

*FINNISH
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NON-OFFENSIVE DEFENCE

*A Criteria Model of Military
Credibility*

Arto Nokkala

DOCUMENTATION

War College Helsinki 1991

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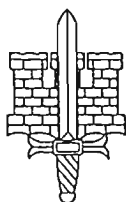
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1 INTRODUCTION

During the course of the 1980s in Europe the recognition of the interdependence of peoples and states in regard to security became an increasingly prominent trend. This was accompanied by the effort to decrease the significance of military force as a means of foreign policy. These developments originally took shape on the background of the strategic fixation of the East-West conflict, which gave rise to an increasing emphasis on the indivisibility of peace and security. In the wake of political and economic changes in Europe this whole conflict soon began to lose its earlier meaning. Military means of maintaining national security began to be seen more as a problem than as a solution.¹

The dilemma posed by military armament has traditionally been approached through arms control and disarmament. Arms control accepts the dynamics of armament, but seeks to control and limit it. In its purest form disarmament rejects arms and the dynamics of armament altogether. As such the conditions for its rapid implementation are, in comparison to other alternatives, highly prohibitive.²

Gradually these approaches have given rise to a scientific and political discussion focusing primarily, on the one hand, on the critique of mutual deterrence and, on the other, on the switch from offensive to exclusively defensive military capacity, which is advocated instead of the radical and swift reduction of such capacity. The politicization of this debate was particularly a consequence of the transformation of the Soviet Union and Eastern Europe. Moreover, the debate has expanded beyond its European context; a variety of non-offensive defence models have been delineated throughout the world. The debate, however, has focused less on the nature of the defence posture of the international military order than on the armed forces and military doctrines of individual states.³

Non-offensive defence is understood as both a political and a military concept.⁴ The fact that through debate about it is

Lt. Col. GSO Arto Nokkala is Chief of the Office of Strategic Studies at the Institute of Military Science, War College, Finland

possible to affect the allocation of resources in different states suffices to show that it is indeed political. The purpose of this study, however, is to analyse it exclusively from the military viewpoint. Accordingly, the task here is to delineate the conditions required by military actors for the practical implementation of non-offensive defence measures.

2 THE STUDY OF NON-OFFENSIVE DEFENCE

2.1 Concepts

The theoretical concept of non-offensive defence strongly implies that there exists an offensive type of defence which can be differentiated from a merely defensive type. One of the initiators of the discussion, Horst Afheldt, specifically used the concept of defensive defence already in the 1970s.⁵ The concept came to be most commonly designated, especially in West Germany and France in the 1980s, by the term "non-offensive defence."⁶ Following the mid-1980s the terms "non-provocative defence" and "alternative defence" appeared in the western debate on the subject.⁷ Innovation in political thinking gave rise to the Soviet doctrines of "reasonable sufficiency" and "defensive sufficiency."⁸

The term "structural inability to launch an attack" (*Strukturelle Angriffsunfähigkeit*) has been used, in a rather different sense than the forementioned terms, from 1982 on especially within German research circles. In its narrow sense this term signifies common security, but when used more broadly it connotes a defence strategy and structure intended to serve the attainment of extensive collective peace.⁹

What all these concepts have in common is the idea of a national military system and strategy incapable of offence, but sufficiently capable of effectively repulsing attacks. In some cases, however, such concepts are used to signify merely the partial restriction of offensive capacity at the expense of defence. It is held that a non-offensive system would not provoke attack. Accordingly, if a sufficient number of states adhered to the ideal of non-offensive defence then military stability would prevail.¹⁰ Moreover, it would be difficult to invade, occupy and control a non-offensively defended state.¹¹ Non-offensive defence is thus a relative concept which must be scaled to offensive defence and attack. Appendix 1 presents a list of concepts relevant to the subject along with their definitions.

The concepts of offence and defence as such have a range of possible connotations. According to the division of military action

into means and ends these concepts are to be understood in terms of aims on the one hand and the instruments needed to attain aims on the other. Traditionally the function of military force was to wage war for the achievement of political goals. The necessary instruments were soldiers as well as arms and other forms of technology.

The debate on non-offensive defence arose, however, in a context overshadowed by the existence of nuclear weapons in response to the need to make armed force a means for a political strategy aiming to prevent war. So also arose the idea of "non-provocation." A consequence of these developments is that offence and defence have come to refer more to ideas and structures than to concrete action. Accordingly possible strategies are strategies for a hypothetical future war, a war trying to be prevented. Defensiveness and offensiveness imply that defence and offence refer to both intentions and capabilities backed by concrete forces. Non-offensive defence refers both to such forces and to principles both of which are to exclude offence as a goal and as a means.

2.2 *Basic Premises*

The military credibility of non-offensive defence is a concern of peacetime military decision-makers, whose job it is to prepare measures to be implemented in case of war. For decision-makers war is an undesirable but probable future state of affairs for which preparations must be made. The way war is conceived affects choices concerning such preparations.

The basic premise of non-offensive defence as an alternative requires the negation of the "normal state of affairs" through change. Accordingly existing military systems are seen as offensive, even when their means or ends, or both, are referred to as defensive.

Four basic premises can be put forth to serve as a point of departure for the formulation of a theoretical viewpoint for the study of the present subject.

1. In war defence must be differentiated from offence in order for armed forces and doctrines regarding their use to be designated as strictly defensive. It is easier to identify

- the characteristics of offence than of defence.
2. For exclusively defensive military deterrence to be credible during peacetime it is necessary to distinguish between defence and offence in war. Again it is easier to identify offensive deterrence than defensive.
 3. Military credibility influences the military decision-making of the opponent. If an opponent's stance is perceived as purely defensive, the probability that counter-measures will be less offensive increases.
 4. Because a variety of parties assess each other's actions and make decisions in interaction with one another in an open system, the military stability of this system requires a shared interpretation of military credibility.¹² In this study, however, credibility is examined from the viewpoint of only one actor at a time.

The aim of this study is to present a general criteria model for the evaluation of the credibility of the exclusively defensive capability of military organizations. The model is initially tested in relation to twelve cases. The purpose is more to become familiar with and define the subject than to thoroughly elucidate it. Nonetheless, the intention is to delineate the limits of military thinking in order to determine the obstacles to, or possibilities for, the actual implementation of the organization, doctrine and strategy of non-offensive defence by armed forces.

2.3 Military Theory and Organization

There exist a diversity of theoretical approaches to the study of war and the utilization and function of military force during peacetime, since it has been of interest to a variety of scientific disciplines. Nonetheless, the study of the distinction between defence and offence from the viewpoint of military credibility belongs above all to the multi-disciplinary field of military science, the specific focus of which is on war research.

The theories of military science are very controversial. There is a well known attitude of aversion toward the theories expressed in the classics of the art of war. Criticism is not, however, aimed so much against research as against how such theories or "doctrines" are applied in practice by military leaders. In this

regard the classics actually strongly emphasize intuition and individual characteristics and capabilities, for which doctrine and theory are seen mainly as fetters.¹³ Institutionally bound as they are to the armed forces and military culture, operations doctrine and tactical research emphasize practical needs and optimum applicability. Thus basic research and theory formation receive less attention in these fields.

A distinct military theory is possible only to the extent that it can be shown that war, or preparations for it, follow universal laws. Wars are usually described as context-bound and unique. Nonetheless, regardless of the type of society to which they belong armed forces prepare for war according to very much the same principles, which reflects the common rationality of violence.¹⁴ These principles can be considered as constituting military theory in relation to the domain in which they are universally valid, regardless of whether or not they are actually implemented in war. If after war they do not change these principles can be considered valid. Military theory is normative. It aims to provide guidelines as to how armed force should be employed in battle and war.

The problem with military theory, however, is its basic assumptions. To a large extent these assumptions neglect the fact that, as with other forms of collective violence, battle and war are social behavior. Consequently, the army is viewed primarily as a machine in whose effective operation people are merely friction-causing elements. Military theory seeks to provide military leaders guidelines for overcoming such "friction." This is reflected in the deeply entrenched paradigm of the military sciences, which likewise underscores the unique nature of military action.

The conceptualization of battle and war from a broader social science perspective would no doubt enhance the theoretical framework used for examining the credibility of defensive capability. This would also allow the comparison of military action to other forms of social behavior if need be. The object under study here is in fact military decision-making, which always takes place within a certain sociopolitical context. Moreover, by considering the state as an organization among organizations it becomes possible to utilize organization theory in the study of military action.

A military organization can be defined as a special state organization which wields violence or the threat of violence against similar organizations in other states (Appendix 2). As an open system the military is often easier to distinguish from its sociopolitical environment than many other organizations. In particular military roles are empirically distinctly identifiable. Moreover, within the range of roles an individual may have military ones are the most dominant. In addition to distinct role behavior military organization membership involves adherence to a characteristic set of norms. For example the organization's formal hierarchical structure is maintained by the official norm known as military discipline involving absolute obedience to superiors' commands.

One of the postulates of organization theory is that organizations seek to decrease uncertainty in their surroundings in order to preserve themselves. Uncertainty increases when the environment is complex and changes swiftly. The organization increases predictability through adherence to a plan of action. The main elements of military organization deal with wartime operations, serving in particular to reduce uncertainty in decision-making. The most important element in the environment is the potential wartime enemy. With this element in mind the decision-makers create a programme of action composed of rules and plans. Other essential environmental factors are technology, geographical conditions and the resources necessary for the renewal of the organization.¹⁵

The input and output of information is of central importance to decision-making in the peacetime military organization.¹⁶ The state's military organization serves above all as a communications system when it is not being used for war. Its educational, preparation and other activities primarily provide information concerning how it will function in war. The official wartime goal of the organization is to fulfill its military function.

The interaction between different military organizations gives rise to the input for decision-making. Interpretations of such information are subjective.¹⁷ Information interpretation is influenced both by the organization's internal norms and by those of the outer surroundings. Some of these norms are universal among military organizations, since they arise from the very nature of such organizations. It is in reference to

universal military norms that the concept of military thought is used.

Military thought plays a highly influential role in the military organization's programme. It is a prominent aspect of the organization's standing operating procedures, which are very slow to change in response to innovation.¹⁸

The military way of thinking can be understood as a part of military theory. It can be expected to be renewed in the socialization and professionalization processes undergone by the organization.¹⁹ As the organization is continuously regenerated so are its primary structural elements, including its programmes. Historical development has left the constituents of the military thought relatively unchanged, in spite of the transformation of technology and regulations. Thus the significance of the military way of thinking assumes a prominent part in the coding of communication between organizations during peacetime.

3 THE CREDIBILITY OF MILITARY THREAT

3.1 *Dimensions of Threat*

The study of threat in relation to the international system and states is usually carried out from the perspective of conflict and deterrence theory. The realist tradition of research in the field usually focuses on threats to national security. Observing that threats are often linked to the vulnerability of the state, the realists define national insecurity as the combination of threat and vulnerability. Accordingly, the absence of national insecurity serves as a definition of national security; but this is as such a controversial way of defining it.²⁰

Just as it has been recognized how difficult it is to precisely define what is referred to by security and how, because of its subjective nature, the idea of national security is on the whole an "ambiguous symbol", so threat is considered to be an unclear concept having multifarious connotations. It is held that the concept of threat needs to be made more precise and used in reference to specific contexts. Buzan, for example, divides threats into sectors on the basis of their origin, their intensity and historical change. The state faces threats from military, political, economic, cultural and ecological sectors. In the identification and categorization of such threats it is necessary to realize that military threat has political aims. But the effort to achieve such aims may also be carried out through purely political threat, which may in turn be closely linked to cultural and economic threat. Ecological threat transcends state borders. The different sectors are closely associated.²¹

From the viewpoint of state decision-making the sources of threats are not solely other states. The increase of international actors has made it more necessary than ever for states to adopt a broad approach to the assessment of threat sources. The magnitude, probability and estimated consequences of threat can vary in regard to time and place. Moreover, threat can be either actual or potential. The former involves the possibility, and usually the indefinite probability, of becoming a direct threat

in future circumstances. In deterrence theory these two types of threat correspond to immediate and general deterrence respectively.²²

The relevance of threats is also influenced by their openness to a variety of subjective interpretations. Thus the meaning of threat lies in how its existence is interpreted among the various actors involved. The historical dimension of threats signifies that the interpretation of the combination of various threat sectors and other dimensions may change in the course of time. Threats are above all images of threats, ultimately formed on the level of the individual. They are conceptions whereby present or future conditions are perceived as posing a threat to security or causing a feeling of insecurity. The extensiveness and ambiguity of threat make it possible for people to perceive it as ubiquitous, and even to make it one of the primary constituents of their world-views.²³

The idea that threat interpretation is ultimately dependent on the individual has caused researchers to increase focus on its psychological nature. The psychological perspective helps explain why the precise analysis of threat has met with numerous difficulties. One such difficulty concerns the extent to which the foreign policy decision-maker's threat conceptions are influenced by the same logic which governs his interpretation of threats to his personal interests.²⁴ Moreover, people have a need to simplify the information they receive and filter it through prejudices. Due to these and other disturbances to the communication process there may be a considerable divergence between the real environment and how it is comprehended.²⁵

Given the nature of threat perception on the level of the international system and the state, it is possible for a communicated threat to be interpreted as military when it is actually not so. On the other hand a non-military threat may be interpreted as military. It can vary considerably. Military threat is by no means necessarily objectively determinable, and to be interpreted as such the action in question may need to be analysed according to clear guidelines. In military organization decision-making threat is examined both in its general relation to all organizations and in the specific ways it is of significant to the armed forces. As with organizations in general, observation of the environment requires dealing with the uncertain and the active effort to precisely delineate and predict conditions while

preserving the organization's freedom of movement. The definition of the situation is essential for decision-making.

The meaning of threat may, however, be different if its existence is conceived of as necessary for keeping the organization's work going. Threat information is not necessarily merely one factor among others determining decision-making regarding the definition of circumstances. It may be of central importance, perhaps even to such an extent that the delineation of threat comprises the whole definition of the situation required for decision-making. Professional expertise on the reduction of uncertainty is then used to systematize threat as a primary item of input for decision-making.

From the viewpoint of military organizational decision-making, threat is not merely a factor of psychological fear. It is organization-derived and professionally interpreted information input, which is a necessary condition for military planning. Thus military threat has a special significance for the military organization. Its interpretation as such can be expected to differ from that of threat in general and from how military threat is interpreted in non-military organizations.

3.2 Military Thought and Threat Interpretation

Among the conclusions drawn from empirical research there is often reference to the tendency of military personnel, due to their professional obligations, to employ worst case scenarios instead of probability analyses. Moreover, statesmen are said to do likewise in the formulation of their interpretations due to the alleged predominance of military threat in relation to other threats.²⁶

From the viewpoint of organization theory the assertion concerning worst case analysis is in need of clarification: What is a so-called worst case? The effort to rationally calculate benefits and costs does not necessarily make for balanced preparedness in relation to all threats or to all the degrees of military threat. The assumption of rationality signifies that in the assessment of military threat the ends pursued and means employed by external actors and by one's own organization are ranked. This requires

the prioritization of threats. The limits of worst case analysis vary depending on whether it is applied to an organization's internal affairs, to relations between organizations or used to rank threats in relation to one another.

Outside the military organization the worst type of threat can be seen as military threat if it is ranked in relation to political and economic threats, especially if the psychological phenomena of fear is taken into account. For military decision-making, however, military threat does not need to be ranked in relation to other types of threat. It is technical. It does not necessarily recede to the same extent as, for example, it does in the sphere of political decision-making. Apparently in creating a base for planning military threat is actually interpreted using inexact probability assessment to a greater extent than worst case analysis.

The validity of worst case analysis is greater when it emphasizes the capability more than the intentions of the potential opponent. In contrast to their members, military organizations themselves do not have intentions, but only a structure, a purpose and processes. Most of the information they produce does not reach other military organizations, since it is kept secret. The organization's military purpose is among the most well guarded secrets. Military doctrine does not necessarily indicate what the actual practical aims of the military organization are.

The problem with doctrines is that they are proclamatory and thus meant to serve political intentions.²⁷ Furthermore, proclaimed doctrines throughout the world mainly reflect defensive intentions. Military acts are committed in the world, however, which at least one actor may interpret as offensive. Public doctrines reveal at most political aims, not military ones. Therefore in the assessment of military threat intentions are inessential. They can only support assessments if they are in conformity with the probable structure, including the programme and aims, of the organization in question. Thus it is the real military tasks and plans for various eventualities which are of utmost importance.

For the most part the organization's purpose or military task, as well as its programme, must be determined through the examination of the structure of armed forces. In addition various

auxiliary conjectures may be employed. For example, it can be assumed that the set task is intended to be achieved at reasonable cost. In spite of the obstacles involved, the assessment of the purpose of military organizations is necessary, because without it the instrumental utilization of armed force in case of war would be impossible to plan; planning would be pointless.

Since the accuracy of information concerning aims remains questionable, information concerning capability is of greater importance. The value of such information is further enhanced with an awareness that deception is an essential component of military operations. Even if military tasks are made public, there remains the suspicion that they, and public rules of strategy and tactics as well, are intended to mislead.²⁸

Due to the numerous factors of uncertainty it faces, the assessment of military threat could be expected to be subject to great variation and dependence on intuition if it were not for the existence of strong regulatory professional factors or controlling norms. In the coding of information military thinking is of particular importance. Military thinking strongly influences the way in which other military organizations' capabilities, and the intentions they give rise to, are interpreted as military threat. Thus the military organization always has a conception of threat which is professional, rational and intuitive. It is based on a very systematic analysis of opponents and their probable behavior. In this way the number of probable scenarios is reduced. The communication of military threat is presented in Appendix 3.

3.3 Military Credibility

Military thought, in the context of interaction between military organizations, provides a common foundation for interpretations of threat which cannot be hidden behind a veil of secrecy. Because conceptions of military threat are in certain respects speculative and intuitive, military thinking, with its characteristic norms and role expectations, forms an exceptionally invariable component of the military organization's programme. Likewise, for this reason military threat is considerably more clearly comprehended within military organizations than among other interest groups in society.

Military thinkers set standards for determining the credibility of threat. Contrary to what may be the case in other contexts, these standards are not concerned with whether or not the opponent's organization desires to initiate action.²⁹ Military credibility can be defined as a conclusion derived from a process of interpretation guided by military thought regarding the probable aim of the opponent-organization's programme for war and its capability for implementing it.

This claim makes it necessary for the task-strategy or ends-means relation to conform to the requirement of coherence. It thus forms the central element of credibility. Due to the interactiveness of communication, credibility is influenced by how one's own organization's task and capability are conceived in the scenario and by how the opponent is thought to interpret them.

4 DEFENSIVE AND OFFENSIVE CAPABILITY

4.1 *Military Theory and the Defence/Offence Distinction*

Military theory is based on the premise that in war all operations are geared for battle. In the waging of war the military must choose between either offence or defence.³⁰ These two types of warfare are likewise the basic options for peacetime decision-making and planning concerning military aims and strategy, even if the chosen political option or the political aim of war is always defence.

In their communicative interaction with one another it is hardly possible for the declared exclusively defensive stance of one military organization to be accepted as such by the other if it cannot according to military theory be distinguished from a stance based on offensive capability. Moreover, interference in the communication process can give rise to erroneous interpretations. This creates the need for utilizing margins of certainty to make sure that an interpretation of a threat as exclusively defensive is as accurate as possible. According to military theory military organizations predictably tend to favor offensive doctrines.³¹ Moreover, the primary concern with offence is reinforced by the prominence of secrecy and acts of deception and surprise, because there are only two basic alternatives -defence and offence- available to the opponent.³²

To establish a margin of certainty it is necessary to attain the highest possible level of abstraction in distinguishing between defence and offence, thus reducing the number of variables to be monitored to a minimum. In its most elementary form military thinking is concerned with the interaction of the basic elements of battle, namely fire-power, mobility and cover. These elements are parts of the concrete physical output produced by the organization with technology in time and space. The latter involves the use of other geographical factors such as territory in extenso.

In its simplest sense fire-power solely signifies the power by which a target is physically destroyed. Mobility includes not

only the transference of technology to the appropriate location, but also the firing-range of weaponry, the variables of which are linked to the need for the mobility of weapons systems. In its original sense cover as a physical unit solely signifies the passive use of the environment or buildings to protect against fire-power. Thus it is conceptually distinguishable from both fire-power and manoeuvre. The extent to which the organization of these basic elements is different for offence and defence determines the validity of the offence/defence dichotomy and at the same time reveals the limits within which military theory is applicable.³³

The aim of offence is to gain control over territory. The aim of defence is to retain control of territory. This distinction is complicated by the fact that territory is not under control if it cannot be protected against a counter-attack. Thus in regard to aims, defence and offence are partially dependent on one another.³⁴

Such complications in making distinctions on the level of aims indicate that on the level of means or strategy the attainment of the aim of attack requires the capacity for counter-attack, i.e. for defence, if territorial restrictions are not set. The borderline between defence and offence is particularly impossible to draw if counter-attack is implemented outside of the territory originally involved. In theory, and possibly also in practice, it is possible for two military organizations struggling against one another in a certain area to both be pursuing defensive aims. Accordingly one would be seeking to ward off an extensive counter-attack by the other in a way which would be difficult, or nearly impossible, to differentiate from defence. Thus at such a stage war cannot be seen simply as defence by one party against attack by another.

Correspondingly even when seen as part of the implementation of defence, an extensive counter-attack cannot without special qualifications be distinguished from offence. The distinction is further complicated by the fact that in the struggle for a given area a counter-attack may require considerably more troops than defence. However, according to the normative principle of non-offensive defence counter-attack is allowable but attack is forbidden. The switch from defining an area as being under attack to defining it as being under defence cannot be derived from military theory. Thus theoretically an organization which is capable of attack is also capable of defence.

The examination of the development of arms technology and its strategic implications for military thinking gives rise to another basic problem. The growth in the mobility and firing-range of weapons systems, particularly in regard to missiles and aircraft, and the increase in fire-power provided especially by nuclear weapons has created a situation in which theoretically either side could destroy the other's organization but consequently at the same time bring about the destruction of its own. It is precisely this "balance of terror" and the fear of escalation it involves which provides the foundation for strategies of deterrence. For both parties victory is highly uncertain or even practically impossible.

If a solution to the dilemma of the impossibility of victory caused by mutual deterrence were to be sought from military theory one of the logical conclusions thereof would be for territory to become irrelevant. Territory could not be taken or held, since such action could not be undertaken except by setting conditions and restrictions on the use of certain types of technology in the military organizations's operations.

The "rescue" of military thought, and consequently the possibility for reestablishing the defence/offence distinction, apparently requires the restriction of military theory's field of applicability in regard to the use of both technology and territory. It is continuously necessary to presuppose that the assumption of rationality in organization decision-making is valid.

In regard to technology, the placement of such restrictions would require that long-range and victory-negating technology either be classified as political or that within the framework of military thought victory be seen as secondary.

The first alternative involves the claim that since by using certain forms of technology an organization will bring about its own destruction then such technology is not credible. If decision-making is supposed to be rational then the military organization should not be given tasks which are impossible to implement. Nevertheless, it is possible that, as with other organizations, the armed forces has equipment whose purpose is not derivable from the aims of the organization, but rather only from outside. Arms technology which does not contribute to military credibility may nevertheless promote political deterrence and the credibility thereof.

The depreciation of victory as a component of military thinking involves giving the aims-means relation primary status, placing it above victory in hierarchical order. The aims-means relation can serve as the condition for victory, if victory is actually attainable. Even if it is not attainable, the effort will be made to set aims which are at least to some degree realizable. This leads to the idea that the winning of war is not one of the functions of the military. Accordingly if war breaks out, victory can only be a political goal; the function of the military is more concrete and restricted.³⁵

Even if concern for territory were to be reestablished within the framework of military thought, it would still be necessary to limit it. Otherwise with the outbreak of war it would be difficult to distinguish between defence and offence. The restriction of concern for territory is, however, well-grounded, since non-offensive defence is part of a political strategy for the prevention of war involving emphasis on peacetime military decision-making and planning. The military organization thus has its "own" territory with that of the opponent being "foreign." It is not acceptable to plan to make territory one's own because it has been invaded.

From the political viewpoint this restriction involves the supposition of a status quo. This is analytically necessary for the delineation the distinction between defence and offence and the conditions for military credibility. This restriction provides an opportunity to try to make a territorial distinction between two organizations one of which is deemed to have the capability for offence and defence in the "foreign" territory while the other only has the capacity for defence in its "own" territory.

4.2 The Necessary Conditions for Offensive Capability

A military organization can probably seize a given territory if it has the fire-power to destroy its opponent and is able to provide sufficient troops for occupation and the repulsion of counter-attacks. To reach its target fire-power requires mobility. Mobility in turn requires further mobility. A military organization cannot initiate an attack without manoeuvring its fire-power swiftly and by surprise over the border into the "foreign" territory. The

need for manoeuvrability is most decisive at the beginning of battle. Theoretically the defence of one's "own" territory can begin without manoeuvre. At any rate manoeuvrability is needed only at a later stage, for the implementation of counter-attacks. However, the conditions for cover in regard to both time and place are the same in offence and defence. The use of both fire-power and mobility can begin without it in both forms of struggle; but the need for cover remains constant throughout the period of battle.³⁶

The conveyance of fire-power into foreign territory and manoeuvrability therein requires technology which either has a range extending from one's own area or which provides for the transportation of the troops for implementing them. The geographical conditions of the territory, including its extent, terrain and meteorological factors can either facilitate or hinder the extension of fire-power to the targets.

For offence the most essential of the basic elements of battle is mobility. Mobility is decisively more important in the implementation of the lower level principles of military action, such as surprise, than in defence. Moreover, its time of use is clearly during the beginning of battle.

An opponent will probably be interpreted as constituting an offensive threat if its organization has the capability, taking into consideration technology, geography and factors for organizational renewal, to manoeuvre its fire-power and troops into another's territory. Such an interpretation gains support from the fact that military organizations tend to favor the maintenance of offensive capability due to the margin of certainty it provides. The interpretation of communication also involves the evaluation of the supposed threat in relation to the aims and programmes of one's own organization. Although the definition of the power relation between the parties involved is indeed difficult, it is intuitively significant, particularly when the relation is considerably uneven. The perceived credibility of the opponent's offensive threat is doubtlessly bolstered if one's own organization takes a defensive stance and its power is judged to be deficient.

Thus the necessary condition for offensive power is the ability to implement a massive invasion into "foreign" territory, i.e. into the interpreter's "own" territory, at the onset of battle. If

the other party's aim is, however, defensive but involves readiness to employ a preemptory strike to prevent the opponent from initiating attack, it runs the chance of being interpreted as having credible offensive power. Therefore non-offensive defence cannot involve such pre-emptory capacity. This requirement pushes defence strategy still further toward the minimization of manoeuvrability.

The fulfillment of the necessary conditions for offensive capability in regard to the basic elements of warfare indicates that the, mainly lower level, principles of military thinking will not become less stringent. The possibilities for utilizing fire-power, manoeuvrability and cover in different combinations are increase. An organization may, for example, focus an attack on an area where the opponent has only little power and where other factors, such as terrain and weather, favor surprise. Certainty concerning the credibility of offensive capability grows as the hypothetical combinations of the various principles increase. This in turn provides grounds for differentiating between offence and defence by restricting the use of the different basic elements of warfare.

4.3 A Criteria Model of Exclusively Defensive Capability

The sufficient conditions which a military organization confined to its "own" territory must meet to be defined as exclusively defensive cannot be simply derived from the necessary conditions for the credibility of offensive capability. Nevertheless, using the negations of the conditions for offensive capability a preliminary criteria model is formulated in Diagram 1.

In the selection of variables the grouping and strategy of the organization is simplified into the basic elements of warfare. Although the organization's technology is indeed a primary type of input, the consequences of fire-power, mobility and cover must also be examined in relation to the lower level variables involved in the normal social behavior of the organization. The other three main variables in the model consist of geographical factors, organization maintenance and the opponent's organization with the corresponding factors. Maintenance factors include all the state and societal resources

which according to peacetime planning are to be used to maintain the organization in wartime.

Basic Variables	Defensive Criteria
1 The elements of warfare as displayed by the military organization and its technology	
1.1 Fire-power	Restricted to one's own territory
1.2 Mobility	Restricted to one's own territory, but involving the capacity for counter-attacks
1.3 Cover	Available
2 Geographical factors	Promote defence in one's own territory
3 Organization maintenance factors	Promote defence in one's own territory
4 Antagonistic military organization, its technology and its geographical and maintenance factors	Invulnerable to attack in its own territory, but vulnerable to defence against it in foreign territory

Diagram 1. Criteria Model of Exclusively Defensive Capability

The criteria model sets restrictions on the capacity for counter-attack, which is an essential ingredient of effective defence, including non-offensive defence. Consequently, counter-attacks must be initiated within one's own territory, since deployment outside it is impermissible. Thus an organization forced out of its own area, which can be interpreted as having the capacity to restore the pre-war status quo, is susceptible to being considered to possess offensive capability.

5 THE MILITARY CREDIBILITY OF NON-OFFENSIVE DEFENCE

5.1 Implications of the Criteria Model

The criteria model of defence can be further elucidated by examining some of the implications to which it gives rise. This examination in turn provides grounds for the initial evaluation of the stipulated or already actually existing military potential of non-offensive defence. Such an assessment, however, must inevitably be rough, serving only to orient further investigation. Nonetheless, as such it doubtlessly provides an understanding of the requirements of military credibility.

The criteria model presupposes a territorial defence system (Appendix 4). All operations which might extend into the territory of another state are forbidden. All troops intended for use in operational counter-attacks are to be kept away from the border. The mobility allowed such troops depends on the extent of the territory, and on other geographical factors such as the location of areas significant to the continuation of defence.

Reserves are to be dispersed so as not to invite pre-emptive strikes. If their dispersal is not feasible geographically then it must be done temporally. Accordingly, in a more restricted territory counter-attack forces are to be mobilized only when needed while in a broader territory they may be spread out in a state of full preparation. Proceeding from the border into the interior the defence system becomes progressively more condensed with the increasing mobility allowed to it.

The restriction of manoeuvrability requires the exclusion of all air forces except for air defence fighters and some helicopters. Large numbers of assault aircraft, in so far as they signify the capacity to project power beyond one's own territory, represent offensive capability. The strategic airlift capacity also exceeds the scope of strictly defensive military capability.

The model cannot include ocean fleets, unless the political definition of a country's "own" territory involves the division of the seas between different states. In reality the prominent problem of the oceanic links necessary for defence, for example in the

case of NATO, cannot be solved through military thought if the freedom of the seas is upheld.

The precise classification of weapons systems as defensive and offensive is almost impossible. For practical purposes, however, certain systems can be considered more offensive than others. The requirement for the minimization of manoeuvrability does not therefore allow the possession of ballistic or cruise missiles or otherwise of rockets whose range and number make possible the extensive bombing of another state's territory. Accordingly, the permissible maximum firing-range is approximately fifty kilometers. Likewise, the maintenance of a relatively large amount of armored and motorized forces in a restricted geographical area, or in excess of what is required for carrying out a counter-attack in one's own territory represents offensive capacity.

The maintenance of a military organization cannot involve a weapons production industry which would allow for the swift transformation of a purely defensive system into an offensive one. Exclusively defensive capacity would, however, necessitate, especially in large regions, extensive staff-resources. Moreover, the armed forces would have to enjoy the special approval of the local population in order for territorial defence, and the guerilla operations which are an essential part of it, to be possible.

The criteria model variable involving the image of the potential opponent from the viewpoint of one's own organization is perhaps the most difficult to elucidate. An environment containing strictly defensive armed forces is less threatening than one involving offensive potential. Without organization-level examination, however, imprecise interpretation may have a strong influence. For example, a weak neighbor of a strong state may for various reasons be more prone to emphasize, even without making an analysis of the political situation, its neighbor's offensive capacity than a state whose capability is more or less equal to that of its neighbor.

The number of actors and the probability of confrontation in the environment are also influential factors. For example, extreme political and economic antagonism between actors within a given society will probably cause neighboring states to expect the likelihood of offensive action by it to be greater than by an internally more peaceful neighbor whose military organization's

purpose and capacity may be just as offensive. An organization surrounded by many actors may, however, increase its margin of certainty if the main focal points of antagonism are, for historical or other threat-explaining reasons, unclear.

5.2 *Measuring the Defensive Capability of Armed Forces: Twelve Cases*

Twelve different military organizations have been selected for examination here, namely those of Chile, China, Finland, France, Japan, Luxemburg, Pakistan, Singapore, the Soviet Union, Sweden, Tanzania and the United States. This list thus includes the organizations of small and large states, both aligned and nonaligned, and of industrialized and developing countries. The examination is deliberately carried out without reference to political contexts in order to emphasize purely military factors and to take into consideration the organizations' environment without the analysis of intentions. Consequently, the antagonistic military organizations referred to by the criteria model simply signify the armed forces of states which are within the reach of the military power of each state under consideration, regardless of what type of relations exist between the states in question.

Table 1 presents general data concerning the states under consideration, and Tables 2 and 3 present details concerning their respective armed forces. Table 4 displays some of the parameters of the variables which are important for the evaluation of exclusively defensive capability. These figures are not as such especially significant, but they can be of use particularly in the delineation of the qualitative differences between the armed forces of the examined countries.

State	Population	Surface area (km ²)	Population per km ²
Chile	12 958 000	757 000	17
China	1 115 552 000	9 561 000	117
Finland	5 010 000	338 000	15
France	56 414 000	552 000	102
Japan	123 599 000	378 000	327
Luxembourg	365 000	2 600	140
Pakistan	111 611 000	796 000	140
Singapore	2 694 000	600	4 359
Soviet Union	288 561 000	22 402 000	13
Sweden	8 344 000	450 000	19
Tanzania	26 574 000	945 000	28
United States	248 855 000	9 373 000	27

Table 1. General Data on the States Examined³⁷

State	Total no. of troops		No. of army troops
	Active	Reserves	
Chile	96 000	102 000	54 000
China	3 030 000	1 200 000 <	2 300 000
Finland	31 000	700 000	28 000
France	461 000	1 733 000	289 000
Japan	378 000	249 000	156 000
Luxemburg	800	—	800
Pakistan	550 000	513 000	500 000
Singapore	56 000	207 000	45 000
Soviet Union	3 988 000	5 602 000	1 473 000
Sweden	64 000	709 000	45 000
Tanzania	47 000	10 000	45 000
United States	2 118 000	1 819 000	761 000

Table 2. Total Armed Forces Personnel and Total Army Personnel³⁸

State	Military equipment			
	MBTs	APCs, AIFVs	Ftrs, FGAs, Tpts	OCs, CCs
Chile	231	520	15 49 18	9 17
China	8 000	2 800	4 600 1 180 600	19 1 044
Finland	180	300	64 – 3	– 21
France	1 340	4 948	248 183 110	15 73
Japan	1 222	550	207 78 54	6 86
Luxemburg	–	5	–	No sea- outlet
Pakistan	1 850	800	229 208 20	3 45
Singapore	–	1 000	40 111 16	– 29
Soviet Union	61 500	78 000	4 140 3 921 1 870	142 785
Sweden	785	600	207 81 8	– 54
Tanzania	60	75	24 –	– 18
United States	15 440	31 435	615 4 166 1 133	154 223

Table 3. Military Equipment³⁹

Abbreviations: MBTs, main battle tanks; APCs, armoured personnel carriers; AIFVs, armoured infantry fighting vehicles; Ftrs, fighters; FGAs, fighters, ground attack; Tpts, transporters; OCs, ocean combatants; CCs, coastal combatants.

State	Active & reserve troops per km ²	MBT per active army troops	Km ² per Ftr	Army troops per Tpt
Chile	0.3	0.004	50 470	3 000
China	0.4	0.004	2 080	3 830
Finland	2.2	0.006	5 280	9 270
France	4.0	0.005	2 230	2 620
Japan	0.8	0.008	1 830	2 900
Luxemburg	0.3	—	—	—
Pakistan	1.3	0.004	3 480	25 000
Singapore	438.3	—	16	2 810
Soviet Union	0.4	0.042	5 410	790
Sweden	1.7	0.017	2 170	5 560
Tanzania	0.1	0.001	39 380	7 500
United States	0.4	0.020	15 240	670

Table 4. Parameters of Military Capability
Abbreviations: see Table 3

All of the armed forces under consideration, except for those of Chile, Luxemburg and Tanzania, possess missiles with a range clearly exceeding fifty kilometers and whose numbers are of operational significance. Of all the countries examined the Soviet Union and the United States have both the largest number of missiles and the widest selection of ranges. The Soviet Union has 5 904 exclusively nuclear-capable launchers. Of these 3 058 are land-based, 2 012 are sea-based and 834 are air-launched. The corresponding total number for the United States is 2 083, of which 1 065 are land-based, 712 are sea-based and 306 are air-launched. The tactical missile systems of these countries are in most cases composed of either anti-ship missiles or air-to-surface missiles (see Table 5).⁴⁰

State	Missile system	Purpose	Range (km)
China	CSS-2	strategic	< 2 700
	CSS-3	"	< 7 000
	CSS-4	"	> 10 000
	CSS-N-3	"	< 2 800
	CSS-N-2	anti-ship	95
	Type M	air-to-surface	600
	HY-4	"	150
Finland	Styx	anti-ship	80
	RBS 15	"	c. 150
France	S-3D	strategic	> 3 500
	M-20	"	> 3 000
	M-4	"	4 500
	Hades	surface-to-surface	350
	Pluton	"	120
	Exocet MM-40	anti-ship	70
	" AM-39	"	70
	Martel	air-to-surface	60
Japan	Harpoon	anti-ship	> 90
Pakistan	Harpoon	anti-ship	> 90
Singapore	Harpoon	anti-ship	> 90
Sweden	RB 08	anti-ship	c. 150
	RBS 15	"	c. 150

Table 5. Examples of Missile Systems of over 50 km Range⁴¹

The armed forces of China, France, the Soviet Union and the United States cannot be considered exclusively defensive. Their strategic weapons, airlift capability, assault fighters and bombers and large oceanic navies allow them if need be to extend their fire-power far beyond the borders of their own territories. In the case of China, however, adherence to a defensive posture is indicated by the fact that in the ratio of defensive fighters to ground attack fighters and bombers the number of the former is considerably larger than the latter; this is also true

of the ratio of Chinese coastal combatants to ocean combatants. Nor does China, unlike the three other states mentioned, possess military bases abroad.

In the case of France an element of non-offensive defence is the large size of its reserves in relation to the country's total surface area. This makes for effective territorial defence. The total number of air force planes and the area covered per fighter also indicate the degree of France's defensive orientation. The military environment does not involve a high degree of offensive credibility. Like the United States, France does, however, have the technological and economic capacity to enhance its military attack and intervention capability. Thus on the whole the French military establishment displays a credible offensive stance.

Given the differences in the geo-strategic factors influencing them, it is understandable that the Soviet Union stresses army power while the United States stresses naval power. The number of tanks possessed by the Soviet Union, at least before the reductions called for by the CFE Treaty, and in particular the air forces of the United States clearly represent offensive capability, especially when their potential enemies and the geographical conditions of their state territories are taken into account. In spite of having a credible predominately offensive orientation, the Soviet military does have an element of non-offensive defence in that the amount of its defensive fighters is greater than that of its ground attack fighters and bombers.

Chile, Pakistan and Tanzania are suitable for comparison to one another. Each has a rather extensive territory of about equal size. Moreover, all three are non-aligned third world countries. The Tanzanian armed forces are clearly defensive; this is true even in relation to the country's surroundings. The Tanzanian military lacks almost all the elements of offensive capability stipulated by the criteria model. On the other hand it possesses neither the power nor the proper terrain for comprehensive territorial defence. The degree to which a military establishment can be considered defensive depends not merely on the nature of its own capability but even more on the nature of surrounding military organizations.

Pakistan's offensive capacity is represented above all by its battle tanks and its efforts to increase the scope of its missiles.⁴² The country is, however, situated close to two relatively strong

military powers, India and Iran. Moreover, Pakistan's number of military troops relative to population amount and density makes more for defensive than offensive military capacity.

Chile's military-geographical conditions are exceptional. Chile is a long and narrow country bordered by an extensive coastline on the one side and on the other by a mountain chain which forms a natural barrier. The amount of ocean combatants and armoured troops, along with the rather extensive air transport capability, possessed by the Chilean military do not make it a particularly offensive power, especially considering the defensive capacity of the surrounding military organizations of Argentina, Bolivia and Peru. The region poses special problems for air defence which explains why Chile's defensive fighter capability is small in comparison to its ground attack capability. Nonetheless, Chile's armed forces are predominantly defensive.

Sweden and Finland are, in regard to their territories, conditions and surroundings, readily comparable. Neither of their armed forces represent offensive capability. This is demonstrated, for example, by the predominance of defensive fighters in their air forces, by the small-scale air-transport capacity which is necessary due to their extensive territories, and by the fact that they have only a small amount of long-range missile systems. In a physical environment characterized by abundant forests and bodies of water, the quantity of Finnish and Swedish troops allows for comprehensive territorial defence, including operational counter-attacks. However, the number of tanks possessed, especially by Finland, does not indicate capacity for extending army fire-power beyond national territory. The military organizations of both countries must take into account surroundings involving significant military potential, such as that of the Soviet Union and the United States Navy. Consequently, it is difficult to fulfill the criterion of defensive capability concerning the military environment. Nonetheless, unlike in the case of Tanzania for example, the number of soldiers in relation to total area in Sweden and Finland appears to be highly sufficient for meeting defensive needs. Therefore the armed forces of Sweden and Finland come close to fulfilling the ideal of exclusively defensive capability.

Japan is a highly populated and urbanized island state. It therefore needs a relatively large number of troops, but very

little long-range fire-power outside of the navy. Japan's military fulfills the criteria of strictly defensive capability, although its navy is strong and capable of wide-ranging operations. Considering its surroundings, Japan's armed forces cannot be classified as offensive; but the value of Japan's strictly defensive posture is diminished by the presence of United States forces and their employment of nuclear deterrence.

Militarily the two small states Luxemburg and Singapore are very different from one another. Luxemburg's armed forces are very small while Singapore's are very strongly equipped. The defence of Luxemburg's territory is strongly dependent on NATO; its armed forces do not have the least capacity for offence in the surrounding regions. As with Tanzania, Luxemburg's capacity for defence is restricted. For example, it has no air force. Moreover, its armed forces are too small to carry out effective defence within its own territory against foreign military forces.

Singapore, in contrast, appears in spite of its small size to be able to maintain independent military capability. This state essentially consists of one big city, which well justifies the high number of soldiers in relation to total area. In practice national defence would almost exclusively consist of urban warfare and coastal defence.

In regard to the distinction between defence and offence Singapore's armed forces provide a concrete example of how given lack of strategic depth military thinking focuses on deterrence. The amount of armored equipment, fighters and transporters and the ratio of defensive fighters to ground attack aircraft maintained by Singapore indicate that it has the capacity to sustain armed forces operations outside its own territory. Thus according to the criteria of exclusively defensive capability Singapore's military power would have to be considered offensive. But Singapore's defensive orientation can be seen as more extensive if one takes not only these criteria into account but also the fact that the country is surrounded by relatively strong military powers.

5.3 *Conclusions*

It is not relevant here to place the examined military organizations in hierarchical order according to the degree to which they are exclusively defensive. The very positivistic analytical approach used here does not allow for a more detailed comparative examination of the interpretations of these states' own armed forces. If the criterion regarding the surrounding military environment is taken into consideration then the armed forces of none of the states examined can be considered as exclusively defensive. Luxemburg, Sweden and Finland come closest to realizing the ideal of non-offensive defence.

This initial examination does, however, further prove that the military organizations of states which are large in terms of territory and resources maintain a more offensive stance than those of small ones. An exclusively defensive profile is most suitable for the military organizations of small and medium states whose surroundings do not contain strong antagonistic military powers. This condition was not displayed in any of the cases examined.

The situation for a military organization in a microstate is always difficult, particularly when it is located near military powers possessing significant offensive capacity. In the effort to make itself as militarily inviolable as possible it is difficult for a small state to avoid adopting offensive elements. The alternative involves relinquishing parts of the military system which are also important for defence and relying on what outside support is to be had.

The credibility requirements set forth by military thinkers do not necessarily alone direct armed forces development, because in reality many political, economic and social factors influence decisive decisions. Armed forces may become increasingly technical and professionalized while at the same time being decreased in size. The resulting mobile high tech organization is difficult to classify according to the offence/defence distinction. It may not necessarily be capable of retaining its own territory, little less territory it has captured. Nevertheless, it can be interpreted as having a credible predominantly offensive capacity. By taking into consideration the margin of certainty

required for interpretation, it could launch an attack so as to make it indistinguishable from the initiation of defence.

It does not seem probable that non-offensive defence will be implemented solely according to the requirements of military credibility. An exclusively defensive system and strategy require very extensive arms reduction and transarmament. Such requirements are formidable, especially for the big powers, since they would affect the whole military; ideally they would entail the relinquishment, for example, of large numbers of missiles, almost all nuclear weapons and foreign bases. On the other hand, demands on reducing mobility would concern states with small territories. The primary focus of such requirements would be on new technology. If the political conditions for such reductions were realized then non-offensive defence would be closer to disarmament than to arms control. As such it could be implemented as part of a large-scale disarmament process.

This initial examination, aided by a rather rough model of the requirements which non-offensive defence must meet to be militarily credible, indicates that military thought sets forth very strict conditions for non-offensive defence. Organizations, however, seek to preserve themselves. In an uncertain environment the conversion of one's own offence-capable organization from the inside into one solely capable of defence is difficult, especially if the termination of large parts of it is required. In such a case other factors may become more important than the defence/offence distinction in the structure and agenda of the organization. Conditions for diminishing the offensive capacity of armed forces are created, however, by taking military thought into account in the political process. In the international environment, however, not all states are bestowed with equally favorable conditions for the implementation of this type of change.

NOTES

1. Barry Buzan, *An Introduction to Strategic Studies: Military Technology and International Relations* (Worcester: MacMillan Press, 1987), pp. 227-236.
2. *Ibid.*, pp. 237-275; Johan Galtung, *There are Alternatives: Four Roads to Peace and Security* (Nottingham: Spokesman, 1984), pp. 148-161.
3. Galtung, *op. cit.*, 180-184; Marie-Louise van Muijen, "Recent Developments in the Alternative Defence Debate," paper delivered at the workshop on "The Superpowers and Europe: an emerging New Order?" European Consortium for Political Research, 10-15 April 1989, Paris; on the need for world-wide application of nonoffensive defence see Randall Forsberg, "Towards a Nonaggressive World," *Bulletin of Atomic Scientists*, September 1988, pp. 49-54.
4. van Muijen, *op. cit.*
5. Horst Afheldt, *Defensive Verteidigung* (Hamburg: Rowohlt & Reinbek, 1983), pp. 19-21, 144-153.
6. David Gates, "Non-offensive Defence: A Strategic Contradiction," Occasional Paper 29, 1987, Institute for European Defence and Strategic Studies, pp. 7-11.
7. See for example Barry Buzan, "Common Security, Non-Provocative Defence and the Future of Western Europe," *Review of International Studies*, vol. 13, pp. 265-279; Pekka Visuri, "Alternative Defence in the Central European Debate," in Vilho Harle and Pekka Sivonen eds., *Europe in Transition* (London: Pinter, 1989), pp 93-109.
8. Makhmut Gareyev, "The Revised Soviet Military Doctrine," *Bulletin of the Atomic Scientists*, December 1988, pp. 30-34; Leon Goure, "The Soviet Strategic View," *Strategic Review*, vol. 17, no. 2 (1989), pp. 81-96. The simple comparison of these concepts to non-offensive defence has also been criticized in the Soviet Union; see Grigory Salmanov, "Rejecting the Sword," *Soviet Military Review*, no. 5 (1989), pp. 5-7.
9. Dieter S. Lutz, *Zur Theorie Struktureller Angriffsunfähigkeit*, Hamburger Beiträge zur Friedensforschung und Sicherheitspolitik, Heft 22, 1987, Institut für Friedensforschung und Sicherheitspolitik an der Universität Hamburg.
10. Anders Boserup, "A Way to Undermine Hostility," *Bulletin of the Atomic Scientists*, September 1988, pp. 16-19.
11. Buzan, *op. cit.* , pp. 276-278.
12. See Albrecht von Müller, "Conventional Stability and Defence Dominance," in *Non-offensive Defence: A Global Perspective* (London: UNIDIR, Taylor and Francis, 1989), pp. 3-22. In examining defensiveness from a systemic point of view, stability in its various forms is a central concept for von Müller.
13. Michael I. Handel ed., *Clausewitz and Modern Strategy* (Badmin: Frank Cass, 1986), p. 2; Matti Lappalainen, "Antoine-Henri Jomini: Napoleonin profeetta," *Tiede ja ase*, no. 45, 1987.
14. Charles Reynolds, *The Politics of War* (Exeter: Harvester Wheatsheaf, 1989), p. 62.
15. For the main points of organization theory see Daniel Katz and Robert L.

- Kahn, *The Social Psychology of Organizations*, second edition (John Wiley & Sons, 1978), pp. 130-136; James G. March and Herbert A. Simon, *Organizations* (John Wiley & Sons, 1958), pp. 6467, 70-71.
16. On the significance of information for organizational communications see Everett M. Rogers and Rekha Agarwala-Rogers, *Communication in Organizations* (New York: The Free Press, 1976), pp. 74-76.
 17. See Katz and Kahn, op. cit., p. 433-434; Rogers and AgarwalaRogers, op. cit., p. 83.
 18. Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown and Company, 1971), p. 83.
 19. Bengt Abrahamsson, *Militärer, makt och politik* (Stockholm: Prisma, 1972), pp. 47-49, 88-99. Abrahamsson uses the term "military mind," by which he signifies the way of thinking characteristic of soldiers which became established in the course of the profession's history and through personal choices and education. The term refers to general professional values, norms and role expectations rather than to specific regulations. Yet a connection between the general and specific here can be seen if the primary elements of the organization are understood as being reproduced according to the conditions and requirements set by special character of the profession.
 20. Arnold Wolfers, *Discord and Collaboration*, second edition (Baltimore: John Hopkins University Press, 1967), pp. 147-165.
 21. Barry Buzan, *People, States and Fear: The National Security Problem in International Relations* (Guildford: Harvester Press Group, 1983), pp. 147-165.
 22. Patrick M. Morgan, *Deterrence: A Conceptual Analysis* (London: Sage, 1977), p. 28.
 23. Thus it is understandable that relations between individuals and groups can be classified as relations of threat, exchange or integration; see Kenneth E. Boulding, "Peace and Evolutionary Process," in Raimo Väyrynen ed., *The Quest for Peace* (Bristol: Sage, 1987), pp.48-59.
 24. Raymond Cohen, *Threat Perception in International Crisis* (Madison: University of Wisconsin Press, 1979), p. 13; cf. Robert Jervis, "Perceiving and Coping with Threat," in Robert Jervis, Richard Ned Lebow and Janice Gross Stein, *Psychology and Deterrence* (Baltimore: John Hopkins University Press, 1985), pp. 13-33.
 25. Jervis, op. cit.
 26. Paul K. Huth, *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1989), p. 7, Sverre Lodgaard, "Threats to European Security: The Main Elements," in Sverre Lodgaard and Karl Birnbaum eds., *Overcoming Threats to Europe: A New Deal for Confidence and Security* (Oxford: Oxford University Press, 1987), p. 11.
 27. On the nature of doctrine see Wilhelm Agrell, *Alliansfrihet och atombomber: Kontinuitet och förändring i den svenska försvarsdoktrinen 1945-1982* (Stockholm: Liber, 1985), pp. 283-284; Pekka Visuri, *Totaalisesta sodasta kriisinhallintaan: Puolustusperiaatteiden kehitys läntisessä Keski-Euroopassa ja Suomessa vuosina 1945-1985* (Keuruu: Otava, 1989), p. 18.
 28. Donald C. Daniel & Katherine L. Herbig, "Propositions on Military

- Deception," and "Deception in Theory and Practice," in Donald C. Daniel and Katherine L. Herbig eds., *Strategic Military Deception* (New York: Pergamon Press), pp. 3-30, 355-367.
29. Bruce Russett and Harvey Starr, *World Politics*, third edition (New York, W.H. Freeman and Company, 1989), p. 135.
 30. Delay is defined as a distinct type of battle in Finnish military regulations. It is considered to be a combination of defensive and offensive struggle, involving disengagement. Because it is not, however, a common concept, and because it is hierarchically dependent on defence and offence, it must be classified as an operational and tactical concept rather than a strategic one.
 31. Barry R. Posen, *The Sources of Military Doctrine: France, Britain and Germany between the World Wars* (New York: Cornell University Press, 1984), pp. 58-59, 241-244.
 32. Richard K. Betts, *Surprise Attack: Lessons for Defense Planning* (Washington: The Brookings Institution, 1982), pp. 3-4.
 33. Military theory cannot provide an "explanation" in the sense the term is used in the natural sciences, but only one which is applicable to its own field and is historically contingent. This philosophical limitation, however, will not be dealt with further here.
 34. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1989), pp. 357, 389, 523-526.
 35. Thus from the viewpoint of military decision-making it is understandable that armed forces with limited resources cannot rationally expect to defeat ones with decisively greater resources. Nonetheless, they can have confidence in their capacity to conditionally achieve certain temporally and spatially limited goals, especially if the problem of victory and defeat is left to political decision-making.
 36. A unit on the move uses, for example, tank-cover and grenades are not to be exploded too early. The common view that defence requires greater cover does not apply to this level of abstraction.
 37. Population figures are from *The Military Balance 1990-91* (London: Brassey's, 1990). Surface area figures are from *Maaailmaa numeroina: Tilastollisen vuosikirjan 1989 kansainvälinen osa* (Helsinki: Tilastokeskus, 1989).
 38. *The Military Balance*, op. cit.
 39. The category of FGAs also include bombers. Ocean combatants include strategic submarines, carriers, cruisers and destroyers. Coastal combatants include frigates and patrol and coastal combatants (excluding mine warfare and amphibious ships).
 40. *The Military Balance*, op. cit., pp. 216-225. Launchers of anti-aircraft missiles with a range of over fifty kilometers are not taken into account here. Eighty-eight ships have been counted here as launchers of American sea-based Tomahawk cruise missiles, which makes the total number of launchers used somewhat less than it is in reality. Missiles destroyed according to the INF Treaty are not taken into consideration.
 41. Jane's *Weapon Systems 1987-1988, 1988-1989; The Military Balance*, op. cit.
 42. Aaron Karp, "Ballistic Missile Proliferation," in *Sipri Yearbook 1990* (Oxford: Oxford University Press, 1990). pp. 369-391.

APPENDIX 1

Concepts and Definitions associated with Non-offensive Defence

Mutual defensive superiority

A situation existing between two nations or alliances resulting from the implementation of non-offensive defence "whereby each side has a defensive capability greater than its opponent's offensive capability."¹

Non-offensive defence

A defence system and strategy requiring the relinquishment of offensive capability. It involves the maintenance of sufficient defensive capacity to effectively dissuade aggression by convincing the aggressor of the impossibility of attaining his goals (deterrence by denial). Non-offensive defence should not provide an opponent any inducement to undertake pre-emptive strikes. Moreover, in the event that deterrence fails defence should strive to limit damage; it should not be suicidal.²

Non-provocative defence

1. An alternative defence system which the enemy considers neither offensive nor provocative.³

1 Robert Neild, "Non-offensive Defence: The Way to Achieve Common Security in Europe," Background Paper 25, January 1989, Canadian Institute for International Peace and Security, p. 4.

2 Bjørn Møller, "Disengagement and Non-offensive Defence in Europe," Working Paper 2, 1987, Centre of Peace and Conflict Research, University of Copenhagen, pp. 11-12.

3 Maire-Louise von Muijen, "Recent Developments in the Alternative Defence Debate." Paper for the workshop "The Superpowers and Europe: An Emerging New Order?" European Consortium for Political Research, 10-15 April 1989, Paris.

2. A way of defence whereby a state which adopted it would not pose a threat outside its own borders, but would nevertheless preserve the capacity for effective resistance within them. This would entail making the country difficult and expensive to attack and occupy. The defender's offensive capacity would have to be limited as much as possible to his own territory. But all military groupings would not need to adopt a strictly defensive stance.⁴

Reasonable military sufficiency

A "minimum quantitative/qualitative level of armed forces and armaments following the total elimination of nuclear weapons and other systems of mass destruction by all States, a level which ensures for each of them guaranteed protection but which is insufficient for launching a surprise attack or conducting aggressive operations in general."⁵

Structural incapacity for attack

Strukturelle Angriffsunfähigkeit

1. – Incapacity for pursuit of offensive operations, i.e. launching attacks against the enemy's territory and its seizure;
– Incapacity for staging counter-attacks designed to seize the enemy's territory;
– Incapacity to launch strikes deep into the enemy's territory, even in the event of absence of the intent to seize the area.⁶

4 Barry Buzan, *An Introduction to Strategic Studies: Military Technology and International Relations* (Worcester: MacMillan Press, 1987), pp. 276-284; Barry Buzan, "Common Security, Nonprovocative Defence and the Future of Western Europe," *Review of International Studies*, vol. 13, 1987, pp. 265-279.

5 D.T. Yazov, "On Soviet Military Doctrine," *The RUSI Journal*, vol. 134, no. 4 (Winter 1989), pp. 1-4.

6 Janusz Prystrom, "Conventional Disarmament and Security Building Measures as a Subject of Research pursued in the Socialist States," *UNIDIR Newsletter*, vol. 1, no. 3 (September 1988), pp. 8-10.

2. A defence strategy and armed forces structure based on the ideas of common security and defensive dissuasion (Defensive Abhaltung) intended to achieve stability through disarmament and conversion. In the broad sense the structural incapacity for attack provides a suitable strategy and armed forces structure for the idea of "Common Peace" and the goal of a "New European Peace Order."⁷

Transarmament

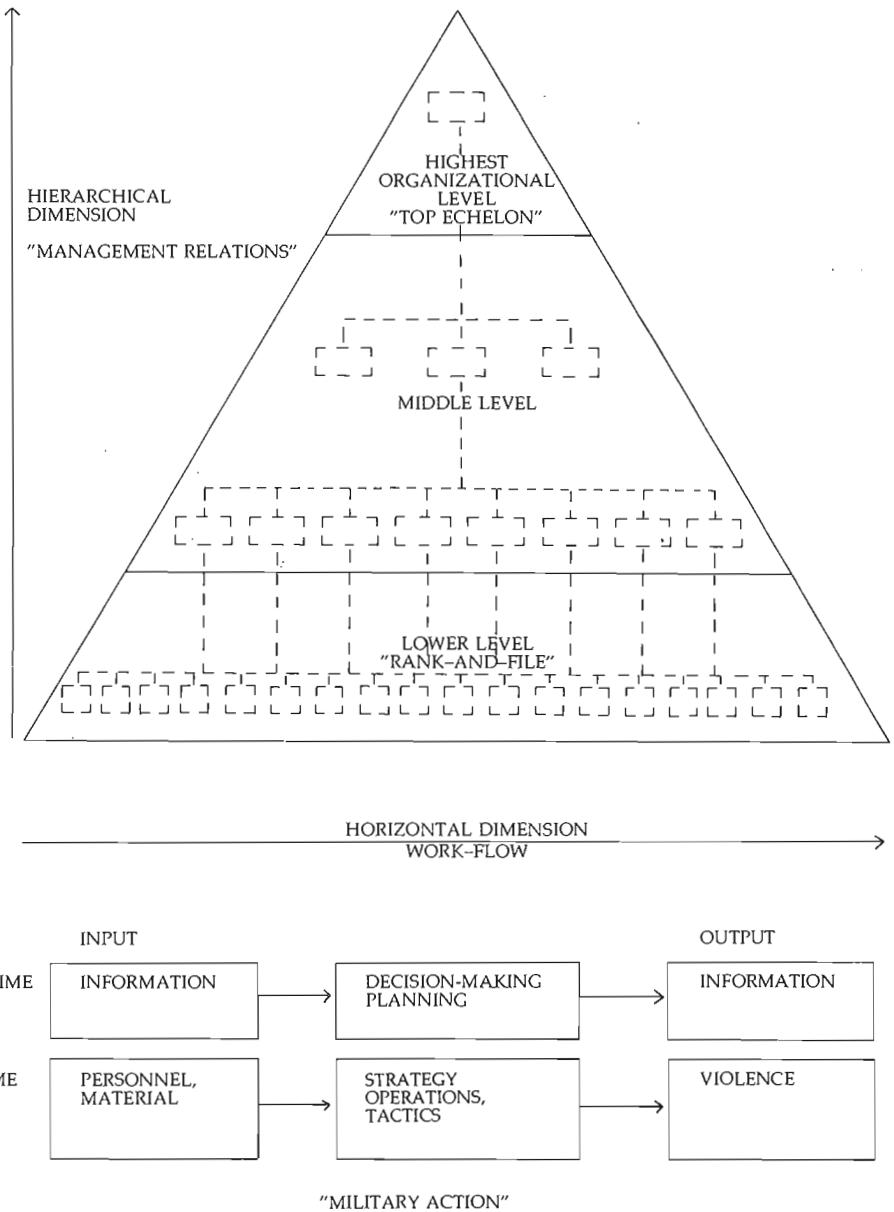
A process involving a shift from offensive weaponry to defensive weaponry.⁸

7 Dieter S. Lutz, *Zur Theorie Struktureller Angriffsunfähigkeit*, Hamburger Beiträge zur Friedensforschung und Sicherheitspolitik, Heft 22, 1987, Institut für Friedensforschung und Sicherheitspolitik an der Universität Hamburg.

8 Johan Galtung, *There are Alternatives! Four Roads to Peace and Security* (Nottingham: Spokesman, 1984), 162-163.

APPENDIX 2

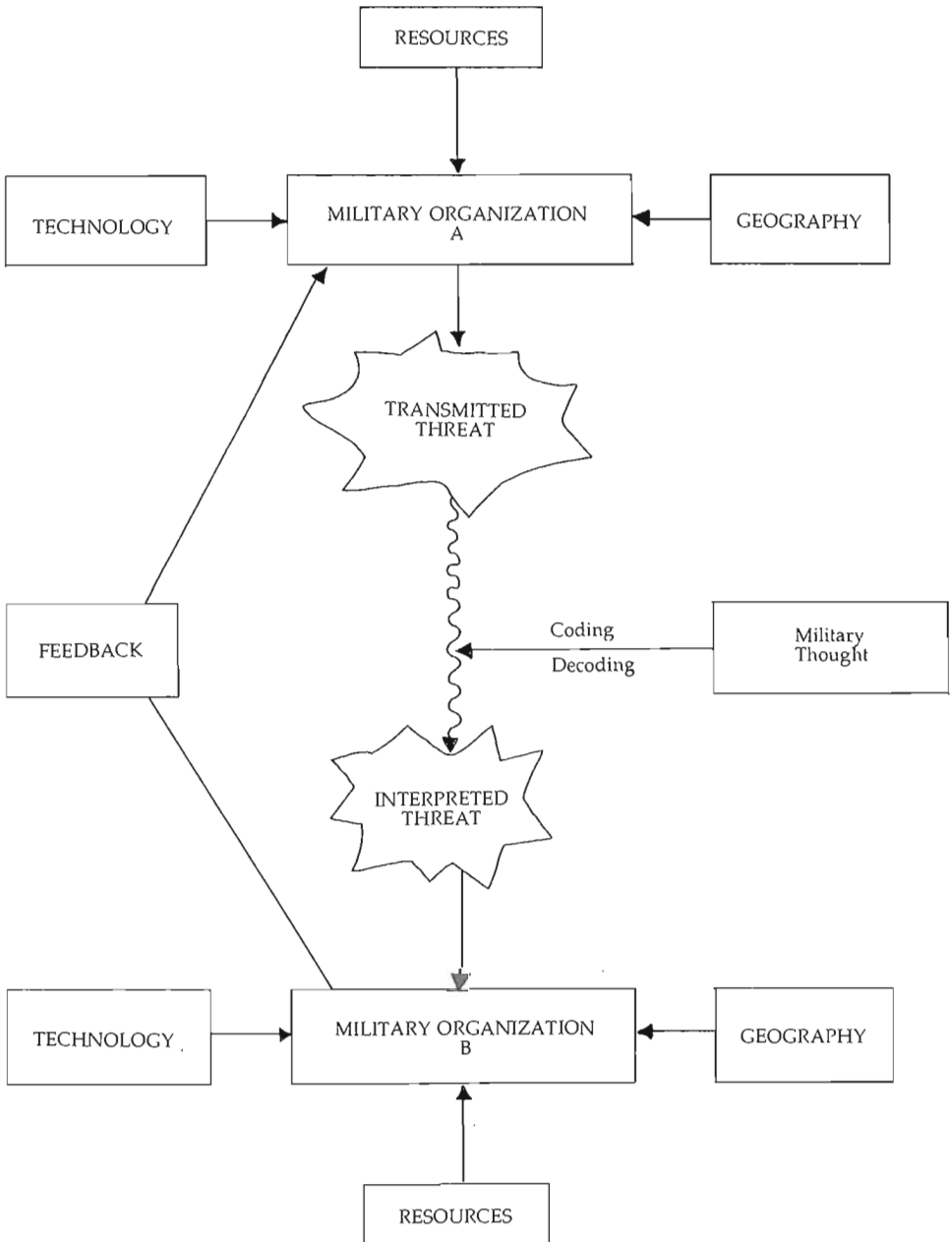
Structural Dimensions of the Military Organization and Military Action



Source: Cf. initial diagram in Daniel Katz and Robert L. Kahn, *The Social Psychology of Organization*, second edition (New York: John Wiley & Sons, 1978), p. 77.

APPENDIX 3

Communication of Military Threat During Peacetime

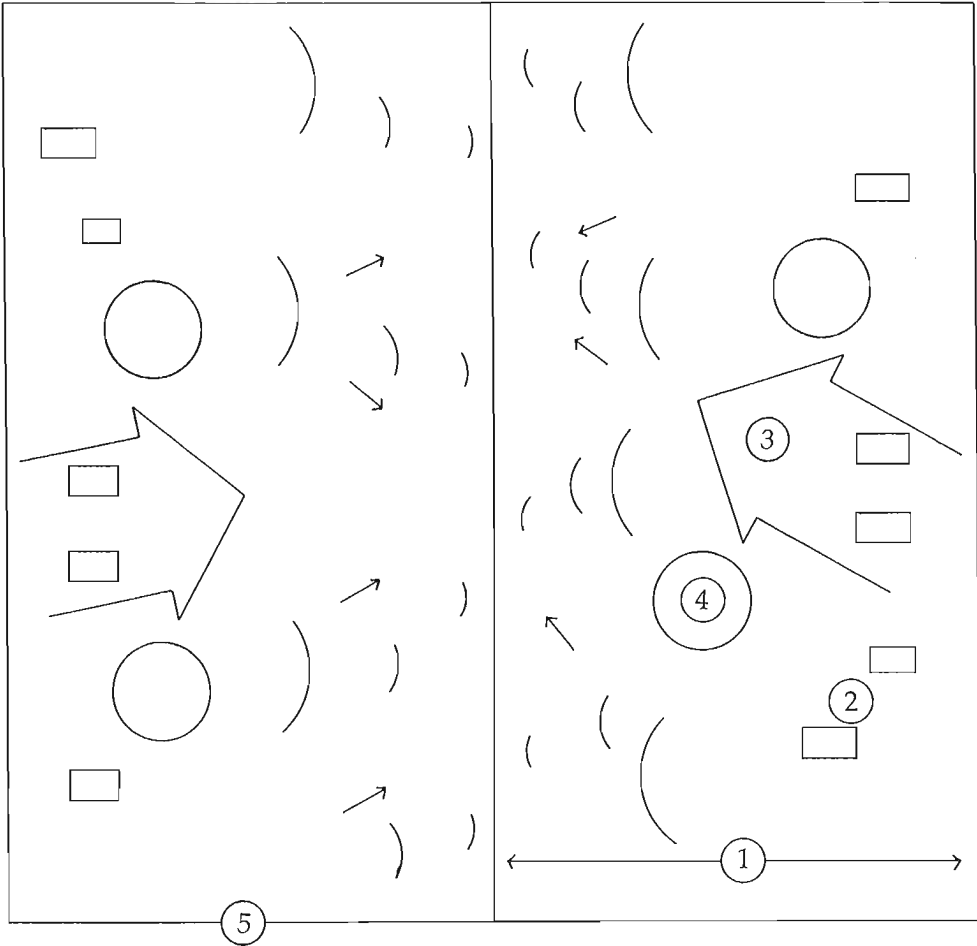


APPENDIX 4

Implications of the Criteria Model of Non-offensive Defence

MILITARY ORGANIZATION A

MILITARY ORGANIZATION B



Explanation:

- ① Gradually concentrating diffused territorial defence, involving restricted counter-attacks
- ② Diffused reserves capable of counter-attacks
- ③ Operational counter-attacks
- ④ Strategically important regions
- ⑤ The geographical area available to the military organization

DOCUMENTATION

Report of the Parliamentary Advisory Board for Defence Policy; 19 December 1990

ESTIMATE OF THE FINNISH DEFENCE FORCES' CURRENT STATE AND PERFORMANCE CAPABILITY AS WELL AS AN ASSESSMENT OF THE DEFENCE FORCES' DEVELOPMENT PLANS AND DEFENCE APPROPRIATIONS FOR THE 1990'S *)

Excerpts:

FOR THE MINISTRY OF DEFENCE

The Parliamentary Advisory Board for Defence Policy received on 2 February 1990 the task of estimating the Defence Forces' current performance capability as well as giving its assessment regarding the development plans and defence appropriation requirements of the armed forces for the 1990's. In the course of its deliberations the advisory board has set about to define more precisely the first part of its task, the current state of the Defence Forces, through addenda.

The advisory board has carefully familiarized itself with the current state and performance capability of the Defence Forces. In studying the matters related to the future development and appropriations requirements it has received accounts regarding the system of defence, land forces, naval forces, air forces as well as other military related areas.

....

The advisory board's appraisal of the matters was carried out in such a fashion that the introduction embraces background materials, the second

*) Second of the two reports prepared by the Parliamentary Advisory Board for Defence Policy. The first report of 28 February 1990, was published in the previous issue (*Finnish Defence Studies 2, 1991*).

section presents an estimate of the Defence Forces' current state and performance capability and the third section presents views regarding the Defence Forces' development plans and appropriations for the 1990's.

....

The advisory board respectfully submits its findings to the Ministry of Defence.

Helsinki, 19 December 1990

1. INTRODUCTION

The role of the Defence Forces is to support our country's foreign policy, the goal of which is the preservation of our national independence as well as to safeguard the living conditions of its citizens. The basic objective of the Defence Forces is to raise the cost of attack higher than any conceivable benefit that an aggressor might hope to gain, and thus to deter any possible aggressor from the notion of using the area of Finland for hostile purposes. However, if this does not succeed and our country is either threatened with attack or becomes a target of military action, the Defence Forces will be able to offer to the government the means for crisis management with which to deal with any threat ranging from territorial surveillance to repulsing of violations of Finnish territory or air-space, all the way to extensive and wide-ranging defensive operations.

Certain treaties to which Finland is a signatory place both military limits and legal obligations on the country. The treaties signed in 1922 and 1940 regarding the Aaland Islands confirm the demilitarized nature of that area during peace-time but also oblige Finland to defend the islands during war. The Paris Peace Treaty of 1947 sets certain quantitative and qualitative limits on the Finnish Defence Forces. However, in a decision on 21 September 1990 the Government of Finland unilaterally stated that the stipulations of Part III of the Peace Treaty, dealing with the limitations on Finnish sovereignty, have lost their relevance, with the exception of the ban on nuclear weapons. In the Treaty of Friendship, Co-operation and Mutual Assistance of 1948 with the Soviet Union Finland guarantees that it will not allow its area to be used in an attack against the Soviet Union.

The Finnish system of government maintains that each citizen has a duty to take part in the defence of the country. For males this duty is manifested in the law regarding universal conscription which mandates either military or civilian service for the conscript. In addition, the laws of civil defence and labour commitment contain obligations for Finnish citizens to participate in tasks related to national defence. The obligations concerning national defence presume that, if necessary, all national resources will be mobilized for this purpose.

The tasks of military defence are set out in the Law on the Defence Forces (402/74) which sets out the obligations of the Defence Forces during times of peace, threat of war and war.



02.2656

According to the Law the tasks of the Defence Forces are:

- 1) To work together with other national bodies to oversee the nation's land, sea and air space;
- 2) To guarantee the inviolability of the nation through force if necessary;
- 3) To defend the nation and its legal procedures as well as the living conditions and basic rights of the citizens;
- 4) To oversee the preparedness, maintenance and development needs of the nation's armed forces;
- 5) To give military instruction as well as promote the will to defend the nation and the implementation of activity to improve national physical fitness;
- 6) To give, when needed, aid to the civilian authorities to maintain law and order as decreed by statute;
- 7) To contribute to the activities of the United Nations by organizing detachments that can be used in UN peacekeeping operations;
- 8) To carry out other functions set forth by law.

A general requirement to be set for defence capability is that it must be preserved and upheld at such a level that it will be possible to adapt to rapidly changing situations, to control different types of crises and, when called upon, to thwart different types of military measures directed against our country or to prevent our land, sea and airspace from being used in an attack against a third country.

....

2. THE CURRENT STATE AND PERFORMANCE CAPABILITY OF THE DEFENCE FORCES

2.1. Territorial Defence System

2.1.1. Description of the Territorial Defence System

Finland employs a territorial defence system. Accordingly, the country is divided into seven operational military areas, each having the ability to function independently. Each of the areas is supported by both the naval and air components. The military areas are further divided into 20 military districts for purposes of local defence and mobilization. This system of a dispersed chain of command is designed to guarantee that our defence capability could not be paralysed during a conflict. The system makes it possible for all crisis management measures to be

effected throughout the country. In addition, it makes it possible to execute mobilization as well as to repel an attack.

The military areas as well as the naval and air forces use their units, as soon as they reach a basic level of readiness, for territorial surveillance, point protection and the managing of different types of crisis situations. These units can be reinforced through the addition of reserves if required. All troops therefore have two main peace-time functions: first, they carry out conscript and refresher training integrating conscripts and reservists into war-time units and, secondly, they also perform certain readiness tasks.

The units that are formed through mobilization are divided, according to their order of mobilization urgency, into "core forces", "fast deployment forces" and "main forces". In addition, according to their operational task, the troops are divided into local and general forces. The local forces are established in each military district to carry out reconnaissance and surveillance, point protection and local defence tasks. The network of local defence covers the whole country. The general forces are mobile and can react to the particular needs that are required to repel any threat to the different areas of the country. Whereas the most important function of the local forces is to slow down and wear out the attacker, the main function of the general forces is to repulse the enemy. Both the general and local forces support each other in the carrying out of their assigned tasks.

The foundation on which the principle of territorial defence rests is that of a large trained reserve. Through this system defence preparations can be carried out throughout the whole area of the country. The purpose of this system of defence is to indicate that an attack on Finland would, from the point of view of the goals of the attacker, lead to a lengthy fight and relatively large losses of men and equipment. The aim is that the territorial defence system would also have a preventive influence regarding the intentions of any potential attacker. In addition, the system is designed for a measured response, led flexibly by regional commanders, to different levels and types of threatening situations that might arise anywhere throughout the country.

The defence administration have plans to rationalize the defence system so that the number of command levels will be reduced by about half of what they are today. The seven military area command levels are to be replaced by three "defence zones" and the 20 military districts by 12 "military regions". The reforms are presented in section 3.

2.1.2 Troop requirements and general conscription

The total troop requirements of the Defence Forces are determined by many factors. Determinants such as the required tasks ascribed by law, the territorial defence system, the large area of Finland, the amount and quality of material required, the military potential presented by the environment as well as the country's main security goal, the prevention and deterrence of war; all influence the dimensions of the defence organization.

The tasks of the Defence Forces can be divided between their actual defence tasks and the collateral support functions such as military training and aiding the civil authorities. The defence tasks can be divided into areas that encompass command, reconnaissance and surveillance, repelling violations of air-space, point protection, demonstration of an ability to defend and the repelling of any attack. For the nation-wide carrying out of these tasks the Defence Forces mainly rely on trained reserve forces.

Owing to the concept of general conscription the total number of trained reserves in Finland is slightly more than 1 000 000 men. The defence system is constructed in such a way that, if required, the whole pool of trained reserves could be employed. During war all the reserves would not be subject to purely military tasks, since some would be needed to handle other non-military tasks that need to be carried out. Part of the reserves, owing to factors of health or age, would not be suitable for placement with units engaged in war-time activities.

The Defence Forces' total strength during war has been projected to be about half a million men. To organize, establish and equip a defence organization of this magnitude together with the necessary reserves requires about 700 000 men. Although these numbers are relatively large they are not, compared to Finland's size and population, vastly different from the strength of comparable forces in other European countries.

A territorial defence system is typical of countries that have limited material resources. By covering the whole area of the country and by demonstrating a readiness to carry on fighting deep within the country this system attempts to prevent any attacker with greater fire-power and mobility from achieving a quick settlement to the hostilities. Likewise, this system attempts to compensate for missing combat elements such as ground-attack fighters. In order for a territorial defence

system to function effectively a rather large number of troops is required. In all European countries that employ a territorial defence system the formation of units is carried out through the mobilization of the pool of reserves that are created through the system of general conscription.

2.1.3. Types of troops and their tasks

The Defence Forces' war time units are divided on the basis of mobilization urgency and level of equipment into core forces (about 60 000 men), fast deployment forces (about 270 000 men) and main forces (over 200 000 men).

When a crisis threatens the first units organized will be from within the core troops whose units are formed by reinforcing the peace-time units with reserves.

The tasks of the core forces are territorial surveillance, repelling of territorial violations, point protection as well as other types of crisis management functions. As the best armed and most quickly organized units the core forces also have the important task of repelling a surprise attack.

If the situation becomes more critical, the fast deployment forces are called upon to reinforce the core forces. The most important tasks of the fast deployment forces are to ensure the inviolability of national territory, to protect important targets and installations as well as to prevent any potential aggressor from utilizing our territory against a third party. With these forces it is endeavored to prevent any military measures being directed against our country as well as to safeguard the mobilization of the main forces. During war the fast deployment forces are employed in the focal points of combat activity.

After the formation of the core and fast deployment forces, the main forces units are established. The main forces are formed almost entirely from the reserves. The task of the main forces is to increase the depth and repellent capabilities of the defence effort and therefore also to play a part in the prevention of war.

The material resources available to the troops have been heavily prioritized in such a manner that the best material is given over to the core forces. The material at their disposal can be viewed in many areas to represent, from a qualitative perspective, the minimum required to

conduct operations on a modern battlefield. The material procurement for the fast deployment forces has been influenced by the recommendations of the third parliamentary defence committee. However, the allocated financial resources have not been adequate to fulfil these recommendations on schedule. The main forces have at their disposal the oldest and, from a combat point of view, the bare minimum needed to perform their assigned tasks.

The core, fast deployment and main forces all contain elements of the ground forces. Owing to the relatively large size of our country and especially due to the nature of the territorial defence system the Defence Forces are strongly weighted in favor of the ground forces so that over 90 % of our war-time troops belong to this branch of the armed forces. A partial reason for this is that with the meager resources available it has been possible to acquire relatively inexpensive material suitable for territorial defence which can be used by our large trained reserves.

The most important units of the approximately 490 000 strong ground forces are the brigades. In addition to these units, the high command has at its disposal different types of artillery, air defence, combat engineer, signal and logistics units. Altogether there are 27 brigades of which 2 are armoured brigades, 10 light infantry brigades that belong to the fast deployment forces and 15 brigades which are engaged in local defence tasks (Brigade 80).

The tasks of the naval and air forces are, above all, to ensure the integrity of the country's borders, to offer reconnaissance assets during crisis situations and to support the military areas during time of war.

The strength of the war-time navy is approximately 12 000 men. The range of combat vessels includes different types of ships such as missile boats, mine sweepers and mine-laying craft. The number of combat ships is about 30. The system also includes land-based command centres as well as support and logistics units.

The strength of the war-time air force is approximately 30 000 men. The activities of the air force are carried out within the framework of three air wings. The air wings have at their disposal their allocated number of fighter planes in addition to reconnaissance and transport planes and helicopters. There are approximately 60 fighters. The air force also encompasses command centers as well as aerial surveillance, air defence and airbase units.

The tasks of the Frontier Guards are to guard and maintain surveillance over the country's borders and, together with the police, to maintain order and safety within the border and sea areas as well as to act in concert with the customs service to aid in their activities. The Frontier Guards take part in national defence and can, by decree, be joined to the Defence Forces if required. The Frontier Guards are divided into core and fast deployment forces, and their war-time strength is approximately 25 000 men, most of whom belong to the ground forces. During war the Frontier Guards units engage mainly in guerrilla activities as part of the operations in the military area in which they are engaged in.

2.2. Troop performance capability

2.2.1. Total material state

The Defence Forces' material is, in principle, divided into two parts: first, that which is under the direct control of the Defence Forces and, secondly, that which during crisis situations is either bought or requisitioned from the public at large. The share of material requisitioned from society is markedly greater in Finland than that which is generally considered necessary elsewhere. This is due to the fact that the amount of funds available for military procurement is kept at a relatively low level in Finland.

The amount of material obtained from society during the period of mobilization is considerable, in certain areas it can even constitute the main portion. Most of the vehicles used in war-time are obtained through civilian requisition. Similarly, nearly half of the material needs of the combat engineer and signal units as well as about a third of logistics supplies are obtained from society. The problem with certain types of goods needed by the Defence Forces is that the amounts required are not obtainable in Finland during a time of crisis and consequently could not be drawn down from stock in warehouses. In addition part of the material obtained is poorly suited for use in war-time conditions.

The greatest part of the material possessed by the Defence Forces dates from the period of the Second World War. For this reason part of the equipment no longer meets the demands of modern combat. The core forces and parts of the fast deployment forces have more modern material.

The fact that more than half of the long-term material procurement funding is given over to the core troops (about 60 000 men) clearly demonstrates the low level of procurement resources and also the conscious effort to concentrate material towards those forces that can be quickly mobilized.

The following section will analyse the total material state of the Defence Forces on the basis of the following central determinants necessary for the efficient functioning of any military organization: mobility, fire-power, combat endurance and command capability. As the element of comparison we use the principle of "required strength", which means the quantity of material that has been estimated to be essential for the efficient functioning of the forces involved.

Mobility

The Defence Forces troop mobility is based on obtaining 90% of the vehicles needed from the general public. With regard to such types of vehicles that are unobtainable from civilian sources, such as certain types of all-purpose and combat vehicles, the Defence Forces possess about one fifth of the required strength. Equipment needed for water crossings, such as ferries and pontoons, are available at about half their required numbers. Fixed-span bridging equipment, an essential component of brigade support, is totally lacking.

Fire-power

The supply of assault rifles is sufficient for arming slightly over half of the troops. The rest are fitted out with weaponry dating from World War II.

Over half of the artillery and mortar equipment dates from the 1930's and 1940's and no longer meets performance requirements. Part of the outmoded artillery has been modernized to conform to current requirements. Since World War II the artillery caliber has noticeably increased and range has doubled due to increased performance requirements.

Over half of the fixed coastal artillery consists of modern 130 millimetre or 100 millimetre turret guns. The rest of the equipment is of older vintage.

The domestically produced bazookas, which were manufactured in the 1950's as anti-tank weapons, have become obsolete. The situation has been rectified through the acquisition of missiles and heavy disposable anti-tank weapons. The problem area continues to be the rather small

numerical amount of these weapons as well as the limited range of the heavy disposable anti-tank weapons. As far as anti-tank mines are concerned, the situation is satisfactory.

With respect to anti-aircraft weaponry, about a quarter is old and only adequately suited to its task. The main pieces of equipment are 23 millimetre guns which, although rather modest in radius of action, are fit for use. With the purchase of the anti-aircraft missiles the range can be slightly increased. However, the amount of available equipment is a limiting factor with regard to the areas it can be concentrated in. The anti-aircraft missiles used to protect the area around the capital will become obsolete during this decade.

There is a noticeable deficiency with regard to munitions. The greatest shortages involve anti-tank weapons, mortars and artillery. The Defence Forces annually consume more ammunition during training than it is able to acquire with its operating and maintenance budgets.

Combat Endurance

The material requirements in the area of combat endurance are considered in this connection to include billeting and provisions equipment, articles for protection and other clothing material as well as medical supplies.

The available equipment for billeting and provisions is nearly sufficient. The amount of available clothing covers about half the requirements. For this reason the reservists' own supplies are significant in meeting the total material needs in this area. Fatigues are in sufficient supply to distribute to everyone. However, there exists a shortage with regard to winter clothing and equipment. In the area of protective equipment there is a deficiency of personal protective equipment. There is a deficiency of personal protective outfits as well as, among other things, cleaning equipment. The radiation control net is functional.

In the field of medical materials there are some significant shortages. The medical equipment situation concerning the troops is, however, relatively good. The shortages that do exist are in the areas of medical vehicles and field hospital equipment.

Command Capability

The problems concerning the communications equipment necessary for command activities are both the expense of the equipment involved as well as the relatively short service life of the equipment owing to the

rapid development of jamming systems. For these reasons the greatest shortages occur with regard to radio and field telephone equipment. The limited material available is concentrated in such a manner so as to directly serve the troops engaged in combat.

2.2.2. Material production possibilities during a crisis

Only a small portion of the necessary material needed by the Defence Forces could be fabricated during a crisis situation. What could be produced would be different types of consumption goods, of which the most important would be ammunition.

The industrial sector that supplies the Defence Forces during peacetime could, within limits, increase their production on relatively short notice. The process of getting other production under way would take months. Domestic industry would be capable of producing some of the needs of the Defence Forces during crises provided that production remains undisturbed and that factory facilities stay outside the purview of enemy activity. Consequently, the level of peacetime stocks form, from the point of view of defence planning, a decisive point of departure.

2.2.3. Troop performance capability

2.2.3.1. Factors influencing performance capability

Factors influencing troop performance capability include the amount and quality of personnel, the will to defend, training as well as the demands of modern combat.

The Defence Forces get the main share of their personnel from the ranks of trained reservists. The amount of these reservists is sufficient. Over 80 % of the available reserves are placed in war-time formations.

There are not sufficient numbers of cadre personnel for use in war-time. This shortcoming is rectified through the use of reservists. The number of personnel available during peacetime militates against the maintenance of, for instance, an around the clock system of territorial surveillance.

The level of education of the personnel employed by the Defence Forces is good and that of the reserves is satisfactory. Because it is not

possible for the entire reserves to take part in military refresher training, training has been prioritized in such a manner that all core forces participate in training during a five-year period and all support troops in a corresponding 5-7 year time frame. With regard to the main forces, only commanders and some other key personnel engage in refresher training.

Questions relating to material have already been discussed on a general level earlier and they will be presented again when we analyse the performance capabilities of individual troop detachments. Problems involving material influence significantly the level of performance capability.

Due to the marked development in the field of military technology the picture of a modern battlefield is continuously undergoing change. The armies of the great powers have been able to increase their mobility and fire-power significantly. They have developed more effective transport planes, helicopters, assault and landing equipment as well as new systems that increase the fire-power of artillery, rocket launchers, and ground-attack aircraft. For example, the firepower of ground-attack aircraft of the opposing great powers has increased manifold during the 1980's. New technologies have made possible more efficient intelligence gathering and real time command, accurate direction of fire-power also under conditions of darkness and inclement weather as well as the transfer of great amounts of information that can be communicated in real time. The abovementioned developments naturally have an influence when appraising our troop performance capability.

2.2.3.2 Ground forces performance capability

With regard to the ground forces only the brigades will be examined in detail. The other troops will be discussed through a general outline.

The Defence Forces have three types of brigades - the brigade 80, the light infantry brigade and the armoured brigade.

The brigade 80's, which together comprise 15 brigades, are formations which are given the task of territorial defence. Their mobility is based on tractors, trucks, and other means of transportation obtained from civilian sources. With regard to the material requirements of these brigades, it must be stated that there are inadequacies involving

firepower and mobility. Artillery and mortar equipment as well as anti-tank weaponry are obsolete and the brigades' supplies of winter clothing and command equipment are deficient.

Light infantry brigades are meant to be employed throughout the country and also to engage in mobile combat such as counter-attacking. The mobility of the combat units is based on the use of all-terrain or armoured vehicles. The goal of the Defence Forces is to have 10 of these brigades. These brigades are better equipped than the brigade 80's. Shortages of required equipment are especially to be found in areas involving anti-tank and anti-aircraft weaponry as well as materials necessary for combat endurance and operational command and control. At present there are sufficient numbers of combat and all-purpose vehicles available to equip a little more than two brigades. The other brigades, which lack access to this equipment, have had to make due with civilian vehicles.

There are two *armoured brigades*. One of these is equipped with T-72 main battle tanks while the other is outfitted with modified versions of T-55's. The brigade which is equipped with the more modern equipment is in a satisfactory state of readiness. The other brigade lacks all-purpose trucks and part of the necessary armoured combat vehicles. The brigade's artillery and anti-aircraft weaponry do not fully meet the required performance standards.

The ground forces' other units are either local troops or general troops used in support of the brigades. Both the guard and intercept units of the local troops are outfitted with old equipment. However, the units involved with guerrilla activity have new material at their disposal. Also the coastal defence forces have more modern weaponry to work with, for example 20 % of the units have 130 millimetre turret gun equipment and 40 % are equipped with 100 millimetre turret guns. The coastal artillery also possesses a small amount of ground-to-sea missiles.

The different units belonging to the general troops can either be put at the disposal of the high command or used as combat support for the brigades. These units possess both old and new equipment. One third of the field artillery batteries are up-to-date. About a quarter of the anti-aircraft units are outfitted with equipment dating from the 1940's, other units have newer missile and artillery equipment. Part of the anti-armour units are armed with old-fashioned bazookas while other parts have anti-tank missiles. This type of material division is also common to the engineer, signal and logistics units.

2.2.3.3. Naval forces performance capability

The striking power of the naval forces is centered on a flotilla of missile boats. The squadron of Helsinki-class missile boats is totally operational. The first boat of the Rauma-class vessels has been commissioned. The range of the missiles has been deemed to be sufficient for our circumstances. There are still some problems involving the accuracy of the missiles and the amount available is limited. The naval forces also suffer from a lack of ammunition.

The Tuima-class of missile boats will be removed from operation by 1995 due to their becoming obsolete. At that time the boats will be adapted for mine-laying. In addition, the Nuoli-class reconnaissance boats will be retired in the near future.

The naval forces have a sufficient mine-laying capability. Within the space of a few days they would be able to lay such a mine barrier that direct access to the harbours via the most important sea lanes would be prevented. If required to, most combat vessels have the capability to lay tactical mine-fields. The mines are partly contact mines of the type used during the Second World War and partly more modern impulse mines. There are two mine ships fit for use in the open sea.

The renovated R-class patrol boats will achieve an operational state by the mid-1990's. When this takes place those vessels designed especially for anti-submarine operations will be removed from service. Anti-submarine capabilities are meant to be upgraded through later procurement.

2.2.3.4 Air forces performance capability

The deterrent capability of our air force is based upon three squadrons of fighter aircraft. There are about 60 of these fighters. This amount is rather small when the extent of Finnish airspace is taken into consideration. The fighters are, however, able to ensure the inviolability of our airspace during peace-time and when war threatens. During war they will inflict losses on the attacker's air assets, but they will not be able to prevent his activities. Finland does not possess ground-attack aircraft necessary to support her ground troops.

Our Draken and MiG-21 bis fighters are capable of performing all-weather interception. However, when looking at the developments in

the environment they would be operating in, one can spot certain weaknesses. One weakness is the lack of capability to intercept targets flying below the aircraft as well as poor electronic countermeasure tolerance. The technical service life of our fighters has been calculated to end during a seven year period which will commence during the middle of this decade.

Hawk trainer aircraft form the basis of our flight training system. Through them we are able to offer high quality fighter training. It is of critical importance to maintain a sufficient supply of these aircraft for the long term bearing in mind the attrition rate due to accidents. At present, there are 45 Hawk trainers available for use.

The air defence control-and-command systems have been modernized to take into account the demands of the operating environment. The most serious shortcomings arise in the area of low-level air surveillance where, depending on the situation, there can emerge rather large gaps in radar coverage. Through the updating of the short-range and long-range surveillance systems it is endeavored to have the capability to form points of surveillance concentration.

The support system has been developed to accommodate a flexible system of using surveillance and interception capabilities so that these tasks can, if necessary, be carried out from anywhere in the country. The greatest shortcomings in the system are the limited number of missiles for the fighters and the shortage of fortified alert facilities.

2.3. The ability of the Defence Forces to carry out their assigned tasks

The following will examine the ability of the Defence Forces to carry out their assigned tasks based on the accounts given to the advisory board. The examination will focus only on the actual defence tasks of the Defence Forces, the carrying out of which call for operational command-and-control, the ability to repel acts of territorial violation, point protection and the repelling of an attack.

Command and control

The basic structure of the Defence Forces command and control system is ready and operational. A series of command structure and organizational reforms has sought to achieve increased efficiency.

Problems in this area are, above all, related to those concerned with

crisis command. At many levels of command there still do not exist fortified operations facilities nor the necessary number of air shelters. The communications equipment is old and partly deficient. The real time data transfer process between command staffs has not yet reached a satisfactory level. The increased level of preparedness that would come about through linking the command and control system to the civilian communications network would take time and might delay defence measures.

Surveillance and the repelling of territorial violations

The tasks of surveillance and the repelling of territorial violations are performed during peace-time by the border and coast guards, coastal units as well as the naval and air forces. In reality, as the state of readiness is raised all troops take part in territorial control together with their other functions. In addition, the ground forces work together with the border guards to maintain the ability to control the national frontiers to the extent that they have the capabilities to observe unlawful crossings of the border as well as the means to repel those crossings which, from a security point of view, might threaten the country. If the situation warrants, the border guards can in a relatively short time increase their strength through the addition of reserves.

The carrying out of sea surveillance is handled by about 40 radar stations of which about half are under the control of the Defence Forces. The coverage of the radars directed towards the Gulf of Finland is sufficiently complete. However, that which is directed towards the Gulf of Bothnia has gaps. The radar surveillance is complemented by sensory observational equipment as well as by underwater surveillance devices located along important sea lanes. While the technical possibilities for around-the-clock radar measurements exist, they are not used to full effect in peace-time. The amount of available staff limits the time during which radar operations can be performed to a period of from nine to sixteen hours per day which results in gaps in effective radar surveillance. If required, sea surveillance can be temporarily intensified. However, an intensified use of radars would call for mobilization of extra personnel within the space of a few days.

In the state of basic preparedness during peace-time air surveillance is carried out by three long-range radars around-the-clock and 21 middle-range radars for periods averaging about eight hours per day. The latter radars, are used alternatively so gaps emerge in the tracking operations carried out at lower altitudes. Air surveillance can be upgraded to being operational around-the-clock within the same limits

imposed upon sea surveillance. To increase the operational time of the middle-range radars from about eight hours to, for example, twelve hours would require that extra personnel be called to duty and sensory air surveillance units be established. That would mean that the coverage offered by the system would be nearly total. However, there would still remain shortcomings related to detecting low-flying small targets such as cruise missiles.

The repelling of territorial violations occurring at border areas is the task of the Frontier Guards whose units can, if needed, be reinforced or supported by units of the Defence Forces.

The coast guard and naval units have the responsibility of identification of vessels as well as the repelling of any territorial violations taking place at sea. The same task can be undertaken, weather conditions permitting, by the air force. In certain situations, the repelling of territorial violations from the sea can also be carried out by of coastal artillery units operating out of their fortified readiness sites.

For purposes of surveillance and the repelling of territorial violations, the air force wings have at their disposal equipment in their main bases which are in continuous readiness and which could be airborne in a matter of minutes. In addition, duty turns are carried out at civilian airports on a rotating basis. There are also aircraft on duty for sea surveillance, the taking of air samples and rescue operations. As the degree of alert increases, also the anti-aircraft units can be used to counter acts of territorial violations.

The operational level of the ground, sea and air surveillance systems as well as the systems used to repel territorial violations are deemed sufficient for their tasks during peace-time. The greatest problem in this area is the lack of trained personnel which makes it impossible to maintain around-the-clock radar coverage of both the sea area and airspace as well as militating against establishment of a full capability to repel territorial violations. If surveillance needs to be made more effective, reserves must be called up. In this way guard and surveillance activities could be made to cover the entire border area, all naval vessels could be made operational and the support role carried out by the air force could be implemented throughout the whole country. However, even after these measures have been undertaken, there would still be problems related to electronic warfare measures and small low-flying targets.

Point Protection

During peace-time the Defence Forces have the capability to protect important installations such as command posts, command centres and depots as well as having the ability, if needed, to assist the police in such functions as isolating a particular area or temporarily guarding property. Under the system of territorial defence, responsibility for point protection is given over to the local forces. Before their establishment, protective duties will be performed by units composed of conscripts. The local forces have a war-time strength of 160 000 men. This number includes all the border guards, most of the coastal forces as well as the units given the responsibility of protecting airports and other corresponding installations. Owing to the fact that the area of our country is relatively large, it is clear that many points remain outside the operational purview of our forces. Nationwide there are about 1500 points to be protected of which about 1000 are civilian installations. The responsibility for part of them is given over to the police.

The protection of vital installations such as those involving national and regional leadership, communications, traffic and energy production centres as well as military installations and depots has in recent years become more urgent due to the development of different types of units specializing in intelligence-gathering and sabotage. The need to employ protective measures might become necessary even before the actual commencement of military action. This emphasizes the need for a high degree of preparedness. There are only a fairly small number of troops employed in point protection and the weaponry and other equipment at their disposal is quite old.

Repelling of attacks

Under the system of territorial defence the ground forces assume the central role in both preventing and repelling an attack. Consequently, the significance of the army during war and other forms of armed conflict or the threat thereof is decisive. Our small navy and air force are, in spite of their deficiencies, the most efficient elements of our defence system. However, it can be observed that their operational capabilities would be depleted rapidly, possibly even during the threat of war.

The number of troops from which the ground forces are composed corresponds, in relative terms, to the strength of the ground forces of other nations comparable to us and makes possible the defence of all parts of the country. In terms of quality of equipment our forces must make do with material that is both older and more deficient than the

corresponding types of equipment used by our nearest neighbours. In addition, a sizeable share of the equipment needed would have to be obtained from other areas of society.

From the point of view of repelling attack the greatest defects are to be found in areas relating to mobility, anti-armour, anti-aircraft, indirect fire, and ammunition needs as well as to certain equipment connected with battle endurance and command.

The primary goal of the Defence Forces is that merely their existence alone should serve as enough of a deterrent to prevent armed measures being directed against our country. In the event that this alone is not sufficient to deter an attack, the Defence Forces must have the capabilities themselves to repel any such aggression. The better equipped our troops are, the better chance they will have to carry out their assigned tasks.

Due the current level of material that the Defence Forces have at their disposal they are capable of repelling only a small and geographically limited armed attack in a satisfactory manner. In the event of a wide-scale attack the limited amount of high-level technical material as well as deficiencies having to do with mobility, fire-power and troop protection would lead, in a relatively short time, to our troops suffering great losses.

2.4. The advisory board's appraisal of the Defence Forces current state and performance capability

The parliamentary advisory board for defence policy has familiarized itself with the current state of the Defence Forces and with the performance capacity of certain integral parts such as the territorial defence system, the formation and necessity of reserve forces, aggregate material situation, the performance capacities of the ground, naval and air forces as well as the problems concerned with production of defence material. Many important areas were left unexamined, for example legislation concerning the total defence effort which is currently under consideration before Parliament. Due to the tight schedule under which the advisory board had to work, it was felt that it would not be possible to express views regarding all sectors of the issue at hand. The board therefore felt it would be more efficacious to concentrate totally on three aspects of the subject: questions related to the system of territorial defence, the situation relating to material and performance capability

of the troops as well as the ability of the Defence Forces to carry out their assigned tasks. In this connection we use the current state as the basis of the assessment, while the views concerning future developments are presented in section 3.

The advisory board believes that the system of territorial defence is still the system that is most suited to the special conditions found in our country. It facilitates the possibility of obtaining both a moderate defence capability and the ability to prevent armed conflict without the expenditure of large resources. This force can only be obtained through a system of universal male conscription. This is supported by voluntary national defence activities.

There are notable deficiencies in the Defence Forces' total material situation which influences the Defence Forces' ability to carry out its tasks. The advisory board does not start from the assumption that all troops should achieve a similar qualitative level of performance capability. The strong material prioritization in favour of the core and fast deployment forces is viewed as a correct principle, especially in relation to the nature of the threat involved. It should, however, be the starting point that all war-time units and the men who are attached to them should have sufficient equipment with which to perform their assigned tasks.

At the current time especially the ground forces possess large amounts of over-age material which is unsuitable in regard to meeting the necessary levels of performance. The amount of material which either must be bought or requisitioned from society during the process of troop formation is considerable. This is especially true with regard to the important core and fast deployment forces. It is the view of the advisory board that the possibility of raising the level of domestic defence material production capabilities should be investigated. However, the point of departure in this area should be that during peace-time the available stocks form the decisive base on which defence ability rests. Especially in relation to certain types of ammunition, the amount of supplies on hand is currently insufficient.

The ability of the Defence Forces to carry out its assigned tasks will now be assessed by the advisory board.

The Defence Forces' command and control system is structurally functional. During times of crisis the system is hampered by deficient communications equipment as well as the weak level of command posts.

It is the view of the board that during peace-time the Defence Forces possess a satisfactory capability with regard to surveillance functions and the repelling of territorial violations. There are, however, significant gaps in the system of surveillance due to, for example, the ability of the medium-range radars to be operational only for periods that average eight hours per day owing to a lack of trained personnel. The enhancement of surveillance would demand the calling up of reserves within a few days' time.

The Defence Forces possess the capability to protect their most important installations such as command posts, command and communications centres and depots. During times of crisis and war the Defence Forces' personnel are capable of protecting about half of the important national installations. The protection of the greater part of civilian premises falls under the jurisdiction of other authorities, chiefly the police.

The Defence Forces' task of national defence is hampered in certain critical areas by a quantitative and qualitative lack of the necessary material. At the same time, these shortcomings influence the ability of Finland to prevent itself from being drawn into crisis situations and war. The problems concerning the ability to repel aggression revolve around the material available to the ground forces which is rapidly becoming obsolete. The advisory board observes that material procurement should be strongly directed towards having the core and fast deployment forces reach an operational level in the areas of mobility, firepower, protection and command capability.

The number of local in relation to that of the general forces could perhaps be raised to relieve material procurement. It is the point of view of the advisory board that the current main forces should be only viewed as forces which possess suitable equipment for their tasks of local surveillance, protection and defence.

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3.8. The advisory board's views regarding the Defence Forces' development plans and defence appropriations for the 1990's

The parliamentary advisory board for defence policy has received an account of the Defence Forces' procurement needs for the 1990's as well as an estimate of the resources required. The presentations have focused on the defence system as well as material questions related to the ground, naval and air forces. In addition, the board has received the

main outlines of the plans dealing with developments relating to training, construction and defence material production. The General Headquarters has submitted their funding requirements. The Ministry of Finance has presented to the board its views regarding the economic outlook during the coming years.

The board has evaluated the Defence Forces' development plans in light of the ongoing changes taking place in Finland's security environment. The societal changes taking place in Europe influence the development of these plans. However, conclusions must be based on long-term, lasting development trends.

The board notes in this connection that the ending of the political division of Europe and the loosening of confrontation between the opposing military alliances has reinforced military stability and has fundamentally decreased the threat of war. The ongoing negotiating processes have set in motion force reductions on the part of both military alliances. At the same time, new types of security problems have arisen in Europe based on the uneven political and economic development of different countries. In order to prevent conflicts and to promote their peaceful solution attempts have been made to make the CSCE process more effective.

The lessening of the state of bipolar military confrontation has also influenced the strategic situation in the northern parts of Europe. It is of utmost importance that Finland continues to carefully monitor these developments.

Some of the changes which are still in their initial stage of development include:

- The military withdrawal of the Soviet Union back to its own national territory and the attendant restructuring of its defence organization, including the status of the Baltic states in this context,
- The endeavours of the Eastern European members of the Warsaw Pact to find a new security accommodation with both the East and the West,
- The emergence of a united Germany as the leading economic power of both Central Europe and the Baltic Sea area.

In addition, the significance of Northern Europe in the strategic relationship between the U.S.A. and the Soviet Union will be maintained and, especially from the point of view of naval developments, it will be enhanced.

Conventional disarmament has been started up especially through the reduction of offensive weapons systems. The role of nuclear arms continues to decline. However, the qualitative development and renewal of weapons systems continues. Even after all the weapons systems agreed to be reduced will have been taken away, moved back and destroyed, the amount of fire-power remaining in Europe will considerably exceed that which is necessary for national defence. In addition, increased emphasis on national defence requirements has also been observed.

Also Finland must make sure that it will be able to maintain stable national defence capabilities that will be credible in its security environment. By so doing we can affect the process through which the growth of security and stability can fully benefit also our own area.

The disarmament agreements finalized so far do not bring much military change to Finland's immediate security environment. However, both NATO and Warsaw Pact military forces come under new types of regulations as far as verification and openness is concerned. For Finland it is important that in the future also our surroundings will directly benefit from conventional and nuclear disarmament.

The structural military changes being undertaken by the members of the two military alliances are not, in the same degree, necessary for neutral Finland, though the new requirements for openness present new tasks also for our Defence Forces.

A new forum for dealing with the question of military security, which is to be established in 1992, will give the CSCE countries the possibility of pursuing their national security interests during the ongoing period of change. Similarly, a common security system can be further developed through reductions in force levels as well as through further promoting of measures advancing military openness and trust.

In this new forum the armed forces of the neutral nations, such as Finland, will for the first time be placed on an equal footing with those of the other nations. The process of preparing for this forum will be one of the central tasks of our security policy in the near future.

The factors outlined above signify that there are taking place continuous and fundamental qualitative changes in Finland's security policy environment. Defence planning must therefore be adapted to take these changes into consideration. Because of this it should be stressed that

the long-term plan is based on uncertain assessments. Therefore, defence planners should be prepared for a continuous reassessment of the basic tenets of policy.

In the course of its work the board has stated that it would be useful to further evaluate the changes occurring in Finland's international environment and the progress taking place with regard to European disarmament as well as their combined influence on the Defence Forces' development. Therefore, the board proposes that the advisory board to be appointed for the next term of Parliament take these questions under consideration during its work.

The development principles of the defence system that have been put forth by the Defence Forces are regarded by the board to be justified. It is important that the point of departure for development of the Defence Forces be the ability to manage low-level crises, and if required, the ability to defend the preservation of national independence. These starting points and the measures necessary to carry them into effect have, together with political action, an influence in the prevention of war.

The board stresses the significance of reconnaissance and surveillance measures as well as the securing of territorial inviolability.

The board would also wish to emphasize the importance of protecting during the early stages of a crisis those installations necessary for the maintenance of essential societal functions. This would call for, among other things, the protection of administrative and national defence leadership as well as command-and-control facilities located throughout the country. The job of performing these protective tasks can befall upon the core and fast deployment forces which is why these considerations must be taken into account in equipping these troops.

The board proposes that it should be determined how the Defence Forces' readiness to assist other authorities in the controlling of different types of crisis situations can be made more effective.

The territorial defence system remains a system best suited for our conditions. It is a defence system which emphasizes the employment of ground forces. The main tasks of the naval and air forces under this system are to ensure territorial inviolability, reconnaissance and the support of the operations undertaken by the ground forces. A relatively large pool of reservists is necessary in Finland owing to factors related to the amount of funds directed toward defence as well as the large

area of our country. The reserves required can only be obtained through a system of universal male conscription.

Universal conscription is still a suitable military system. It is even-handed, taking equally into account the different parts of the country and is in harmony with our country's system of democracy.

The Defence Forces have planned to reduce the level of core and fast deployment forces to 250 000 men. This is to be achieved by moving 80 000 men from the fast deployment forces to the main forces. This is a solution in the right direction when viewed from the perspective of the amount of available resources. The changes will create the preconditions necessary for equipping the core and fast deployment forces to a level in which they will be able to fulfil different types of crisis management tasks. The idea of cost savings is also related to the increase in the level of local troops in relation to the general troops.

The board finds the development plan for the territorial defence system to be well-founded. The planned arrangement would improve preparedness for regional crisis management as well as increase the possibilities for co-operation with other authorities. The planned change-over from a system of 7 military areas and 23 military districts to one composed of 3 national defence zones and 12 military districts signifies a reduction by half in the levels of command and is thus a significant rationalization measure. This change together with the organizational change being carried out by the General Headquarters will affect a considerable share of the Defence Forces' personnel and, at the regional level, also other societal sectors and national defence measures. The board would also like to stress that the new arrangement will serve not only as a significant rationalization measure but also to increase defence effectiveness. The board wants to stress that the setting up of this new system will simplify the command system as well as the regional chain of command capabilities towards the ground, naval and air forces.

Regarding troop development within the territorial defence system framework, the board will now give its position towards the development plans of the ground, naval and air forces:

The board finds the ground forces' development plan to be justified. The ground forces still form the basis of defence and are the main tool for crisis management. This can be seen in the sequence of development and the level of equipment - first the core forces, then the fast deployment forces and lastly the main forces. The decrease in the number of the fast deployment forces by 80 000 men and their shift over to the ranks of the

main forces (whose new strength will be 280 000) affects almost solely the ground forces. Similarly the measures taken to relieve equipment needs through increasing the levels of local troops in relation to general troops affect the ground forces. These measures change the relative levels of ground force development by increasing the emphasis put on the core and fast deployment forces and especially their best units, the light infantry and armoured brigades. It is the opinion of the board that the significant reduction in the levels of the core and fast deployment forces, brought about by economic factors, can be carried out in light of the general developments in Europe and without endangering the credibility of Finland's defence capability.

Examination of the funding framework shows that funding is directed towards only part of the ground forces. The rest of the troops will have to make due with obsolete material. The board, in connection with its earlier assessment of the Defence Forces' current state, has asserted that every war-time unit, and the men who are placed in it, must have the required level of equipment necessary for the performance of its task. The board believes that this principle also includes the main forces. The most important units of the fast deployment forces must be brought to the required level of equipment during the 1990's. While these troops are developed, it must be kept in mind that part of the fast deployment forces carry out local defence tasks in which case their requirements are, for example in comparison to the light infantry brigades, more modest. In order to meet their assigned local defence tasks the brigades belonging to the main forces must have material meeting at least the minimum requirements necessary for anti-armour and air defence operations as well as necessary fire-power and adequate protective equipment. For other units belonging to the main forces the bare minimum requirements should be that each individual soldier has the necessary clothing and weaponry needed for carrying out his tasks as well as the equipment needed for movement and communications.

The advisory board believes that a necessary pre-condition for ground force development is that a long-term solution should be found that would make it possible to evenly replace the equipment that is being taken out of operational use.

The most important development areas for the naval forces during the 1990's are the improvement of mine-laying capabilities, increasing the effectiveness of command, reconnaissance and surveillance systems as well as increasing reliability. The advisory board finds that these development lines are in harmony with the Defence Forces' over-all

view of force development and support the goal of managing crisis situations and preventing war. The command and organizational developments to take place in the naval forces are appropriate to the needs of the territorial defence system.

The naval forces have stated that the current level of operating and maintenance funding creates problems with respect to maintaining operations at the necessary level. The advisory board regards the operational maintenance of the most important vessels to be necessary from the point of view of carrying out surveillance tasks as well as for training purposes.

During the course of its work the advisory board has received information from which it became evident that many different authorities perform the same type of surveillance tasks in the sea areas. A rational division of labour between the different authorities should be quickly sought.

Air force development will in the near future be concentrated in the modernization of the command-and-control systems as well as the procurement of new fighter aircraft. The advisory board recommends that with regard to the purchase of new fighters consideration should be given to the purchase of one type of aircraft, since this solution would be less expensive and more effective than purchasing more than one type. The advisory body believes that the procurement decision should be made in such a way that the replacement of the old equipment with the new could begin during the middle of this decade.

The advisory board also attaches special attention to the air force's increased needs related to the maintenance of operations and air safety.

Regarding other development areas the advisory board states that the outlines it has received suffice to elicit only these main observations:

The point of departure for personnel development is the personnel requirements of the Defence Forces. Personnel planning must take into consideration the requirements for defence, the increase in the general level of education as well as the need for the renewed personnel system to treat different groups fairly.

The advisory board finds it important for the Defence Forces to acquire capable personnel and to preserve its competitiveness as an employer during the 1990's.

The advisory board finds the attitude of the Defence Forces regarding the maintenance of personnel at their current level to be justified. Shortages arising in some activities should primarily be dealt with through the increased use of technology and through the internal personnel organization of the different service branches.

The advisory board states that voluntary national defence work has its own significance in the carrying out of defence goals.

The advisory board pays attention to the challenges involved in reserve training. It is important to develop training organizations and training conditions in such a manner that the reservists find the activities to be meaningful and appropriate to their training. The advisory board expresses the view that the income losses brought about by participation in military refresher training be better compensated. The board also emphasizes the need for continuous follow-up and development regarding the training of conscripts as well as the maintenance of legal protection and the significance of raising their economic conditions.

Building and property maintenance in one of the Defence Force's problem areas. Investment in this sector is justified because the construction of fortified facilities is an effective and inexpensive means to increase efficiency and the construction of new warehousing facilities is necessary for both replacing obsolete buildings as well as reception of new material. The weak state of the Defence Forces' fixed property and the attendant social and motivational problems it produces with respect to conscripts and personnel speaks in favour of the extra funding needed for urgent renovation.

The advisory board has, in conjunction with its estimate of the Defence Forces' current state, already given its position regarding the significance of the existing available material. In this connection it is important to state that the amount of material in stock is decisive from the point of view of defence. In addition, it would be necessary to study the possibility of raising the level of preparedness of domestic defence material production facilities. Because local production facilities can only partially compensate for material consumed during a crisis situation it would be wise to direct funding towards this particular area. It is the board's view that the situation is especially disturbing with regard to the state of ammunition.

The Defence Forces have presented their total funding requirements for the decade of the 1990's (1990-1999) to be 127 billion marks calculated

at 1991 price levels. Calculations do not include pensions which from 1991 onwards are to be included in budget expenditures for national defence. This would mean that during this period national defence would consume, on average, 7,8 % of state expenditures and approximately 2 % of gross national product. The real growth rate for public expenditures is estimated to average 1,3 % annually during the period (1990-1999) and the real growth rate of G.N.P. is estimated to be, on average, 2,5 % per year. During this period 65 billion marks of appropriation funding would be earmarked for material procurement and 7,5 billion marks toward construction and renovation of property.

The Defence Forces have calculated that at this level of appropriations they would be able to equip all core and fast deployment forces. This would mean that ten light infantry and two armoured brigades would achieve operational levels of performance capacity and that the procurement of new fighter aircraft and naval vessels could be carried out to the extent planned. The equipping of naval, coastal and air surveillance troops as well as the fitting out of the border guards, all part of the fast deployment forces, could be met. In addition, the anti-armour, artillery and air defence units operating under the high command could be properly equipped and the brigade 80s belonging to the fast deployment forces could obtain their required materials. Improvements could be undertaken in providing the proper resources for the main forces to carry out their local defence tasks and the personal equipping of individual soldiers could be raised. At this level of appropriations the Defence Forces would also have the capability to construct necessary protective facilities and warehouses as well as renovate those instruction, work and accommodation facilities that are currently in a poor state.

The Ministry of Finance has presented to the advisory board its views regarding developments in both the national and public economies. According to the survey of national and public economic development up to the year 1994 which was attached to the national budget proposal for 1991, the total level of state expenditures for the period 1992-1994 will rise, on average, by 1,3 % per year. The level of defence expenditures could correspondingly grow by an average of 1,4 % per year.

The aforementioned plans are based on the assumption that gross national product will rise by 1-2 % per year in the near future. According to the latest evaluations, gross national product will rise more slowly in the near future or possibly even remain stagnant for a few years. Recently, the condition of both the national and public economies has

rapidly weakened. As the estimates for gross national product in the near future continue to weaken the basic conditions of the national and public economies, and as the international outlook also contains many uncertainties, it may become necessary to adapt to a lower level of state expenditures in the immediate future. If this comes about, it will also become necessary to slacken the pace of planned defence expenditures.

The slowing down of economic activity will have a positive influence on the balance of payments developments for the short term. In spite of this our country's net debt is expected to rise from the 17 % share of gross national product that it was in 1989 to 27 % during the first half of this decade while the state's share of foreign debt is expected to remain at its 1989 level of $4\frac{1}{2}$ % of gross national product. The attainment of a lasting external balance for our economy can only be brought about through a sufficient lowering in the level of demand which presupposes a limiting of the increase of public expenditures to an average of 1 % per year. If such were the case the rise in the level of foreign indebtedness would terminate in the second half of this decade which would mean that overall production could once again be raised to its target level of 3 % per year. Should the ongoing recession be short-lived and the external balance quickly improve, the average growth rate of gross national product could reach a level of about 2,5 % per year.

The parliamentary advisory board for defence policy regards the fundamental positive developments occurring in the great power relations to have also significantly improved the security situation in Europe. Despite the many uncertainties involved in the changes that are now taking place in Europe, the board believes that, overall, they will have a positive influence. In taking into consideration both these developments as well as the unfavorable outlook of the Finnish economy for the near future, the board has decided upon a lower target level of funding than that outlined by the Defence Forces in its proposals, although the board considers these proposals to be well-founded as such.

The advisory board maintains that it is important that the Defence Forces, during the 1990's, are developed in a sustained and well-planned manner. It is essential that all service branches are given the resources with which to carry out their statutory tasks.

The advisory board recommends that during the 1990's (1990-1999) the minimum required funding for national defence, not including pensions, be set at about 90 billion marks calculated at 1991 price levels, however,

with the proviso that defence appropriations are not to exceed 1,5 % of gross national product. With these resources it will be possible, during this decade, to equip the light infantry and armoured brigades, begin the fighter replacement programme as well as carry out the main naval defence procurement. However, during this period part of the fast deployment forces and almost the entire main forces will still have to make due with obsolete material.

In its preliminary assessment that has been previously referred to the Ministry of Finance has stated that the outlook for the public economy during the second half of the 1990's might be more favourable than what we can currently expect. Therefore, the advisory board also recommends that during the second half of the 1990's, in addition to investing in the areas mentioned above, funding should be directed towards troop material procurement for the rest of the fast deployment forces, improving the weak situation regarding ammunition as well as the renovation of buildings and other property.

Taking into consideration the length of the planning period it is the view of the advisory board that during the course of the period the planning principles must be constantly assessed.

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- 2 *Flank or Front: An Assessment of Military – Political
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