germany).55 This impressive achievement constitutes the main influence in forming the British army élite ideology. Furthermore, the ideology fostered in British military organisations has been of the traditional type of leadership, that emphasising the definition of the officer as a gentleman which, in turn, derives from a traditional conception of the officer role.

Currently, the British as an all-regular volunteer force, maintains the highest professional standards and is equipped with the most modern weapons. All-regular volunteer forces in the British army have necessarily to be compatible with the maintenance of a predominantly professional military establishment, and this could be more suitable for the UK in her situation with NATO. It has long enjoyed a reputation as one of the most professional and capable armies in the world.

Recruitment Policy at the Military Academy of Egypt

It has already been argued that members of the Egyptian army élite have

three factors in common; the first is that by social background, they

are mostly sons of middle class families, and the second is that by

economic status, they represent, along with others, a special cadre

or a privileged group in society. Thirdly, by educational background,

they are formally educated and graduates of the military academy.

Moreover, members of the élite have had long periods of service accentu-

ated by participation in four wars, frequent training in and out of the

country and use of foreign weapon systems; all these are factors which

unite the army élite and make it constitute a cohesive and homogeneous

élite ideologically.

This section will present the army élite policy towards recruitment of

those who will attend the training programmes at the military academy,

through the analysis of; source of recruitment, technical trends and

assessment of entrants.

Source of Recruitment

The main source of officers is now, and is intended to remain, the

military academy of Egypt. The most important source of entry is

directly from the state schools all round the nation, and from the

military secondary school at Giza. There are other sources of entry to

the military academy, from Egyptian universities and the Egyptian army,

but these sources provide only a few.

The following table illustrates the main sources of recruitment.

Table 9: Sources and Previous Education of Entrants to the Military
          Academy in Egypt (in percentages)

Type of Entry	1963	1973	1982	1984
State Schools	90	80.2	69	68
Military Secondary School	00	9.0	20	21.3
University entrants	8	8.0	8.5	7.7
Army entrants	2	2.8	2.5	3
TOTAL	100.0	100.0	100.0	100

Source: The Military Academy, Enrolment Office, Cairo, 1982 and
          1984.

1. School Entrants

Since 1952 the cadets come from a great variety of social backgrounds.

The social bases of recruitment are much broader and this has been
accomplished partly by making the conditions of entry into the officer
career as varied and flexible as possible. Flexibility has been
achieved through the creation of various types of commissions (BA and
BSc) which have different standards and modes of entry. The varying
conditions of entry have made it possible for the Military Academy to
range widely in its efforts to attract the maximum number of eligible
candidates. (The existing standard of entry is GCE level, equivalent
to an 'O' level of 55% in all grades).

As Table 9 shows, in 1963 90% of the cadets who entered the Military Academy were from state schools. However, between 1963 and 1973 the proportion of state school boys as a percentage of the total number of cadets entering the MA was 80%. This proportion fell in 1982 and 1984 to 69% and 68% respectively. Because the supply of new cadets started to turn towards the new military secondary school system, which was instituted in 1970, it is worthy of note that this school is now supplying more than one-fifth (21.3%) of the regular cadet entry into the Military Academy. The school has been in operation since 1973 and the system offers elementary pre-service training through military and non-military studies throughout the three year terms.56

2. University Entrants

The number of university entrants has been very low, 7.7% in 1984, Table 9. The main reason for this lower proportion of the university entrants to the Military Academy is that the shortage of these special-ists is covered by the university graduates from the conscription system and "reserve officers".

However, university entrants are essential to fill the specialist posts such as doctors, dentists, lawyers, technicians.... and so forth.

3. Army Entrants

The number of entrants from the army has been very low indeed, 3% in 1984, Table 9. Candidates from the army must have gained the GCE level of 55% in all grades before they are eligible to appear at the Military Academy Council to test their characteristics as regular army officers.

Technical Trends

In the last three decades in particular, however, important changes

have occurred in Egypt's armed forces, technically and socially, which

have broadened the responsibilities of the military beyond those areas

associated with the organisation and training of a military force, the

planning of its activities and its direction in and out of combat.

The accelerated pace of technological innovation, associated with the

speed of replacement of equipment and weapon systems on the one hand,

and increased complexity and sophistication of weaponary and methods of

army units (organisation) to carry out their mission on the other hand,

produces an increased demand for highly skilled personnel, whether

officers or enlisted men.

This has necessitated the need to know the technology imported from

both East and West but also the deployment of such technology quickly

enough to outflank the potential opposition.

The advantages of such a system are that it produces the requisite

numbers of personnel with adequate skills required to meet the service

responsibilities in terms of national defence; it also provides a

greater degree of career satisfaction to more officers at all levels,

particularly those who will take part in the national development

process.

With respect to the social and economic contribution by the armed forces, the idea is that the military, as an organisational and technical institution and apart from its purely defensive tasks, could help in socio-economic developments.

The implication of these military and civilian requirements makes it necessary to adopt a new philosophy towards training programmes in order to provide suitably qualified officers to meet these broader responsibilities in and out of combat. Consequently, training pro-grammes at the Military Academy are geared towards obtaining a civilian bachelor degree in administrative and engineering sciences.

Assessment of Entrants

All candidates must undergo a series of tests and assessment to prove that they possess the qualifications and the qualities required for attendance at the training programmes at the Military Academy. The assessment of individual intelligence and vocational skills is per-formed by means of written tests and interviews.57

Let us now turn our attention towards the recruitment policy adopted by the British army in selecting an officer corps or élite.

The following table illustrates the main sources of recruitment to the RMAS:

Table 10:   Sources of Entrants to the RMA Sandhurst 1947-1983

	1947 [a]		1950 [b]		1960 [c]		1967 [d]		1983 [e]	
	No.	%	No.	%	No.	%	No.	%	No.	%
Public Schools	237	65.1	199	60.9	128	51.2	92	45.7	79	48.7
State Schools (grammar & others)	127	34.9	121	37	72	28.8	87	43.3	83	51.2
Welbeck School	-	-	-	-	44	17.6	22	10.9	-	-
Unknown	-	-	7	2.1	6	2.4	-	-	-	-
TOTAL	364		327		250		201		162	

Sources:

a & d   According to M.Garnier, 1972, p.502.

b & c   According to C.B.Otley, 1973, p.198.

e   According to The MoD, Director of Army Recruiting in the UK, 1983
         and Statement on Defence Estimate, Cmnd, 9430, I,1985.

Table 10 makes it clear that an irreversible decline in the role of the public schools has now set in, and that other sources, including state schools and Welbeck College are taking over the major role in the supply of new entrants. Although this change is a slow process, it reflects the social and educational changes in the British society outside the RMA Sandhurst.

Social and educational changes in British society have resulted in changes in the principles of military selection by creating an increasingly open recruitment policy, which made the conditions of entry to the RMAS varied and flexible. Flexibility had been achieved through various types of commissions which have different standards of modes of entry from schools, universities and the army.

1. School Entrants

The educational level of schools entry for potential officers is now as follows:

- Regular Commission (career to age 55):
  2 General Certificate of Education passes at Advanced level
  ('A' level) and 3 at Ordinary level ('O' level grades A-C).

- Special Regular Commission (16 years career):
  4 'O' levels from certain categories of entrant but more usually
  5 'O' levels 2 of which are 'O' level passes on 'A' level papers.

- Short Service Commission (3-8 years):
  A minimum of 5 'O' levels.58

It can be seen from the above that the educational background of school entrants to the RMA Sandhurst (of those regular commission of 2 GCE passes at 'A' level and 3 at 'O' level) may be considered very highly comparable with the existing standard of educational background of

school entrants at the Military Academy of Egypt ('O' level of 55% in all grades).

2. University Entrants

Graduates are commissioned annually from the UK universities. They are an excellent source of supply of officers. The number has recently risen to 43% of the annual input of the RMA Sandhurst.59

As in Egypt, the university entrants are essential to fill the specialist posts such as engineers, doctors, dentists, chaplains, lawyers.... and so forth. However, in the Egyptian army the main source of these specialists is conscripts and reservist officers, while in the UK the British army is an all-regular army, and the main source of recruits to this category is the universities.

The British army made every effort to attract a proper proportion of the brightest young men, in competition with industry. The army has often granted a sponsored university bursary to any young man who has stated that he wished to join the army as an officer after he had already gained a place at a similar university by his own academic efforts, but chose to go to university from school rather than to the RMA Sandhurst. After he has his degree, he can join the RMA Sandhurst on a post-university course to complete his professional training. Moreover, by arrangement with the civilian universities as well as Shrivenham, the army sends a large number of officers annually for engineering and arts degrees, and a lot of effort has been made to send more officers by extending these arrangements to cover the broader

fields of many other universities throughout the United Kingdom. For instance, in 1975 169 serving officers and 11 university cadets are reading for degrees in Engineering and Applied Science at the Royal Military College of Science (Shrivenham). In addition, 88 serving officers and 126 university cadets are at civilian universities.60

3. Army Entrants

As in Egypt, the entrance from the ranks of the army is still a small source of supply of officers (5%).61 A prospective candidate for a "regular or short service" commission must have the equivalent of 5 'O' levels. The candidate has an automatic right to one appearance at the Regular Commissions Board (RCB) for a test of character as a regular army officer.

Technical Trends

With respect to the technical trend of the British army, the increasing complexity in nature and size of the structure of military organisations as a result of the extensive use of weapons and equipment and electronic devices is the major cause of the changes in the skill structure of officer groups which compelled the armed forces to recruit and promote increasingly on technical competence.

As a Report and Recommendation to the Secretary of Defence in the UK, December 1969 pointed out:

"The trend in recent years, caused by the use of complex weapons
systems, has been toward increased specialisation of line officers
in order to retain within the line the knowledge required to command
modern forces effectively".62

To meet these requirements, the British army recruits personnel either
with the requisite skills or with aptitude for training in these
fields. Thus, Welbeck College had been established to fulfil this new
recruitment policy. Welbeck College was established in 1953 with the
objective of tapping a new source of supply of suitable candidates for
the RMAS. When the cadets are eventually commissioned, they go to the
technical corps of the British army.

It can be seen from the above analysis of technical trends in both the
British and the Egyptian armies that as the need for technological
innovation becomes more and more pressing, the Egyptian army élite
becomes more and more reliant on the growing pre-eminence of
technology as an objective in establishing a modern army. As far as
the recruitment to the Military Academy is concerned, policy is based
on recruiting those who have aptitude for and interest in training in
administrative and engineering sciences, regardless of their social
background. In contrast, the British army is a highly technological
army and the ideology prevailing in its élite is to recruit their
members from special social and educational backgrounds which have
established their own technical training schools in order to have
specialists with appropriate professional technical skills.

Assessment of Entrants

One of the most important points relevant to the issue under investi-
gation is the methods of assessment of the new entrants. The inter-
views with the Royal Military Academy Sandhurst Staff in 1983 and with
the Ministry of Defence, Directors of Army Training Staff in 1983, 1984
and 1985, and the correspondence with the Director of Army Recruiting
in 1983, have all confirmed that the main requirement for selection of
new entrants and for their suitability to attend officer training
programmes at Sandhurst, is leadership qualities, and all candidates
(except Welbeck candidates) must be selected through the Regular
Commissions Board (RCB) where they undergo a series of tests to dis-
cover what they believe to be the leadership qualities required for an
officer.

The RCB systems for selection are as follows:

- The use of psychologically qualified selectors;

- The assessment of personality, intellegence and vocational skills
  and orientations by means of written tests and interviews;

- The use of group tests and practical "leadership" test situation
  and the use of participant observation.63

On the basis of the analysis of policy presented above, it can be seen
that the criterionthat is in use by the RCB for securing a steady flow
of high quality candidates based on leadership qualities 'Traits

Theory' is in fact a disguise to hide the class culture of the British army élite. In spite of the fact that there has been a broader recruitment policy by open competition, the RCB still shows a preference for those candidates who have leadership qualities. It presumes that these qualities of character are most clearly implanted in public schools candidates from the better off social strata.

There is other evidence produced by Westbury's analysis which indicated that in 1970,65 per cent of the officer candidates who had attended the élite public schools were admitted to an officer school, while only 22 per cent of all candidates coming from grammar and other schools.64 Moreover, according to Garnier (1972), 75 per cent of all officer candidates are rejected, in spite of the fact that the British army is undergoing recruitment difficulties.65

G.Salaman and K.Thompson in 1977 studied the culture factors which influenced those responsible for selection process (senior officers of the RCB) and they illustrated their study by an example of a real selection procedure between two candidates, one from upper class and the other from working class. The study suggested that the culture and the values of upper class are still predominant amongst those officers of the RCB who run the selection procedures. When choosing, they prefer the candidate who is 'like them' who displays a commitment to the cultural values of those staff who run the selection procedures.66

The point being made here is that the British army élite by using a trait theory 'leadership qualities approach' in selecting new recruits to the RMA Sandhurst is, in fact, trying to be homogeneous in order to maintain their social stratification. Despite social changes in British society, (as a result of industrialisation developments which have resulted in an increasingly open recruitment policy), changes in the composition of the army élite structure (shown in Table 10) have occurred at a much slower rate. (See Table 10).

As far as the Egyptian army is concerned, the analysis confirmed that only the tradition criteria of interview and written tests are in use in assessing the suitability of new entrants. This differs from the situation in the United Kingdom where additional tests are used such as those specifically designed to assess leadership qualities.

Under the impact of technological changes on the military organisations of both armies, many questions have to be answered:

Does the leadership qualities approach, as a policy of recruitment to the British army, offer clear guidance or criteria to identify and measure actual relevant behaviour to which one can apply these criteria with precision?

Can the Egyptian army learn from the British experiences in recruitment policies?

These questions will be analysed in Chapter 4 of this study.

NOTES TO CHAPTER 1

1. 'The Egyptian army élites' refers to those who have the greatest
    amount of power at the top echelons of the army chain of command,
    Major General, Lieutenant General, General and Field Marshalls.

2. Stanworth, P. & Giddens, A. Élites and Power in British Society.
    Cambridge University Press, 1974.

3. Bottomore, T.B. Élites and Society. Penguin Books, England 1964.

4. Wright Mills, C. The Power Élite. Oxford University Press, New
    York, 1956.

5. Parry, Geraint, Political Élites. General Allan and Unwin, London,
    1969.

6. Ibid. p.68.

7. Nadel, S.F. "The Concept of Social Élites". International Social
    Science Bulletin, Vol.VIII, No.3, 1956, pp.413-18.

8. Parry, G.... op.cit, p.98.

9. This situation may exist in all developing countries and it is the
    individual, either alone or within the group or family who reacts
    with changes by adopting new attitudes or views. Some changes are
    planned by modernising leaders, others happen through social
    mobility, but it is always the individual who may accept or reject
    such changes. For more detail see Derek Hopwood, Egypt: Politics
    and Society 1945-1981. George Allen & Unwin, London, 1982, ch.9.

10. Parry, G. ...op.cit, p.99.

11. John Rex, "Capitalism, élites and the ruling class", in P.Stanworth
    Giddens, A (eds). Élites and Power in British Society, Cambridge
    U.P. Ch.12, 1974, p.215.

12. Nazih Ayubi, Bureaucracy and Politics in Contemporary Egypt. The
    Middle East Centre, St.Antony's College, Oxford, Ithaca Press,
    London, 1980.

13. Vatikiotis, P.J. The Egyptian Army in Politics. Greenwood Press
    Publishers, Westport, Connecticut, 1961 and 1975; Nasser and His
    Generation, Groom Helm, London, 1978 and "Some Political
    Consequences of the 1952 Revolutionin Egypt; in P.M.Holt (ed.)
    Political and Social Change in Modern Egypt, Oxford U.P. London,
    1968, pp.362-387.

14. Anthony Giddens, "Élites in the British Class Structure"; in
    Stanworth, P & A Giddens, Élites and Power in British Society...
    op.cit. ch.1, pp.1-22.

15. Otley, C. "The Social Origins of the British Army Officers",
    The Sociological Review, Vol.18, No.2, 1970, pp.213-395. See
    also Anthony Sampson, The New Anatomy of Britain. London:
    Hodder & Stoughton, 1971 and latest edition, Anatomy of Britain
    Revisited, 1982.

16. Otley, C. "The Origins and Recruitment of the British Army Élite
    1887-1959. Ph.D. Thesis, University of Hull, February 1965.

17. Garnier, M. "Social Class and Military Socialisation: A Study of
    the RMA Sandhurst", Ph.D. dissertation, University of California,
    1969.

18. Keegan, J. & Dyer, G. World Armies (2nd ed.) Macmillan Publishers,
    London, 1983/84, pp.54-59.

19. Hamrush, A. On the Egyptian Revolution of 1942. Arabic text,
    Beirut, al Mu'assasat al Arabigah li'L Dirasat wa al Nasher, 1978.
    Put the number in the Egyptian army between the time of the
    Palestine War in 1948 and 1950 at around 36, 247, men.p.124.

    And Subaih, M. Aiyam wa aiyam: 1882-1956. A survey of historical
    incidents in Egypt, Cairo, 1960 claimed that about 10,000 men took
    part in the Palestine War. These estimates include officers, but
    they fail to present the numbers of the army élite.

20. The Military Balance, The International Institute for Strategic
    Studies (IISS), London, 1984/85. p.60.

21. Ibrahim, S.E. "Social Mobility and Income Distribution in Egypt",
    in Khalek-Tignor (eds.) The Political Economy of Income Distri-
    bution in Egypt. Holmes & Heier Publishers Inc., N.Y. 1982, pp.
    375-434.

22. Dessouki, A., Ibrahim, S.E., Aliboni, R., Luciano, G. and Padan,
    P., Egypt's Economic Potential. Croom Helm, London, 1984.

23. The huge growth in intermediate and higher education has been
    encouraged by Government policies by making education free at all
    levels. For instance, the 1978-82 Five Year Plan outlined the
    Government's education policy in three principles, education as
    a basic right, it is the main duty of the Government towards the
    society and the major intention is to democratise the society.
    Within the general policy of educational expansion, the Government
    expenditure for education has grown from about £E23 million in
    1952/53 (less than 3 per cent of GDP)to about £E280.3 million in
    1978 (about 3.8 per cent of GDP). For more detail see Khalid
    Ikram, Egypt, Economic Management in a period of Transition.
    A World Bank Country Economic Report, published by the John
    Hopkins University Press, London, 1980. Moreover, the 1978-82
    plan allocates £E418 for investment expenditures in education,
    research and training (4% of GDP).

24. The Military Balance.... op.cit, 1972/73.

25. Ibrahim.... op.cit., 1982

26. Dessouki & Ibrahim & et al. op.cit, 1984

27. According to the 1976 population census carried out by Egypt's Central Agency for Public Mobilisation and Statistics (CAPMAS), 44 per cent of the population lives in cities. The population of Greater Cairo is 22 per cent of Egypt's total population. For more detail on the survey, see Ibrahim. op.cit, 1982.

28. The significance of the open door economic policies on social and economic measures was the increases of per captia income level above US $400 per annum and the annual growth rate by 11.11 per cent. See A.R.E., Ministry of Planning The Five Year Plan 1981/82 to 1986/87.

29. According to the Ibrahim Survey in 1979, the upper class stratum are individuals with an annual income of over £E5,000 and upper middle class are individuals with annual incomes ranging from £E2,000-3,000, while the middle class are individuals with income ranging from £E1,000-2,000. Social Mobility and Income Distribution in Egypt.... op.cit., pp.421-25.

30. People recruited in these cadres start at higher salaries, enjoy special allowances and their promotion is usually faster. In general terms, they are considered a privileged group compared with civil-service and the public sector. For more detail on general and special cadres, see: Ayubi, Bureaucracy & Politics... op.cit., pp.372-84.

31. Otley, op.cit., 1965, p.161

32. Otley, op.cit., 1970, p.4

33. Otley, op.cit., 1965, p.147.

34. Janowitz,Morris, "Armed Forces and Society: A World Perspective", in Van Doorm (ed.) Armed Forces and Society, Sociological Essays, Mounton, The Hague, Paris, 1968, p.25.

35. CAPMAS, Statistical Year Book, Cairo, 1983/84, in arabic.

36. Ibid....pp.181-85.

37. Ministry of Defence (Egypt), Officers Dept. 1984.

38. Otley, C. "Militarism and Militarisation in the Public Schools, 1900-1972. "British Journal of Sociology, Vol.29, No.3, 1978, pp.321-339.

39. The Liberation Rally was inaugurated in July 1953 as a single legal political organisation. It was not a party but a means of rallying the people round the new rulers who had, therefore, to try to appeal to the mass directly rather than through established political channels.

40. The ASU was declared in the National Charter to be the important source of power instead of the Liberation Rally and to comprise all popular forces, all intellectuals and members of liberal professions are integrated within the ASU. Although it was not designated as a party, the ASU was organised in a hierarchical framework.

41. Roger Owen, "The Role of the Army in Middle-Eastern Politics". Review of Middle-East Studies, No.3, published by Ithaca Press, London, 1978, pp.63-81.

42. Waterbury, J. The Egypt of Nasser and Sadat, The Political Economy of Two Regimes. Princeton University Press, 1983.

43. Derek Hopwood, Egypt: Politics and Society, 1945-1981. George Allen & Unwin Publishers Ltd., London, 1982, p.51.

44. Narayan, B.K. Anwar EL Sadat. Vikas Publishing House PVT Ltd., New Delhi, 1977, p.107.

45. Egyptian army officers have emerged as the main elements of the new élite, particularly those who have graduated from Military Technical College where training programmes have included such specialised technical subjects as mechanical and civil engineering, communication, administration... etc. and they constitute the most crucial force in Egypt's political life. There have been several attempts to arrive at the exact figure in civilian administration, Dekmejian, R.H., Egypt Under Nasser, Albany State University, N.Y. 1974 & Cooper, M., The Transformation of Egypt. Croom Helm Ltd., London, 1982 and Dessouki and Ibrahim et al., op.cit. 1984. They found that the ratio of military ministers to civilians was 44:131 (33.6%) under Nasser Government (1954-70) while under Sadat (1970-81) the ratio was 32:163 (20%). The important tendency in the numbers mentioned above is towards civilianisation. Under the Sadat Government it was 20% compared to Nasser Government's 33.6%, and this trend is likely to continue in the future under the Mubarak Government. For more detail see: AL-Ahram, 7th Sept. 1985, in arabic.

46. Ayubi, N. Bureaucracy & Politics.... op.cit. p.400.

47. Ministry of Information (Egypt), The Political System in Egypt. State Information Service, Cairo, 1984.

48. Hopwood, Derek, Egypt=Politics... op.cit., 1982, p.181.

49.   Currently, the Egyptian armed forces are taking part in solving
      problems such as housing, transportation, food security,
      communication systems... Moreover, military factories have also
      contributed to civilian production. These include communication
      equipment, scientific engineering equipment, spare parts and
      domestic appliances. In addition, since the manufacture of
      weapons systems must keep abreast of the latest development in
      science and technology, skill and know-how must characterise the
      workers and managers who operate and direct these factories (in
      military factories workers are mainly from amongst civilians,
      while managers are mainly from army officers). Training centres
      were set up for the creation of well-trained workers and managers
      and missions were sent abroad to catch up the latest in science
      and technology. This vocational training would help in turn in
      the development process. See The Egyptian Army Through History.
      MOD (A.R.E.) Information Dept. 1982/83 pp.62-65.

50.   The most influential contributor to this reformation was a frame-
      work of the way in which military institutions interact with
      modes of production and the rest of the state apparatus, suggested
      by Robin Luckham. "The Military, Militarism and Dependence in
      the Third World: A Theoretical Sketch", in C.H.Enloe and
      U.Semin-Penzer (eds.). The Military, the Police and Domestic
      Order: British and Third World Experience. Richardson Institute
      for Conflict and Peace Research, London, 1976.

      Also see: Maurice Garnier: "The Control of Military Organisa-
      tions in a Democratic Society: Some Thoughts Concerning the Role
      of Social Scientists", Indiana Law Journal, Summer 1974, pp.676-
      678.

51.   Keegan, J. & Pimlott, J. World Armies.... op.cit. p.606.

52.   From the early development of parliamentary institution, the
      civilian élite has been given a great deal of authority and sover-
      eignty over the British armed forces. Parliament asserted its
      supremacy and regulated the discipline and finance the budget of
      the army. See: Roberts, A. "The British Armed Forces and
      Politics; A Historical Perspective", Armed Forces and Society,
      Vol.3, 4, Aug.1977, pp.531-556 & MOD, UK, Cmnd 230, 1957 and
      Cmnd 9430, I, 1985. Brian Taylor has discussed this issue and
      pointed out that the British army cannot be allowed to serve the
      purpose of a political party, yet must be subject to political
      control. Command and administration is exercised by Defence
      Council and its Service Boards. Membership of these bodies is
      civilian as well as military and the Chairman is a MOD (always
      civilian). This ensures the necessary links with Parliament.
      See: Coming of Age: A Study of the Evolution of the Ministry of
      Defence Headquarters 1974-82, RUSIJ, 1983, pp.44-51.

53.   Howard, Michael. The Central Organisation of Defence, RUSIJ,
      1970.

54. Finer, S.E. The Man on Horseback. Pall Mall Press, London, 1962.

55. Garnier, M. "Technology, Organisational Culture and Recruitment in the British Military Academy", Journal of Political and Military Sociology, Vol.3, 1975, pp.141-142.

56. In the Military Secondary School, the first six months of the first year is devoted entirely to military training. The second and third years include studies, mainly academic, to GCE level (equivalent to 'O' level in the UK schools), as well as military training. It is intended to attract more candidates by making it a boarding school into which boys who wish to go to the Military Academy are taken. The school cadets are eligible for entrance to the Military Academy without going through the selection procenture applied to the state school candidates. See: AL-AHRAM, 24th July 1984.

57. The interview with the Dean of the Military Academy of Egypt in February 1984 (who is the Head of the Military Academy Council), confirmed that the assessment of new candidates is through traditional methods of written tests and interviews.

58. Ministry of Defence (UK). Report from Director of Army Recruiting, Officer Selection for the British Army, November 1983.

59. Ibid.... 1983.

60. MoD (UK). Statement on the Defence Estimate. Cmnd.5976, 1975.

61. MoD (UK). Report from Director of Army Recruiting.... op.cit. 1983.

62. MoD (UK). Statement on the Defence Estimate. Ch.1, para.12, p.3, 1969.

63. MoD (UK). Regular Commissions Board. Profile, Headings, Definitions, Nov.1983.

64. Westbury Analysis, Prepared for the Central Office of Information by Interscan Ltd. Westbury analysis carried out between 1961 and 1970. London, 1971.

65. Garnier, M. "Changing Recruitment Patterns and Organisational Ideology: The Case of a British Military Academy", Administrative Science Quarterly, Vol.17, March 1972, pp.499-507.

66. Salaman, G. & Thompson, K. "Class Culture and the Persistence of an Elite: The Case of Army Officer Selection", Sociological Review, May 1978, pp.283-304.

CHAPTER TWO

CHAPTER TWO

THE FORMAL ORGANISATION STRUCTURE OF THE EGYPTIAN ARMED FORCES

The aim of this chapter is to explain the nature and the structure of formal military organisation, status systems, and hierarchy in the Egyptian armed forces, and to illustrate how the structure and the processes within the structure have been affected by the roles of holders of authority at the top levels of command.

Special attention will be paid to the British armed forces in order to help clarify process and procedures in the Egyptian army.

A basic factor that influences the military organisation structure and processes is objectives. To start with the objectives of the armed forces, it is appropriate to define clearly and understand the military organisation purposes and objectives because the missions that the organisations are called upon to perform are dependent upon such objectives.

The Purposes and the Objectives of Military Forces

Organisations exist in order to carry out a specific purpose; for instance, if an industrial organisation aims to supply the public directly or indirectly with the goods and services in military organi-

sations, the main objective is to provide security for the nation (to defend society from external military attack), and in so doing, provide the security necessary for normal social life.

Beishline, J.R. has defined the army objective as:

"those values which a military organisation is expected to preserve, acquire or create for the nation that it serves. These values have to do in general with national security. Military objectives are frequently referred to in military parlance as "missions". No successful commander attempts to plan or organise for a task until he has first determined his mission".1

It is important also, in military organisation, that there are usually secondary objectives, which make an essential contribution to the main objective of the organisation, and must be in harmony with it.

Since one of the main objectives of the organising function is to build a structure that will accomplish the objectives with maximum economy and effectiveness, it follows that one cannot perform the function of organising unless one has an accurate knowledge of the objectives of the organisation. The relationships between procedures, factors, and organisational structure must be established in accordance with the line of action developed in the plan in order to accomplish the objective.

The military objectives of an organisation are of great importance in certain of the basic factors of military functions. Military leaders must have a thorough knowledge and understanding of the organisational objectives for which they are responsible. They can utilize this knowledge in determining the characteristics and requirements for the proper use and performance of their units.

The morale of a group depends upon the integration of its members' interests. If the members know and thoroughly appreciate the objectives of their group, they should have a relatively easy agreement of interests.2

As mentioned earlier, there are the primary and the secondary objectives of such military organisation. The primary objective is to provide security for the nation. However, military objectives must be further classified as to whether the nation is enjoying a time of peace or is at war. In peacetime the general objective of the armed forces is to be so organised, trained and equipped as to be able to take action in defence of the nation if and when called upon. In wartime the general service objective is the destruction of the enemy forces.

The secondary objectives are those functions that should contribute to the broad general services that are necessary to the well-being of society as we explained earlier is the contributory role of the Egyptian armed forces in economic and social development programmes in Egyptian society. Also the military forces may be called upon to

ι

contribute to helping solve such national disasters as floods,

devastation and explosions and major fires, or on the international

level try making a contribution to peace-keeping duties.

There is one other classification that is of interest and applies to

the armed forces. They may be required to restore order and peace in

certain kinds of civil disturbances where local police power has dis-

integrated. For instance, the increasing guerilla warfare in Northern

Ireland today, will demand more constant preparedness to counter

terrorist techniques. This seems to be mainly a civilian problem, but

the military forces will be of valuable assistance. As the armed

forces have become more and more involved in new modes of conflict

which previously have been thought to be outside their purview, such

functions add to the range of skills required by the officers. Con-

sequently, the armed forces have developed new tactics and procedures

such as counter-insurgency and counter-terrorist methods to accommodate

new techniques.

Finally, when the policy of such a nation is designed to avoid general

war and managed for limited war, the notion of the constabulary force

contributes to an understanding of the organisational objective of the

armed forces.

Janowitz, M. has defined the constabulary concept of the professional

soldier in the following way:

"The military establishment becomes a constabulary force when it is continuously prepared to act, committed to the minimum use of force, and seeks viable international relations rather than victory, because it has adopted a protective military posture".3

With regard to the constabulary concept, the British armed forces have contributed considerably in developing this concept during the post-war period in order to accommodate themselves to a policing function and to demonstrate the political stability of the members of the British commonwealth. It is worthy of note that a constabulary role has applied to the Egyptian armed forces for some time (during the British occupation of Egypt in 1882).4

However, the most important factor affecting the determination of the military objectives is civilian control over the military. Unlike business organisations, the army is not an independent organisation that is free to determine its own objectives. Moony, J.D. and Reiley, A. have described this situation concisely as follows:

"An army cannot decide the issues of a war, it cannot even make war, for these are acts of government. Wars are waged by governments, and the issues of war are decided by treaties between governments. The duty of an army is simply to achieve the military objectives of war, everything else is outside its province. The State does more than make and terminate war. It creates armies. It determines their size, their composition, their form of organisation, their leadership, and their primary objectives".5

The government plays a vital part in determining military objectives. The armed forces are only used upon government order and then it is in extension of government policy. Moreover, military forces are organised and operated through legislation which determines their objectives and controls overall military funds. This control of funds can amount to a life or death power over military programmes.

However, it should be noted that in any society the Ministry of Defence department has a major role to play along with the government in determining army objectives. With respect to the internal objectives "missions" that are to be accomplished by the army units and sub-units and have a great effect on the organisation structure and processes have to be determined by the commanders of the army.

Let us now turn our discussion to an explanation of formal military organisations, status systems and hierarchies in the UK and Egyptian armies by analysing the operational structure at different levels of command, the hierarchies of military ranks and chains of command.

Firstly, the operational structure at different levels of command in both the UK and Egyptian armies.

 a - At the high level of command. "Commanding Officers".

The organisation and functions of the Ministry of Defence Departments in the UK are illustrated in Chart (1), while the organisation and functions of the Egyptian army are illustrated in Chart (2).

We cannot discuss in detail the functions of the various administrative

sub-departments of the Department of Defence in both the UK and Egypt,

but we have briefly indicated the main functions in Charts (1) and (2).

Organisation and Functions of Ministry of Defence Department in the

UK.

The Department of Defence includes the Ministry of Defence, the Defence

Council, Legislative Liaison Department and other departments of

defence agencies as aministrative assistant departments which meet

specific requirements.

In providing immediate assistance and advice to the Ministry of

Defence, the Chief of Staff and his assistants, the Defence Staff

Officers, are formed as the next command line. Although the Chief of

Staff and his departments are separately organised, they function in

full co-operation with the Ministry of Defence; they are responsible

for keeping the Ministry of Defence fully informed on matters con-

sidered or acted upon by the Chief of Staff.

Next in the command line are the Army, Navy and Air Force. Each of

these three services is separately organised under its own Commander,

but under the direction, authority and control of the Ministry of

Defence. The Commander of each of these services is responsible to the

Ministry of Defence for the operation of such units (departments) as

well as for its efficiency whilst under his command.

Orders to the three services are issued by the Ministry of Defence,

or under authority specifically delegated in writing by the Ministry of

Defence to the Chief of Staff.

Commanders of each service are responsible to the Ministry of Defence

for the accomplishment of the military missions assigned to them, and

they perform such missions with full operational control over the

forces assigned to them.

The Chain of Command runs from the Ministry of Defence to the

Commanders of the three services through the Joint Chief of Staff.

(Chart (1)).

Organisation and Functions of Egyptian Ministry of Defence Departments

As Chart (2) shows, the Egyptian Ministry of Defence Departments almost

wholly consist of the same departments and exercise the same command

lines (functional roles) as the UK Ministry of Defence Department,

except for the Office of Mobilisation which was formed within the

Ministry of Defence Department, because the Egyptian army still applies

compulsory military service "conscriptions".

b - At the middle level of command. "Executive Officers".

The army in both the UK and Egypt was established as a separate organ-

isation within the Department of Defence. The main task of the army is

to provide the security for the nation. Consequently, the army is

charged with the responsibility of planning, organising, training,

equipping..... and directing of combat operations on land, in accord-

ance with army plans for national security and in co-ordination with

the Navy and Air Force.

Organisation and Functions of the UK Land Forces   "U.K.L.F."

The Army is organised into the following principal parts. These are:

Headquarters, Armoured Corps, Infantry Corps, Artillery Corps,

Engineer Regiments, Special Air Service Regiments, Field Hospitals,

Supplies Regiments.... and all departments of activities which are

essential to the performance of operational forces which are not

designated as a part of operating forces of the Army. (Chart (1)).

Organisation and Functions of the Egyptian Land Forces "E.L.F."

The main Egyptian Land Forces consist of two armies, Second Army and

Third Army. Each of these armies is organised into the following

principal parts:

The Army Headquarters, Infantry Divisions, Armoured Divisions,

Artillery Brigades, Republicans Guard Brigades and Services Units

such as Transportation Services, Ordinance, Field Hospitals.... and

all the administrative units which are essential for performance and

support to the operational forces. (Chart (2)).

- 73 -

CHART NO. 1 — Ministry of Defence and Land Forces Department in the U.K.
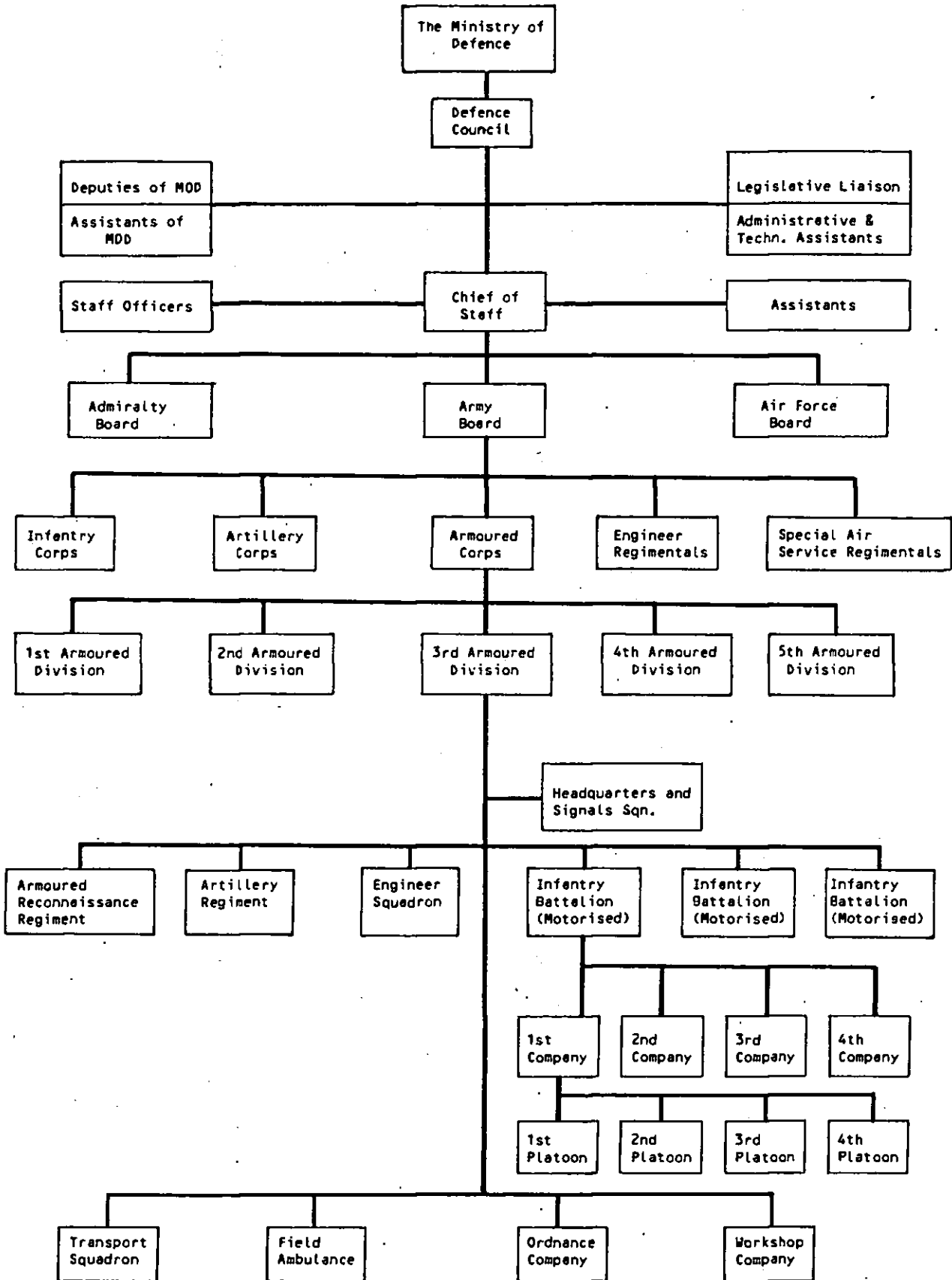
Sources: -   Encyclopedia of the Modern British Army, GANDER (7). 1980, pp.17:54.
            -    DAVID & CHARLES, The World's Armies, Newton Abbot, London, 1979, pp.183:194.

* This chart is prepared for illustration purposes only.

CHART NO. 2 :- Ministry of Defence and Army Departments in Egypt

| Deputies of MOD | | Ministry of Defence | | Mobilisation Office |
| Assistants of MOD | | | | |

Technical Assistant — Admin. Assistant

Staff Officers — Chief of Staff — Assistants

Navy — Army — Air Force

2nd Army | 3rd Army

Armoured Divisions | Infantry Divisions | Artillery Brigades | Special Service Units | Republican Guard Brigades

1st Infantry Brigade | 2nd Infantry Brigade | 3rd Infantry Brigade | 4th Infantry Brigade

H.Q. and Signal Sqn.

Armoured Battalion | Artillery Battalion | 1st Infantry Battalion | 2nd Infantry Battalion | 3rd Infantry Battalion (Motorised) | Engineer Company

1st Company | 2nd Company | 3rd Company | 4th Company

1st Platoon | 2nd Platoon | 3rd Platoon | 4th Platoon

Transport Company | Field Ambulance | Ordnance Company | Service Company

Sources: - MOD Egyptian Armed Forces, 1980.

- DAVID & CHARLES, The World's Armies, Newton Abbot, London, 1979, pp.54-59.

* This chart is prepared for illustration purposes only.

c - At the Third Level of Command. "Line Officers".

Organisation and Functions of the UK Armoured Division

The UK Armoured Divisions consist of five main Combat Formations, these formations can be seen in Chart (1) [6].

Once in action the armoured divisions would be split into task forces. There are two task forces to a division, each under the command of a Divisional Commander and Second-in-Command.

The composition of each task force is variable and dependent on the nature of the role to be assumed, the nature of the terrain involved, and other such variables.

Each task force is made up of a number of battle groups of which there are usually nine to a division. The battle group is an amalgam of mutually supporting teams of infantry, cavalry, artillery and engineers, together with their support functions that are integrated into what are virtually independent battle formations. The battle group component is the combat team, and there are usually 20 such teams to a division.

This reflects the complexity in nature and size of the structure of the task force and the weapons and equipment incorporated and acquired in the units and sub-units in each task force. Consequently, it indicates

the great complexity which results from the extensive use of these weapons, equipment and electronic devices.

Organisation and Functions of the Egyptian Brigade

The operational structure of the Egyptian Infantry Brigade consists of the following: Brigade Headquarters, Armoured Battalion, Artillery Battalion, Engineer Company and the essential infantry units which comprise twelve companies of four platoons each. These companies are grouped into three battalions and there are service units such as transport, field ambulance, ordnance company and a service company. These formations can be seen in Chart (2).

However, the Egyptian Armed Forces at brigade level are still grouped into traditional formation in carrying out their missions. This can be seen at those small supporting units from artillery and armoured which are not designated as a part of operating forces of the brigade because each has its own independent structure and commanders and can give the support to the brigade when required.

This shows the simple nature and size of structures of the brigade units and the weapons and equipment incorporated into each brigade unit. Consequently, it indicates a lesser complexity at such levels than is the case with those in the UK. For instance, the adoption of the task force by the British army which reflects the combination of a "mix" of units and sub-units such as Infantry, Artillery, Armoury,

Engineers.... and the tendency in the direction of task force organisa-
tions made up of components from the Army, Navy and Air-Force, seems to
be growing constantly in the UK armed forces as a contemporary armed
force. One can readily imagine the great specialisation which the
combination of such units requires.

However, at battalion level in the Egyptian army, there are so many
assistants who command the smaller units which make up the battalion,
and there are also staff and technical specialists and non-commissioned
officers who assist the battalion commander. In the following chart an
attempt is made to illustrate the interrelationships of the executive
officer (at battalion level) and the line officer (at company level)
as well as staff and technical specialists.

With the increased complexity of weapons systems, no military commander
can reasonably be expected to be an expert in all aspects of military
operations. Thus, military commanders find that they must rely upon
the expert knowledge, advice and assistance of staff officers and
technical specialists. As the members of staff become specialist
advisers to the executive and line officer, and give no orders to line
subordinates in their own right, the organisation will operate under
the line and staff principle.[7]

From Chart (3) it can be seen that the line and staff organisation is a
combination of the line organisation with the staff function. In this
type of structure the leaders have the benefit of staff specialists to
aid and advise them.

CHART 3 - A Line and Staff Organisation


```
                          ┌──────────────────┐
                          │Commanding Officer│
                          └──────────────────┘
┌─────────────────┐  ┌──────────┐  ┌──────────┐  ┌────────┐
│Personnel Executive│ │Operations│ │Training  │ │Supply  │
│    Officer       │  │Officers  │ │Officer   │ │Officer │
└─────────────────┘  └──────────┘  └──────────┘  └────────┘

┌───────┐   ┌───────┐        ┌───────┐  ┌───────┐
│Staff  │   │Staff  │        │Staff  │  │Staff  │
│Officer│   │Officer│        │Officer│  │Officer│
└───────┘   └───────┘        └───────┘  └───────┘
```

| | Unit Commander | Unit Commander | Unit Commander |

```
┌────┐ ┌─────────┐ ┌────┐    ┌────┐ ┌─────────┐ ┌────┐    ┌────┐ ┌─────────┐ ┌────┐
│S.O.│ │Executive│ │S.O.│    │S.O.│ │Executive│ │S.O.│    │S.O.│ │Executive│ │S.O.│
└────┘ │Officer  │ └────┘    └────┘ │Officer  │ └────┘    └────┘ │Officer  │ └────┘
       └─────────┘                  └─────────┘                  └─────────┘

┌──────────────┐ ┌─────┐  ┌──────────────┐ ┌─────┐  ┌──────────────┐ ┌─────┐
│Line Officer &│ │Tech.│  │Line Officer &│ │Tech.│  │Line Officer &│ │Tech.│
│    NCOs      │ │Spec.│  │    NCOs      │ │Spec.│  │    NCOs      │ │Spec.│
└──────────────┘ └─────┘  └──────────────┘ └─────┘  └──────────────┘ └─────┘

┌────────────┐      ┌────────────┐      ┌────────────┐
│Enlisted Men│      │Enlisted Men│      │Enlisted Men│
└────────────┘      └────────────┘      └────────────┘
```

S.O.   =   Staff Officer
Tech.Spec. =   Technical Specialist
NCO   =   Non-commissioned Officer

SOURCE: This chart is prepared for illustration purposes only.

At company level, each company commander is held responsible for four platoons. Each platoon leader has a platoon as his particular responsibility and consistently works under the direct guidance and orders of the company commander. The platoon leader occupies the last position in the officers' Chain of Command.

The structure shown in Chart (4) illustrates this type of organisation at the lower levels of command. This type of organisation is a simple one and the lines of authority and responsibility are vertical. Each platoon leader is independent of the others, and is accountable only to the Company Commander. Unity of command pervades throughout. Orders and instructions can be put into effect promptly. The ultimate in specialisation is personified by the different responsibilities of leaders and enlisted men. The leader, if he is capable, is quick and decisive in action through his acquired leadership and technical skills; and so too are the enlisted men, if they are competent to use weapons and equipment.

A second aspect of the formal military organisatin structure is: Hierarchies of Military Ranks.

One of the most important elements related to the authority of the military organisation is rank structure. Every society, whether developed or developing has formed an inevitable division in its labour force and in the rank order of its members, often according to their functions in the division of labour. Individuals tend to be assigned a

CHART 4 – A Line Organisation at Lower Levels of Command
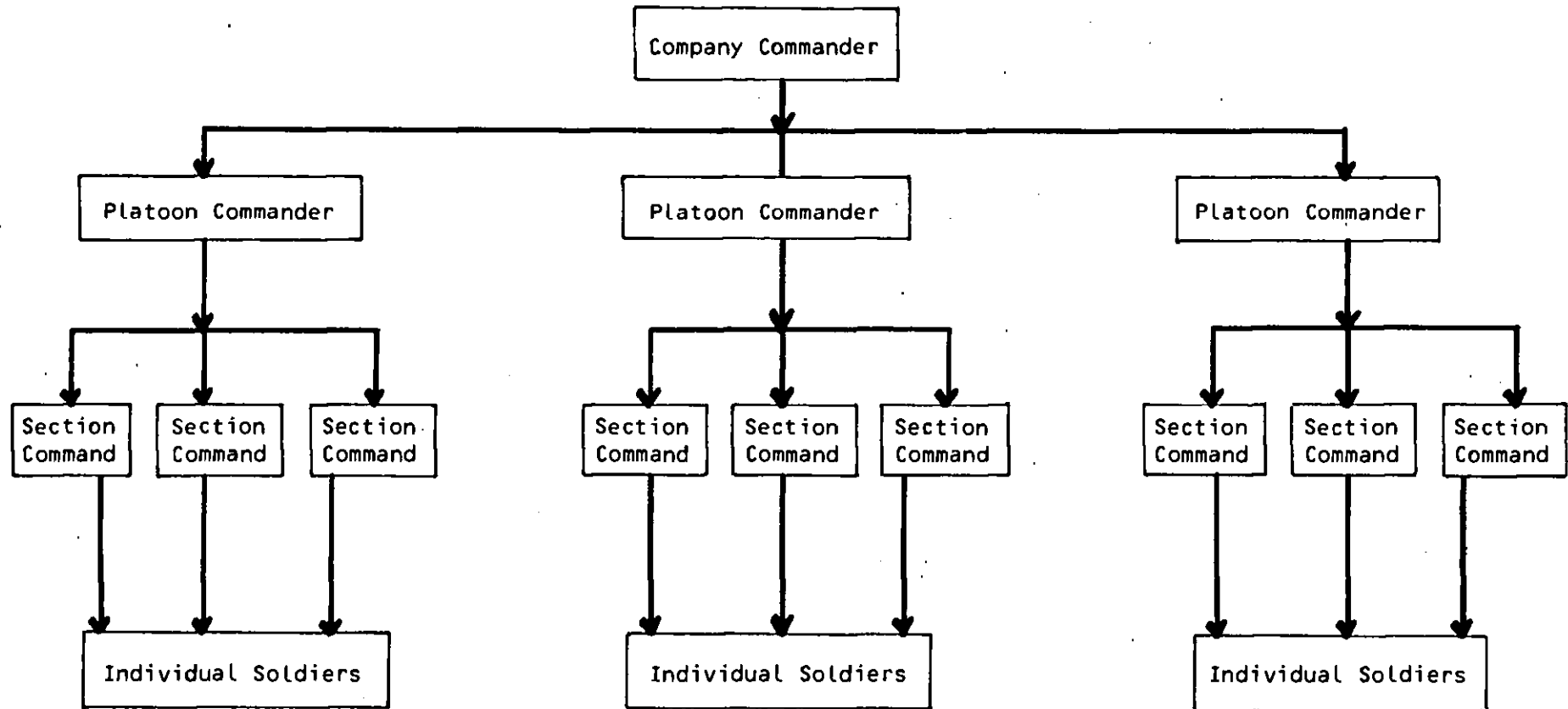
SOURCE: This chart is prepared for illustration purposes only.

social rank or social status in accordance with their functional rank
or functional status.

In a military organisation, just as in any other formal organisation,
role prescriptions are functionally necessary as the basis for military
efficiency and disciplined behaviour. However, the nature of the
missions of military organisations demand that important functional
status be filled by the appointment of the most qualified personnel
available. It also demands that status be ranked hierarchically
according to differential functional importance.8

In military organisations, the manner in which functional statuses are
ranked and filled is also a source of military authority and disci-
pline. When considered in this light, the functional necessity for
hierarchies of military rank should be obvious and should be accepted
without question by everyone in the military organisation. However, a
number of ranks gives a general pyramidal character to the rank
hierarchy as a whole.9 These implications have led to the customary
procedure of charting hierarchies of rank, and, obviously, authority.

Chart (5) graphically shows the pyramidal hierarchy of military ranks
of officers in the army.

Chart No.5

Hierarchy of Military Rank (Army Officers)

General of the Army

Lieutenant General

Major General

Brigadier General

Colonel

Lt. Colonel

Major

Captain

Lieutenant

2/Lieutenant
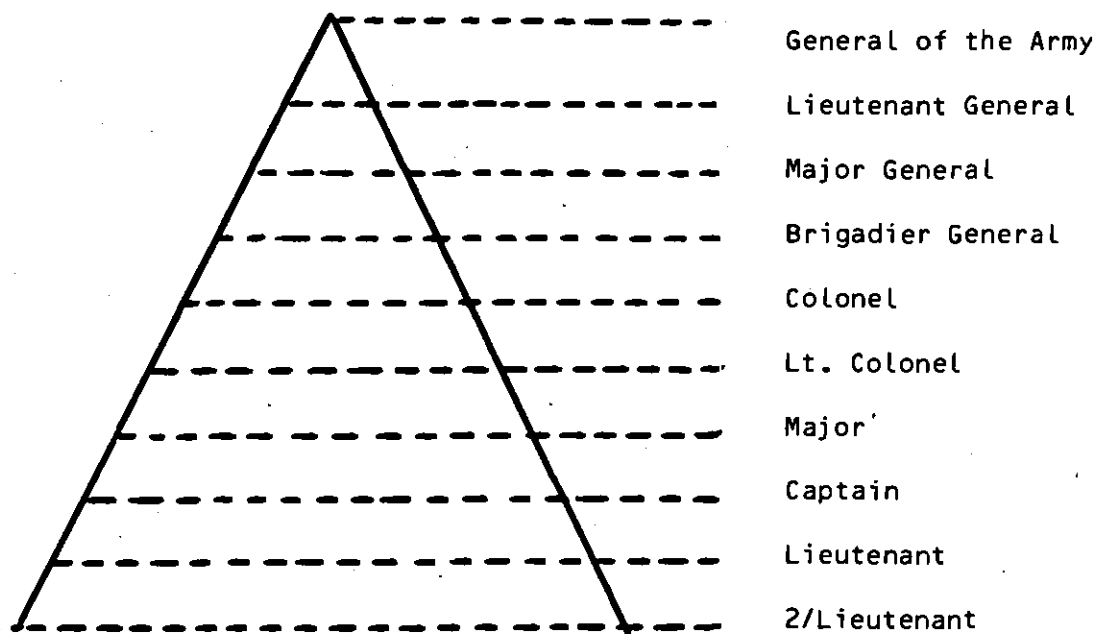
If one considers the rank structure of the British and Egyptian armed forces, the following table shows the actual rank structure of officers on active duty in both armies:

Table 11: British and Egyptian Army Officers' Rank Structure in 1983

Ranks	The British Regular Army Officers	The Egyptian Regular & Reserve Army Officers
General of the Army} Lieutenant General } Major General }	0.6	1.2
Brigadier General	1.8	2.8
Colonel	3.9	6.7
Lt. Colonel	9.2	8.6 (0.8 reserve officers)
Major	30.1	17.2 (2.2 " ")
Captain	28.9	16.9 (4.6 " ")
Lieutenant	14.5	22.2 (10.1 " ")
2/Lieutenant	11.0	24.3 (14.2 " ")
Based on percentages	100	99.9

Sources:

    a. MoD(UK) The Arm List, 1983.
        and J.Whitaker.... op.cit. 1983/84

    b. MoD (Egypt) Officer Dept., 1983
        and World Armies (2nd ed.) 1982/83

Table 11 shows that the largest group of ranks in the UK occupational structure are among the Captains and Majors' ranks. And if we arrange the rank distribution in the UK, and depict it graphically, we find another shape, almost a diamond shape. One can find that in actual practice, the military hierarchies may be different in that they are shaped like pyramids. Janowitz has noted that:

"there is a tendancy in modern armies for the traditional
hierarchical pyramid to give way to a diamond-shaped pattern of
ranks".10

Consequently, Table 11 makes it clear that there is a tendency in the
hierarchy of military ranks in the UK armed forces, for the tradi-
tional hierarchical pyramid to give way to a diamond-shaped pattern of
ranks. There are valid reasons for this apparent development, one of
them being that the occupational structure of the UK land forces has a
new skills structure in technical, engineering, maintenance and supply
of machine and weapons systems, as a result of technical innovation
which has anticipated the emergence of such new skills.

With respect to the rank structure of the Egyptian army officers, there
are two distinct hierarchies, regular officers and reserve officers.
The regular officers comprise the career professionals, while the bulk
of reserves comprise the non-regulars.

The continued presence on active duty of a large number of reserve
officers who come from compulsory service (conscription) to serve as
short-term officers, from two to four years as first lieutenant and
second-lieutenant in particular, and then return to civilian life,
enables the Egyptian armed forces to maintain a balance of the rank
distribution of regular officers. Also, there is another reason for
this, there is less use of sophisticated equipment and electronic
devices than in the British army as we explained earlier in the opera-
tional structure of the Egyptian brigade.

A third aspect of the formal military organisation structure is:

Chain of Command in Military Organisation

Individuals in military organisation structures cannot all occupy the same positions in relation to each other or exercise the same rights and duties (superior-subordinate relationships).

The Chain of Command in military organisation emphasises differences in military rank and authority. However, with the increased complexity of weapons and equipments systems, no Military Commander can reasonably be expected to be an expert in all aspects of military operations, consequently he delegates some of his authority and responsibility to his subordinates.

Moore, Wilbert, E. pointed out that delegation of authority and responsibility in the rank hierarchy has two significant organisational implications:

1. "Orders are usually issued in general terms and become increasingly specific as they proceed down the line of command.

2. The delegation of authority and responsibility through a number of ranks gives a general pyramidal character to the rank hierarchy as a whole".11

These implications have led to the hierarchy being pyramidal in form as we have discussed in the preceding section.

The following chart illustrates the Chain of Command in the military organisation:

Chart 6

Chain of Command in Military Organisation

```
┌─────────────────────────────┐  ┐
│   The Ministry of Defence   │  │
└─────────────────────────────┘  │
              │                   │              Echelon I
              ▼                   │
┌─────────────────────────────┐  ├            Commanding Officer
│       Chief of Staff        │  │
└─────────────────────────────┘  │
              │                   │
              ▼                   │
┌─────────────────────────────┐  │
│       Army Commander        │  │
└─────────────────────────────┘  ┘
              │
              ▼
┌─────────────────────────────┐  ┐
│      Corps Commander        │  │
└─────────────────────────────┘  │
              │                   │
              ▼                   │
┌─────────────────────────────┐  │              Echelon II
│     Division Commander      │  │
└─────────────────────────────┘  ├            Executive Officer
              │                   │
              ▼                   │
┌─────────────────────────────┐  │
│     Brigade Commander       │  │
└─────────────────────────────┘  │
              │                   │
              ▼                   │
┌─────────────────────────────┐  │
│    Regimental Commander     │  │
└─────────────────────────────┘  ┘
              │
              ▼
┌─────────────────────────────┐  ┐
│     Battalion Leader        │  │
└─────────────────────────────┘  │
              │                   │
              ▼                   │              Echelon III
┌─────────────────────────────┐  │
│      Company Leader         │  ├             Line Officer
└─────────────────────────────┘  │
              │                   │
              ▼                   │
┌─────────────────────────────┐  │
│      Platoon Leader         │  │
└─────────────────────────────┘  ┘
              │
              ▼
╔═════════════════════════════╗
║       Enlisted Men          ║
╚═════════════════════════════╝
```
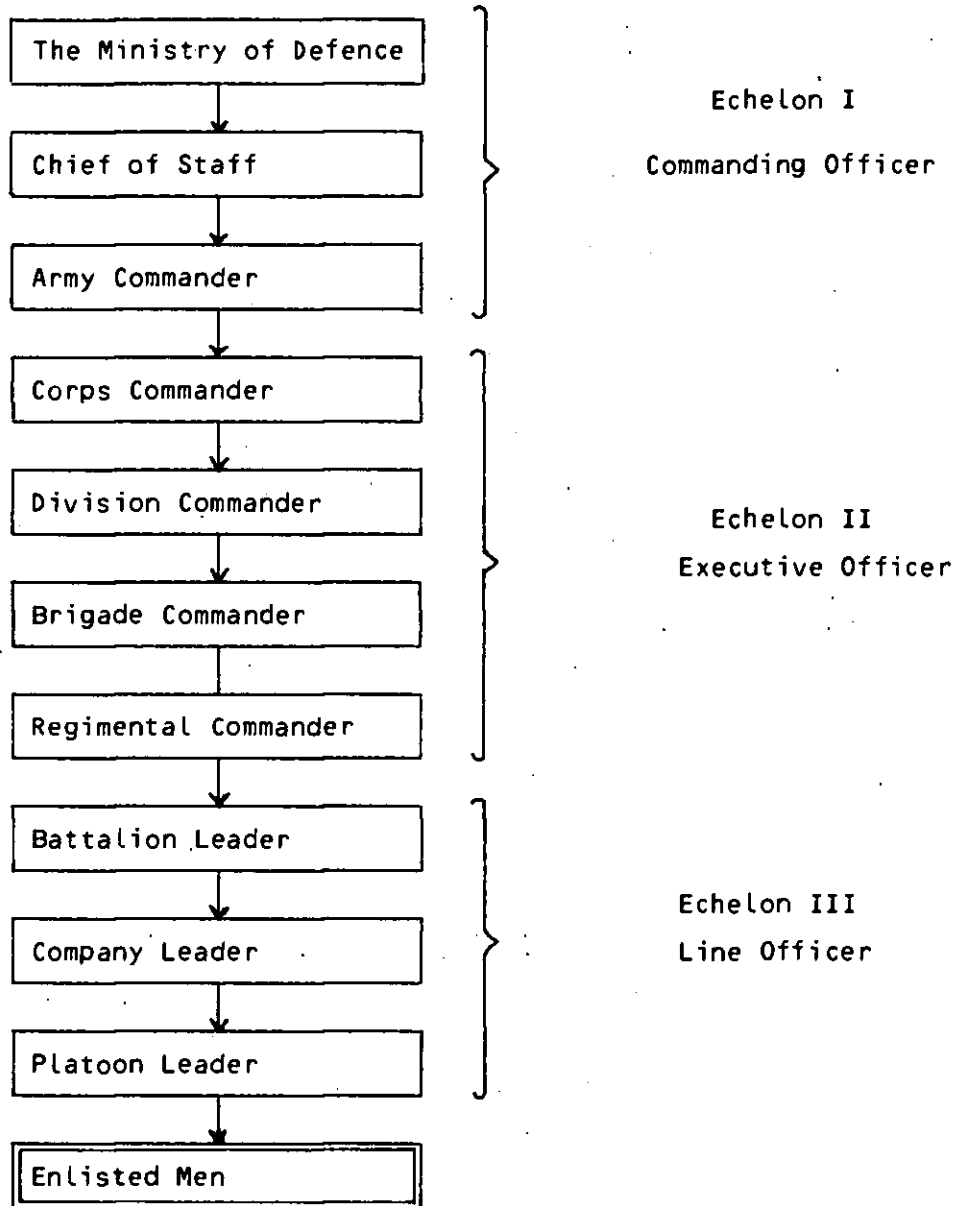
Sources:

- From Chart 5.

- BEISHLINE, Military Management, Ch .11 (p.157) (1950)

- MINTZBERG, The Structuring of Organisations, :Ch .2 (p.27),
          (1979).

If we classify the different levels of command within the organisations

structure in both the United Kingdom Land Forces and the Egyptian Land

Forces in Charts (1), (2), (3) and (6), we find that there are three

echelons in the Chain of Command in the military organisation; each

echelon can itself be classified into three groups on the basis of

career lines and major assignments; Technical Specialist, Staff

Officer and Commander (leader). Among these three groups, the type and

degree of emphasis on leadership skill varies:

- The Technical Specialist Officer is the most specialist-oriented,
  although he is an engineering officer, but he should have acquired
  some leadership skills.

- The Staff Officer is essentially a specialist in co-ordination,
  advice and assistance in all aspects of tactical knowledge.

Both Staff Officer and Technical Specialist are not vested with command

authority, except within their own staff division.

- The Commanding Officer is the 'generalist' in decision-making.

That is why, in the military organisation as a whole, there is a sharp

distinction between command functions and roles, and military staff

functions and roles.

Military Commander Authority and Responsibility:

A Command carries out his role by exercising his authority and respon-

sibility. Military authority is defined by Beishline in the following

way:

"the right to command, issue orders, and take all action necessary
to fulfil one's military duties".

While he defines the command as:

"the authority which an individual in the military service lawfully
excercises over his subordinates by virtue of an assignment".12

From the foregoing definitions, one can understand that a Commander

exercises authority by virtue of his rank or position. For example,

the design of military organisation provides that a Lieutenant Colonel

shall command a battalion, but in this case all the authority that goes

with a battalion Commander is unquestionably in the hands of the Major.

This is so because he has been assigned to the position of battalion

Commander by the competent official orders.

The same would be true if a Captain were assigned to the position of

battalion Commander, but only in rare battlefield conditions would the

command of a battalion be given to an officer as junior in rank as a

Captain. Considerable authority, however, is vested in an officer by

virtue of his rank.

Industry and business have a similar conception of the term
'authority' . In simple terms it is usually defined as "the right to
command". It is clear from the definitions of authority in both
military and civilian fields, that it is a right of command decision.

With respect to Commander responsibility, when a Military Commander is
granted the authority of his position assignment, he is also charged
with performing certain functions and accomplishing the objectives of
his organisation. He is responsible for seeing that the functions are
properly performed and the objective attained. Accordingly, he is
responsible for fulfilling his assigned duties according to the orders
and regulations received from higher authorities.

Furthermore, the Military Commander (leader) must know definitely and
specifically who his higher authority is. Such knowledge will enable
him to know exactly who has the necessary authority to give him orders
and to whom it should report. (Unity of Command principle).

The Military Staff Authority

The Staff Officer and Technical Specialist functions are usually
differentiated from the leadership functions for the purposes of either
command specialisation or staff-technical operative specialisation.
The army staff was defined by Mooney & Reiley as: 'the staff of a unit
consisting of the officers who assist the Commander in his exercise of
command' .14

With this as a base, the staff-technical specialists are then prepared to carry out their main functions which are:

1. Providing information, technical advice, suggestions required by the Commander for planning objectives, policies to govern the operation of his units on how best to put decisions into practice.

2. Making a continuous study of the situation for anticipating planning.

3. Translating the decisions and plans of the Commander into orders and causing them to be disseminated as commands.

As we know, the Chain of Command in military organisation is defined in the Principles of Management Schools as "a series of levels through which orders and instructions must pass travelling from superior to subordinates".15 Staff officers are not directly a part of this chain of command. However, they do formulate and transmit orders to sub-ordinate commanders. But this is done in the name of their Commander and therefore within his authority. Even though a staff officer as such has no authority to command, the heads of staff division in the organisation are given wide latitude as to routine and detailed decisions in the implementation of policies and basic decisions of their Commander. Since these decisions are made within the authority of the Commander, it is obligatory that such officers know, understand, and thoroughly support his policies.

The commander retains full responsibility for the decisions of his staff. When it is properly utilised, this practice expedites action and promotes efficiency.

The preceding sections have illustrated in detail formal military organisations, status systems and hierarchies in the UK and Egyptian armies. The purpose of such illustration is important for the analysis and comprehension of military organisation structure and processes in both armies. Moreover, it indicates how the structure and the functions within the structure have been affected by the technical complexity of weapons and equipment incorporated in and acquired by the military organisation to produce new forms of units such as the task force organisation and the new shape of hierarchy of military ranks which will be considered as a turning point in the military authority.

The Bureaucratic Nature of Military Organisations

In this section we will illustrate the distinctive characteristics of military organisation in both the UK and the Egyptian armies.

The objectives of a military organisation are called its missions. When the missions of a military organisation become increasingly complex, a large number of highly specialised functions are involved. According to Weber, the result is that the organisation is in need of extensive and systematic co-ordination and control and for a large administrative structure, sets the stage for the development of bureaucracy.16

With this as a base, the formal military organisation structures of both the UK and Egypt are then shared into the type of bureaucracy that seems to show the degree of functional specialisation.

For example, at the high level of command, we noticed that the Chief of Staff is responsible for keeping the Ministry of Defence fully informed about what is going on in the Army, Navy and Air-Force, through his departments such as Personnel Department, Administration Department, General Staff Department and Plans and Operations Department, which all reported to the Chief of Staff.

Within each department, of course, such functional specialisation repeats itself in varying forms at all levels of the military organisation. These functional military specialisations provide a necessary basis for the development in military organisation of bureaucratic structures.

It is clear that military organisations contain regularised activities which are necessary to their mission. These activities or functions are attached to specific positions in the organisation, forming the fixed duties of the occupant of each position. These regulations are written in general and abstract terms so as to be applicable to a wide range of specific situations, and they are continually revised as requirements change and as new procedures and behaviours become appropriate. Thus, they become "universalistic" that is, they apply generally to all military persons occupying specified positions or

offices to whom they are relevant, so that it reflects the imperson-
ality of bureaucratic organisation.

With respect to the decision-making process, it is becoming clear that
various functional positions found in the Chief of Staff departments in
both the UK and Egyptian armies, show many characteristics of bureau-
cratic offices. Similarly, each position in various chains of command,
decending from the top levels to the lower levels, consists essentially
of bureaucratic decision points, having to do with a limited function
and based on specialised knowledge and information provided by staff
officers and technical specialists.

Moreover, military communication in the hierarchies of both armies also
embodies many rules and regulations which may not be specifically
applied without the possession of specific information. Thus, the
occupant of each functional position, especially, must have adequate
information about the nature of the problem and the limits being
imposed by his superiors.

In the Chain of Command, channels of communication exist to serve the
flow of command from superior to subordinate and the flow of
information from subordinate to superior.17 In each case, flow of
information and commands are kept by predominant use of written
communication and formal structures exist for the processing and trans-
mission of each item. This formalisation is, in itself, a possible
source of distortion, because information must pass through many

levels through the Chain of Command before action is taken. This

formalisation does show regularisation and, of course, bureaucratic

characteristics.

At this point it becomes clear that the formal military organisations

of the UK and Egyptian armies show most of the characteristics which

Weber's 'ideal-type' possessed. It is important to note that in

military organisation, Commanders of the army play the most important

roles to ease or to increase the rigidity of the bureaucratisation of

their organisational structure and processes. For instance, by a

centralised decision process or by maintaining a functional distinction

between many types of officers in their organisations, such as leaders

(fighters) and technical specialists. This trend develops further

specialisation and brings further problems of integration and, of

course, bureaucratisation.

The Roles of Holders of Authority in the Military Organisation

This section focuses on the roles of holders of authority, especially

those at the high level of command in the military organisation, in

determining the internal processes. Consequently, we need to look at

their effect on formation of military organisation structures.

In military organisations, organisational behaviour can be controlled

by command authority in which authority and decisions are concentrated

at the top echelon. According to Mintzberg, the whole system of

authority rests in the organisations at the top and the whole organisa-

tion is then consciously designed as a logically integrated chain of means and ends.[18]

In addition Coats & Pellegrin have described the military organisation in the following way:

> "Military organisations, like ideal-typical bureaucracies, are necessarily hierarchic. Each military job is subject to direction and control from above. The job increases in prestige as the scope of responsibility and authority widens. In the hierarchy, this prestige is correspondingly greater. To this extent, military organisation clearly exemplifies a prime characteristic of bureaucracy, in terms of military 'jobs' it is a hierarchy of roles".[19]

In military organisations, a situation sometimes occurs in which a top commander has little desire to delegate authority and responsibility to his subordinates. When this happens many decisions have to be made on his own and the danger is that the military organisation may become too centralised.

Naturally, a central authority must exist in the top echelons, but these echelons cannot possess sufficient detailed knowledge of conditions in the field to enable them to make intelligent decisions on many matters. Accordingly, sufficient authority must be delegated to the field organisation to enable the lower level to cope successfully with local situations in the fulfilment of their missions.

- 97 -

Thus, a major factor that can affect the military organisation

structure and processes is the role of those Commanders at the top

echelons. The point being made here is that the senior officers at

the top echelons of military organisations have their traditions

(ideology) deeply entrenched in their attitudes, learned over long

periods of time, accentuated by their experiences which have led them

to determine the internal procedures in their organisation.

For example, in the British army, the selection of new entrants to the

Royal Military Academy Sandhurst continues to perpetuate the qualities

of leadership skills as mentioned earlier in Chapter 1. These

emphasise heroic qualities deriving from a traditional conception of

the officer role. Despite the increasing technological complexity of

military weapons and equipment which has compelled the British armed

forces to recruit and promote increasingly on technical competence, the

Commanders of the British army are still showing a preference for those

candidates who they believe to have acquired the leadership qualities

required to maintain the British army identity as one of high levels of

professionalism and leadership, in which organisational commitment and

esprit de corps are crucial.

However, to avoid the problems of maintaining an authority which might

be created by the presence of technical specialists and leaders in the

same unit, and in order to maintain a functional distinction between

them, the British army created units specifically designed to handle

new technologies (such as the Royal Engineers) in order to meet the

demands of modern warfare.20   It is worthy of note that this pattern of

adaptation between technical and operational units (teeth army) is an

old one in the British army. For instance, in the UK to be an officer

implies a certain kind of behaviour. Since the cadets enter the RMA

Sandhurst from different sources, public schools, grammar schools,

Welbeck College... this requires that they behave in a genetlemanly

manner. Status is defined by the behaviour associated with it. More-

over, the academy is helping in this respect by the fact that a certain

style of life still dominates Sandhurst and the army in general. This

situation strongly fosters an esprit de corps amongst all sections of

the British army, as well as the emergence of a specific military

culture.

However, the presence of numerous technical staff in the British army,

as a result of technical innovation, has changed the traditional

hierarchy pyramid of military ranks to a diamond shaped pattern of

ranks in order to accommodate the increasing numbers of technical

specialists, particularly in the task force organisation which is com-

prised of units and sub-units from infantry, artillery and engineers,

together with their supporting teams.... including many different types

of officers in the task force (leaders, technical and staff officers).

Correspondingly, the traditional formal military authority is certainly

not simple to maintain.

In Egypt, on the other hand, the ideology embraced by the Commanders

at the top echelons is towards recruitment of those who have the

apptitudes and interests for education and training in technical, scientific, administrative fields. Since 1952 the pattern of entry to the Military Academy is towards a variety of social backgrounds. It is evident, therefore, that the upper class élite has almost disappeared as a result of a marked shift to a wide cross-section of Egyptian society. (Table No.1). The social and cultural basis of the distinctions among Egyptian army officer corps has been undermined, if it has not disappeared altogether.

Moreover, the tendency towards technical innovation, associated with the need for the use of new weapons systems and electronic devices is considered the major factor to be introduced into the systems of bachelor degrees in administrative and engineering sciences in order to create specialised technical skills for regular army officers.21 The implication of such systems on the hierarchy of ranks, particularly at the lower level of command, is towards giving the impression of an inflation of rank structure and a growing specialisation of knowledge and skills at this level of command. Under the new skill structure there can be no doubt of the weakening of traditional military authority at the top level. Although the military authority is vested soley in the hands of Commander who has control over the lower levels, the new skill structure does not permit such a simple hierarchical command structure. As a result, the task of dispensing military authority becomes more and more involved in co-ordination rather than the exercise of direct control and issuing of orders over the lower levels. Even the co-ordination task in the military operational

structure is a complex one and involves diversified skills and is at present a major problem for military commanders.

Moreover, the Egyptian army rank structure includes two categories, career (regular officers) and non-career (reserve officers). These two categories form parallel hierarchies in the Egyptian army rank structure. (Table 11). As far as the reserve officers are concerned, their increasing numbers who come from conscription system and who acquire professional technical knowledge and skills but have not yet been accorded as full authority as that of regular officers, is often a source of organisational strain.

At this point it becomes clear that the growth in numbers of certain specific military skills which have been brought about by technological advances requires a more qualified and sophisticated leaders to man them. Such leaders have to counter the immense capacities of those staff and technical specialists (specialised knowledge and skills) to resist traditional military authority. It becomes impossible for the Commander to command his own organisation by traditional methods. Huntington argued that, in the case of conflict, an institutional solution is ready at hand: 'the priority of the hierarchy of rank over the hierarchy of office (or skills)' .22 However, this does not abolish the tension between the leaders and their subordinates. To impose autocratic orders and instructions for solving specific technical problems is, in fact, to create a new danger in the military organisation.

In this chapter we have discussed formal military organisations, status
systems and hierarchies in both the United Kingdom and Egyptian armed
forces, and illustrated how the structure and processes have been
affected by the roles of holders of authority at the top levels of
command.

In the next chapter we will discuss the ways in which military
organisation structure and processes have developed in response to
technological innovation.

NOTES TO CHAPTER TWO

1.   Beishline, John R. Military Management for National Defence.
     Englewood Cliffs, N.J. Prentice-Hall, Inc. New York, 1950, p.47.

2.   Ibid.... pp.50-51.

3.   Janowitz Morris. The Professional Soldier: A Social and
     Political Portrait. Free Press of Glencoe, N.Y., 1960, p.12.

4.   Subaih, M. Aiyam Wa aiyam 1882-1956....op.cit., p.37.

5.   Mooney, James D. & Reiley, Alan C. Onward Industry. Harper &
     Brothers, Inc., N.Y. 1931, pp.309-310. Also see Beishline, J.R...
     op.cit.

6.   Encyclopedia of The Modern British Army, Gander (7), 1980, pp.17-
     54.

7.   The military line organisation consist of the units that actually
     perform the combat mission, "operational units" or, as they are
     called sometimes, "teeth army". It is noteworthy that the line
     of the ground forces is considered to be composed of combat
     elements such as Infantry, Artillery, Armory, Engineers, Signals..
     and other supporting teams. With the increased technical advance,
     more and more specialisation culminates in combat elements
     utilising new weapons, electronic devices, missiles... all inte-
     grated into the line units and to be used as a team "task force".

8.   Coats, C.H. & Pellegrin, R.J. "Military Institutions and the
     Military Profession Reconsidered", Military Sociology, 1965, p.78.

9.   Moore, Wilbert E. Industrial Relations and the Social Order.
     Macmillan Co., N.Y., 1951, pp,72-84.

10. Janowitz Morris. The New Military: Changing Patterns of
     Organisation. Russell Sage Foundation, N.Y., 1964, pp.65-66 and
     by the Norton Library, 1969.

11. Moore, Wilbert.... op.cit., pp.75-76.

12. Beishline, J.R., Military Management.... op.cit. p.123.

13. Ibid.... p.133.

14. Mooney, J.D. & Reiley.... op.cit., p.60 and for more detail on military staff and technical specialist functions, see Kurt Lang, "Technology and Career Management in the Military Establishment", in Morris Janowitz (ed.) The New Military. Russell Sage Foundation, N.Y., 1964 and 1969 by Norton Library, pp.39-81. However, staff officer and technical specialists here refer to military staff.

15. The Principles of Management School has popularised such terms as; Chain of Command, Unity of Command and Span of Control. We have already referred to the Chain of Command; with respect to Unity of Command, we refer to "the notion that the individual is required to report to only one superior. Then each member of the organisation will also know to whom he reports and who reports to him". With respect to Span of Control, we mean "the number of subordinates that can successfully be made accountable to any one individual" (the number of subordinates reporting to a single superior). However, the Management School focussed on formal structure and on official relationships among members of the organisation. These functions by no means constitute a formula for good organisation, whether military or commercial and industrial organisations. See Urwick, L. The Elements of Administration. New York: Harper and Brothers, Inc. 1943, p.26; Gulick, L.H. and Unwick, L. (eds.). Papers on the Science of Administration, Columbia University Press, 1937.

16. Weber pointed out that the characteristics of a bureaucratic form of organisation are; a specialised division of labour, a hierarchy of authority, a system of rules and regulations, an atmosphere of impersonality. These key variables are considered fundamental to any serious examination of formal organisation structures. Although Weber's 'ideal type' is rarely found in pure form, it probably remains interesting and valuable for the study of military organisations to determine the extent, and the nature of their bureaucratic characteristics. See Max Weber in his study: "The Theory of Social and Economic Organisation" (written in 1920) from Blau, P.M., and Scott, R. Formal Organisation - Chandler, 1962; Wolfe, J.N. and Brickson, John (eds.). The Armed Services and Society: Alienation, Management and Integration. The University Press, Edinburgh-Scotland, 1970, pp.144-146.

17. Feld, Mary D. The Structure of Violence, Armed Forces as Social System. Sage Publications, London, 1977.

18. Mintzberg, Henry. Power in and Around Organisation. Prentice-Hall, Inc. Englewood Cliffs, N.J. 1983, p.149.

19. Coats & Pellegrin.... op.cit. p.110.

20. Garnier, M. Changing Recruitment Patterns and Organisational Ideology.... op.cit. 1972; Garnier, M. Technology, Organisational and Culture.... op.cit. 1975, pp.150-151.

21. Arikan, Nejat. "Egyptian Armed Forces", Defence Technology,
    April, 1982, pp.94-115.

22. Samuel P. Huntingdon. "The Solider and the State. The Theory and
    Politics of Civil Relations, Cambridge, Harvard University Press,
    1959, pp.11-18 and new ed. 1967.

CHAPTER THREE

CHAPTER THREE

TECHNOLOGICAL CHANGES AND THEIR EFFECTS ON MILITARY ORGANISATION

STRUCTURE AND PROCESSES; IMPLICATIONS FOR MILITARY TRAINING

The previous chapter attempted to outline the formal military organisa-

tion structure and processes of the UK and Egyptian armed forces in

order to illustrate the roles of holders of authority at the top levels

of command. The purpose of this chapter is to illustrate the

characteristics of technical development of military weapons and equip-

ment (the technology factor) and their effects on the structure and

processes of military organisation, the necessary shifts in skills and

activities of military leaders, and the implications for military

training.

Technological Changes and Military Organisation Structure

The Future War

One fundamental question in this respect may be; what kind of war, if

any, will the future one be? In order to answer this question, it

seems expedient to present the main alternative forms of the future

war. It also seems highly probable that modern warfare will try to

exploit both the old and the newest inventions in the military arsenal.

Firstly: Nuclear War

The worst form of future warfare will be the nuclear war, whether
strategic or tactical. The development of nuclear bombs and the means
of delivering them make it clear that the world has entered an era of
mass destruction by military weapons. One of the last but surely not
the final instruments is nuclear-armed satellites circling round the
world in outer space prepared to dive with electronic and computerised
precision to hit any carefully specified target in minutes.

However, this kind of war seems rather unlikely at least with regard to
the relatively peaceful conditions of Western society and because of
the political and psychological consequences of its use.

Secondly: Conventional War

The conventional war will be the most likely model in the immediate
future. There are, in fact, some conventional wars going on in distant
areas at this very moment. The conventional war has certainly changed
in the following ways:1

1. The increasing technical complexity of weapons and equipment;
2. The increased destructive power of weapons;
3. The rapidity of technical changes.

If one considers the effects of these developments in military weapons
and equipment on the military organisations, it seems that these

innovations have both solved and posed problems for military
commanders. While they have provided the means for improved combat
efficiency, they have at the same time created certain changes with
regard to the organisation structure and processes, and the management
of human resources.

1.   The Increasing Technical Complexity of Weapons and Equipment

Since the second World War developments in complexity of weapon systems
moved ahead with great rapidity. For instance, the line organisation
that existed in World War II was composed of old tanks, motor vehicles
and cannons. This line organisation is now dated since the introduc-
tion of new weapon systems and equipment. Tanks are provided with
computers, guided missiles and infra-red heat searching equipment.
Vehicles are developed to be amphibious, and cannons are mechanised and
their destructive power is greatly increased.

Sadler argued that the increasing technical complexity of weapons and
associated equipment has grown to the extent that commanders respo-
sible for their deployment cannot be thoroughly knowledgeable of their
capacities and requirements for maintenance". [2]

This implies that decisions by the top level of commanders have come
more and more to depend on advice on technical matters given either by
their subordinates or by technical specialists standing outside the
Chain of Command.

2. The Increased Destructive Power of Weapons:

The concentration of destructive power has now made the individual or small crew-served weapon the equal of entire mass weapon systems of the past.

For instance, the increased firepower of a single aircraft or a single warship allows one aircraft or one warship to inflict as much damage as an entire earlier fleet or army. The implications of these developments on military organisation is that the increased firepower of modern weapons causes military forces to be more dispersed in order to reduce exposure to danger. Each unit becomes increasingly dependent on its own organisational impetus once the battle has commenced.3

Accompanying the increased firepower is the immense increase in the territorial range with which the force has to cope to carry out its missions. In this situation the operational commander may need rapidly to deploy his forces totally outside his normal area of concern.

3. The Rapidity of Technical Changes:

The increasing rapidity with which weapons and equipment have changed has anticipated changes in traditional forms of military organisations. For instance, the early tanks were used basically within the framework of traditional operations. However, recently the performances of the tank have developed to a very high pitch of perfection and began to be mass-produced and widely adopted as a major weapon. This means that

the advent of fundamental new and vastly more powerful types of weapons and their adoption on a mass scale necessitated changes affecting battle orders and the size and depth of missions, speed of offensive operations, forms of manoeuvre, defensive tactics and other aspects of warfare.

These innovations in conventional warfare with their complexity and immense firepower inevitably gave rise to changes in tactics, strategies of warfare, and in the organisation structure of the armed forces.

For instance, as hand weapons and artillery improved with the appearance of automatic weapons (various types and systems of machine guns) and the development of other military equipment, the infantry units and sub-units, as the main forces on the ground, incorporated and acquired sub-units and units of artillery, engineers, communications, reconnaissance as well as units of new branches of arms such as tanks, all being integrated into independent battle formation or what is called a "task force".

On the other hand, the necessity for increasing the rate of advance of land forces has increased the need for greater mobility and caused changes in their formations for better co-ordinated fire power and movement, and for great improvement in the organisation of command and communication over the forces.

Each of these innovations in conventional warfare is crucial in
assessing the extent to which military units and sub-units have to be
formed to modify their operation to utilise these innovations of
warfare most efficiently.

Military organisations, however, do not remain static. New develop-
ments and innovations in technology constantly bring about changes and
make the organisation structures of the armed forces move away from
fixed and permanent structure.

For instance, the tendency in the direction of task force organisa-
tions, made up of components from the army, navy and air-force seems to
be growing constantly, especially in the contemporary armed forces as
we found in the UK armed forces in Chapter 2.

With respect to the Egyptian armed forces, the 1967 and 1973 wars may
be considered a turning point. Since 1973 in particular, the military
establishment has been undergoing changes as a result of the need for
modernisation, especially with Western weapons systems. These develop-
ments necessitated more and more specialised units such as engineering
and electronic units which culminated in combat elements in order to
utilise the new weapons systems. One can readily imagine the great
specialisation which the use of such instruments of warfare required.
The creation of technical and engineering training programmes at the
Military Academy is a case in point.

Technological Changes and Military Organisation Process

The impact of technology has led to a number of changes in the military

organisation process through the following aspects:

1. Technological changes and authority;

2. Technological changes and decision-making;

3. Technological changes and communication.

Technological Changes and Authority

The impact of technology has caused a number of changes in the forms

and basis of military authority; the aim here is to illustrate the

influence of technological factors on the basis and the forms of

military authority.

> "Traditionally, a military authority has been vested in rank alone.
> This view is expressed in the hierarchy of military ranks, which
> holds that a member of the military group owes obedience to all
> persons of superior rank. A further traditional characteristic of
> military authority has been its autocratic nature. Orders have
> been expected to be obeyed implicitly, without question or argument
> and consultation with subordinates has been considered undesirable".4

Changes in the Basis of Military Authority:

To consider changes in the basis of the military authority, the changes

have been that rank has become less important and expertise, knowledge

or skills more important. This has come about in the following ways:

1. The growing complexity of technical weapons and equipment has
    meant that only personnel specially trained in its operation or
    maintenance are competent to take decisions with regard to it.
    Consequently, although in theory the military group member is
    required to accept and obey orders and instructions from all
    persons of superior rank, in practice they tend to receive them
    only from their functional superiors, i.e. officers of the same
    technical specialisation, to accept the authorities of a superior
    only if they prove that they possess reasonable professional
    competence.

2. Given the sophistication of contemporary weapon systems and the
    overriding need to ensure the economic and effective use of the
    extremely costly equipment for which the commanders are respon-
    sible, then we can see that this has produced both an increase
    in the numbers of technical staff officers and a change in their
    roles.

The traditional staff officer was an adviser to a superior commander,
and gave such assistance and advice to the commander as the latter
required. Authority was vested solely in the commander who was expert
in a particular aspect of military operations.

Today the size and complexity of the hierarchy is so extensive that the
traditional distinction of staff commander no longer fits the realities
of military administration. According to Morris Janowitz:

"Organisations in which the role of staff officers is limited to that
of adviser may have been effective as long as the technology of war-
fare developed slowly. But the commander has greater and greater
difficulty in assessing the performance of his technical subordinates
and consequently is forced more and more to use his staff officer in
supervisory as well as advisory roles".5

There are not only many more specialised aspects of military operations
which are regarded as staff function, but also tendency for staff roles
to emerge which encroach upon areas traditionally regarded as falling
under the authority of line commanders at every level. For instance,
at lower levels of command, the use of staff officers in supervisory as
well as advisory roles, has created conflicts in the hierarchy at these
levels.

There is always the danger that recipients of staff advice in subordi-
nate units will consider such advice as an order, such a situation
causes line officers to feel that staff officers and technical special-
ists are intruding upon their command, authority and functions. Con-
versely, staff officers and technical specialists often feel that,
relatively deprived of command authority, they are not accorded
organisational status commensurate with the functional importance of
their specialised knowledge.

Stouffer, Samuel, Borgatta, E. and Janowitz, M., in their study of
organisational strains, in which they investigated the attitudes

towards staff-command relations, have provided us with a useful frame-
work for understanding this issue. They argue that authority conflicts
are created:

"a) For the staff officer charged with 'producing' efficient per-
formance of those lower-echelon functions falling within his
technical competence; and

b) For the commander in the lower-echelon units under such super-
vision. If the staff officer, in his capacity as technical
specialist (and employing his achieved authority), attempts to
exercise authority over a technical function in a lower echelon, he
is vulnerable to the allegation that he is using authority which is
specifically denied him by the formal rules of military establish-
ment. But if he fails to exercise his supervisory control, he risks
the charge of failing to assist his commander in executing his
responsibilities. If the lower-echelon commander permits direct
intervention for efficiency, he does so in the face of formal
regulations. He thereby weakens his ascribed authority over his
units.... But if he resists direct staff intervention, he is con-
fronted with the reality that higher-echelon commanders do not share
his emphasis on formal regulations. Or by preventing staff from
exercising technical authority, he is forced to exercise supervision
himself, although often he lacks the technical competence for this
supervision".6

However, the magnitude of these differences is not always striking,
indicating that the staff-command conflict operates for all types of
officer personnel and reflects the basic problem of a complex skill
structure operating within the formal military hierarchy.

Changes in the Forms of Military Authority:

The changes in the basis of authority have been accompanied by related

changes in its forms. The technology of warfare is so complex that the

co-ordination of a group of military personnel cannot be guaranteed

simply by authoritarian discipline. For instance, it is simple to

issue an order such as "advance" or "open fire" in an autocratic way,

and indeed in such cases immediate and unquestioned obedience is both

necessary and obligatory. However, it is very different to issue an

autocratic instruction with regard to the execution of a complex

technical task. Since in carrying it out the subordinate will nearly

always have to solve problems at his own discretion, use his initiative

and make his own decisions.

Janowitz, M. argued that the combat fighter regardless of military

arms, when committed to battle, is hardly the model of Max Weber's

ideal bureaucrat following rigid rules and regulations.7

In short, as older forms of authoritarianism becomes out-moded,

effective new forms become necessary for the hierarchical command

structure of military organisation.

According to Sadler:

"Autocratic forms have gradually come to be less often employed;
instead there has been a growing tendency for consultative forms

to be employed. The reasons for this stem from many sources, but technical developments have undoubtedly played an important part".8

Thus, the impact of technology has forced a shift in the forms and basis of military authority, and made necessary new skills to create a stable and purposeful involvement at each level in the hierarchy of ranks.

Technological Changes and Decision-Making:

Technical progress in military technology has placed new and higher demands on military organisation. The new weapons and equipment have raised the value of time unprecedently. The delay in decision-making and executing orders can be lethal for the troop units and formations. The struggle for speed and for reducing the time standards in executing various actions has become a most important element in the struggle for military superiority and this struggle, to an enormous degree, depends upon the qualifications of commanders to take suitable decisions in the quickest possible time.

It seems that quality of decision-making depends largely on:

1. The time pressure.

2. The limited number of facts available.

3. The risks of delay.

1 - The Time Pressure:

Sometimes commanders have to make their decisions although the environment around them is ambiguous and the many sources of information required for their decisions may be contradictory. This can delay their decisions because they might like to have additional information before a decision can be taken.

But in military operations, in certain situations, of a matter of life and death, there is no time for collecting this information.

2 - The Limited Number of Facts Available:

A lack of appropriate information which faces the commander, especially at the high level of command as a decision-maker, may lead to increased uncertainty about the nature of the problem and when he should try to resolve it. He may be uncertain about the alternative actions he can take, and when he will have the resources (computer assisted) to carry them out. He may be uncertain about what unpredictable events will occur in the battlefield and how they will affect the outcome of his decision.

3 - The Risks of Delay

The increased firepower of modern weapons may cause many risks in delaying decisions for dealing with any situation which might have occurred in the battlefield and which require the commander to act on his own judgement rather than to wait for his superior's orders.

Under these circumstances, a degree of autonomy in performance is required. But how much autonomy? Is it full autonomy or constrained autonomy? Is it closely related to the skills acquired from training programmes or practical experience or both?

Eilon, S., in his study, 'Prescription in Management Decisions' investigated the delegation of authority and responsibility in decision-making to the lower level and has concluded that:

"If there is no delegation from the higher echelon of management to a lower echelon, then the latter is constrained; it cannot exercise any discretion, it cannot meaningfully develop initiatives or skill in handling situations which call for managerial inter-vention, and it cannot therefore share in any responsibility for the success or failure of such intervention. The lower echelon may still be useful for monitoring events or as a convenient means of transmitting messages through the system, but it has no active participatory role in the decision process. At the other end of the scale, if complete delegation is practised, the higher management level becomes uninteresting; full authority and responsibility for decisions are then vested with the lower echelon, and the function and the very existence of the higher level may be put into question. That some delegation is necessary is therefore obvious enough, if a balance of power and co-existence is to be preserved".9

With a great deal of technological changes, there will be some pressure to delegate decision-making at operational levels to those which Beishline[10] & Child [11], and Mintzberg [12] called the "man on the spot" who is in a position to respond quickly to local situations. This does,

in a sense, imply a degree of delegation down the hierarchy to the people closest to the decision situation.

With respect to the degree of autonomy which may be delegated to the lower echelons in the military organisation, particularly at operational level, it may be useful in the light of our suggestion at the beginning of this section (the triple variables that seems to play an important role in the decision-making processes, the time pressure, the limited facts available and the risks of delay) to try to consider the degree of autonomy that may be delegated to the lower level of command.

From the start, authority should not be delegated to the point where the higher level of command or delegating officer loses control of the situation. But, how much autonomy should be delegated to the lower level of command? It is noteworthy that there is no mathematical formula that provides the answer of this question. But it must be borne in mind that in the military organisation, particularly, at operational level (fighting units) sufficient authority must be delegated in order to enable the leaders at this level of command to cope successfully with the local situations in fulfilment of their missions. Therefore, one of the major problems of high level of command is to determine the degree of sufficiency of authority that should be delegated for the accomplishment of various missions by the lower levels.

As pointed out earlier in this chapter, modern weapon systems have immense fire power and because the commander at the top level has a major responsibility for the proper use of this destructive power, there is a need, in other words, for control of its power. This implies a tendency for decisions to be made at the top level. It also implies that the leader of the lower level must be more obedient to more remote authority than those in the past. Moreover, the great improvements in communication systems provide commanders with a comprehensive view of the theatre of operations (by the transmission of urgent information). This will serve towards centralising the decisions made at the top level.

Accompanying the increase of the firepower of weapons are the immense increases in range. The need for decreased time scale forces the commander at the top level to make rapid decisions. There is no excuse for delaying decisions in combat situations. The modern battlefield is characterised by high complexity and a rapidly moving battle; "a fluid battlefield".13   So decisions must be taken and executed rapidly. This requires the decision to be made in very short time and also implies that the decision will depend on the current knowledge of the situation. As we have seen, the trend in communication improvements provides the commander at the top with a wide command control. It makes him able to collect information, assign target priorities and allocate strikes rapidly. This seems sensible in theory because it enables the commander to use resources efficiently by responding to threats according to the plan of priorities. However, in practice the

communication centres are considered by the opponent as a vital target
to be destroyed or rendered ineffective by jamming or interference.
Also, when decisions are centralised and directed via communications,
an opponent can hamper effective communications by concentrating his
effort on a few important targets.

Thus, the top levels may advocate centralised decisions as a means of
enhancing their specialisation or with respect to their functional
status in the Chain of Command, but this is considered a contributing
factor in the development of centralised structures, and the danger is
that leaders at the lower levels will have very limited authority over
their resources and, as a result, this reduces their command flexi-
bility. Moreover, lower echelon leaders bear heavy responsibility for
basic mission accomplishment without adequate authority over the
functions assigned to them.

In combat situations, there is a demand for a high degree of autonomy,
particularly in the point of contact with the enemy. Janowitz des-
cribed the situation of those units when committed to battle as
"improvisation is the keynote of the individual or combat group".14

According to Etzioni; while in peace-time armies are highly bureau-
cratic, they are capable of shedding some bureaucracy as circumstance
demand it, often in war:

"rules and regulations are waived or disregarded, personal leadership counts for more than formal power positions, oral communications replace many written ones".15

Experience indicates that this is true in large part, because in combat situations the distant top level of military bureaucracy must become a supporting structure to the operational levels rather than a controlling structure. In combat situations, military authority and discipline are functional necessities at all times to ensure immediate control of violence, but also because individual, group and indeed organisational life and death may be at stake. The commander on the spot must have a wide latitude for making the decisions required to cope with the situation dependent on his own judgement and based on an intimate knowledge of existing conditions and therefore he can use his initiative and make his own decisions about the best response to make when confronted with a given type of danger.

For instance, in the Falklands campaign, strategic decisions were taken by the high level of command in the UK on the military theatre. They established clear guidelines within which commanders on the operational level were to conduct the operations, without making any attempt to direct the battle from 8,000 miles away. This short and clear Chain of Command made possible quick reaction to events and met the needs of the forces in the South Atlantic. On the other hand, the intention was not to impose any detailed direction of actions in the battlefield, which had to remain the responsibility of the commander on the spot.16

It is understandable that a commander who is at the centre of operations has a better grasp of the situation and its problems than do commanders at a distant headquarters. Accordingly, the bulk of decisions within the policy framework are required to be made at lower levels to cope with the existing conditions. According to Beishline; the military forces are able to operate with a centralisation of command and a decentralisation of operations.17 Therefore, initiative is encouraged and great flexibility of organisation is obtained.

The most important factor that plays a significant role in this scenario is the decision-making skills required at all echelons of military organisation, particularly at the operational levels. This reflects the growing needs for military training programmes to develop such skills under the impact of technological changes.

Technological Changes and Communications:

The major innovations have probably occurred in communications. For instance, communication by radio first appeared in warfare and it was demonstrated that oceans were no longer formidable obstacles in defence matters.

Systems of communication offer reference information and instructions required by commanders and are directly transmitted via communication channels to any units or sub-units. On the other hand, the great ability of communications systems to transmit information directly

across distance, from the theatre of operations to the commanders at
the headquarters, significantly strengthens the feedback in the control
cycle.18 For instance, in the Falklands campaign, as the task force
sailed south it became increasingly important to receive frequent
detailed situation reports from the area of operations as a general
background for the strategic decision-makers in Whitehall. The British
military satellite provides good communications across the 8,000 miles
between the UK and the task force and vice versa.19

The growth in size and breadth of military resources obviously
increases the number and kind of military units with which any military
leader must interact. This interaction can best be analysed in terms
of the increase in information that the military leader must consider
in reaching his decisions.

Attwood (1975) found that it is no exaggeration to state that a
manager's (leader's) whole job depends on his ability to communicate.
He estimates that 80 per cent of his time is spent in communication.20

The great increase in firepower resulting from technological changes in
weapons will require a much greater dispersion and mobility of tactical
units. Troops will move quickly from one area to another and the
different units of a command may be widely scattered over a large
geographic area. These changes in tactics will undoubtedly place much
greater importance on communication activities of all kinds.21

On the other hand, closely related to these tactical changes is the increasing demand for the rapid processing of large amounts of data gathered by reconnaissance systems. This situation requires the rapid processing of orders and instructions within the chain of command between many other units to keep track of the exchange of knowledge between them. But orders and instructions need interpretation and the understanding may become more complicated accordingly. The desire to unify language becomes necessary to facilitate understanding of the meaning of the orders. The language for communicating should be sufficiently complete, but at the same time laconic and operative. There is not enough time for long dialogues, and therefore the communication channels must have perfect mastery of the descriptive language and of the control language.

This has added the data processing problem to the communication problems. This new problem must be taken into account and new tasks, which will require perceptual skills, will have to be created at an increasing rate to keep pace with technological changes.

Technological Changes and Military Skills

The preceding sections have illustrated that the complexities of warfare have created changes in tactics, strategies of warfare, and changes in the organisation structure of the armed forces. This has led them to adopt new tasks and new actions. Consequently, it can be postulated that the impact of technological changes on military organisation have resulted in significant changes in their structure and

processes and necessitates shifts in the skills and activities of the military leaders.

It is important to identify the nature of change in certain specific military skills which are brought by technological advances. These will cover; skills involved in command, decision-making and basic communication skills (leadership skills), and skills required to direct machines, weapons and equipment (technical skills).

Skills Involved in Command and Decision-Making

In the traditional operational environment the "fog of the battle" hampered quick and judicious decision-making. On the modern battle-field, increased firepower and higher destructiveness, mobility and higher precision of weapons generated by modern technological advances, will require instant decision-making skills at all echelons of the military leadership. As a further outgrowth of technological changes, it is likely that the future will impose greater decision-making responsibilities on the lower levels of command in military organisa-tions. However, it is one of the trends of great importance for military skills.

As a result of the pace of technological changes, many profound changes will occur in command and decision-making skills, and impose a greater emphasis on officer training programmes to provide training in these necessary skills required for potential officers.

Basic Communication Skills:

As we mentioned earlier in this chapter, the increase in firepower
resulting from technological changes in weapons will require dis-
persion and mobility of tactical units and the different units of
command will be widely scattered over a large geographic area. Con-
sequently, communication activities between many units will be
increased to keep track of the large amounts of information passing
between them.

As a result, a continuing need exists to develop communication skills
of leaders to use combat radio as well as to command their units by
radio. Also, they need a basic ability to listen and write effectively
as well as to use automated processing to help them to sift and
process data between their units and other units rapidly.

Skills Required to Direct Machines (Weapons and Equipment):

The evolution of military weapons has progressed through successive
stages in which the military personnel relied originally on mainly
hand-held operated weapons or rifles, machine guns and cannons; then
operated tanks, low pressure cannons, aircraft, submarines and other
self-propelled weapons; now he needs to know how to instruct automata,
such as computers, guided missiles.... and electronic equipment.

However, in order to perform such tasks related to this automation, the
leader needs to understand modern technology and electronic theories,
he also needs to rely on the skills required to manage this automation.

Consequently, the leader must develop special procedures and acquire the technical skills needed to operate as well as to maintain these newest systems. The levels of skills required for maintenance are often not less than those required to direct these weapons and equipment. Technical skills here mean job knowledge and the adequate use of available tools.

The important point regarding these three aspects (decision-making, communication and technical skills), is to maintain a just balance. As the complexity of modern weapon system, and the almost alarming rate of technical development, impose the necessity for a certain standard of technical education among a proportion of officers, the diversity of tasks and conditions under which the army is called upon to operate, demand a high standard of leadership skills as well as technical skills.

Officers today face the challenge to manage themselves, their men, and their resources as a result of technical innovation. This presents the crucial role of education and training programmes provided by the military academies for preparing the potential officers.

The officers are required to possess knowledge, skills and abilities to organise and co-ordinate resources as well as the activities of a wide-ranging group of specialist subordinates.

Let us now illustrate the impact of technical developments under con-
sideration and their effect upon the skills structure of officer
groups in both the British and the Egyptian armies.

Occupational Structure of the British Army Officers

The available documents provided by the Ministry of Defence Department
presented the occupational structure of the British army as an advanced
form of technical function in which skill levels and educational back-
ground among men are very high.22

The replacement of men by machines and the use of sophisticated weapons
and equipment (e.g. tanks, computer guided missiles) in the last two
decades increased the job of technical, engineering and maintenance
staff and shifted the skill structure of this category so as to become
the second in size in the occupational structure of officer groups in
the UK.

Table 12: The UK Officer Distribution by Occupations Group
           (in percentages)

Occupational Groups	1960	1970	1980
General Officers and Executives	1.7	1.7	1.5
Tactical Operations	52	48	45
Technical & Engineering and Maintenance	12	21	24.5
Administrative, supply....	14	12	11
Others	20.3	17.3	18
Based on percentages	100	100	100

Sources: MoD, Statement of the Defence Estimate, Cmnd.4592, 1971
           and SDE, Cmnd.3927, 1969.
                  Cmnd.9430, 1979/80 & Cmnd.7826, 1980.

* These distributions are approximate

Table 12 shows that while officers are more often engaged in tactical
operations than any other activities, the engineering, technical and
maintenance group is next in size; this category accounted for about
12% in 1960 and one-fifth in 1970 while they were almost one quarter of
all officer positions by 1980.

Operational units which form the basis of military power have become
highly mechanised and the numbers of officers involved in such
activities as engineering reflect the replacement of men by machines. The

number of officers in this sector is related to the number of men in the primary operations area. However, the relationship between the growth of the technical and engineering sectors reflects the growth of technological development in the British armed forces. Furthermore, technical innovations tend to decrease the size of the tactical operations group, from 52% in 1960 to 45% in 1980.

This trend is more marked in the UK military establishment because of the greater emphasis on specialised personnel qualified to use mechanical instruments and electronic devices.

Occupational Structure of Egyptian Army Officers

The continuing proliferation of new weapons systems requires the military to adopt new skills and responsibilities. Since 1973 the need for some form of career specialisation of officers is becoming more widely accepted within the Egyptian military services. This produces the required number of officers with specific expertise and depth of knowledge necessary to enable the military to carry out its role in national defence.

The following table illustrates the growth of technical groups amongst Egyptian army officers since the beginning of the 1960's.

Table 13: Occupational Structure of Officer in the Egyptian Army

   (in percentages)

Occupational Groups	1960	1970	1980
General Officers	2.9	2.8	2.3
Tactical Operations	57.1	57.2	50.7
Technical & Engineering Maintenance	8	10	16
Administrative, supplies....	32	30	28
Others	-	-	3
Based on percentages	100	100	100

Sources: MoD, Egyptian_Armed_Forces, Army Press, 1973 & 1981
          and World_Armies (2nd ed.) 1982/83.

* These distributions are approximate

Table 13 shows that while the Egyptian armed forces employed signifi-
cantly lower proportions of officers in technical, engineering and
maintenance categories during the 1960's and early 1970's, in the late
seventies and beginning of the eighties, changes in military technology
appeared in certain respects to have anticipated changes in the occupa-
tional structure of officer groups in these categories.

As a result of technical innovation in weapons and equipment, with its associated skill requirements, the relative size of the tactical operations of the Egyptian armed forces is declining to the extent that the numbers of technical, engineering and maintenance jobs which are vital to technical competence and effectiveness of the organisation, start to grow rapidly.

However, in contrast with the British armed forces, the Egyptian armed forces employ a significantly lower proportion of officers in the technical, engineering and maintenance fields, which has made these categories occupy only third place in size in the occupational structure of officer groups in the Egyptian army. Tables 12 and 13 clearly illustrate this trend. Consequently, they indicate the lesser complexity in nature of the military skills at all levels in the military hierarchies than those in the British army.

In the next chapter we will analyse the training programmes at the military academies in Egypt and the United Kingdom. A particular examination will be carried out of the training programmes at the Military Academy of Egypt in relation to specific military skills, and of the extent to which skills are developed in the training and education programmes.

NOTES TO CHAPTER THREE

1. Sadler, P.J. "Technical Change and Military Social Structure", in Frank A. Geldar (ed.) Defence Psychology. Pergamon Press, 1962, pp.312-317.

2. Ibid. p.312.

3. Morris, Janowitz, The New Military.... op.cit. pp.36-37.

4. Sadler, P.J., Technological Change.... op.cit. p.315.

5. Morris, Janowitz, The Professional Soldier.... op.cit. pp.67-68.

6. Stouffer, Samuel, A., Henry Borgatta, "Role Conflict as a Factor in Organisation Effectiveness", in R.V. Bwers (ed.) Studies in Organisational Effectiveness. Washington D.C. 1962, pp.5-27; Morris Janowitz, Sociology & Military.... op.cit. pp.29-30.

7. Morris, Janowitz. Sociology and the Military Establishment. Russell Sage Foundation, New York, 1959 and 1974.

8. Sadler, P.J. Technological Change.... op.cit. p.316.

9. Samuel Eilon, Management Control. Pergamon Press, Oxford, England, 1979, p.163.

10. Beishline, J.R. Military Management, op.cit. ch.9, p.135.

11. Child, J. Organisation: A Guide to Problems and Practice. Harper & Row, London, 1977.

12. Henry Mintzberg. The Structuring of Organisations. Prentice-Hall, Inc., Englewood Cliffs, N.J. 1979.

13. Frank R. Hunsicker, "Organisation Challenge and Response by 1985", in F.D. Margiotta (ed.) The Changing World of the American Military. Westview Press, 1978, ch.16, pp.281-292.

14. Morris Janowitz. Sociology and Military Establishment. op.cit. p.37.

15. Etzioni Amitai. A Comparative Analysis of Complex Organisations. New York, Free Press, 1961.

16. In the Falklands campaign the higher management of the crisis was conducted by a small group of Ministers which was chaired by the Prime Minister herself. While on the military side, it has been established that clear guidelines were drawn up within which commanders were to conduct the operations. This illustrates the

effective political control of the operation by the issuing of
strategic decisions by the British government in military affairs.
Also this implies that the decision-making at the operational
theatre remains the responsibility of the Commander on the spot.
See MOD (UK) Cmnd.8758. The Falkland Campaign: The Lessons.
1982, pp.15-36.

17. Beishline, J.R. Military Management. op.cit. pp.134-135.

18. John Child, Organisation: A Guide to Problems and Practice.
(2nd ed.), Harper & Row, London, 1984, ch.9, pp.245-256.

19. MOD (UK). The Falkland Campaign.... op.cit., pp.15-16.

20. Attwood, T.J. "Training for Communications" in Bernard Taylor (UK)
and Gordon L. Lippitt (USA) (eds.) Management Development and
Training Handbook, McGraw-Hill Book Company (UK) Limited, 1975,
pp.293-309.

21. Fitts, P.M., "Military Skills in a Changing Technology", in
Frank A. Gelderd (ed.) Defence Psychology. Pergamon Press, 1962,
pp.99-104.

22. In 1969 the Secretary of State for Defence in the UK made it clear
that "the British armed forces will remain based on all-regular
volunteer forces maintained at highest professional standards and
equipped with the most modern weapons". See: MOD (UK) Statement
on the Defence Estimate. Cmnd.3927, 1969; SDE, Cmnd.9430, 1985.

CHAPTER FOUR

CHAPTER FOUR

EDUCATION AND TRAINING PROGRAMMES AT THE RMA SANDHURST AND THE
MILITARY ACADEMY OF EGYPT

The aim of this chapter is to analyse the current education and

training programmes at the RMA Sandhurst and the Military Academy of

Egypt. The intention is to identify how each academy has responded .to

the.need for specific military skills (leadership skills and technical

skills) which are brought about by technological advances and required

for the future army officers.

The purpose of the academy education and training programmes is to

transform the new cadet into a member of a professional army. Changes

in the character of warfare necessitate that the education and training

programmes provided by the military academies should produce a body of

officers qualified to carry out the evolving and more complex functions

of their profession.

However, the structure of education and training programmes at the

military academies vary from academy to academy in terms of aims,

content, length and methods of training.

Education and Training Programmes at the Military Academy of Egypt

The Egyptian Military Academy's mission is to educate, train and

inspire their cadets for exemplary service as commissioned officers in the regular army of Egypt. The purposes of the academy are set out in its charter which states the following aims:1

* Scientific preparation of the cadets who will become professional officers in the Egyptian army.

* Developing broad leadership capacities, and providing knowledge and skills which serve as a foundation for a wide variety of specific task.

* to build strong foundations for assuming senior officer responsib- ilities.

Since the establishment of the Military Academy in 1811,[2] the primary goal was concentrated on providing the commission with practical skills on tactics of war, and with discipline. Even on the eve of the Six Day War in 1967, the Academy remained essentially a military institution, its training programme and its organisational ethos still faithfully patterned along the pure military lines drawn up more than one hundred and seventy years earlier.

In the years since 1967, however, the Egyptian armed forces have become increasingly aware of the need for greater breadth in the education of the cadets. This awareness has led the leaders of armed forces to recognise the need to assimilate into the training programmes wartime experiences,

and the accompanying tactical and technological changes in warfare. They were influenced by the requirements of the modern war in which the armed forces must be composed of highly qualified and trained individuals.

With the new weapon systems imported from the East and West incorporated into the Egyptian armed forces, new kinds of training needs, however, became increasingly apparent to reflect the newly acquired technical innovations.

Moreover, the partial contribution of the Egyptian armed forces in the social and economic development process highlighted the need for the military establishment to adopt new skills previously thought to be outside those normally found amongst combat functions.

The requirements for the Egyptian armed forces to assume additional responsibilities can be seen clearly in the Ministry of Defence report in 1982:

'In the wake of the October War in 1973, the army participated in alleviating the plight of the people through the body of national service projects. Through this body, the army participated in the projects of extending and repairing telephone lines and built the roads and bridges, as well as food security and housing' .[3]

The implication of this self-image supplements the main objective of the armed forces that the army officers have to acquire knowledge and

skills of non-combat functions that make them able to contribute
efficiently and constructively to the development process of the
country.

Again, there is a need, therefore, to create a training system which
can be specifically incorporated into career specialisation for the
army officers, in order to meet the changing requirements of the
officer roles.

The combination of these trends helped to alleviate the pressure on the
Egyptian army to reform and modernise the training programmes at the
Military Academy. In 1973 the Military Academy staff and the army
training authorities have been asked by the Ministry of Defence to
examine the training programmes at the Military Academy in order to
recommend reform.

The Academy staff and the army training department called for radical
reforms in the structure and the content of the Academy training pro-
grammes to be geared towards under-graduate university programmes which
lead to civilian bachelors degrees in administrative and engineering
sciences, with a re-emphasis on the existing military training.4

The philosophy behind this trend is to produce a suitably qualified
army officer to meet the broader responsibilities in and out of combat.
Moreover, this trend will attract a larger proportion of candidates

either with the requisite skills or with aptitude for training in these fields; in other words, to attract personnel who would be more committed to a military career with the necessary qualifications and motivation.

The current training programmes at the Military Academy are concerned with continuous developments in the quality of weapons, equipment, ordnance, and their methods of use; the technological developments in various scientific fields; the several dimensions of the potential officer's work; and administrative and managerial fields.

The cadets study either administrative science or engineering science, geared towards obtaining civilian bachelor degrees as well as military training. In addition to these undergraduate university programmes, there is a more specialised military one run for the graduate entrants who join the army after obtaining their university degrees as specialist officers, such as doctors, lawyers and so forth. The aim of the course for these post university cadets is:

- To make them fit to be junior officers
- To lay a foundation for their professional military career

The following chart illustrates the training and education programmes at the Military Academy of Egypt:

TRAINING PROGRAMMES AT THE MILITARY ACADEMY OF EGYPT

Academy Headquarters

Engineering. Programme | Administrative Programme | Military Training Courses

Course of Computer Science | Course of Basic Science | Course of Elec. Enginrg. | Course of Commun. & Elec. Warfare

Tactics Course | Skills at Arms Course | Signals Course | Physical Training | NBC Training

Management & Admin. Course | Economics Course | Mathematics & Statistics Course | Accounting Course | Independent Courses

- 141 -
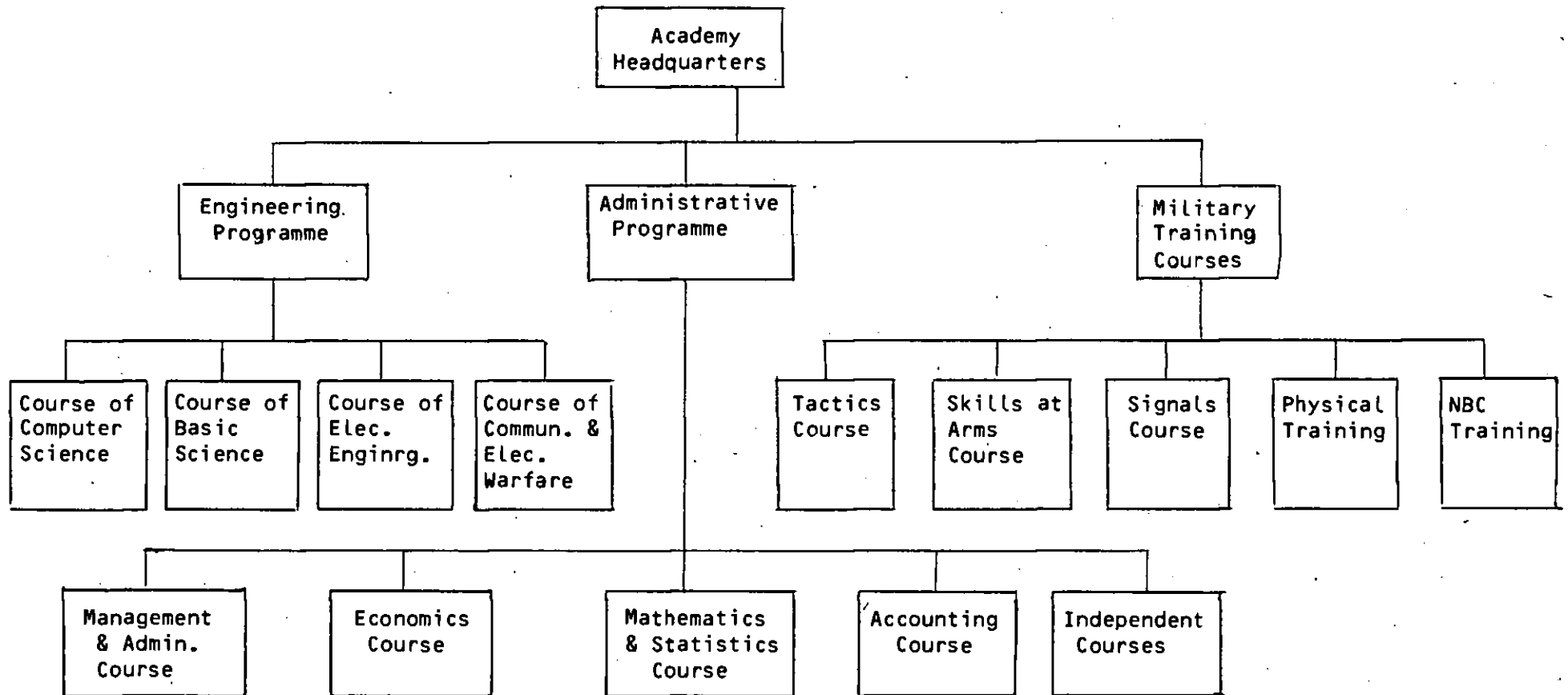
Source: The Military Academy of Egypt, August (1982)

Engineering Science Programme

The purpose of the engineering programme as set out in the Academy charter is to prepare the cadets on scientific and engineering fields to serve as professional officers in technical, electronic and signal corps. It aims, firstly, to prepare the cadets to assimilate knowledge of and how to use the new weapon systems and equipment. Secondly, maintenance and primary repair of weapons, devices, and equipment. Thirdly, scientific preparation of the cadets to serve and share in national service projects. However, the engineering programme is not different from the programme at the Engineering College - University of Cairo (civilian undergraduate programme) of five years duration. The first four years of the programme are at the military college which is made up of thirty courses, while the fifth year is at the Engineering College - University of Cairo - (after the cadet has been given his commission in military training). In the fifth year there are eleven courses: the student has to choose five courses, plus a project.

The Engineering curriculum consists of those courses considered essential for a broad base of knowledge for each graduate. The core courses cover a wide range of subjects including electrical and electronic engineering, computer science and communication and electronic warfare. In addition to those courses, the cadets must choose a number of further subjects drawn from particular areas of study such as: mathematics, physics, chemistry and civil engineering.

When these subjects are added to the courses already included in the core course, it provides a considerable breadth and depth of academic knowledge. The details of the engineering courses are shown in Appendix No.I.

Administrative Science Programme

The purposes of the administrative programme, as set out, incorporated with the Civilian University Faculty of Commerce are to provide the opportunity to the cadet to follow the relevant studies in the Civilian University geared to obtaining a civilian bachelor degree in Administrative Sciences.

On the other hand, it gives a wide variety of knowledge and skills in different fields of Administrative Sciences to serve as a foundation for a variety of tasks.

The administrative programmes at the Military Academy are the same courses as the Egyptian Civilian Undergraduate courses in the Faculty of Commerce of four years duration. The curriculum includes subjects related to five aspects of management; Management and Administrative Studies, Economic Studies, Mathematics and Statistical Studies, Accounting Studies; and in addition, there are associated studies, such as Commercial English, Commercial Law and Public Relations. The detail of the courses is shown in Appendix No.II.

It may be said without exaggeration that at the Military Academy of
Egypt the emphasis falls heavily on the engineering and administrative
sciences. The interviews with the Academy staff and with the cadets
in 1984 confirmed that more than 70 per cent of the cadet's time is
given to academic study and less than 30 per cent to non-academic
forms of training throughout the four years of the course. This
implies that the cadets acquire higher levels of background informa-
tion in administrative and technical knowledge.

Military Training

The military training programmes at the Military Academy of Egypt are
distributed along the four years of the cadets' attendance at the
Academy.

The most significant part of this training is discipline which is
considered the first step in this basic training. In addition,
physical exercise prepares them for long foot marches, land navigation
exercises, rifle marksmanship, and tactical manoeuvres that are part
of their field training.

Each cadet receives instruction in the fundamentals of small unit
tactic, skills at Arms and Signals, and Communication Skills and Nuclear
and Biological and Chemical Defence (NBC) through the study of
military science. In addition, two summers of field training give
each cadet repeated opportunities for the practice of principles

learned, while sustaining the high level of fitness demanded of the army officer. Each cadet learns to exercise good judgement when thinking and reaching decisions under mental and physical stress.

During the first and second year, the cadets are instructed in the organisation and administration of the army and carry out some minor tactical exercises during the first field expedition. This allows them to apply principles already learned in military training at platoon level.

The military training during the third year includes courses in Company Combined Arms Operations (infantry, artillery, armour). The level of military knowledge and skills reached on the first and second years is also maintained.

The content of the military training in the last year is largely based on practical tactical training; it is designed to develop leadership skills and provides essential instruction in infantry tactics, signals, and skill at arms above platoon level.

The second and last expedition includes training in the initiatives and abilities to lead the men in barracks as well as in the field.

Education and Training Programmes at the Royal Military Academy Sandhurst

The Royal Military Academy Sandhurst (RMAS) was established during the 18th century.5 It has a reputation as one of the most professional military institutes in the world. In 1972 the Mons Officers Cadet School for Short Service Courses (SSC) was combined with the RMA Sandhurst and all initial and regular training officers were located at Sandhurst.6 Consequently, all officers who are given the Queen's Commission have to pass through the RMAS system.

The purposes of the RMA Sandhurst are set out in its Charter which states the following aims:[7]

*   To give the officer cadet a broad view of his profession as a whole and his responsibilities as a servant of the Crown.

*   To develop the essential characteristics of leadership and man-management, sense of discipline and sense of duty.

There are three main categories of courses at the RMA Sandhurst. The Standard Military Course 'SMC' for all non-graduate officers with a Commission on Completion and the Regular Career Course 'RCC' which is for those officer cadets who have opted for the Regular Commission and Graduate course, "Post University Cadet Course and Direct entry Course". Chart 8 attempts to illustrate these courses.

Also there are a number of shorter courses for specialists, terri-torial and army voluntary reserve officers. Our concern will be concentrated on the first two categories. (SMC and RCC).

CHART NO.8

THE ROYAL MILITARY ACADEMY SANDHURST TRAINING PROGRAMMES

```
                          ┌──────────────┐
                          │   Academy    │
                          │ Headquarters │
                          └──────┬───────┘
                                 │
    ┌──────────┬──────────┬──────┴──────┬──────────────┐
┌────────┐ ┌────────┐ ┌────────────┐ ┌────────┐ ┌──────────┐
│Standard│ │Regular │ │Graduate &  │ │Academic│ │Military  │
│Military│ │Career  │ │Short Courses│ │Studies │ │Training  │
│Course  │ │Course  │ │17 weeks post-│ │        │ │          │
│'SMC'   │ │'RCC'   │ │univ. course │ │        │ │          │
│(28     │ │(23     │ │20 direct    │ │        │ │          │
│weeks)  │ │weeks)  │ │entry course │ │        │ │          │
└────────┘ └────────┘ └────────────┘ └───┬────┘ └────┬─────┘
                                          │           │
        ┌─────────────────┬───────────────┤    ┌──────┼──────┐
┌────────────────┐ ┌────────────────┐ ┌──────────┐ ┌────────┐ ┌───────┐ ┌───────┐
│Strategic Studies│ │Democracy & Society│ │Military │ │Physical│ │Signals│ │Skills │
│(War Study and  │ │and the Army    │ │Technology &│ │Training│ │       │ │at Arms│
│International    │ │                │ │Communications│ │       │ │       │ │       │
│Affairs)        │ │                │ │          │ │        │ │       │ │       │
└────────────────┘ └────────────────┘ └──────────┘ └────────┘ └───────┘ └───────┘
```

- 147 -

Sources: The Royal Military Academy Sandhurst, (1982)

The Standard Military Course 'SMC'

The SMC is run by New College with an intake at the begin-
ning of each term. It is attended by all direct entrants, that is
prospective officers who join mainly from schools and other sources.
The young men attending the SMC are graded as cadets and are appli-
cants for short service commissions, 'SSC' 3-8 years, or Permanent
Regular Commissions 'PRC' until the age of 55 years, or Special
Regular Commissions 'SRC' 16 years service.8

The aim of the SMC, as set out in the Academy study guide of November
1981 is "to develop the qualities of leadership and to provide the
basic knowledge required by all young officers of any arm or service
to command a platoon or the equivalent of his arm or service".

At the end of the course they will be fit to be junior leaders.

The SMC is designed to develop functions of leadership and provides
essential instruction in minor infantry tactics, skills at arms, map
reading, physical training, drill, signals, communication skills,
adventure and administrative training. The details of these pro-
grammes are set out in Appendix No.III.

By the end of the course 'SMC' overseas training takes place. It aims
to give the maximum responsibility to the cadets in commanding at
platoon level through practical exercise of the subjects taught during
the course.

The Regular Career Course 'RCC'

The Regular Career Course is run by the Old College for all officers who wish to achieve a regular commission, or a special regular commission and for those short commission officers converting to a regular commission. The latter are known as returning officers. The students attending the course will be from two sources; the standard military course, immediately after commissioning or regiments and corps where officers have spent a variable period of time of 2-4 years.

The aim of RCC, as set out in the academy syllabus and curriculum programme No.27 is:9

"To lay the foundation for a professional military career and to confirm the suitability of the officer for a regular or special regular commission".

The Regular Career Course syllabus is divided into two parts both of which are spread throughout the course; the professional academic studies and the military training.

Part I - The Professional Academic Studies

The professional studies provide the predominant section of the RCC. The curriculum is highly vocational and consists of foundation studies and special studies where they combine to provide an extensive and

comprehensive military education that will form the basis of officer
cadets' eventual career outlooks. For instance, foundation studies
consist of Strategic Studies (War Studies and International Affairs),
and Democracy, Society and the Army (includes a course on Contemporary
Britain) and Military Technology and Communication. While special
studies consist of Northern Ireland Studies, Warsaw Pact Studies and
other studies of defined topics. The details of these courses are
shown in Appendix No.IV.

These professional academic studies are considered the backbone of
education in the Regular Career Course which aims to enable student
officers to be fully aware of foreign and internal defence policies,
the environment in which British armed forces operate and the role of
the army in the society, particularly in Northern Ireland. Moreover,
military technology and communication courses may create, in the
trainees, an awareness of the technical background of weapons and the
electronic devices of modern warfare. This implies that the student
officers have acquired a professional academic knowledge and back-
ground which may give them a broader view of their profession.

Part II - The Military Training
In addition to confirming the suitability of the officer for a regular
or special regular commission, the aims of the military part of the
RCC are to lay the foundation for a professional military career and
to continue to develop in the individual as Commander. Moreover,

military training during the Regular Career Course is related to strengthening and enhancing the military knowledge and skills learnt on the standard military course, especially leadership skills. The details of the military training programme are shown in Appendix No. IV.

In addition to these two basic courses, the SMC and RCC, there are more specialised ones run for entrants who join the army after obtaining their university degrees as specialist officers such as doctors, dentists, lawyers, chaplains, and so forth.

It can be seen from the above that the training programmes at the RMA Sandhurst and the Military Academy of Egypt, whilst having similar objectives, are very different in character.

As far as leadership training is concerned, in Egypt, the analysis of the programmes revealed that the leadership course is based on tactical theories, without involving any particular approach or theory of leadership training. It is understandable that the adoption of undergraduate university programmes in administrative science, with all its consequences, is that the Academy has responded to a perceived need within the military establishments, for its officers to have a broad intellectual foundation associated with the notion of the modern military manager, who is supposed to learn the skills of management, problem-solving, decision-making and allocate resources (human or material) efficiently within the organisation.

But to adopt a civilian programme in its pure terms, without reforms or modifications to the academic coursework in order to reflect service needs, is in fact to produce a broad range of non-combat skills. Moreover, strict adherence to civilian programmes does not take into account the military skill requirements brought about by technological advances and the broader role of the military officer as a manager of resources. In fact it can be argued that, as the situation exists today, commissioned officers are no longer adequately trained and educated as military managers. The reason for this is simply that the graduate officer has become less and less representative of the fighter ethos in the military organisation.

However, a management orientation is necessary, especially in the Egyptian case where the military is to allocate its always limited resources efficiently and effectively. Therefore, officers with management skills are in high demand. But the modern military needs an officer who has competence in peace-time and is an effective leader in wars. In this context, administrative science programmes that currently exist at the Military Academy must accommodate themselves to present day society, but not at the expense of the distinctive military features.

In the British army, on the other hand, leadership training is based on the more recent developments of leadership approaches. The use of the 'functional approach' has been suggested by John Adair in 1963 and successfully applied at the RMA Sandhurst.10

It is useful here to explore in more detail the functional approach for leadership training at Sandhurst in order to offer clear guidance as to what may usefully be learned from the British system. It should be emphasised that the intention here is not in any particular way to impose the British systems on the Egyptian army, where the environment is both materially and culturally different, nor to assess or examine the British systems. But the study of the British systems may be regarded as an 'ideal type' because the British army has a long history and enjoys the highest professional standards. For this, then, there are indeed useful methods and techniques which can be learned from the British system.

Until 1963 the RMA Sandhurst leadership syllabus was based on the qualities approach for leadership training. This approach was based on the phenomenon that the person as a leader possess a set pattern of inborn leadership qualities or traits such as courage, endurance, tact, patience, initiative and so on.

As early as 1930, academic research in the field of leadership started to examine the qualities of leadership. The attempts to crystallise the essence of these have yielded up to 17,000 words used to describe qualities of personality.11 Moreover, the experimental studies found that there is little agreement amongst scholars on what this pattern of qualities or traits is. The implication of this lack of agreement amongst sociologists and psychologists on what those traits are shows

the inadequacy of this approach as a basis for leadership training programmes.

However, this does not mean that there is nothing in the qualities approach which meets approval. For instance, leaders should at least need courage and indeed in the condition of modern warfare, all need initiative. This approach proved valuable in the development of selection criteria for eliminating unfit individuals, and to locating those personnel with the requisite qualities for the British armed forces.

But the failure to discover a common pattern or distinctive qualities of leadership has led to the assumption that perhaps there is a unique set of inborn leadership traits and this may be dependent upon the inter-actional relationship between leaders and followers in a particular situation. W.O.Jenkins analysed 74 books and articles on military leadership and concluded that, "leadership is specific to the particular situation under investigation".12

But the leadership process may be affected by an infinite number of situational variables such as changing missions, resources...., even wide variations in the characteristics of leaders themselves in different situations. The only common factors is that leaders in a specific field or particular area tend to possess competence or knowledge of skills in that area. Thus, the wide variety of situations

which may confront leaders serves to emphasise the fact that leadership

is not a static activity but is a highly dynamic and changing process.

Progressively, in 1949 the British War Office Selection Board (WOSB)

placed emphasis on a quasi-experimental group situation in selecting

new entrants to the British army.13 This selection method is based on

observation of the behaviour of the individual candidates under some

degree of stress in the battlefield in order to rate which one would

emerge and would be able to perform certain leadership functions in

order to enable his group to achieve its task. In other words, which

one would emerge as an effective leader.

Janowitz argued that since these group experiments sought to produce

some of the actual situations confronting the leadership, particularly

during operations, this approach is theoretically more relevant.14

On the other hand, this approach is dependent on the selectors' group

judgement decisions by rating candidates who require non-quantitative

evaluation. In other words, one needs to pick out those which are

believed to be with leadership potential suitable for military command

as we have discussed in Chapter One. However, this approach has proved

its worth in the British army and is successfully in use by the Regular

Commissions Board (RCB), for the purpose of leadership selection. This

Board was developed and based on the experiences of (WOSB).

According to John Adair in the decade before the Second World War, the
British army was the first to make use of the qualities approach for
the purpose of leadership selection, but it does not seem to have been
realised that they could also be used for leadership training.15

So far, the most successful attempt to apply the RCB selection system
to leadership training is that made by John Adair in 1963.16 The
Sandhurst leadership syllabus was devoted entirely to the new trend
called the functional approach. According to Adair, this approach com-
bines three factors that can play vital roles in leadership training.
In any working group there are three areas of need at any given time.
There is the need to achieve the common task or purpose, and this is
the reason why groups come together. This is applicable to any group
whether those groups are military, religious, political or business.
Secondly, and related to task, there is a need to build the group in
order to be held together as a working team. Therefore, it needs to be
maintained as a cohesive unity or what is called in the military
language "team maintenance".

Thirdly, there is the individual's need for satisfaction. Each member
of the group has his own individual needs. These needs are not only
physical needs, but also psychological ones.17

Let us turn our discussion to explaining what these three factors have
to do with leadership training. First of all, these three areas of

need overlap and affect each other. For instance, if a group achieves
its task, then the team maintenance goes up and morale rises. It is
true that to fulfil the task, the group should be held together as a
working team, and that will necessitate certain functions being per-
formed by the leader of the group. These functions, in this context,
mean that the task has to be defined clearly by a plan to allocate work
to individuals, control activity on the job and evaluate the perform-
ance. In short, to direct the group effectively towards relevant
goals. The functional approach stresses that on carrying out these
functions, a great deal of cohesiveness of the group depends on the
leader's personality which, in turn, influences the group needs, and
the inter-action of the two produces the group unity to achieve the
task.

However, the most important factor that influences the degree to which
the leader performs these functions depend upon the situation in which
he has to work. As has already been pointed out, in the leadership
field there are a variety of situations which may face the leaders,
particularly those at operational levels. It is extremely difficult to
predict all of the situational factors which may affect the leadership
process. Nobody can offer a list of guiding rules for all occasions,
nor can one say that the leader is expected to perform all the functions
himself. This is the critical factor which influences how far the
leader shares decision-making with the members of his group. Thus, the
functional approach stresses that leadership is essentially an inter-
action between leader personality, group needs and situational factors.

With respect to the implications of the functional approach for officer

leadership training, Adair pointed out:

'The first step is to make each officer cadet aware of what is

happening in groups in working situations. Secondly, to give him

an understanding of the functions which are required at any given

time in any given situation (and these may be widely different

according to each situation). Thirdly, to develop in him the skill

to provide those functions of leadership effectively' .18

At this point, and allowing for the limitation of the theoretical

formula, the functional approach may serve as an understanding of

leadership which may allow us to base training programmes upon it.

However, sociologists and psychologists do seem to agree that trait

approaches and situational approaches offer important perspectives on

leadership but that there are dangers in emphasising one over the

other.19 The more recent work in leadership theory, Fiedler's con-

tingency model and Vroom and Yetton's situational approach, suggest

that these approaches are complementary.20

It should be noted that Fiedler's model and Vroom and Yetton's approach

bring new perspectives on the conceptualisation of leadership. But it

is important to say that no one has yet produced a satisfactory

theoretical formula to explain what constitutes leadership. Therefore,

it seems that the most valid general approach must involve some com-

bination of all the approaches produced to a working theory of leadership.

Let us now turn our discussion to explain the impact of technical education and training at the military academies in Egypt and the United Kingdom.

In Egypt the analysis of the Engineering Science programme revealed that emphasis is placed upon the assimilation of vast amounts of factual details and information related to Electrical and Electronic Theories, Communication Theory and Systems, Computer Engineering and Introduction to Electronic Warfare. Despite the declared objective of the programme that equal weight should be given to the academic as well as to the practical, it appears in fact to be the case that the cadet's intellectual development is accorded the greater importance. The Military Academy places most of the 70 per cent of the total time assigned for academic studies (engineering and administrative studies) to be spent in the classroom.

A further feature of the engineering curriculum is the great increase in the number and content of civilian subjects within the courses. To this end, the courses are standardised and lessons packaged. They tend mostly to utilise subjects in civilian engineering science rather than the military field. As courses have increased in number and in size of content, the students have devoted greater time and emphasis to academic studies rather than other aspects of the programme.

Generally speaking, the new engineering curriculum at the Military
Academy of Egypt may be described as an attempt to provide a general
education for early career requirements, and a foundation for pros-
pective specialised army officers. But such attempts must reflect the
growing professional demands in and out of combat.

With respect to the technical education and training at the Royal
Military Academy Sandhurst, the current syllabus contents that exist at
Sandhurst may be seen as an 'ideal type' to create an awareness of the
technological background to modern soldiering, which may enable the
commissioned officer to know more about conventional weapon systems as
well as battle technology so that resources can be properly allocated.

However, the time devoted to the academic studies (military technology
included) is only 18.5 weeks which means that the scope and depth of
these subjects have been compressed to the extent of the time assigned
to each subject. This may not allow for enough assimilation or
reflective analysis. The main reasons for compression of time reflect
the attitudes of the British army élite towards academic studies. The
implicit assumption has been that the real professional education of an
officer begins after his being commissioned, in his practical
experience and in the specialised schools of the British army.21 In
1973 Major-General Pain, the Director of British Army Training, argued
that academic education is a basic preparation for life ahead. The
education and training provided at Sandhurst could not be complete in

itself; but rather would it be the starting point for a continuing
process to be carried on throughout an officer's career.22 Further-
more, in 1978 Brigadier A.J. Trythall, Chief of Education of the UK Land
Forces pointed out that the compression of time at Sandhurst was
because there was a serious shortage of young officers at regimental
duty, and because 'Collocation' was inevitable on the grounds of
economy in a smaller army.23

According to Brian Bond, the advocates of reduction of time for
academic studies at Sandhurst argued that academic education contri-
butes little to junior officers and that education cannot replace
experience, whereas officers of other armies needed degrees, those in
the British army did not; academic education, they believed, was not a
substitute for commanding troops.24

The immediate question which arises is why academic education towards
obtaining civilian degrees is seen as unnecessary as a means of
developing professionalism in the British army?

As has already been pointed out, education and training in the British
army was developed in a way that is almost exclusively devised to
support specific military skills. The military training system sus-
tains itself on professionalism and tradition rather than on the
development of new trends such as civilian education as do those in the
USA (West Point), Australia, Canada and Egypt.25

However, in Britain during the last few years, there were considerable arguments put forward on whether the development of civilian education and training programmes for professional officers would be the most effective means of attaining specific operational aims, or whether military organisations are more prepared to accept such education.26

So far, the attitudes of the British army élite in this context does not reflect the philosophy of the importance of civilian education and training programmes in the development of the profession. According to A.J.Trythall, the British armed forces probably always want to commission numbers of young men who make good leaders but do not want a university education.27

As has been already pointed out in Chapter One, this view may be influenced by the extensive, almost continual operational experiences of senior British army officers with an impressively high level of pro-fessional achievement.

The preceding sections highlight the character of the education and training programmes in the military academies in Egypt and the United Kingdom. However, under the impact of technological changes, the most important point related to the issue under investigation is the need for a combat leader who holds an ideal image of the military profession. In other words, the need is for a skilled leader who has the ability to serve as a heroic leader and at the same time perform efficiently in the role of manager.

The impact of technological changes on military organisations has created a variety of situations requiring a sophisticated leader capable of planning, organising, co-ordinating resources in order to solve the sort of problems which occur at his level of command. Meanwhile he needs to retain the distinctive characteristics of traditional military leadership such as courage and initiative, as long as he has to face a wide variety of situations.

Officers need to operate in two realms throughout their career and thus in each situation. Consequently, the military academies and their raison d'etre lies in recruiting and training those personnel either with the requisite skills or who are able to embody both roles.

NOTES TO CHAPTER FOUR

1. The Military Academy of Egypt, The Academy Council, Cairo,
    Egypt, 1984.

2. The Military Academy was established in 1811 during the reign of
    Mohammad Ali. At first it was called the Military School. It was
    the first military institute established in the Middle East. See:
    Arikan, N., Egyptian Armed Forces.... op.cit. p.94.

3. The role of the Egyptian army in social and economic development
    processes has been discussed in Chapter One. For more details
    see: MOD (A.R.E.). The Egyptian Army Through the History.....
    op.cit. pp.62-65. However, it is important here to re-emphasise
    that the economic problems facing the country necessitate the
    partial contribution of the military sector, hand-in-hand with the
    civilian sector for development process.

4. Since 1967, training programmes at the Military Academy have been
    subject to intensive scrutiny. After the October War, 1973 the
    leaders of the armed forces found that it is useful for the pro-
    fession to attain a good level of academic education. Two types
    of education and training programmes were offered by civilian
    universities and accepted by the army. The first was by the
    Engineering College of the University of Cairo, while the second
    was by the Faculty of Commerce, University of Ain Shams at Cairo.
    Both are civilian undergraduate programmes and lead to a degree in
    Administrative and Engineering Sciences.

5. Smyth, Sir John, Sandhuurst: The History of the Royal Military
    Academy Woolwich, The Royal Military College Sandhurst, and
    The Royal Military Academy Sandhurst, 1951-1961. London;
    Widenfeld and Nicolson, 1961.

6. Trythall, Brigadier, A.J., "The Labours of Sisyphus", Educational
    Reform at RMA Sandhurst, 1960-1976, RUSIJ, 1978, pp.36-39;
    Brennan, R.H. "Sandhurst Today", Military Review, Oct. 1977.

7. The Royal Military Academy Sandhurst, "Academic Study Guide, No.27
    Nov. 1981.

8. The Royal Military Academy Sandhurst, "The Standard Military
    Course", Academic Study Guide No.27, 1981.

9. The Royal Military Academy Sandhurst, "Regular Career Course",
    Professional Academic Studies, Jan. 1982.

10. Adair, John. Training for Leadership, Macdoland, London, 1968.

11. Ibid.... p.12; See: C.Bird, Social Psychology, D.Appleton -
    Century, London, 1940, pp.378-79.

12. Jenkins, W.O. "A Review of Leadership Studies with Particular Reference to Military Problems". Psychological Bulletin, Vol.44, 1947, pp.57-77; R.M.Stogdill 'Personal Factors Associated with Leadership', Journal of Psychology, Vol.25, 1948, pp.35-71.

13. Harris, Henry. The Group Approach to Leadership-Testing. Routledge & Kegan Paul, London, 1949. The War Office Selection Board (WOSB) gave full support to the approach suggested by H.Harris. Selection in this approach was two-fold. The first of these was to test the candidate's ability to perform certain leadership functions which would enable his small group to achieve its task. This had to be done under certain time pressures designed to simulate, to some degree, the stress situation of the battlefield. Secondly, the selectors assessed an area of leadership activity they believed to be generally required in any situation, such as giving instructions, ability to maintain the morale of the group by specific acts, reconciling tension.... As the candidates tackled these situations and solved the problems, the selectors were able to pick out and rate with some degree of accuracy, those potentially suitable for leadership. See: J.Adair, 'Learning to Lead in the Army of the Sixties', British Army Review, No.18, Apr.1964, pp.10-11.

14. Janowitz, Morris. Sociology and the Military.... op.cit. p.73.

15. Adair, J. 'Learning to Lead....' op.cit. p.11.

16. Adair, J. 'New Trends in Leadership and Management', RUSI, Apr. 1967, pp.315-323; Training for Leadership.... op.cit.

17. Maslow, A.H. Motivation and Personality. Harper and Brothers, New York, 1954. Individual needs of Adair's approach are drawn from the work of Maslow.... that needs are organised on a priority basis as follows: Basic Physiological Needs, Safety Needs, Social Needs, Self-Esteem Needs and Self-Realisation Needs. These needs spring from our common life as human beings.

18. Adair. J. New Trends in Leadership.... op.cit. pp.318-319.

19. Ribeaux, P. & Poppleton, S.E. Psychology and Work. The MacMillan Press Ltd., London, 1978, Ch.14, pp.273-293.

20. Fiedler, F.E. A Theory of Leadership Effectiveness. N.Y., McGraw-Hill, 1967. His model attempts to take into account both the leader's personality characteristics and situational variables. He proposed that the nature of the situation will affect greatly what kind of leadership style will be effective. In other words, the effectiveness of a particular style of leadership is contingent upon the situation.

Vroom, V.H. and Yetton, P.W. Leadership and Decision-Making. University of Pittsburgh Press, 1973. Their approach has emphasised the variability in the behaviour of individual leaders

and the importance of the situation in determining this variabi-
lity and effectiveness. However, no satisfactory attempt has been
made to operationalise Vroom & Yetton's approach to management
training.

21. Janowitz, Morris. The Professional Soldiers.... op.cit. p.132.

22. Pain, Major General H.R.S. "Educating the Army Officer - A
    Rejoinder", RUSI, March 1973, pp.70-73.

23. Trythall, Brigadier, A.J..... op.cit. p.38.

24. Bond, Brian, The Labours of Sisyphus: Educational Reform at
    RMA Sandhurst, 1966-1976, RUSI, Sept. 1977.

25. Harris-Jenkins, Gwyn. "The British Armed Forces" in Janowitz and
    Wesbrook (ed.). "Political Education of Soliders", Vol.II, Sage
    Publication Inc., London, 1983, pp.83-89.

26. Proposals for the reform of officer education in Britain exhibit
    several features which may be summarised as follows:

    - In November 1965 the British government appointed a Committee,
      the Howard-English Committee to examine the existing education
      of professional officers in the British armed forces and to
      recommend reforms.

    - Four main options were available; a first option was purely
      academic in kind, as to recruit only graduates or to send all
      the commissioned students to the university or to Shrivenham
      after Sandhurst. A second option was to produce a single
      military university on the lines of West Point (USA). A third
      option was to make the educational element at Sandhurst post-A
      level in nature, with some kind of diploma by arranging that
      their future officers attend degree courses at the universities.
      A fourth option was to recognise that Sandhurst was, or ought
      to become, primarily an institution of essentially post-A level
      professional or vocational military education and training.

    The Howard-English scheme does not seem to pay much attention to
    the need to promote non-military education among élite members of
    the British armed forces. Even the academic year which existed
    before 1972 was abandoned in favour of the present SMC - RCC
    courses of approximately 12 months duration. For more details
    see: MOD (UK), Howard-English Committee's Report, July 1966;
    Education for the Profession of Arms, The Strategic and Defence
    Studies Centre, Australia University Press, Canberra, 1969,
    pp.1-18; Trythall, Brigadier.... op.cit. pp.37-38.

27. Trythall, Brigadier.... op.cit. p.38.

CHAPTER FIVE

CHAPTER FIVE

AN EXAMINATION OF THE TRAINING PROGRAMMES AT THE
MILITARY ACADEMY OF EGYPT

The aim of this chapter is to examine the training programmes at the

Military Academy of Egypt and evaluate their appropriateness in

developing military skills. Particular attention will be given to

skills associated with technological advances (leadership skills and

technical skills).

Consideration is given to the extent to which these military skills

were developed in the training programmes at the Royal Military Academy

Sandhurst. It should be emphasised that the intention here is not in

any particular way to evaluate or to assess the Sandhurst programmes,

but to see how far the British army, as a modern army, equips its

potential regular officers with these specific military skills.

In Egypt, a questionnaire was administered to cadets and officers and

interviews were carried out with Academy staff.

In the United Kingdom the most relevant sources of data were a

questionnaire administered by the Ministry of Defence in 1978 and a

questionnaire submitted to the Ministry of Defence, Training Depart-

ment in July 1985, and an analysis of the interviews with the RMA

Sandhurst staff by the researcher.

The intention was to identify features of the training programmes in

both academies and highlight the areas of differences and similarity

between the two systems.

Field Data Collection

Initial visits to secure co-operation of relevant personnel and

collection of background data were carried out as follows:-

a) visit to the Royal Military Academy Sandhurst: January 1982 and
    November 1982;

b) visit to the Military Academy of Egypt, January 1983.

Main Interviewing Programmes

In the UK

1. Staff responsible for training at the RMA Sandhurst totalled 16.
    Of the 16, 12 were interviewed in May 1983.

2. At The Ministry of Defence, Directors of Army Training Staff were
    interviewed in May 1983 and in January 1984.

In Egypt

1. Staff responsible for training at the Military Academy totalled
    18. Of the 18, 14 were interviewed in February 1984.

2. At the Ministry of Defence, Directors of Army Training Staff
    were interviewed in July 1983 and in February 1984.

These interviews had a dual purpose: to generate qualitative and
diagnostic data on the areas found to be of importance, such as
leadership and technology; and to provide inputs for the design of
an appropriate questionnaire on the Military Academy programmes and as
a background to the data collected from the questionnaires in the UK.

The Questionnaires

The Egyptian Questionnaires

The Egyptian questionnaires were administered in stages. The first
stage was by distribution to the student cadets currently being trained
at the Military Academy (directly after they had been given their
commissions). The second stage was 18 months after the trainees had
been given their commissions and posted to their regimental duties.
The questionnaires were sent with a letter introducing the objectives
of the study.

The time of distribution to the student cadets was crucial for the
response rate. The questionnaires were despatched when all of the
commissioned cadets could be expected to be in the Academy premises
and when they could be expected to have more leisure time for
answering. The Military Academy staff gave the project substantial
support and this, in turn, enhanced the rate of return (83%). The time

of distribution to the serving officers was 18 months after they had
been given their commissions. The objectives were to ascertain their
perceptions of how far the training programmes through which they had
passed equipped them adequately to perform the tasks required of them
when they were in posts of responsibility.

The questionnaire was administered to 83 cadets. These cadets were
followed up and the same questionnaire sent to them after they had been
serving as officers for 18 months. Of the 83 questionnaires distri-
buted 51 individuals completed the questionnaire on both occasions.
The total questionnaires are the basis of the mean responses and per-
centage responses. However, where comparisons are being made between
the responses before and after having serving officer experience, it
was considered more appropriate to base the significance tests on the
51 matched pairs of observations.

For the purpose of the analysis, an average score was computed for each
variable, "t" tests were used to determine the significance of
differences between the average scores of student cadets and serving
officers on each question.

The questionnaire forms are presented in Appendix (V) for student
cadets and Appendix (VI) for serving officers. Section I deals with
the course content. Section II deals with the teaching methods and
Section III asks for further comments.

Analysis of the questionnaire responses.

I. Course Content

The perceived objectives of the course:

Two questions were asked concerning the course objectives. The first asked the cadets to state what they saw to be the main objectives of the course, the second asked whether they felt these objectives had been achieved. Both questions were open-ended and post-coded.

Table 14: The Perceived Objectives of the Course and Whether or Not they Were Seen to be Achieved

Perceived Objectives	Percentages mentioning each objective	Percentages reporting that each objective was achieved
	%	%
To develop effective leadership	98.8	74.7
To develop skills in effective communication	97.6	48.2
To think clearly and analytically	96.4	71.1
To provide knowledge and concepts related to military skills	95.2	85.5
To create an awareness of technology	95.2	72.3
To provide an appreciation of resources	34.9	15.7
To improve understanding of human behaviour	30.1	6.0
Base of percentages	83	83

Table 14 shows a high degree of consensus on the five most frequently mentioned objectives. However, with respect to these five objectives, the course was seen to fall particularly short in teaching communication skills. It was seen to be more successful with respect to providing knowledge and concepts related to military skills, developing effective leadership, creating an awareness of technology and developing clear, analytical thinking.

The following five sections compare the responses of the subset of 51 respondents who answered the questionnaire when they were cadets, and, later, after they had been serving for 18 months as officers.

In both questionnaires respondents rated a number of aspects of their course in terms of how satisfactory they were. The ratings were coded on a 5-point scale ranging from 1 (excellent) to 5 (very unsatisfactory). The significance of the differences between the responses at the two points in time were estimated using a "t" test for related means.

1. Satisfaction with Leadership Training

The question asked both cadets and serving officers, "how satisfactory did you find the training with respect to leadership aspects?".

Comparison of the responses of the subsample of 51 individuals whilst cadets, and, subsequently, as serving officers, were made with regard to each of the leadership aspects in Table 15 below:

Table 15: Mean Satisfaction Scores, Standard Deviations, "t" Tests for Related Means and Significance Level of 4 Variables on Leadership Course in the Egyptian Questionnaire:

VARIABLES	Mean Satisfaction Score			St. Dev.	"T" Value	Signif. Level
	Cadets	Officers	Diff.			
Plan & give orders at platoon level	1.98	1.55	+0.43	0.98	3.13	0.01
Plan & give orders above platoon level	2.80	2.65	+0.15	0.96	1.16	N.S.
To lead soldiers in barracks	2.03	1.86	+0.17	1.16	1.09	N.S.
To lead soldiers in the field	2.52	2.23	+0.29	1.006	2.09	0.05

(Low score = satisfied)

Table 15 shows the following results:

1. All aspects were rated between "good" and "satisfactory" at both points in time.

2. The least satisfactory aspect was giving orders above platoon level, and the most satisfactory was planning and executing operations at platoon level.

3. On all four aspects, opinions become more favourable after officer experience in the field, especially with respect to planning, giving orders and executing operations at platoon level and ability to lead soldiers in the field, the differences were significant.

2. Satisfaction with Weapons Systems Training:

The question asked, "how satisfactory did you find the training with respect to weapons systems aspects?"

Table 16: Means satisfaction Scores, Standard Deviations, "T" Tests for Two Related Means and Significance Level of 4 Variables of Weapons Systems course in the Egyptian Questionnaire:

VARIABLES	Mean Satisfaction Score			Std. Dev.	"T" Value	Signif. Level
	Cadets	Officers	Diff.			
Weapon Charteristics	2.09	1.74	+0.35	0.99	2.53	0.02
Weapon Operations and Firepower	2.17	1.76	+0.41	1.08	2.72	0.02
Vehicle Characteristics	2.84	2.10	+0.74	1.09	4.87	0.001
Vehicle Mobility	3.13	2.51	+0.62	1.16	3.84	0.01

(Low score = satisfied)

Table 16 shows the following results:

1. All aspects were rated between "good" and "satisfactory" at both points in time.

2. The least satisfactory aspect for both cadets and officers was vehicle mobility, and the most satisfactory was weapons characteristics.

3. On all four aspects opinions become favourable after field experience. With respect to the weapons systems course, all differences were significant.

3. Satisfaction with Nuclear Warfare and Biological and Chemical Defence (NBC) Training:

The question asked, "how satisfactory did you find the training with respect to NBC aspects?"

Table 17:   Mean Satisfaction Scores, Standard Deviations, "T" Tests for Two Related Means and Significance Level of 4 Variables of NBC Course in Egyptian Questionnaire:

VARIABLES	Mean Satisfaction Score			Std. Dev.	"T" Value	Signif. Level
	Cadets	Officers	Diff.			
To wear and operate protective equipment	2.74	2.12	+0.62	1.21	3.69	0.01
Drill in the event of a nuclear attack	3.74	3.02	+0.72	1.53	3.37	0.01
Drill in the event of a chemical attack	3.33	2.53	+0.80	1.23	4.66	0.001
Decontamination procedures	3.31	2.63	+0.68	1.17	4.17	0.001

(Low score = satisfied)

Table 17 shows the following results:

1. All aspects were rated between "good" and "satisfactory" at both points in time.

2. The least satisfactory aspect for both cadets and officers was drill in the event of Nuclear attack, and the most satisfactory aspect was wearing and operating protective equipment.

3. On all four aspects opinions became more favourable after experience in the field. With respect to the NBC course, all differences were significant.

4. Satisfaction with Introduction to the Computer Training:

The question asked, "how satisfactory did you find the training with respect to introduction to the computer?"

Table 18:   Mean Satisfaction Scores, Standard Deviations, "T" Tests
for Two Related Means and Significance Level of 5 Variables
of Introduction to the Computer Course in the Egyptian
Questionnaire:

VARIABLES	Mean Satisfaction Score			Std. Dev.	"T" Value	Signif. Level
	Cadets	Officers	Diff.			
Knowledge about data collection	3.19	2.53	+0.66	1.49	3.19	0.01
Knowledge about data analysis	2.54	1.96	+0.58	1.61	2.60	0.02
Knowledge about data interpretation	2.54	1.94	+0.60	1.53	2.82	0.02
Knowledge about problem-solving skills	2.29	1.76	+0.53	1.31	2.87	0.01
Knowledge about decision-making skills	2.33	1.90	+0.43	1.17	2.63	0.02

(Low score = satisfied)

Table 18 shows the following results:

1. All aspects were rated between "good" and "satisfactory" at both
    points in time.

2. The least satisfactory aspect was knowledge about data collection
    and the most satisfactory was knowledge about problem-solving
    skills.

3. On all five aspects opinions become favourable after officer
    experiences in the field. With respect to the computer course
    all differences were significant.

5. Satisfaction with Communication Systems Training:

The question asked, "how satisfactory did you find the training with respect to communication systems aspects?"

Table 19: Mean Satisfaction Scores, Standard Deviations, "T" Tests for Two Related Means and Significance Level of 3 Variables of Communication Systems Course in the Egyptian Questionnaire:

VARIABLES	Mean Satisfaction Score			Std. Dev.	"T" Value	Signif. Level
	Cadets	Officers	Diff.			
To use combat radio at platoon level	2.74	2.16	+0.58	1.35	3.09	0.01
To fit radio net into the scheme of military communication	3.27	2.69'	+0.58	1.28	3.27	0.01
To command a platoon by radio	2.96	2.51	+0.45	1.31	2.45	0.05

(Low score = saitsfied)

Table 19 shows the following results:

1. All aspects were rated between "good" and "satisfactory" at both points in time.

2. The least satisfactory aspect was fitting the radio net into the scheme of military communication, and the most satisfactory aspect was using the combat radio net at platoon level.

3. On all aspects opinions were more favourable after experience in the field. With respect to the communication systems course, all differences were significant.

The ability to apply what had been learned in the courses.

The question asked, "do you consider that you can apply what you have learned in the course in practical situations"?

The question is an attempt to investigate how far the training programmes equipped the cadets to apply what they had learned. The analysis here concentrated around five areas. The question was open-ended and post-coded. The answers are listed in the following table:

Table 20: Applicability of the course in practical situations:

Subject Areas	Percentages perceiving the course as applicable	
	Cadets %	Officers %
Weapons systems	91.6	58.8
Leadership	78.3	17.6
Communication systems	59.0	35.3
Nuclear and Biological and Chemical Defence (NBC)	36.3	54.9
Introduction to the computer	21.7	9.8
Base of percentages	83	51

Table 20 shows that the cadets saw the two most applicable areas to be weapons systems and leadership. However, after serving in their units these two aspects of the course were seen to be much less applicable. After experience in the field, the change in perception of the applicability of the leadership training was very marked.

I. Summary and Conclusion

Comparison of the responses of the sub-sample of 51 individuals whilst cadets and subsequently as serving officers with respect to each of the five areas of concern in the course content supported the opinion that these areas of training were satisfactory.

On all aspects opinions became more favourable after experience as a serving officer. Eighteen of the differences were significant.

With respect to the applicability of the five areas in practical situations, opinions became much less favourable, particularly in relation to leadership training.

There seems, on the surface, to be some inconsistency here, in that after officer experience, the individual training programmes were evaluated more favourably, but the applicability of the broad areas in practical situations was evaluated less favourably. However, it is possible, and seems to be the case, that individual courses were seen to be satisfactory in terms of course content, but that at the Academy there was insufficient opportunity to apply the knowledge in practical contexts.

With respect to leadership training, officers considered that this is the most difficult area to apply in the field situation. There was not enough practical training on the differing situations that have been

created by modern warfare and which require a more experienced leader
to cope with them. Perhaps this was because the leadership course was
based on tactical theories, without involving leadership approaches
which could provide the trainees with adequate perspectives in dealing
with different situations.

- 183 -

II. Teaching Methods

Two questions were asked concerning the teaching methods on the course. The first asked respondents to state what they saw to be the effective aspects of the teaching methods on the course, the second asked which methods they found most appropriate. Both questions were open-ended and post-coded.

Table 21: Responses to the Questions, "Which Aspects of the Teaching Methods on the Course were Effective?"

Aspects of the Teaching Methods	Percentages perceiving the methods to be effective	
	Cadets %	Officers %
Giving general background	100	74.5
Giving concepts, facts and knowledge	92.8	70.6
Creating command skills	19.3	15.7
Interactioning with others	7.2	17.6
Linking between theory and practice	7.2	3.9
Base of percentages	83	51

Table 21 shows that teaching methods had provided the trainees with sufficient general background and facts, concepts and knowledge in the subjects taught. However, after serving in their units, these two aspects of the teaching methods were seen to be less effective.

Most appropriate teaching methods.

Table 22:   Responses to the Questions, "Which Methods did you Find
            Most Appropriate?"

Teaching Methods	Percentages Perceiving the Methods as Most Appropriate	
	Cadets %	Officers %
Role playing	100	no comment
Games	100	no comment
The use of audio visual aids	97.6	96.1
Conference methods	96.4	94.1
T-training groups	95.2	94.1
Laboratory training	56.6	45.1
The lectures	40.0	33.3
Base of percentages	83	51

Table 22 shows that cadets considered that the first five frequently
mentioned teaching methods were the most appropriate teaching methods
on the course.   After serving in their units, the use of audio-visual
aids, conference methods and T-groups were still perceived as the most
appropriate teaching methods.   Role playing and games received no
mention in the second questionnaire.

Summary and Conclusion

The main aspects of the teaching methods were seen by the trainees to be effective in providing them with sufficient concepts, facts and general background on the subjects taught.

Practical teaching methods such as the use of audio visual aids, conference methods and T-training groups were considered to be the most appropriate teaching methods on the course.

III. Overall View

Two questions were asked with respect to the overall view of the trainees of the training programmes.

The first asked respondents to state their views on the need for more to be done on the aspects of training they have received. The second asked if there were any further comments on the aspects of the training programmes. The first question was open-ended and post-coded.

Table 23: Responses to the Question: "What is Your Overall View on the Need for More to be Done on the Aspects of Training You Have Received?"

Aspects of Training Received	Percentages Perceiving the Need for More to be Done on This Aspect of Training	
	Cadets %	Officers %
More practical training	98.8	92.2
Must give more emphasis to the relationship between theory and practice	91.6	76.5
Must meet the current needs of a modern army	78.3	58.8
Permit the use of more new teaching methods	66.3	54.9
Create new areas of study	18.1	31.4
Base of percentage	83	51

Table 23 shows that the cadets saw that the existing training pro-
grammes must cover the four frequently mentioned aspects of training
adequately. It was seen necessary to cover the more practical training
aspects and the links between theory and practice.

However, after serving in their units these four aspects of the course
were seen to be much less adequately covered.

Further comments on the aspects of the training programmes.

Table 24: Responses to the Question, "Are There any Further Comments
You Wish to Make on Aspects of the Training you Have
Received?"

Aspects of the Training Programme	Percentages Expressing Further Comments on Training Received	
	Cadets %	Officers %
Comment on the length of course	75.9	66.7
Comment on teaching methods	73.5	60.8
Comment on course content	65.1	54.9
Base of percentages	83	51

It may be seen in Table 24 above that the comments were concentrated
around three aspects of the training programmes; length of course,
teaching methods and course content.

The cadets considered that there was a need to increase the time devoted to practical applications which could help them to give a better perspective on relating the theories taught to practical situations.

However, after serving in their units, these three aspects were less frequently mentioned.

Summary and Conclusion

The general comments demonstrated a need for more practical training. There was a need for more application of theories already taught in relation to different situations

The United Kingdom Study

The main aspects of the training programmes at the Royal Military

Academy Sandhurst (RMAS) are considered under the following headings:

1. Course Content

    (a) Leadership
    (b) Military Technology
    (c) Communication Systems

2. Teaching Methods

3. Overall View

Each of these aspects will be described and analysed in separate parts

below, presenting the opinions of military and professional staff of

the RMAS and the directors of army training staff at the Ministry of

Defence. The Ministry of Defence questionnaire data were also used.

These are considered to be important, providing background for the

opinions expressed during the interviews. (See Appendix VIII).

1. Course Content

Objectives of the Courses:

Both the military and professional staff considered that the objectives

of the standard military course were achieved to a standard that was

satisfactory.

However, the military training objectives for the regular career course became more difficult to achieve as the length of the course has been shortened drastically.

Opinions about the more specific aspects of the course are considered below.

(a) Leadership

The predominant views expressed by military and professional staff were:

- The standard military course and the regular career course formed a good basis on which to develop the qualities of leadership and provide cadets with the basic knowledge and skills required to command an infantry platoon or the equivalent.

- There was a unanimous opinion on the need for more time to be devoted to the course. They felt that there was not enough time spent on the broad aspects of leadership on the course.

- Some staff thought that the major difficulty in leadership training was to find the right mix between giving time to the teaching of functional leadership theory and to developing the qualities needed to be an effective leader.

- The majority considered that Sandhurst training helped the trainees in gaining the self-confidence necessary to become a junior leader at the end of the course.

The MoD questionnaire results supported these views in that 96.5% of the cadets and officer cadets and 83.7% of the young officers felt sufficiently well prepared to execute operations on conventional warfare at platoon level.

(b) Military Technology

Military technology, apart from professional studies, was considered by all those interviewed as important background knowledge for an army officer at any stage in his career, irrespective of his arm or service.

The need for a theoretical background to the existing military technology course was expressed by all the staff responsible for technical training. They also revealed that the course has now no technical areas (such as Battle Technology; Computers and surveillance satelites). Technical areas are now separated off and taught at Shrivenham. There are only two areas of study: Conventional Weapon systems and non-conventional, i.e. Nuclear Warfare and Biological and Chemical Defence (NBC).

1. Weapons Systems

All those interviewed indicated that the teaching of the course was very good but was rushed, with areas not covered adequately. However,

the MoD questionnaire results indicated that 92% of the cadets and 93% of the serving officers agreed that they felt sufficiently well prepared to fire rifle platoon weapons.

2. Nuclear Warfare & Biological & Chemical Defence (NBC):
The lack of time available for NBC did not allow staff to cover the course adequately. The MoD questionnaire confirmed these results indicating that only 6.5% of the cadets and officers felt that they were sufficiently well prepared in NBC.

Some of the basic difficulties in the military technology course were:

1. The starting point was uneven since there were significant differences in the level of knowledge and ability of the cadets. The course was seen to reflect the selection system, which considered the suitability of service entrants in a "gentlemanly" way.

2. The pace of instruction was dictated by the varying ability of students.

(c) Communication Systems
Communication systems are comprised of two topics. The first is related to the use and operation of infantry platoon radios, whilst the second is related to the communication module as part of professional studies.

All those interviewed concerned with communication systems considered
that the cadets were generally well prepared and that the time
allocated was adequate. Also, it was considered that the objectives
were relevant and correct for the level of training.

1. Preparation to use and operate infantry platoon radios
It was considered that the cadets and officer cadets were sufficiently
well prepared in this area. The MoD questionnaire results were con-
sistent with this and indicated that 95% of the cadets and officers
agreed that they were sufficiently well prepared to operate infantry
platoon radios, and 87.3% agreed that they could command a platoon
by radio.

2. Communication Module
This module, which sets out to develop effective communication between
individuals and groups achieved its aims and was able to make the
student aware of his strengths and weaknesses in this area. The MoD
questionnaire results indicated that 66.7% of the cadets and officers
agreed that the professional studies course in general had improved
their communication and written and verbal expression.

2. Teaching Methods
Several of those interviewed agreed that the choice of teaching
techniques was inhibited by the drastic cut in time. However, it was

mentioned by some of the staff interviewed that audio visual

aids could be made more accessible and thereby easier to use. More

teaching time could be devoted to this.

The existing teaching methods of the course were:

1. Lectures, demonstrations, presentations and films
2. Seminars/discussion periods
3. Using the libraries

The MoD questionnaire results indicated that the methods of instruction

for the courses were generally considered to be "about right" by the

students, although there was some indication that films and video were

too frequently used.

3. Overall View

Comments were concentrated around the following aspects:

1. Length of the Course:

There is almost complete agreement among the staff that the course

should be longer if the syllabus was to be covered adequately.

2. Knowledge of Training Aspects:

The MOD questionnaire results indicate that there is almost complete

agreement between young officers that they would like more knowledge

of professional studies (military technology included) and mechanised

warfare and combat team tactics which were included in the RMAS

courses.

The preceding sections have examined the training programmes at the
Military Academy of Egypt in developing specific military skills.
Consideration is given to the extent to which these skills were
developed at the RMA Sandhurst.

The following is an attempt to examine the training programmes at the
Military Academy of Egypt in comparison with the British military
academy programmes at Sandhurst as a basis for equipping a modern
army officer with these skills. This can serve as a basis for a proper
examination of the skills taught on the course and the content and the
teaching methods in the Military Academy of Egypt.

(a)   Creating Effective Leadership
At the RMAS it is clear from the analyses that the military and pro-
fessional studies staff considered that the leadership course formed a
platform which provided the trainees with the skills required to lead
soldiers at platoon level or the equivalent. However, there was a
substantial number who considered that the compressed nature of the
course did not allow for more training in difficult circumstances such
as in a testing environment without the directing staff acting in a
semi-teaching role.

In contrast with Sandhurst, the Military Academy of Egypt leadership
course was generally considered by both cadets and serving officers,
satisfactorily taught from a theoretical standpoint and in terms of

tactical theories. However, serving officers did not feel that the course sufficiently prepared them to apply what they had learned in practical situations.

They felt that their activities and duties necessitated that they must possess not only the theoretical knowledge of leadership, but also the abilities to apply what they had learned to organise and co-ordinate the activities of their group subordinates.

This view was confirmed by the interviews with the military professional staff at the Military Academy of Egypt. The majority of the military staff interviewed considered that the existing leadership course must place more emphasis on leadership training.

There was also a feeling that there was too much emphasis on infantry tactics, although it was accepted that this provided the vehicle for the display of leadership characteristics.

The view was also expressed that the cadets were not given enough periods of practical training (a small amount of time allocated to the subject on the course) and this in turn restricted the number of command appointments as a part of the training for all the cadets to develop their abilities and consolidate their experience of leadership skills.

The present benefit from the existing course is to give command appointments during training to a few 'weak' student cadets. Some staff considered that on a course that was concentrated, the few weak cadets seriously slowed down the development of the other cadets.

With respect to the creation of effective leadership, the results indicate:

1. Allowing for the shortness of time, the Royal Military Academy Sandhurst programme demonstrated a better structure and greater range of skills in preparing the cadets than its Military Academy of Egypt counterpart.

2. The predominantly favourable structure of the leadership course at the RMAS can be attributed mainly to the criteria used in the design of syllabuses which emphasise a functional approach in creating effective leadership.

3. The less successful structure of the leadership course at the Military Academy of Egypt can be attributed mainly to the present need to obtain civilian bachelors degrees without involving the new trends in leadership training such as the functional approach.

Thisfinding is based also on an analysis of the content of leadership training programmes both in the UK and Egypt. It has been found that those responsible for drawing up the training programmes for the

Military Academy do not take sufficient cognisance of more recent research findings in leadership theory. Too much emphasis is still being placed upon infantry tactics rather than using an approach based upon leadership theories.

As the nature of the military leadership becomes more varied and complicated, so theoretical approaches to the study of leadership which have been successfully used at the RMA Sandhurst since 1963, may serve as a base which can complement the growing sophistication in the Egyptian army.

(b) Creating an awareness of the technological background
At the RMAS, there appears to be a paradox which needs to be investigated and explained. Whilst the need for additional technical training is clearly demonstrated, the Ministry of Defence has reduced the amount of time available for officer training from two years to eleven months for regular service entrants and from one year to six months for short service officers.

Interviews with staff responsible for technical training revealed considerable unease about the Ministry's policy. It was, they believed, dictated by expediency, given the brief period served by short service officers, whilst regular service officers, they argued, did not have to return for specialist technical training unless requested.

The reduction in time of what had previously been taught over a period of two years into a period of eleven months for regular officers, has severely constrained the amount of knowledge in professional academic studies (military technology included). The situation in the UK has been analysed by the Ministry of Defence itself who examined the training programmes in 1978, but reduced the time of the courses, because of the question of finance.

A further problem mentioned by the staff was that the equipment which exists for officer training in technical subjects seems to be rather dated with much equipment having to be rented from civilian sources.

It should be noted that when we attempted to outline some of the problems of technical training at the RMA Sandhurst, we felt sure that this is not new to the British army experts, and that most of these problems have been analysed by experts over and over again. But the vital question, however, is why they do not do much about it? There is certainly no problem about finance. We have therefore to look beyond the purely technical sphere. One factor among other things which emerged throughout this study is the philosophy of those responsible for training programmes in the British army towards academic education in general and technical training in particular for junior army officers.

It can be argued that the Ministries of Defence have got their priori-
ties wrong. Shortening programmes and not spending money on technical
and scientific equipment that is up-to-date is perhaps an inappropriate
formula for providing adequate training for future officers.

In contrast with Sandhurst, the Military Academy of Egypt technical
course covered very thoroughly the academic studies in a programme
geared towards obtaining bachelors degrees in administrative and
engineering sciences. The Egyptian system provides the full amount of
academic education to the student cadets at the Military Academy before
they are commissioned.

However, there were conflicting views on whether the present content
and approach of administrative and engineering studies were correct.
While the opinion of some cadets and serving officers indicated that
this trend is valuable and provides them with both a considerable
knowledge and a general background, based on degree level of work, for
many there was doubt as to whether the whole civilian course was
important to their needs as regular army officers.

For instance, both the cadets and serving officers were agreed that
they received sufficient theoretical background in the subject areas
taught, but they did not consider that they could apply what they had
learned in practical situations.

With respect to the creation of an awareness of the technological background, the present trends in academic studies at the Military Academy of Egypt went too deeply into civilian sciences. The theoretical nature of the subjects was stressed rather than the practical application, while the academic studies programme at Sandhurst (military technology included) did not allow sufficient time for intellectual development and general maturity. Nor did it appear to provide opportunities for indepth and reflective analysis to cover the Military Technology course.

(c) Developing Basic Communication Skills:

Communication programmes are comprised of two topics. The first topic is related to the use and operation of the radio net, whilst the second is related to group behaviour and the interaction between the individuals and groups.

At the RMAS, both programmes were considered to achieve their aims. It was considered that this area was sufficiently covered and adequately taught. In contrast with Sandhurst, the Military Academy communication systems course was considered inadequately covered.

On the signals course, both cadets and officers considered that they were satisfactorily taught theoretically. However, serving officers did not feel that the course sufficiently prepared them to apply what they had learned in practical situations.

The Communications module did not exist in the Military Academy Communications Systems Course.

Therefore, while the RMAS sufficiently covered and adequately taught its Communications Systems Course, the Military Academy of Egypt did not.

As the needs for leadership approaches and becomes more necessary for the Military Academy training programmes, the need for a Communication module becomes more important to train the cadet to interact with his group subordinates in varied situations. Again, the RMA Sandhurst Communication module can serve as a basis for such module.

Teaching Methods:

Teaching methods in both the RMAS and the Military Academy of Egypt were based on traditional teaching methods such as lectures, seminars, conference methods and use of specialist libraries which aimed to provide cadets with a considerable amount of background data for the subject taught.

There was some indication that films, video and T.V. presentation were used, but not to a very great extent.

The new teaching methods in education and training such as audio-visual aids, particularly computer assisted learning were inhibited by the lack of equipment at the Military Academy of Egypt, while the reduction of time at Sandhurst made it difficult for the staff to use the media available to its full potential.

The use of traditional teaching methods by the RMAS and the Military Academy of Egypt was seen as a gap in stimulating the motivation of the student cadets, and made the work of the staff more difficult.

Thus, the comparison of the training programmes of the junior army officer in the United Kingdom and Egypt has revealed differences in knowledge and skills required by the training programmes at the two academies.

CONCLUSIONS

The main purpose of this study has been to examine the extent to which recent developments in new technology and leadership theory have led to changes in the structure and processes of military organisations and to the content of programmes with contemporary leadership training. This has been examined against the background of the cultural context and recent historical developments of the Egyptian army.

The thesis sought to examine the extent of such pressures for change and innovation through an examination of changes in the content of the military training programmes over a number of years to ascertain how far new trends were introduced, through a programme of interviews with those responsible for such programmes and, also, through the administering of a questionnaire to cadets and serving officers designed to test the extent to which they were being made aware of such new developments and were being given an adequate training in them.

Whilst the major focus of this study has been on the Egyptian armed forces, the British army is examined on a comparative basis because it is equipped with advanced weapon systems, has a long history and enjoys the highest professional standards. Also, with the adopting of new Western weapon systems by the Egyptian army, it has become useful to study the British system, particularly its recruitment and training. Thus, the British army system has been compared with the Egyptian

system for the purpose of analysis and in order to help to clarify and
analyse the Egyptian system. However, it should be emphasised that the
intention here is not in any particular way to impose the British
systems on the Egyptian army where the environment is both materially
and culturally different. In fact my contention is that the Egyptian
army should arrive at a formula for its education and training pro-
grammes based on its own cultural needs. But, on the other hand, there
are still many things that can be learned from the British system such
as its approach to leadership and communications.

This study has attempted to explain the nature and the structure of the
contemporary army élite in the context of the Egyptian society. It has
been found that members of the Egyptian army élite have three factors
in common, social, economic and educational background. Moreover,
after long periods of service accentuated by participation in four
wars, and through sharing international norms via frequent training
abroad including study of foreign weapon systems and technology, the
élite ideology has come from its own organisational necessities,
including nation building needs.

In meeting their organisational needs, the recruitment policy has dis-
played greater flexibility. This has been achieved by making the
conditions of entry to the regular army officer corps as varied and
flexible as possible. This has been accomplished partly by increasing
recruitment from a greater cross-section of Egyptian society, and

partly by basing recruitment policy on those who have the aptitude for and interest in training in administrative and engineering sciences. This trend is thought to enhance recruitment among those oriented towards the military profession and motivated towards intellectual achievement.

As far as the training programmes are concerned, the accelerated pace of technological innovation with speedy replacement of equipment and weapon systems associated with the increasing use of the military establishments in national service projects, have produced an increased demand for new skill structures to be created. The undergraduate university degree programmes in engineering and administrative sciences have been created to meet this objective.

The strategy for reform of the training programmes was a radical one (or even a revolutionary strategy), and was more reliant on the growing pre-eminence of technology in establishing a modern army. As the emphasis came to be placed on degree-based programmes in engineering and administrative sciences, the objective was to increase the potential versatility of the graduates. There can be no doubt, of course, that such programmes have the potential to be extremely useful, but the more important question is whether they are relevant to the most urgent needs of the armed forces.

Since the training programmes are non-military degree-based programmes, considerable emphasis was placed on intellectual development and the need to assimilate vast amounts of factual detail and concepts rather than on their military application. Since the 1973 War, the Egyptian armed forces have undergone internal reformulation as a result of the need for modernisation. Great emphasis has been placed on expanding the technical and electronic units. One can understand that the training programmes at the Military Academy will be directed to developing new knowledge and specific military skills necessitated by technical advances and required by the military establishment.

The need for creating new military skills was answered more by an increase of inputs of non-military knowledge than by an appropriate change of content for the military programme that would satisfy service needs. The result is that the training programme at the Military Academy of Egypt seems to be an incremental rather than dialectical process; intellectual development rather than the inculcation of military skills. This can only produce non-combat skills. Consequently, there is a fear of producing 'academics' rather than officers. It is not surprising, therefore, that serving officers felt that the training programmes did not sufficiently prepare them to apply what they have learned in practical situations.

This does not mean that the new training programmes in engineering and administrative sciences are not required. It has been suggested in

different parts of this study that one aspect of Egyptian society in which change and development have come about is the army. The use of the military establishments in national service projects have greatly increased the demand for managerial and technical training. One of the basic challenges which faces Egypt in her developing process is to perform more efficiently with only the minimum possible limited resources and facilities.

For this, such programmes are greatly needed. But what is probably more important is to create military skills relevant to the needs of the armed forces that can deal with the most vital problems brought about by technological innovations. Such tasks will require that the army officers be able to deal with their resources including technical complexity of weapons and equipment more efficiently.

It was an objective of this study to identify the effects of technological changes on the military organisation structure and processes and the implications for military training.

Contrary to expectations, it was found that the extent of changes both in structures and in training programmes was rather limited. The organisation of military structures along traditional bureaucratic lines has remained except perhaps for the introduction of task force organisations at the operational structure at lower levels of command in the British armed forces. However, the content of the training programmes has remained largely unaltered.

In the UK, the time available for training has been reduced at the
expense of certain components of the course, particularly military
technology, whilst in Egypt the lengthy non-military degree-based
programmes have remained too specific to engineering and administrative
science and too remote from the needs imposed by the need for both
modernisation in the armed forces and participation in the national
services projects.

As far as the British system is concerned, the organisational
structures and the nature of the training programmes' content is deter-
mined more by the beliefs of those who hold power than by the techno-
logical factors which provide the impetus for change from the world
outside. This situation seems further exacerbated by the difference
which exists between those responsible for the designing of such pro-
grammes and those whose job it is to teach them. This study has
demonstrated a degree of inflexibility on the part of senior military
officers, related to the belief that leaders are born rather than made.
For instance, the Regular Commissions Board, when selecting new candi-
dates for the RMA Sandhurst, attaches particular importance to trait
theory of leadership. The consequences of such philosophy of those
commanders has produced two different approaches to selection and
training.

More generally, this study has demonstrated the divide which exists
between theory and practice in the study of organisation. Clearly,

there exists a resistance to change in all organisations, but as far as

military institutions are concerned, the divide between theory and

practice remains a large one, and this thesis has demonstrated that the

very hierarchical nature of military authority is itself a major reason

for such inflexibility.

Furthermore, evidence has been produced which demonstrates that there

has been a growing emphasis in the British armed forces on practical

aspects of training, while there was much more emphasis on theoretical

aspects of training in the Egyptian armed forces.

However, what is more significant is that the British system places

more emphasis on the distinctive characteristic of developing a

fighting spirit amongst leaders. Certainly, this fighting spirit is

essential for all military organisations. However, powerful modern

types of warfare have fostered this martial spirit, and have given the

traditional professional features of leadership their distinctive out-

look. Meanwhile, modern warfare creates new power, specialised knowledge and

skills, and has made it difficult for a highly technological army to

rely merely on their ultimate military authority.

With respect to the Egyptian system, the need for qualified officers to

meet the broader responsibilities of the military profession is brought

about by technological innovation. This has increased the need for the

development of officers who are capable of becoming managers of techno-

logical change. Certainly, the development of warfare cannot simply be

measured by increases in the amount of knowledge or theories in the

education and training programmes of the army officer. Nor can one

study a long curriculum of non-military degree-based programmes without

involving the practical application of these theories to military

situations. The implication of developing such leaders as managers

will foster the trend towards specialisation which tends to contribute

to an organisational conflict in the military chain of command.

Having examined all such aspects, it is argued that in between the two

extremes of the pure manager and the pure heroic leader, there is a

need for a leader who is a manager of technological change as well as a

leader of men. Such a task will require that the education and

training programmes at the military academies be designed to meet both

requirements and to fill the training gap between the two extremes.

APPENDICES

APPENDIX NO.I

The Engineering Course at the Military Academy of Egypt

1. Course Content

First Year:

1.1 Mathematics

1.2 Mechanics

1.3 Engineering Drawing

1.4 Physics

1.5 Chemistry

1.6 Workshop Technology

Second Year:

2.1 Mathematics

2.2 Mechanics

2.3 Mechanical Engineering

2.4 Physics

2.5 Civil Engineering
2.6 Descriptive Geometry

2.7 Electrical Engineering

2.8 Electric and Magnetic Fields

2.9 Electronics

Third Year:

3.1 Mathematics

3.2 Mechanical Engineering

3.3 Power Engineering

3.4 Electric Machines

3.5 Electrical Measurement

3.6 Communication Circuits I

3.7 Electrical Circuit theory

3.8 Electronic Devices and Circuits

Fourth Year:

4.1   Communication Systems

4.2   Antennas and Wave Propagation

4.3   Communication Circuits II

4.4   Control Engineering I

4.5   Computer Engineering I

4.6   Automatic Telephony and Traffic Theory
      (or Microwave Engineering)

47   Pulse and Digital Circuits

Fifth Year:

5.1   Control Engineering II

5.2   Operations Research

5.3   Computer Engineering III

5.4   Integrated Electronics

5.5   Communication Theory and Systems

5.6   Navigation and Guidance

5.7   Signal Processing

5.8   Electronic Measurements

5.9   Radar Engineering

5.10 Passive and Active Networks Synthesis

5.11 Introduction to Electronic Warfare

5.12 Project

2. Course Duration:

The Engineering course is of 5 years duration. The cadets attend the

first four years at the Military Academy studying civilian under-

graduate programmes as well as military training programmes; the

fifth year is a postgraduate year at the Engineering college of the

University of Cairo.

3. Course Staff: .

The Engineering College of the University of Cairo supervises the academic education programmes at the Military Academy. There are a few military staff (officers) who graduate from the Technical Military College, carefully selected for their competence.

4. Teaching Methods:

Teaching methods at the Military Academy seem to fall mainly into information presentation techniques, which include methods such as lectures, conferences, T-training groups and some laboratory training and audio visual aids. Simulation methods such as role-playing and games are rarely used.

Appendix II   The Administrative Science Course at the Military Academy of Egypt.

1. Course Content

Subjects / Year	Management & Admin. Studies	Economics Studies	Mathematics & Statistics Studies	Accounting Studies	Independent Studies
First Year	-Organisation & Production -Principles of Behavioural Science	-Economics -Economic Resources	-Pure Mathematics	-Accounting	-Commercial English -Commercial Law
Second Year	-Public Administration	-Policies & Systems in Export & Import -Banking	-Financial Mathematics	-Accounting	-Commercial English -Commercial Law -Insurance
Third Year	-Personnel Mgt. & Human Relations -Purchasing & Stores Mgt.	-Finance & Financial Management	-Statistics	-Auditing -Cost Accounts -Government Accounting	
Fourth Year	-Planning & Admin. Control -Market Research -Admin. Policy	-Economics of the Firm -Policies & Systems in Export & Import	-Operations Research		-Public Relations

Source: The Military Academy of Egypt, (1982)

2. Course Duration

The Administrative studies programme is of four years duration. The cadet attends the four years at the Military Academy studying the civilian undergraduate programmes as well as the military training programmes. When the cadet has been given his commission, he is granted a Bachelor's degree in Administrative Science and then leaves the Academy for his regiment.

3. Course Staff

The Faculty of Commerce, University of Ain Shams at Cairo, sponsors the education programmes side by side with the Military Academy staff in the Administrative Science Department.

Appendix No.III

The Standard Military Course

The aims of the SMC as it is set out in its guide "November 1981" are:

1. To develop the qualities of leadership and to provide the basic knowledge required by all young officers of any arm or service, so that they will be fit to be junior leaders.

2. Each cadet must have been assessed as being able, by the end of the course, to meet the requirements detailed below. It should ·be noted that practical tactics exercises are also used as a vehicle for training officer cadets in commands allied to the leadership package.

Course Content

a. Leadership Course:

To illustrate understanding of leadership and man management by being able to carry out the following leadership functions:

1. Comment on the factors which influence the morale of the soldiers in war and in peace.

2. Identify the areas of need and functional performances required in a leadership setting.

3. Select the appropriate welfare agency both within and outside the unit to assist in a welfare problem.

4. Apply the principles of man-management.

5. Define the inter-relationship of loyalty and discipline.

6. Demonstrate that he has the ability to lead soliders in all their activities in barracks or in the field.

7. Show the self-reliance necessary to be a junior leader.

b. Tactics:

Illustrate his understanding of tactics by being able to:

1. Understand and apply the principles of the phases of conventional war/counter revolutionary warfare.

2. Plan, give orders for and execute operations up to platoon level for all phases of conventional war and counter revolutionary warfare.

c. Skill at Arms:

1. Fire and pass training tests on the self-loading at the standard of a trained soldier.

2. Handle and fire the remaining infantry platoon weapons.

3. Understand the principles of range management on small arms ranges.

4. Demonstrate field craft at the standard of a trained soldier.

5. Complete stages of training at the Battle Shot with small arms only.

d. <u>Map Reading</u>:

1. Navigate across country and on roads, in vehicles and on foot, by day and night.

2. Appreciate the ground from the map.

3. Read air photographs as required by operations at platoon level.

4. Mark simple tactical information on a map.

e. <u>Physical Training</u>:

1. Pass the basic fitness test "BFT".

2. Pass the military swimming test.

3. Pass the Sandhurst combat fitness test.

4. Be conversant with and achieve the requirements of the Army Training Directive, "Fit to Fight".

f. <u>Drill</u>:

1. Demonstrate foot and arms drill at the standard of a trained soldier.

2. Command a platoon on parade.

3. Perform sword drill at the standard of a young officer.

4. Inspect a platoon on parade.

g. Nuclear & Biological and Chemical Defence (NBC)

1. Describe in outline the characteristics and effects of, and the protection measures to be taken against NBC agents.

2. Be able to wear, operate in and maintain the NBC individual protective equipment.

3. Be able to carry out the immediate action drills in the event of nuclear or chemical attack.

4. Be able to carry out immediate decontamination procedures.

h. Communication Skills:

1. Methods of Instruction:
   (i) Demonstrate the principles of good instruction;
   (ii) Prepare and give a lesson using appropriate aids.

2. Service Writing:

   (i) Write official, and personal letters and messages using correct and clear concise English;

   (ii) Write a training programme for platoon level activities;

   (iii) Plan and write a platoon level exercise.

3. Communication Skills:

To develop in the cadet the skills of effective communications.

i. Signals:

1. Demonstrate the sound knowledge of voice procedure necessary for the command of a platoon by radio.

2. Show that he is competent in the practical use of combat net
    radio at platoon level.

It should be noted, however, that academic education and training
during the SMC is minimal and related to public relations exercises
such as instructions on self-presentation on television and other
forms of mass media.

The SMC Duration

The SMC is 28 weeks long and is divided into two terms of 14 weeks
each.

The SMC Staff

All the education and training on the SMC is carried out by the
officers and NCO's in the platoon and companies of the New College.
They are carefully selected for their competence and leadership
qualities.

At the end of the SMC, the cadets are granted their commissions then
leave the Academy and are posted either to regimental duty or to their
special-to-arm school to attend a young officers' course. Officers
who have applied for regular or special regular commissions, after a
short leave, move over to the Old College to attend the Regular
Career course.

Appendix No.IV - The Regular Career Course

The Professional Academic Studies

1. Strategic Studies (War Studies and International Affairs)

The aim is to enable student officers to better understand the
political and military environment in which British armed forces
operate, the evolution of British Foreign and Defence Policy, and
the problems of modern warfare and diplomacy.

The syllabus consists of the following subjects:

a. The World Wars Since 1900:

The First and the Second World War 1914-1945

b. The Role of the Force:

The impact of technology; weapons and tactics 1914-1945

A history of strategic doctrine

The armed forces and state

c. Contemporary Strategy and Deterrence:

The Cold War

Contemporary Strategy

Detente, Arms Control and Disarmament

From total to limited war in the nuclear age

d. Problems of European Security:

NATO and the Warsaw Pact

NATO at War

European Integration

e. Problems of World Security:

The Middle East

Africa

Asia

The United Nations: Peacekeeping

f. British Foreign and Defence Policy

g. Guerrilla and Revolutionary Warfare

2. <u>Democracy, Society and the Army</u>

The aim is to make the student officer aware of the nature, values

and problems of the society which he represents and the role of the

army within it.

The syllabus consists of the following subjects:

a. British Democracy

b. British Economy

c. Industrial Relations

d. The EEC

e. British Society

3. Northern Ireland Studies

Aim: To make the student officers aware of the Northern Ireland
        situation

The syllabus consists of the following subjects:

a.   The Historical and Political Background

b.   Para-military Movements Old and New

c.   Economic and Social Developments since 1969.

d.   The Psychology of Behaviour and Control in Riot Situations

e.   Political Initiatives and Institutional Alternatives

4. Warsaw Pact Studies

The syllabus consists of subjects such as:

a.   Soviet Military Doctrine

b.   The Soviet Soldier

c.   The Soviet Navy

d.   East Germany and its Army

5. In-Depth Studies

Aim: To enable the student officers to study in greater depth some
        areas of the foundation syllabus. A student officer will be
        required to choose one of the following:

A.   The Central Front:

     Political Environment

     The Military Threat and Countermeasures

- 225 -

B. The Military and Society:

Civil Military Relations

The British Perspective

The Politics and Economics of Defence

C. Conflict on the International Scene:

The World & Superpower Confrontation

The Impact of Developing Technology

Southern Africa

NATO: Turbulence in; the Middle East and The Far East

6. Military Technology and Communication

The aims of the programme are "to create in student officers an

awareness of the technological background to modern soldiering so

that the scope and limitations of equipment, techniques and resources

can be properly appreciated.

To stimulate the mind of the student officers and to encourage them

to think critically".

The syllabus consists of the following subjects:

* Conventional Weapon Systems:

a - Explosives:

This is an introduction to the nature of the explosive reactions dealing with the difference between the two fundamental explosive processes of detonation and combustion.

b - Weapons Systems:

This part deals with weapons characteristics, performance, the effects and limitations of firepower, and a consideration of the personal weapons carried by NATO and Warsaw Pact troops and the criteria in considering new weapons.

c - Armoured and Vehicles Systems:

This section deals with armoured and vehicles characteristics; mobility; firepower and protection, cross-country operations.

* Battle Technology:

a. Introduction of the Computer

The aim is to introduce the computer in general, general applications of the computer in military contexts, the presentation and processing of data.

Use of the computer in solving management problems is also introduced with referernce to Critical Path Methods "CPM", linear programming and digital simulation.

b. Battlefield Surveillance:

The object of this topic is to provide a brief introduction to the

scientific principles behind surveillance devices and to indicate

their possibilities and limitations.

c. Telecommunications:

The means of communication available to the army are discussed.

Particular emphasis is given to combat-net radio. The aim is to com-

plement knowledge and expertise gained in the signals wing and to

introduce sufficient theory to make the best use of combat-net radio

in addition to an appreciation of how net radio fits into the scheme

of military communications.

    Nuclear Warfare and Biological and Chemical
    Defence: "NBC"

This topic covers the scientific principles of the release of nuclear

energy in sufficient detail to enable students to obtain a sound grasp

of the technology of nuclear weapons and other applications of nuclear

energy of military significance. Practical work is aimed at a

thorough understanding of the nature, detection and measurement of

radio-activity and the methods of protecting troops from health

hazards.

The characteristics and effects of chemical agents and the defensive

measures to protect troops against their effects is covered.

7. <u>The Military Training Objectives at RMAS</u>

a. Tactics:

1. To be able to make a combat appreciation, within the context of all combat team, for attack and defence in conventional war.

2. To maintain the level of tactical knowledge reached on the SMC.

3. To plan and execute a simple operation at platoon level.

4. To plan and execute a simple exercise at platoon level.

5. To understand the need for psychological operations.

b. Skill at Arms and NBC:

1. To maintain the level of skill required to pass the SMC.

2. To practice the running of ranges.

3. To practice the teaching of SAA.

4. To maintain the standard achieved on the SMC.

c. Signals:

1. To maintain the level of knowledge required to pass the SMC.

2. To understand the EW threat and the measures to be taken against it.

d. Drill:

- To maintain the standard required to take part in the sovereign's parade as a student officer.

e. Phsycial Training:

- Continue to pass the BFT.

f. Administration:

1. To maintain the standards of service writing reached on the SMC.

2. To maintain the level of knowledge of military law reached on the SMC.

3. To maintain the level of knowledge of pay and accounts reached on the SMC.

4. To know the basic principles and methods by which combat teams are maintained in the field and how casualties are evacuated and treated.

3. Regular Career Course Duration

The RCC is 23 weeks long and divided between 18½ weeks of academic studies and 4½ weeks of military training.

4. The RCC Staff

The academic studies are covered by all the three Academic Department staff, mainly civilian, whilst the military training on the RCC are taught by permanent specialist officers, warrant officers and NCOs in military wings.

5. Teaching Methods

a. Lecturers, demonstrations, presentations and films are normally followed by discussion or tutorial periods.

b. Essays, papers and presentations are prepared in private study time and in private time.

c. The paramount importance of using the libraries is stressed and guidance in reading and methods of study is given.

APPENDIX .V

STUDENTS Cadets Questionnaire in the Egyptian Study

I   Course Content:

Q1.   What do you see to be the main objectives of the course?

Q2.   How far do you feel that these objectives were achieved?

Q3.   How satisfactory did you find the training in the following areas:

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
A. Leadership 1. Plan & give orders execute operations at platoon level.					
2. Planning & giving orders above platoon level.					
3. Ability to lead soldiers in all their activities in barracks.					
4. Ability to lead soldiers in all their activities in the field.					
B. Weapons Systems: 1. Weapons characteristics.					
2. Weapons operations and firepower					
3. Vehicles characteristics					
4. Vehicles mobility					

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
C. Nuclear Warfare & Biological & Chemical Defence (NBC): 1. Did the course enable you to wear and operate protective equipment?					
2. Did the course enable you to put into immediate action the necessary drill in the event of nuclear attack?					
3. Did the course enable you to put into immediate action the necessary drill in the event of chemical attack?					
4. Did the course enable you to carry out immediate deconta-mination procedure?					
D. Introduction to the Computer: 1. Did the course give you sufficient knowledge about data collection?					
2. Did the course give you sufficient knowledge about data analysis?					

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
3. Did the course give you sufficient knowledge about data interpretation ?					
4. Did the course enable you to have adequate problem solving skills ?					
5. Did the course enable you to have adequate decision making skills ?					
E. Communication Systems: 1. Did the course make you competent in the use of combat radio net at platoon level?					
2. Did the course give you the ability to fit radio net into the scheme of military communication?					
3. Did the course give you the necessary skill to command a platoon by radio?					

Q4. Do you consider that you can apply what you have learned in the course in practical situations?

II   Teaching Methods:

Q5.   Which aspects of the teaching methods on the course were effective?

Q6.   Which methods did you find most appropriate?

and which least appropriate?

Overall View:

Q7.   What is your overall view on the need for more to be done on the aspects of training you have received?

Q8.   Are there any further comments you wish to make on aspects of the training you have received?

THANK YOU FOR YOUR CO-OPERATION IN COMPLETING THIS FORM

APPENDIX V I

SERVING OFFICERS Questionnaire in the Egyptian Study

I   Course Content:

Q1.   How satisfactory did you find the training in the following
      areas:

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
A. Leadership:Did it help you to: 1. Plan & give orders execute operations at platoon level?					
2. Plan & give orders above platoon level?					
3. To lead soldiers in all their activities in barracks?					
4. To lead soldiers in all their activities in the field?					
B. Weapons Systems: Did the course improve your knowledge of: 1. Weapons characteristics?					
2. Weapons operations and firepower?					
3. Vehicles characteristics?					
4. Vehicles mobility?					

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
C. Nuclear Warfare & Biological & Chemical Defence (NBC): 1. Did the course enable you to wear and operate protective equipment?					
2. Did the course enable you to put into immediate action the necessary drill in the event of nuclear attack?					
3. Did the course enable you to put into immediate action the necessary drill in the event of chemical attack?					
4. Did the course enable you to carry out immediate deconta-mination procedure?					
D. Introduction to the Computer: 1. Did the course give you sufficient knowledge about data collection?					
2. Did the course give you sufficient knowledge about data analysis?					

	Excellent	Good	Satis-factory	Unsatis-factory	Very Unsatis-factory
3. Did the course give you sufficient knowledge about data interpretation?					
4. Did the course enable you to have adequate problem solving skills?					
5. Did the course enable you to have adequate decision making skills?					
E. Communication Systems: 1. Did the course make you competent in the use of combat radio net at platoon level?					
2. Did the course give you the ability to fit radio net into the scheme of military communication?					
3. Did the course give you the necessary skill to command a platoon by radio?					

Q2. Do you consider that you can apply what you have learned in the course in practical situations?

II   Teaching Methods:

Q3.   Which aspects of the teaching methods on the course were
      effective?

Q4.   Which methods did you find most appropriate?

      and which least appropriate?

Overall View:

Q5.   What is your overall view on the need for more to be done on the
      aspects of training you have received?

Q6.   Are there any further comments you wish to make on aspects of
      the training you have received?

THANK YOU FOR YOUR CO-OPERATION IN COMPLETING THIS FORM

Appendix VII
Coding Categories for Open-Ended Questions

The Perceived Objectives ofthe Course:

What do you see to be the main objectives of the course?
How far do you feel that these objectives were achieved?

1. To create an awareness of technology.
2. To provide an appreciation of resources.
3. To develop effective leadership.
4. To develop skills in effective communication.
5. To think clearly and analytically.
6. To improve understanding of human behaviour.
7. To provide knowledge and concepts related to military skills.

Applicability of the Course:

Do you consider that you can apply what you have learned in the course in practical situations?

1. Leadership.
2. Weapons systems.
3. Nuclear warfare and biological and chemical defence (NBC).
4. Introduction to the computer.
5. Communication systems.

Teaching Methods:

Which aspects of the teaching methods on the course were effective?

1. Linking between theory and practice.
2. Giving concepts, facts and knowledge.
3. Interaction with others.
4. Creating command skills.
5. Giving general background.

Which methods did you find most appropriate?

1. The lectures.
2. Conference methods.
3. T-training groups.
4. The use of audio-visual aids.
5. Laboratory training.
6. Role playing.
7. Games.

Overall Views:

What is your overall view on the need for more to be done on the aspects of training you have received?

1. Must meet the current needs of a modern army.
2. Must give more emphasis to the relationship between theory and practice.
3. Create new areas of studies.
4. More practical training.
5. Permit the use of more new teaching methods.

viii Questionnaire on Training at the RMA Sandhurst:

Q1. Indicate the kind of school you attended

Secondary Modern _____

Grammar _____

Public _____

Other _____

Q2. Which GCEs did you obtain?

A_Levels	Grade	O__levels	Grade
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Q3. To which Arm do you prefer to go?   Why?

Q4. What is your age?

Course Content:

Q5. What do you see to be the main objectives of the course?

Q6. To what extent do you feel that each of these objectives was achieved?

Q7. How satisfactory did you find the course with
respect to <u>Leadership Training?</u>

Excellent ☐

Good ☐

Satisfactory ☐

Unsatisfactory ☐

Very unsatisfactory ☐

And how satisfactory with respect to the following
aspects of leadership?

	Excellent	Good	Satisfactory	Unsatis-factory	Very Unsatis-factory
1. planning, giving orders and executing operations at platoon level	—	—	—	—	—
2. planning, giving orders and executing operations above platoon level.	—	—	—	—	—
3. leading soldiers in activities within barracks.	—	—	—	—	—
4. leading soldiers in activities in the field.	—	—	—	—	—

Q8. How satisfactory did you find the Course with
respect to training in Weapons_Systems?

                              Excellent   ☐

                              Good   ☐

                              Satisfactory   ☐

                              Unsatisfactory   ☐

                              Very Unsatisfactory ☐

And how satisfactory with respect to the following
aspects of weapons systems?

		Excellent	Good	Satisfactory	Unsatis-factory	Very Unsatis-factory
1.	Weapons Characteristics	—	—	—	—	—
2.	Weapons Operations and fire power	—	—	—	—	—
3.	Vehicle Characteristics	—	—	—	—	—
4.	Vehicle mobility	—	—	—	—	—

Q9. How satisfactory did you find the Course with respect to training in <u>Nuclear Warfare and Biological and Chemical Defence (NBC)</u>?

Excellent	☐
Good	☐
Satisfactory	☐
Unsatisfactory	☐
Very Unsatisfactory	☐

And how satisfactory with respect to the following aspects of NBC?

		Excellent	Good	Satisfactory	Unsatis-factory	Very Unsatis-factory
1.	Wearing and operating protective equipment	—	—	—	—	—
2.	Putting into action the necessary drill in the event of nuclear attack	—	—	—	—	—
3.	Putting into action the necessary drill in the event of chemical attack	—	—	—	—	—
4.	Carrying out deconta-mination procedures	—	—	—	—	—

Q 10. How satisfactory did you find the course with
respect to introducing you to the computer?

Excellent ☐

Good ☐

Satisfactory ☐

Unsatisfactory ☐

Very Unsatisfactory ☐

And how satisfactory with respect to the following
aspects to the Computer?

	Excellent	Good	Satisfactory	Unsatis- factory	Very Unsatis- factory
1. Knowledge about data collection	—	—	—	—	—
2. Knowledge about data analysis	—	—	—	—	—
3. Knowledge of problem solving skills	—	—	—	—	—
4. Knowledge of decision making skills	—	—	—	—	—
5. Skill in using computers	—	—	—	—	—

Q 11. How satisfactory did you find the Course with
       respect to training in Communication Systems?

Excellent	☐
Good	☐
Satisfactory	☐
Unsatisfactory	☐
Very Unsatisfactory	☐

And how satisfactory with respect to the following
aspects of communication systems?

		Excellent	Good	Satisfactory	Unsatis-factory	Veru Unsatis-factory
1.	The use of the combat radio net at platoon level	—	—	—	—	—
2.	Fitting the radio net into the scheme of military communication	—	—	—	—	—
3.	Commanding a platoon by radio	—	—	—	—	—
4.	The ability to under-stand information received by radio	—	—	—	—	—

Q 12. To what extent do you consider you can apply what you have learned in the Course in practical situations with respect to each of the sections above?

	A very great extent	A great extent	To some extent	To no great extent	Hardly at all
1. Leadership					
2. Weapons systems					
3. Nuclear and Biological and Chemical Defence (NBC)					
4. Introduction to the Computer					
5. Communication systems					

Teaching Methods:

Q 13. 1. Which aspects of the teaching on the Course did you consider to be most effective?

2. Rate each of the following with respect to the adequacy with which they were dealt with on the Course:

	Extremely Adequately	Very Adequately	Adequately	Not very Adequately	Not at all Adequately
Linking between theory and practice					
Giving concepts, facts and knowledge					
Interacting with others					
Creating command skills					
Giving general background					

3. With respect to teaching methods, which
    methods did you find most appropriate?

	Very Appropriate	Appropriate	Not very Appropriate	Not at all Appropriate
- lectures	———	———	———	———
- conference methods	———	———	———	———
- T. Training Groups	———	———	———	———
- Audio-visual Aids	———	———	———	———
- laboratory training	———	———	———	———
- role playing	———	———	———	———
- games	———	———	———	———
- others	———	———	———	———

Q 14. Looking at the Course overall, what do you
       consider to be its main strengths and weaknesses?

Q 15. In your view what might be done to improve the
       course?   (e.g. introducing new areas of study,
       the relation between theory and practice, the
       relationship of the Course to the current needs
       of the army, use of different teaching methods).

Q 16.   In what ways have your understanding of and
         views about training changed as a result of
         doing the Course?

Q 17.   Do you have any views on the appropriateness
         of the length of the Course?

THANK YOU FOR YOUR HELP IN COMPLETING THIS QUESTIONNAIRE