SECURITY SYSTEMS IN TRANSITION: SOVIET AND RUSSIAN ATTEMPTS TO DISARM AND CONVERT THE MILITARY INDUSTRIAL COMPLEX

by

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Of the end
of warlords and armouries
and prisons of hate and fear...

I sing of a world reshaped.

Niyi Osundare

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ABSTRACT

For over 40 years Europe and the rest of the world were divided into spheres of influence by two military superpowers. Bi-polarity and nuclear deterrence formed the basis of the international security system. They also gave rise to an arms race which resulted in the destabilization of the economies of both the Soviet Union and the United States. It gradually became apparent that 'war' was no longer a cost effective tool of policy, that international relations had to be conducted in a different manner.

As part of this latter process Mikhail Gorbachev, General Secretary of the Communist Party of the Soviet Union from 1985 to 1991, proposed an alternative system, one which would be based on a reduction of military strength, the abandonment of ideological confrontation and an increase in the level of cooperation between states. This thesis examines the steps taken by the Soviet Union and its successor, Russia, to implement this alternative regime. Of particular interest to this study are their consequential attempts to reduce their armed forces and convert defence production.

The groundwork is laid for this examination with a discussion in Chapter One on the nature of security. It is generally acknowledged that a state's security is defined in terms of political and economic stability as well as by the ability to physically defend itself. During the Cold War, however, excessive emphasis was placed upon physical security through military rather than economic means. The writings on security of Carl von Clausewitz and Niccolo Machiavelli are examined for their relevance to the security policies formulated during the governments of Vladimir Lenin and Mikhail Gorbachev. Lenin and his successors were influenced by Clausewitz, viewing war as an important instrument of state policy. Gorbachev rejected this approach on the basis that it had become too costly, in human and economic terms, to be used in the modern day. He strongly urged that peace be used in its place.

The central argument is that war and peace are more than just tools of policy, they also have the power to form the foundation of the state. The way in which a state perceives the purpose of war will in turn affect the way in which it pursues peace and disarmament. Although Gorbachev recognized the cost of the war system and supported the transition to peaceful means of cooperation, he failed to understand the depth to which society was affected by the preparation for war. In Chapter Two, the literature on the role of military-industrial complexes in society is reviewed as is that literature which analyses the best possible way to transform or convert the defence sector. As a result of this survey an ideal conversion programme is proposed.

Chapter Three details the rapid pace of disarmament by reviewing the INF, CFE, START I & II Treaties and unilateral actions. This is not meant to be a detailed account of the disarmament process but an outline

of the resulting changes inflicted upon the Soviet armed forces, i.e. unemployment and pension payments and the costs of destroying weapons and restructuring the armed forces. This examiniation continues in Chapters 5 and 6 with a discussion of the theoretical and practical aspects of the Soviet and Russian conversion programmes.

Based on these studies the conclusion is reached that the expected peace dividend need not be illusory and that peace can be used as both a tool of policy and the foundation of the state. However, it can only happen if, among other things, disarmament and conversion are properly prepared and managed. Returning troops can be absorbed into the employment and housing markets and defence manufacturing can be transformed to meet civilian needs. But when these plans are not made and executed, a society becomes disillusioned with the peace dividend.

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PREFACE

The fraying of the "iron curtain" in the late 1980s appeared to herald a new age in international security. The shift from communism to liberal democratic forms of government and the conclusion of various disarmament treaties by members of NATO and the Warsaw Pact was welcomed by politicians and citizens alike. Although the basic definition of state security did not change, the emphasis on certain factors clearly did. It was hoped that ideological confrontation and military competition would no longer be the primary determinants of a state's security and position within the international arena. They would be replaced by economic and political health and stability. Although these two aspects had always been part of the security equation their value had been diminished to a certain extent during the cold war. With the end of that confrontation it was believed that that equation could finally be re-evaluated.

In performing that exercise, however, governments would have to assess the effect of the cold war on their societies. The much trumpeted positive outcome was, of course, the peace dividend. The term implies a financial gain, yet the size of the windfall is reliant upon the basic structure and flexibility of any given state's economic system. During the 1960s and 1970s both Soviet and western analysts presumed that the benefits of disarmament could be achieved fairly easily, without any major structural adjustments to the economy. It has become increasingly apparent, however, that some form of structural adjustment must be made. Furthermore, in order to enjoy the benefits of the dividend more money must be paid into the defence sector in order to facilitate the decommissioning and conversion of certain weapons systems and resultant technology and the transfer and retraining of military and defence sector personnel. The fact that additional money is required before the benefits of a

peace dividend are enjoyed by society is one generally overlooked by politicians in their statements on the subject and in their initial budget allocations.

As a result, the sector which is relied upon so heavily during periods of conflict is given short shrift once the danger has passed. Thus the military-industrial complex, in its broadest sense including personnel from the enterprises and the armed forces is forced to defend its position at home, attempting to protect wages and employment numbers. The complex appears obstructionist, preventing society as a whole from enjoying its much needed and desired peace dividend. Yet it is important to remember that members of the complex are also members of society. If the transition from a war economy to a peace economy is not managed successfully the repercussions will be felt throughout society and the peace dividend in its political, economic and social forms will prove illusory.

This thesis is an examination of a security system in transition. Soviet security from 1917 until the late 1980s was defined primarily in terms of military force capability, and, to a lesser extent, by the economic well-being of the citizenry. Mikhail Gorbachev, General Secretary of the CPSU from 1985 to 1991, came to the conclusion that continued military development, to the exclusion of economic health and stability, was no longer a viable policy option. Thus he began to promote a programme of disarmament and conversion. A policy which was continued by Boris Yeltsin, President of Russia.

The thesis begins with an assessment of various definitions of security. The writings of Clausewitz, Machiavelli and Lenin come under particular scrutiny. The thesis then progresses to a review of the literature on conversion. In the 1960s and 1970s, Jahn, Aspaturian and Doernberg argued that conversion

could be accomplished without any major structural change to the Soviet economic system because a military-industrial complex did not exist within the Soviet Union. This assessment of the relationship of the defence complex with the command-administrative economic system was not sufficiently accurate. They claimed that there was no bureaucratic or military opposition which would prevent defence reform and conversion. This was clearly not the case. Subsequent writers, like Izyumov and Kireyev, recognised the existence of a Soviet military-industrial complex. Based on their more accurate descriptions of the state of the defence sector an hypothesis is put forward. In both the United States and the Soviet Union government was very much involved in the operations of the military-industrial complex. Indeed a form of *state managerial capitalism* existed in both systems. Since this had been the case it would prove impossible for the Soviet, and subsequently Russian, government to suddenly adopt a "hands-off" policy towards the defence enterprises as they proceeded to convert. For conversion to succeed a new industrial policy which incorporated an economic bill of rights would need to be drafted. This thesis argues that not only do the needs of the defence enterprises and their staffs need to be addressed but so too do the needs of military personnel. This is a departure from much of the literature on conversion, which is primarily concerned with the enterprises.

Conversion is, however, more than an economic issue, it can have both social and political repercussions. This conclusion is supported by the evidence provided in chapters three through six. The manner in which military personnel have been retired, with insufficient pensions and in some cases without any remuneration at all, has led to social and political unease. Military personnel have established their own unions in order to lobby for better treatment, an act unheard of in most armed forces.(1) Others have turned to

support one of the myriad nationalist political parties.(2) It is, perhaps, still too early to predict with any confidence what will be the long-term development path of the Russian political system, however, certain assumptions have been made about the rise of Vladimir Zhirinovsky of the Liberal Democratic Party and his support among the armed forces. There is concern in the West over the possible rise of fascism in Russia. If this was to occur then there would probably be a return to an ideologically confrontational world arena and a corresponding arms race.

Although conversion has not proved as successful as originally anticipated it will continue to be a factor in Russian economic reform. The policies which are implemented in the next few years and the support given to enterprises by the government and foreign aid agencies will determine the future of conversion and the long-term stability of the sector and perhaps of the state.

Source material for this study has been varied. Most of the information has been gathered from Soviet periodicals and government legislation. It has been supplemented by material gained through personal interviews, unpublished reports and news and documentary programmes. The titles for Russian sources have been transliterated in accordance with the "Soviet Studies" style. It should also be pointed out that notes are in an abbreviated form at the conclusion of each chapter. Full details of the texts are provided in the bibliography.

1. Interview with Valerian Nesterov, Head International Department, Russian Federation of Independent Trade Union of Servicemen Central Committee, November 5, 1994.

2. There are approximately 80 nationalist parties or organisations currently operating in Russia. They range from tsarist nationalist, soviet nationalist and military nationalist parties.

List of Abbreviations

ALCM -- Air Launched Cruise Missile
AOD -- Administrative Organs Department
ATTU -- Atlantic to the Urals Zone
CFE -- Conventional Forces in Europe
CIMER -- Central Institute for Mechanical Engineering Research
CIS -- Commonwealth of Independent States
CPSU -- Communist Party of the Soviet Union
DDI-- Department of Defence industries
DMC -- Department of Machine Construction
DPPA or PDPA -- Democratic Peoples Party of Afghanistan
EC -- European Community
FYP -- Five Year Plan
GNP -- Gross National Product
G7 -- Group of Seven Industrialised States
ICBM -- Intercontinnental Ballistic Missile
ILO -- International Labour Organization
IMF -- International Monetary Fund
INF -- Intermediate Nuclear Forces
JCG -- Joint Consultative Group
KBs -- Construction Bureaus
KGB -- Committee for State Security
MIC -- Military-Industrial Complex
MPA -- Main Political Administration
MVD -- Ministry for Internal Affairs
NATO -- North Atlantic Treaty Organisation
NGF -- Northern Group of Forces
NPOs -- Scientific Production Organizations
RCRME -- Russian Commodity and Raw Material Exchange
R&D -- Research and Development
SAP -- Saratov Aviation Plant
SEUP -- Saratov Electrical Units Production Association
SLBM -- Sea-Launched Ballistic Missile
SLCM -- Sea-Launched Cruise Missile
START -- Strategic Arms Reduction Talks
TNP -- Goods for National Consumption
VPK -- Military Industrial Commission
WGF -- Western Group of Forces
WTO -- Warsaw Treaty Organisation

CHAPTER ONE
ON THE NATURE OF SECURITY: THE BALANCE BETWEEN MILITARY POWER AND POLITICAL AND ECONOMIC CAPABILITY

The implementation of a conversion programme by Mikhail Gorbachev and the Soviet government between 1988 and 1991 would prove to have far reaching consequences for every sector of society. The political and economic repercussions of that policy are still being felt today by the former Soviet republics. In order to understand why the transition from an "armed economy to a disarmed economy" has been so difficult for the Soviet Union and its successors it is first necessary to assess the way in which the state defined security and viewed the use of military power.

Generally, a state's security is defined in terms of political and economic stability as well as by the ability to physically defend itself.(1) These elements are intertwined, making it impossible to consider any one of them in complete isolation. Ideally, each should receive equal consideration and the government's objective should be to achieve an optimum balance of priorities. Both during and after the Cold War it was argued that the United States and the Soviet Union failed to achieve this balance of priorities by placing excessive emphasis on physical security. Japan and Germany are viewed as the real winners, for they are the two nations which appear to have been the most successful in re-writing the equation for security. While a reasonable level of economic growth has always been necessary in order to underwrite military security, the development of the economy is no longer seen as simply a means to

an end but rather an end in itself. This does not mean that the desire of the world's nation states to possess their own armed forces has declined. There is, rather, an increasing awareness that for a nation to be strong it must have more than a sizable armed force: it must also have a healthy and well-structured economy and a stable political system. As the two principal protagonists in the Cold War, the United States and the former Soviet Union (FSU) are most sensitive to and influenced by these conditions.

The Cold War can be viewed in two ways: either as an actual confrontation between two ideologically and militarily opposed powers or as a system for international relations.(2) For the purposes of this discussion the former definition is of primary importance. Although the United States and the Soviet Union did not engage in open warfare, the level of preparedness necessary to "keep the peace" by means of nuclear and conventional deterrents arguably took a heavy toll on the financial, technological and ideological cultures of both nations. Both the US and FSU must go through a transition period similar to that experienced by Germany and Japan after World War II. Ideally, priorities should be reassessed. This thesis will attempt to analyse the effect that the Soviet Union's pursuit of physical security had on its political and economic stability. The question that will be asked in this thesis is how a shift in emphasis from military power to political and economic development can best be managed in order to guarantee the continued stability and security of the state. The search for an answer begins in this chapter with an examination of the various definitions of security.

TWO VIEWS OF MILITARY POWER

John Garnett in his contribution to Contemporary Strategy: Theories and Concepts (1987) has outlined the various roles of military power. He defines

military power as a "legally sanctioned instrument of violence that governments use in their relations with each other, and, when necessary, in an internal security role".(3) Military power has four distinct uses: as a method of pursuing foreign policy objectives, as a symbol of national prestige, as an instrument of national unity and as a means for ensuring security.(4) Garnett is primarily concerned with the foreign policy role of military power, but a thorough understanding of Soviet military policy requires analyses of all four uses. Of particular value in such analyses are the writings on war or military power of Carl von Clausewitz and Niccolo Machiavelli. Their detailed examinations of the complex relationship between the use of military power and the status of the state provides a model to which the Soviet Union can be seen to be related.

Writing in 1832, Carl von Clausewitz did not speak in terms of military power but rather in terms of war, and he was primarily concerned with how war could be used to achieve foreign policy objectives. For Clausewitz war was simply the physical confrontation of two opponents. The ultimate goal of this meeting was to "compel [the] enemy to do [one's] will".(5)

Within the physical battle, however, lies a contest of emotions, a clash of wills. Clausewitz believed that "the advance of civilisation had done nothing practical to alter or deflect the impulse to destroy the enemy, which is central to the very idea of war."(6) The word "impulse" is in itself indicative of an emotional response, a whim, or desire. Calculated political moves more often than not cause countries to enter into war, but emotions inspire men to battle. "Hostile feelings and hostile intentions" motivate men to fight.(7) One country's "hostile intentions" will invariably provoke a hostile response from its opponent. Force will be met by counter-force, which in turn will generate a reciprocal action, and thus the severity of the response will continue to escalate.

This emotional spiral can be halted when one side is able to disarm its enemy. Clausewitz said that war was the method by which a state compelled an enemy to do its will. Consequently, the enemy must be made literally defenceless or at least be put in a position that made this danger probable in order to overcome his will. Once the adversary had been overcome then the terms of peace could be dictated.(8) Naturally enough, peace treaties are negotiated from positions of strength. This fact means that peace treaties are generally perceived by the defeated nation to be inherently unfair. For example the Peace of Versailles, which concluded World War I, was perceived and portrayed by Hitler and his supporters as unfair to the German nation. The Germans felt that they had been branded as solely responsible for the events of the first World War, and that the redistribution of their lands and colonies and the demands for war reparations were excessive.(9) Hitler's initial policy was to right these perceived wrongs.

The First World War and its resulting treaties provided the basis for the foreign policy of the European nations as well as setting the stage for the internal politics of Germany. A hundred years earlier Clausewitz had addressed this type of situation. He concluded that war, although an instrument of policy, could, in and of itself, create new political situations. War, he argued, was always derived from some political situation, "and the occasion is always due to some political object. War, therefore, is an act of policy."(10) In the opinion of Clausewitz, when all other political methods fail, countries resort to war. This deadliest of "tools" was nothing more than a political instrument. While policy permeated all military operations it could also be argued that the possibility of military operations permeated all policy. Many nations maintain a constant state of readiness for war. Clausewitz denied that one would want to "consider the

whole business of maintenance and administration as part of the actual conduct of war."(11) By defining war in such a narrow context, by claiming that it was "nothing but a duel on a large scale", and that "countless duels go up to make a war", Clausewitz had no choice but to exclude the business of maintenance and administration. As a result of technological advancements in warfare the business of maintenance and administration became a primary concern. In order to deter aggression a state must appear constantly ready to fight.

Garnett's definition, as quoted above, of war as an instrument of policy has strong echoes of Clausewitz's theory. Of particular significance for Soviet defence policy, however, were two of Clausewitz's other concepts, also outlined above. These are (1) that war is an act of force to compel the enemy to do our will; and, (2) that war is caused by political situations and objectives. Lenin modified these principles to fit the prevailing circumstances but the core ideas remained, as will be discussed later.

Turning our attention to Machiavelli, his sixteenth century view gave war, or military power, a greater political content than the definition put forward by Clausewitz. Machiavelli saw war not simply as a battle but as a basis of the state. "The main foundations of every state...are good laws and good arms."(12) It was his contention that if a state did not have the means to protect its civic institutions that state would soon collapse. So important was it to protect the institutions of government that he advised that a study of warfare should be "pursued as an exercise in peacetime and as a necessity and for glory in wartime."(13) The theories of Clausewitz and Machiavelli are at odds over the maintenance and administration of the armed forces. While Clausewitz did not hold these tasks to be unimportant, he did not feel that there was sufficient justification for their inclusion within the narrow context of his definition. For

Machiavelli these issues were inherent in his statement concerning the study of war. If a commander did not understand the basic principles of administering and leading his forces during peacetime he would never be prepared for actual combat. Machiavelli supported force reductions so long as the basic framework of the armed forces was maintained.

It was Machiavelli's contention that the level of military preparedness was derived in part from a state's need for respect. If a state did not have the respect of its neighbours, if it appeared weak, then it would invite aggression. The very theory of deterrence is based upon this precept. The object is to amass such firepower that an opponent would never think to engage in battle. The policies of the United States and the Soviet Union during the Cold War perfectly illustrated Machiavelli's argument. The US and the former USSR, the North Atlantic Treaty Organisation (NATO) and Warsaw Pact (WTO) tried to formulate their doctrines and strategies on the basis of parity, matching each other's weapons systems point for point. The overriding fear was that one state might fall behind the other in the arms race. "If you are unarmed you are bound to meet misfortune for people will despise you."(14)

Machiavelli believed that the task of maintaining a certain level of respect, of maintaining the strength of the military, fell to the ruler of the state, for inevitably it was, and is, his power too which hangs in the balance. He counselled his prince that the skills of organisation and discipline in war were paramount. Citing various historical figures, he claimed that the best-remembered leaders were those who excelled at war. The most successful states were those in which the leadership alternately had fallen to warriors and lawmakers. Again, an example from the recent past emphasises these two points. During Gorbachev's tenure in office his predecessors were vilified for

not having been good "lawmakers". The military had been maintained at a high level, but civic institutions had been neglected, and the state had fallen into disarray. The most notable victim was the economy. The civilian sector of the economy had been geared to the support of the military and eventually the strain became too much. Gorbachev, during his six years in power, tried to be a good lawmaker and a good statesman by placing more emphasis on the economy and the domestic political system than on the military. Although it was necessary to shift the emphasis of Soviet policy from foreign confrontation to domestic reconstruction, Gorbachev erred by restricting the military's role in society too rapidly. Their attitude towards reform was initially supportive, but as the government lost control of the pace and scope of perestroika (the reform programme) the military hierarchy started to voice its opposition. The view behind this opposition was that the political leadership had to be prepared for the possibility of renewed conflict with the West and that it was not taking adequate precautions for such an eventuality. Gorbachev was torn between two factions. On the one hand he was confronted by the conservatives who wanted to ensure the defence of the nation. On the other hand he was faced by the reformers who believed that in order to defend the state you had to have a state worth defending. While Gorbachev should receive credit for beginning the difficult process of reform, he is more often criticised for being neither a good warrior nor a good lawmaker.

It is a difficult task for any leader, in any age, to balance the needs of the military against the needs of the populace as a whole. Bearing this in mind Machiavelli warned that princes and republics should guard against men who make war their profession. "From not desiring peace come the treacherous deeds that military leaders commit against their employers to keep a war going."(15) It is thus a fine line upon which a ruler is forced to walk. He must be

able to maintain a certain level of military preparedness to ward off the hostile advances of his neighbours, yet, at the same time, he must keep the growth of the military in check so that his state may not be seen as overly aggressive. Both the commander and the troops he leads must know when, and be willing, to return home to their more peaceful professions. Only when this is mastered will a ruler earn obedience at home and respect abroad.

The main points of Machiavelli's theory which are relevant to the discussion that will follow are (1) that good arms and good laws are the foundation of every state; (2) the power of the ruler rests upon the power of his military; and (3) war is a policy maker. Until the late 1980s Soviet strategists, as had Clausewitz and Garnett, placed an emphasis on military power as a guarantor of national security. Machiavelli also understood the significance of military power but he believed that political and economic stability were of the utmost importance. While the power of the ruler might rest upon the military, the power of the state rested upon good arms and good laws in equal measure. Both the Clausewitzean and Machiavellian approaches to security will be used to analyse the views of the leadership of the former Soviet Union towards security and military power.

IN PURSUIT OF SECURITY

Soviet military doctrine has generally been viewed in two ways. Either it is seen as having been overly aggressive and expansionistic (the Western view) or having been merely sufficient for the protection of the homeland (the Soviet view). We should not take at face value the Western assertion that Lenin's writings are definitive proof of Soviet expansionistic polices; the roots of Soviet military doctrine run much deeper.

Lenin was greatly influenced by Clausewitz. Indeed he incorporated many of the German's ideas into his theory of war. Lenin argued that wars were

> inseparable from the political systems which engender them. The policy which a given state, a given class within that state, pursued for a long time before the war is inevitably continued by that same class during the war, the form of action alone being changed.(16)

For Lenin, war was the result of capitalism and class divisions. Writing in 1917, he argued that the peasant must understand that war is waged by governments, that the war and the peasants who fight it are tools of the government.(17) In the case of the socialist state, wars would continue to be fought so long as aggressive, imperialist powers remained in existence. Furthermore, wars would not be abolished as tools of policy until such time as classes were abolished and socialism had been created throughout the world.(18) Until that time those wars fought by socialist states would be of a defensive nature, in the sense that the socialist state would a) be protecting its own rights and existence, or b) assisting an oppressed people to overthrow the "slave holding and predatory 'Great Powers'."(19)

The arguments of those who supported the theory of an aggressive Soviet military doctrine can be summarised as follows. The continued existence of capitalist states was a direct threat to the political stability and thus the security of the Soviet Union.(20) The Soviet Union would therefore take two steps. First, it would create a geographical buffer zone in order to insulate itself from the West. Secondly, it would continue to work for the defeat of the capitalist states, viewing them as direct military threats and as bases for anti-communist subversion and sabotage.(21) Methods to this end would be both direct military confrontation and the destabilisation of capitalist political structures through support of the

class struggle.(22)

Robert Bathurst in his essay, "The Two Languages of War", looked again at the issue of war as a tool of policy and concluded that the Soviet policy was to overthrow capitalism.(23) He suggested that the Soviet language of war was different to that used by Americans. It did not start with a breach of legality, or end with a military defeat. It had and always would begin with an exacerbation of class warfare, and would end with nothing less than the transformation of society.(24) For such a grand battle an immense army would be necessary. Thus the size of the armed forces, approximately five million men in 1985, is explained.

Or is it? An alternative view looks beyond the Soviet period to the more distant past. David Jones has argued that Soviet military doctrine shared many similar attributes with Imperial Russian policy. In an article written in 1983 he outlined the points of comparison. The decision-making structure with its Defence Council, General Staff, Military-Industrial Commission, and wartime General Headquarters all resembled the structures created by Nicholas II.(25) The Imperial Army's role as a "national university" had also been continued by its Soviet counterpart. The overall internal function of the armed forces remained the same. Both armies served to "buttress the state's domestic peace, unify a multinational empire by acting as a means of advancement and education,...and served politically as an instrument loyal to the regime in power."(26)

If these legacies are to be remembered so too must the legacy of successive invasions throughout the ages. The Mongol hordes, the Poles, the Swedes, the French, the Germans, the British and the Americans all left their mark on the Russian national psyche. What might have been seen as an

expansionistic/imperialistic policy, Jones argued, was nothing more than an attempt to protect the borders of Russia. Because the state had no natural barriers the creation and maintenance of a strong armed force had to be a priority.(27)

Jones did not suggest that Marxist-Leninist theory should be discounted when considering Soviet defence policy, he simply argued that it should also be viewed in light of Russian history. Major R. Hall would concur. He has described the military doctrine of the Soviet Union as a philosophy of war.(28) This doctrine applied as much to the war itself as to the entire state's preparation for that war. Thus the political, economic, social and military factors were all of equal significance.(29) This approach is reminiscent of the one sanctioned by Machiavelli. To judge Soviet military doctrine solely on the basis of political ideology is to make a gross error. If it is to be understood each component must be examined. The overall policy must be viewed as the Soviets saw it themselves. Only when this approach is taken does the overall defence burden and the Soviet people's willingness to bear it become understandable.

GORBACHEV'S INHERITANCE

As a result of history and ideological confrontation it was necessary for the Soviet Union to create a large and powerful armed force. This they did, but at a cost. When Gorbachev came to power in March 1985 he inherited an armed force of some five million men. The military had been restructured under Khrushchev so that they might better incorporate advances in technology, nuclear weapons above all. During the 1950s the size of the army had been reduced, but when Brezhnev came to power that trend was reversed. He oversaw an expansion in the fighting forces and the defence sector as a whole. The use of nuclear weapons, the number of men under arms, and the defence

budget would all become targets of Gorbachev's reform policies.

Stalin had been responsible for promoting the development of nuclear weapons, but it was Khrushchev who orchestrated their incorporation into the military structure. In a speech before the Supreme Soviet in January 1960 he declared the primary importance of nuclear weapons and missiles. He argued that certain sectors of the armed forces were becoming obsolete and that there should be an increased reliance on nuclear weapons, the weapons of the future.(30) He emphasised that nuclear firepower would make up for any reductions in manpower.(31) In 1955 the armed forces stood at 5,700,000, by 1960 they had been reduced to 3,700,000.(32) There was a subsequent cut of over a million which left the military with 2,600,000 men in 1965. The armed forces were wary of this policy because they felt that a degree of inflexibility was being forced upon them.(33) The issue would not be resolved until Brezhnev came to power.

Initially the Soviet government believed that a nuclear war could be won. As time progressed and the reliance upon these weapons increased attempts were made to reconcile the use of the means of mass destruction with the concept of war as a tool of policy. During Khrushchev's last years in office a debate raged in the policy-making circles over whether war could continue in its function as a tool of policy. One group believed that regardless of the advances in weapons technology and the destructive capability of nuclear weapons, war could still be used in this manner.(34) The second faction held the belief that the concept of war as an implement of policy was "beyond question", but that the validity of the thesis need no longer be tested nor should it be tested due to the newly destructive nature of war.(35) The third bloc argued that war was no longer a feasible tool.(36) Nuclear weapons made war unwinnable. While some

policy makers debated which element should be most prominent for a victory in war -- politics, the military, ideology, economics or social factors -- this third faction contended that for any of these factors to survive within the framework of society, let alone win a war, nuclear weapons must be abandoned as an implement of state policy.(37) As a natural outgrowth of this belief the Leninist theory of war was discarded by this third party, of which Khrushchev claimed to be a member.

This debate was not resolved, nor were nuclear weapons abandoned. The majority of articles published during the 1960s and 1970s, indeed claimed that nuclear war was "winnable". A growing minority began to argue, however, that victory in nuclear war could not be guaranteed, and indeed that to fight such a war would be suicidal.(38) These statements can be seen to represent the political aspect of Soviet military doctrine. They were in line with the general image which the Soviet government tried to present of a peace-loving nation operating only from purely defensive motives.(39) Again it would be a mistake to judge the doctrine by these political statements alone. The technical aspect should also be examined.

During his period in office Brezhnev reversed his predecessor's policy towards conventional forces. They benefited from an increase in size and the development of new technology. The development of the armed forces could be viewed, and often was, as demonstrating the expansionistic nature of Soviet military policy. Alternatively, it could be viewed as a defensive measure. The promotion of ground forces meant that the next war did not necessarily have to be a nuclear one. It was hoped that any conflict between East and West could be resolved through the use of conventional forces, relegating nuclear weapons for use as a last resort. This was a more flexible policy than the one put forward by

Khrushchev, who intended to rely heavily on nuclear weapons for the defence of the USSR. It also allowed the Soviet Union to defend itself against threats posed by nations outside of NATO, most notably China.

From 1960 onwards there was only one incident, the invasion of Afghanistan in 1979, which could lend credence to the theory of Soviet territorial expansionism. Generally, military power was used to support Soviet diplomatic positions.(40) Military advisors and material were used to underline relationships between the Soviet Union and other states. Alternatively, the armed forces were used to maintain Moscow's influence in Eastern Europe.(41) The United States was equally guilty of applying military power to serve its foreign and diplomatic policies. In terms of nuclear and naval forces Soviet policy must be viewed *vis-à-vis* that of America. The Cuban Missile Crisis and the threat of American naval superiority had their effects on Soviet technical policy. The Soviet desire to achieve parity with the US appeared as a threat to America's own security, thus they in turn increased the number of nuclear weapons held. Parity could only be achieved at ever increasing levels, which meant that parity no longer necessarily provided security.

The above discussion has been concerned primarily with the political and military aspects of Soviet doctrine. However, economic and social factors are of particular relevance for the reforms which Gorbachev would initiate. In order to compete in the arms race the Soviet government needed to make increasing demands on the economy. Its ability to quantify that demand was not easy. This was for a number of reasons. First, in order to ensure security a high level of secrecy surrounded defence estimates. Until 1989 defence spending was listed as a lump sum. This amount was relatively static as can be seen in table 1.1.

Table 1.1
(Reported expenditure in billions of roubles)(42)

	1985	1986	1987	1988
National Economy	222.4	247.4	241.0	278.9
Social/Cultural	124.0	140.6	153.5	163.5
Defence	19.06	20.2	20.2	20.2
Administration	2.9	2.9	2.9	2.9

The figure appeared highly unrealistic, especially when compared with the amount spent on defence in the United States (table 1.2).

Table 1.2
(Expenditure in billions of US dollars)(43)

	1985	1986	1987	1988
Gross Domestic Product (GDP)	4200	4300	4500	4600
Total Defence Outlay	252.7	273.4	282.0	290.4

In May 1989 Gorbachev admitted that defence expenditure had been "hidden" in order to prevent enemies of the Soviet Union gaining an accurate picture of the Red Army's strengths and weaknesses.(44) He cited a figure of 77.3 billion roubles for the 1989 defence budget.(45) To analysts in the West and the Soviet Union this figure still appeared too low. It must be remembered, however, that costs were not calculated in the same manner in the USSR as in the US. Attempts were made by the United States' Central Intelligence Agency (CIA) to assess Soviet costs. Estimates were derived by comparing the dollar

value of US and Soviet expenditures. There were obvious limitations to this approach. First, estimates failed to take into account the relatively higher quality of American personnel and equipment. Second, a comparison of figures could not be accurate because the rouble was not convertible. In addition, the CIA would have had to estimate the cost of hundreds if not thousands of items used by the military to determine the level of overall expenditure. This would have been a difficult task to complete due to the lack of open sources and the Agency's reliance on spy satellites. Inadequate information on the various specifications of the items would have limited their ability to estimate the cost. Finally, different values were placed on different aspects of defence. For instance, military hardware was much more expensive than manpower in the Soviet Union, while in the United States the reverse was true.(46) By employing these methods there was a tendency to overvalue Soviet expenditure.

Following Gorbachev's announcement in 1989 Nikolai Ryzhkov, the then Premier, provided an outline of Soviet defence spending.(47) The main categories were listed as, (1) the purchase of arms and military equipment; (2) scientific research and design; (3) maintenance of army and navy; (4) overall military development; and, (5) payment of pensions. While the categories bore a closer resemblance to those employed by the US Department of Defense (DoD) there still appeared to be notable omissions. For instance, was expenditure on military space technology contained within the defence budget or was it listed as an item in the budget of a civilian minister in order to ensure state security? Furthermore, were the military police, civil defence measures and military aid incorporated in the defence budget or elsewhere in the state's accounts? Omissions like these led analysts to believe that the truth was being withheld. Without a recognisably accurate figure determining the overall defence burden would continue to be difficult.

The term "defence burden" symbolises military expenditure as a percentage of the national product.(48) Despite the limitations of the CIA approach, its estimates were still the most widely accepted.(49) According to the Agency's statistics the Soviet defence burden increased from 12-14 percent in the early 1970s to 15-17 percent in the early 1980s.(50) Soviet GNP increased from R383.3 billion in 1970 to R720 billion in 1982. During that period it is believed that total Soviet military expenditures increased from R45-54 billion to R108-122 billion.(51) Official Soviet statistics only started presenting GNP figures from 1987 onwards so it is difficult to make comparisons. According to official data for 1989 the defence burden was 8-9 percent. While the CIA has stated that growth in military resource allocation did slow from 1976 onwards (52), official Soviet statistics seem to bear little relationship to the actual state of affairs, especially if the Soviet military had achieved parity with the United States. In order to compensate for omissions in the defence budget and for fluctuations in Soviet GNP the defence burden has been calculated by Western analysts as being between 22 and 30 percent.(53)

While this may appear to be yet another overestimate the sum is in line with the general trend in Russian and Soviet defence expenditure. David Jones's essay on the defence burden through the ages (1987) traces fluctuations in defence spending from 1680 to the 1980s. Between 1680 and 1874 the percentage of total state spending on defence had fluctuated from a high of 76.82% in 1701 to a low of 34.3% in 1781.(54) A similar calculation was made for the period from 1804-1914. Figures, based on quinquennial averages, ranged from 61.2 percent to 22.4 percent.(55) Jones believed that these levels of expenditure were reasonable considering the expansion of the empire being undertaken at that time and the scope of the army's policing duties.(56) The circumstances surrounding Soviet

defence expenditure were not much different. While the Soviet "empire" did not expand between 1955 and 1985, the cost of policing it did increase. During the imperial era the majority of defence expenditure went to supporting the troops. In the twentieth century funds for materiél have surpassed those for personnel. For example, in 1798 approximately 71 percent of the budget was spent on the maintenance of the army and cavalry and only 28 percent on weapons and other equipment.(57) In 1990 those percentages were reversed with roughly 67.5 percent of the proposed budget being targeted for procurement and R&D and only 30.6 percent for the maintenance of the army and navy.(58)

Although a defence burden between 22-30 percent might have been at the low end of the historical scale, it was increasingly apparent that such a level could not be sustained. In 1985, for these and other reasons, the Soviet Union found itself in a "pre-crisis" situation.(59) In an attempt to achieve parity with the United States the highest quality resources and the best trained personnel had been allocated to the defence sector. Because the civilian sector of the economy was denied the same quality of resources and personnel a technological gap had developed between the Soviet Union and the rest of the developed world. The economy was stagnant. If Gorbachev was going to reduce this gap he needed to be able to reallocate resources. To do that he needed to redefine security and redraft Soviet foreign and military policy.

NEW THINKING AND REASONABLE SUFFICIENCY

Gorbachev's views on the use of military power and the nature of security were different from those postulated by Lenin. Gorbachev, apparently influenced by the debate which had occurred during the Khrushchev era, rejected the idea that war, particularly nuclear war, could be used as a tool of policy. While he

rejected those elements of Lenin's theory which reflected the earlier theories of Clausewitz he maintained those aspects which dealt with peace as a tool of policy.

In addition to identifying the instigators of war and encouraging socialists to defend themselves against a confrontation with the capitalists/imperialists, Lenin urged his fellow Party members to be aware of the surrounding conditions. It was not enough simply to use war as a tool of policy, one had to assess constantly the effects of its implementation. In his "Afterword to the Theses on the Question of the Immediate Conclusion of a Separate and Annexationist Peace" (1918), Lenin criticised the majority of Party functionaries for not "{grasping} the new socioeconomic and political situation", and for not taking into consideration "the change in the conditions that demand a speedy and abrupt change in tactics...."(60) He commented further that Marxism demanded the consideration of objective conditions and their changes, "that the question must be presented concretely as applicable to those conditions...."(61) Thus Lenin believed that war was a tool of policy only if the material interests were there to support it.

Gorbachev took these earlier criticisms of the Party to heart, for they remained applicable to the Party of which he was then in charge. Even a cursory glance at the limited statistics available demonstrated that competition in an arms race with the West was proving a hindrance to economic growth. Gorbachev's subsequent policies manifested his belief that it was necessary to alter the way in which security was achieved.

During the Brezhnev regime a "dual-track policy" had been pursued. Continuous expansion within the Soviet military sector was advocated in the belief that it would enhance security. At the same time diplomatic negotiations,

particularly arms control negotiations, were used as a means to govern the competition with the West. To secure its position as a superpower the Soviet Union was determined to expand its influence within the Third World. The government was willing to accept Western economic inputs so long as it did not have to accept the West's political and cultural influences.(62)

Gorbachev implied that the primary aspect of this policy, the expansion of the military, had achieved the opposite effect from the one desired. The ever increasing arsenals of the combatants did not instil a sense of security but a sense of fear and a desire to improve weapons technology so that security could be achieved. The policy of "new thinking", proposed in 1986, and the doctrine of "reasonable sufficiency" (1987), attempted to replace the dual-track policy. At the 27th Party Congress in 1986 Gorbachev declared that it had become impossible to believe in the survivability of nuclear war or even that a conventional war could be won. Increases in the destructive capability of both types of weapon ensured mutual destruction and eliminated the ability of war to achieve either political or military objectives.(63) Thus, in this new age, security could be maintained only through political means.

Gorbachev's "new thinking" advocated the replacement of "gunboat diplomacy" with political dialogue, stressing co-operation and interdependence. Outlined at the 27th Party Congress in 1986, the concept consisted of five points:

> 1) a recognition of the existence of global problems that can "be resolved only by co-operation on a world-wide scale";
> 2) a new emphasis on the interdependence of states;
> 3) the elaboration of a set of "principled considerations" that are derived from an examination of the present world situation;
> 4) a recognition, that, if the nuclear arms race continues, even parity will cease to be a factor for military restraint; and,
> 5) a harsh condemnation of the rigidity of previous

Soviet foreign policy.(64)

Points one and two can be viewed together. Those problems "that can only be resolved by co-operation on a world-wide scale" were enumerated as issues concerning ecology and economic development and the achievement of a lasting and just peace.(65) There can be only joint solutions to these problems, and all nations must realise that they can no longer take an isolationist stand. A nuclear accident in Chernobyl affects farming in Scotland, just as industrial emissions in the United States have repercussions for the forests and fisheries of Canada.

Attempts at making industry ecologically sound rely on advanced technology and the willingness of nations to share their knowledge. This exchange of information is reliant on trust and a sense of friendship as well as a system of communications. Just as the industrial revolution had its effects on the global economy so too does the rapid advancement in information technology, perhaps the single leading component in making this an "interconnected, interdependent, and essentially integral world."(66)

The first step in reducing tension and increasing trust between nations was to enter upon the path of disarmament. Points three through five in Gorbachev's outline are interconnected. Point three reflected Lenin's counsel to Party functionaries that they should grasp the new socioeconomic and political situations. Having done this Gorbachev had come to the conclusion that war could no longer be used as a tool of policy. Since war cannot be won there is no need to maintain massive arsenals. Furthermore, if (a) conventional warfare leads inevitably to a nuclear conflagration, or (b) conventional weapons systems have become so destructive in their own right as to have an effect equal to that of nuclear weapons in devastating agricultural, industrial and political centres, was there a rational reason for maintaining the massive stockpiles which NATO and

the WTO oversaw? As Alexei Arbatov has pointed out, "a mere 400 nuclear warheads of the megaton class could destroy up to 70% of the US industrial potential."(67) Four hundred warheads barely exceeded 10-15 per cent of the former Soviet Union's arsenal.(68)

Realising that parity might no longer prevent war followed from a critical analysis of the world situation and objective conditions. In an article which appeared in *Kommunist vooruzhennykh sil* in 1990, Colonel V. Strebkov argued that the existence of conventional weapons did not prevent World War II. Why then should we assume that a nuclear presence would save us from a third world war? As he stated, a "direct cause and effect connection between nuclear weapons and prolonged peace on the planet does not exist."(69) Previous Soviet foreign policy had maintained that such a relationship did exist, and thus the basis for a policy of deterrence was laid. By rejecting deterrence Gorbachev had in effect condemned the foreign policy of the past.

The implication of Gorbachev's foreign policy was that while war might no longer be an instrument of policy, peace was. Christopher Donnelly, former head of the Soviet Studies Research Centre at Sandhurst, summarised Lenin's interpretation of Clausewitz's dictum in this way, that "the policies of war are the violent continuation of the policies of peace, {therefore} the policies of peace {are} only the non-violent continuation of the policies of war."(70) The policies which Gorbachev hoped to pursue through peaceful means were those stated above, but of immediate interest to the average Soviet citizen were the proposed reforms of the political and economic systems. It was the general consensus of the Soviet elite that the United States had attempted to lead the Soviet Union into a devastatingly costly arms race with the aim of breaking the Socialist system.(71) In order for the USSR to recover from this exhausting competition it needed to

desist from the military build-up and rechannel the funds into the civil sector.

Very few nations would wish to commence disarmament if they felt themselves to be in a weak position *vis-à-vis* their neighbours or opponents. While Gorbachev acknowledged this point of view he also felt that the military reserves of the USSR were sufficient to withstand the transfer of funds to the civilian sector. Indeed, the General Secretary claimed that the USSR had reached the point of equilibrium, or parity, with the US under the Brezhnev administration. He asserted that as parity had been achieved it was now necessary to engage in disarmament, negotiating from a position of strength. Gorbachev had both long-term and short-term goals within the disarmament process. In 1986, as General Secretary, he announced his three-point process for the elimination of nuclear weapons by the year 2000.(72) The short-term goal was the organisation of the armed forces based upon the precept of "reasonable sufficiency". Gorbachev was not the mastermind behind this doctrine, rather he was its champion. He had begun to promote the idea of "reasonable sufficiency" in 1983, however, it was not formally unveiled until 1986 at the Twenty-Seventh Party Congress. Born out of a debate in the General Staff during the early 1980s over the need to reform Soviet military doctrine, the policy calls for the reduction of force strength, both conventional and nuclear, to a level appropriate only for defensive measures.

Reasonable sufficiency has two components, the political and the military. At the qualitative level, the policy demands that security be based on political rather than military means. If the emphasis of security rests upon the political then a state is placing its security within the context of the security of other countries. There will be an increased willingness on the part of the state adopting this new doctrine to engage in dialogue and to agree to

compromises.(73) If on the other hand, a state's security is based purely on military strength, with no channels open for negotiations, then that actor is placing its security in opposition to international security. The Soviet Union previously claimed that its defence doctrine represented the former scenario, while wholeheartedly following the latter. Despite the presence of the USSR within an alliance, so long as it based the majority of its foreign policy on the level of ideological confrontation it placed its security above that of the world community. The policy of reasonable sufficiency, by placing emphasis on political interaction rather than military confrontation, calls for states to look at every international actor, rather than a few ideological brethren, as possible allies.

However, reasonable sufficiency is not solely concerned with political doctrine, it also calls for the ability to repel aggression. First and foremost, a nation should "restrain its leaders from unleashing war", but should they fail then a balance of forces should be in effect, the ability to "evaluate the hypothetical potential of the other side" should be present, as well as the ability to take account of the intentions and interests of both sides.(74) Returning to Machiavelli's recurring theme of the threat, not only must the strength of the armed forces be accounted for, but it should also be accompanied by an analysis of the political, social, moral, psychological, historical and cultural features of the opponent.(75)

Reasonable sufficiency is in effect a two-pronged attack on international politics. By promoting this policy the Soviet government attempted to shift NATO and WTO relations "beyond parity to mutual confidence and beyond national security to mutual security".(76) International stability and security were to be achieved through a marriage of political and military doctrines.

While it could be said that most states attempt to unite these two doctrines it could also be argued that the nature of the confrontation between the two superpowers caused their foreign policies to grow increasingly militant, adopting themes of conflict and confrontation. Reasonable sufficiency is a means to re-politicise foreign policy, increasing the opportunities for dialogue and compromise. Should negotiations fail then security can still be maintained through military action, although at a reduced level.

Two questions surround the concept of reasonable sufficiency. First, how large or small a force is considered sufficient? Second, to repel an attack successfully must not a defensive force be capable of offence? In response to the first question while initially no fixed numbers were given, the Soviet military elite and now the armed forces of the Commonwealth of Independent States have seen the need to restructure the military. The majority view is that reasonable sufficiency should be whatever it takes to defend the country adequately. The former first deputy minister of the USSR, Petr Lushev, stated that military potential should be "reduced to limits that are necessary only for defence and not for attack."(77) At the same time, although not clarifying what that limit might be, Marshal Dmitri Yazov, former Soviet Defence Minister, stated that a mere reduction of numbers, excluding a modification of structures and weapon mixes, would serve the purpose of providing only "defence against attack from outside."(78) This attitude was eventually changed. Prior to the collapse of the Soviet Union the armed forces had initiated the restructuring of their military formations and strategy in order to accommodate the rapid dissolution of the Warsaw Pact. As troops and tank divisions were withdrawn the remaining divisions were reorganised to provide greater flexibility on the front lines. Smaller units were expected gradually to cover greater distances. A similar restructuring process is underway in NATO.

This leads us to the second question: can a defensive formation be purely defensive? The offensive nature of traditional Soviet tactics was clear from stated requirements. The first requirement was that the armed forces should be able to prevent large-scale destruction of the homeland; the second, that the military be capable of repelling the aggressor and pushing him back into the depths of his territory rapidly; the third, that the armed forces be strong enough to terminate the aggressor's offensive by defeating him and destroying him instantly.

It has been argued that a defence can be purely defensive. In Winning Peace: Strategies and Ethics For A Nuclear Free World, Dietrich Fischer, Wilhlem Nolte and Jan Oberg of the Transnational Foundation for Peace and Future Research outline the methods by which security could be based on wholly defensive measures in both the military and non-military fields. It was argued that a dual message should be presented to dissuade aggression:

> (1) if he attacks he will suffer, but
> (2) as long as he does not attack he has nothing to fear.(79)

The threat of retribution lies behind the concept of deterrence. Yet retribution and counter-attack cause instability. Machiavelli believed that a nation's strength would impress its neighbours and lead to national security. This is true up to a point. An excessive military build-up may unnerve an opponent and lead him to believe that he must strike before the other state has the opportunity to do so. By incorporating a defensive defence into a military doctrine a nation is able to demonstrate to its neighbours that it does not pose a threat, and that therefore they have nothing to fear.

But what is a defensive defence? To Fischer et al., it is a doctrine which

calls for the complete restructuring of the armed forces. Troop reductions and the elimination of certain weapons are both recommended. Those weapons maintained must be a short range, and of limited destructive capability. Furthermore, the attitudes of those in charge of the weapons systems should change, with a conscious decision to reject the concept of offensive defence being made. Defence would be based on a knowledge of local circumstances, such as geography, topography, and political culture. Trust of the civilian population would be a foremost priority, since it is they who are being defended. It is proposed that the civilian population be incorporated into the overall defence strategy. In addition, the authors suggest that each state become self-sufficient in matters of defence and reduce the level of foreign involvement in its security as well as its level of involvement in the security of others. This is how the authors of Winning Peace define a defensive military posture.

The Soviet Union tried to adopt such a posture. Disarmament negotiations and treaties were slowly reducing the number of long-range weapons. Short-range nuclear weapons also fell victim to the axe, and their elimination helped to reduce tension in the political arena. So long as some nuclear weapons remain in the arsenals of the United States and Russia, however, the military must maintain plans for their deployment and use. Even as disarmament negotiations have continued, the leaders of Britain and other NATO states have continued to discuss plans for updating and replacing the remaining weapons. As long as nuclear weapons exist there will exist the threat of their use, and instability will remain.

The adaptation of the Soviet military to local circumstances was thrust upon them a little sooner than they would have desired. This was due to their own reduction proposals, but more importantly the demands of their Warsaw

Pact allies for their withdrawal. As the WTO nations overthrew their communist regimes they demanded the removal of the shackles which bound them to those systems, the presence of the Soviet military. Czechoslovakia, Hungary, and Poland all requested that the Soviet army speed up its withdrawal.(80)

As for trusting their citizens, it was equally important within the former Soviet Union for the citizens to trust the military. The unrest in the Central Asian Republics, the Caucasus and the Baltics and the intervention by Soviet troops destroyed any alliance or affinity those people might have felt towards the military. The armed forces as a result felt alienated from the people and betrayed by the government. They claimed, and rightly so, that they never should have been used in any internal conflicts, that that was the responsibility of the KGB and the MVD guards. The role of the Soviet military was to protect the people, not to turn its weapons against them. The collapse of centralised control has in one respect wiped the slate clean for the military establishment. Because the individual republics are now in charge of their armed forces it could prove easier for the military to renew its ties with the community.

CONCLUSION

John Garnett's definition of military power would appear to be a universal one, for while successive generations of politicians and theorists have debated the issue of when force is applicable they have not denied the fact that war or military power is a form of violence legally sanctioned by governments. The policies of new thinking and reasonable sufficiency were the latest contributions to this subject matter.

Central to both policies was the belief that political rather than military means should be used in pursuit of foreign policy objectives. Gorbachev argued that by analysing our political and economic conditions and recognising that we are members of a "contradictory but interconnected, interdependent, and essentially integral world" we would realise that peace not war should be the tool by which we achieve our aims.(81) Inherent in this theory is a rejection of the belief that we must overcome the will of our opponent. Essentially our aims, so Gorbachev proposed, are the same, therefore there is no reason for one state to subjugate another.

If every nation shares the aim of political, economic and environmental stability then, Gorbachev suggested, ideological differences should not be allowed to get in the way. Generally, the promotion of differences succeeds not in furthering understanding but in developing antagonisms. When an ideology is supported by a sizable military force it can appear threatening to the opposing state. When a threat is presented it must be met. Unfortunately, the response can appear equally threatening.

In promoting new thinking and reasonable sufficiency Gorbachev rejected elements of the theories of Clausewitz, Machiavelli and Lenin. War could no longer be used as a tool of policy, nor could the concepts of the threat and ideological confrontation be the basis of international relations. In pursuing his new policies Gorbachev appeared to reject or at least to ignore the other aspects of military power. To return briefly to Garnett's definition, military power can be used as a symbol of national prestige, as an instrument of national unity and as a means of ensuring security. As will be demonstrated in subsequent chapters, the importance of these elements on the national psyche was overlooked. As a result, the pursuit of the foreign policy programme and military reforms would

have severe repercussions for political and economic reforms.

The implementation of new thinking and reasonable sufficiency was economically motivated as was the initiation of the conversion programme. Machiavelli had argued that war had a bearing on the everyday activities of the state. I would argue that this idea should be thoroughly understood if a transition from a "war system" to a "peace system" is to be accomplished. While Gorbachev's theories appeared manageable, his failure to adequately assess each aspect of military power severely limited their effectiveness. The economic and social consequences of force reductions and conversion were not taken into consideration. Gorbachev would soon learn that peace, like war, can create new political situations.

NOTES

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3. John Garnett, "The Role of Military Power" in Contemporary Strategy: Theories and Concepts, vol.1, p. 71.

4. Ibid., pp.71-72.

5. Carl von Clausewitz, On War, p. 75.

6. Ibid., p. 76.

7. Ibid.,

8. Ibid., p. 77.

9. Alfred J. Toynbee, The World After the Peace Conference, pp. 45-46.

10. von Clausewitz, p. 87

11. Ibid., p. 131.

12. Niccolo Machiavelli, The Prince, p. 77.

13. Niccolo Machiavelli, The Art of War, p. 495.

14. The Prince, p. 88.

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16. V.I. Lenin, "War and Rebellion" in Collected Works, vol. 24, p.400.

17. Ibid., p.408.

18. Alfred Monks, Soviet Military Doctrine: 1960 to the Present, p. 5.

19. Ibid., p.6.

20. F. Rubin, "The Theory and Concept of National Security in the Warsaw Pact Countries" in *International Affairs*, vol. 58, no. 4, 1982, p.651.

21. Ibid.,

22. Ibid., p. 656.

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24. Ibid., p.22.

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26. Ibid., p. 200.

27. Ibid., p. 198.

28. Major R. C. M. Hall, Command and Control of the Future Battlefield: The Soviet View, p. 11.

29. Ibid.,

30. Christoph Bluth, "Defence and Security" in Khrushchev and Khrushchevism, p. 200.

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32. Albert and Joan Seton, The Soviet Army:1918 to the Present, p. 182.

33. Ken Booth, "Soviet Defence Policy" in Contemporary Strategy, vol. 2, p. 65.

34. Monks, p. 34.

35. Ibid.,

36. Ibid.,

37. Ibid., p. 40.

38. D. Strode and R. Strode, "Diplomacy and Defence in Soviet National Security Policy" in *International Security*, vol. 8, no. 2, 1983, pp. 98 and 91.

39. Ibid., p. 99.

40. Booth, p. 69; Military assistance to Third World countries was a vital component of Soviet diplomacy. Transfers could help to weaken Western sponsored military alliances. They could also help to strengthen the Soviet Union's anti-colonial and anti-imperialist cause in the Third World. See Alexei Izyumov, "The Soviet Union: arms control and conversion -- plan and reality", Arms Industry Limited, ed. Herbert Wulf.

41. Ibid.,

42. Figures compiled from *Current Digest of the Soviet Press*, vol. 31, no. 50, p. 13;

vol. 38, no. 52, pp. 10-11; vol. 39, no. 47, p. 16; vol. 40, no. 46, p. 14.

43. GDP estimates taken from *World Economic Outlook -- Interim Assessment*, January 1993, International Monetary Fund, Washington DC, 1993. Levels of military expenditure were taken from Deger and Sen, Military Expenditure: The Political Economy of International Security, p. 49.

44. Ibid., p.62.

45.*Foreign Broadcast Information Service Daily Report: Soviet Union, Supplement;* USSR Congress of the People's Deputies, 31 May 1989.

46. Franklyn B. Holzman, "Are the Soviets Really Outspending the US on Defence?", *International Security*, vol. 4, no. 4, 1981, pp. 87-90.

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58. Percentages derived from the proposed figures for the 1990 defence budget. *Pravda*, 16/12/89.

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62. Bruce Parrott, "Soviet National Security Under Gorbachev", *Problems of Communism*, Nov-Dec 1988, p.2.

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64. Charles Glickham, "New Directions For Soviet Foreign Policy", *RFE/RL Research Bulletin*, 06/09/86, p. 3.

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67. Alexei Arbatov, "How Much Defence is Sufficient", in *International Affairs* (Moscow), 4/1989, p. 40.

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69. Polkovnik V. Strebkov, "Novaya model' bezopasnosti: voennyi aspekt", *Kommunist vooruzhennykh sil*, no. 2, 01/1991, p. 24.

70. C.N. Donnelly, Heirs of Clausewitz: Change and Continuity in the Soviet War Machine, p. 21.

71. V. S. Shaposhnikov, Preface to Problems of Common Security, p. 7.

72. The Plan for the Year 2000 will be discussed in greater detail in Chapter 2.

73. V. Zhurkin, S. Karagonov and A. Kortunov, "Reasonable Sufficiency -- Or How to Break the Vicious Circle", *New Times* 12/10/87, p. 13.

74. Ibid.,

75. Ibid., See also Winning Peace, by Dietrich Fischer, Wilhelm Molte and Jan Oberg.

76. Mary C. Fitzgerald, "Reasonable Sufficiency in National Defence" in Soviet National Security Policy Under Perestroika, p. 179.

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See also L. Semeiko, "Vmesto Gor Oruzhiya: O printsipe razumnoi dostatochnosti" in *Izvestia* 13/08/87, p.5.

78. "Voennaya doktrina Varshavskogo Dogovora -- Doktrina Zashchity Mira i Sotsializma" in *Pravda* 27/07/87, p.5.

79. Winning Peace, p. 51. See also the article by Gen. G.I. Salmanov on military doctrine which appears in *Voennaya mysl'* 12/88

80. The withdrawal of troops from Eastern Europe will be discussed in Chapter 3.

81. Perestroika, p. 139.

CHAPTER TWO
SURVEYING THE FIELD

AN INTRODUCTION TO CONVERSION

For as long as there have been weapons there have been demands for their destruction and the release of men and materials for more "productive" use. The process by which human and financial resources are transferred from the defence sector to its civilian counterpart is known as conversion. It is generally hoped that the initiation of a conversion programme will result in a large scale "peace dividend". The very name given to the collective benefits of conversion implies a financial gain, and certainly the success of conversion is reliant upon the basic structure and flexibility of any given state's economic system.(1) It should be stressed, however, that conversion is also a political, defence and social issue. A political decision must be taken to pursue a course of disarmament. The political decision will impact on the security of the state, an aspect which must be considered during the decision-making process. Once a government has decided to initiate a joint programme of disarmament and conversion it must also consider how it will assist military personnel in making the transition to civilian life as well as how it will promote the development of new civilian-oriented product lines within the defence industries and assist in any retooling of those enterprises and retraining of personnel. The level of success which a conversion programme will enjoy is dependent upon the amount of time and preparation given, at all levels, to its initial implementation.

Over the years there have been numerous publications which have addressed the possibilities of and the potential for defence conversion. There has been a general consensus on both sides of the East-West divide about the benefits which could be derived as well as the problems that might be encountered.

Some of those anticipated benefits include:

> 1) an increase in standards of personal consumption of goods and services;
> 2) an expansion or modernisation of productive capacity through investment in new plant equipment;
> 3) the promotion of housing construction and urban renewal, including slum clearance and rural development;
> 4) an improvement and expansion of facilities for, among others, education, health, welfare, social security, cultural development, and scientific research.(2)

The only area where there has been disagreement is over the best method of achieving the peace dividend. Will a free market or centrally planned economy meet with greater success? The debate has centred around two issues, the existence of a military industrial complex and the very structures of the respective economic systems.

THE EXISTENCE OF A MIC

The concept of a military-industrial complex (MIC) was introduced into political and social parlance by President Dwight D. Eisenhower in his "farewell address" in 1961. Prior to that speech it had been widely assumed in Western societies that civilian politicians acted independently of particular economic and military interests.(3) Their main aim was to promote the public's welfare. To accomplish this, policies were formulated within and legitimated by a democratic parliamentary assembly. However, Eisenhower suggested that this democratic procedure was being undermined by the MIC. Composed of senior military personnel and defence industrialists, the MIC had but one interest, the protection and development of the defence industries.(4) Conspiracy theorists have argued that MICs, in pursuit of their goal, have been willing to goad politicians into war and even, when necessary, assassinate those individuals who have failed to fully support the defence sector. While there is disagreement over

the lengths to which MICs will go, there is little doubt that such complexes exist within the Western democracies. The existence of a similar type of organisation within the former Soviet Union is a matter more open to debate.

Writing in 1975 Egbert Jahn argued against the existence of a "western type" MIC within the Soviet Union. In order to derive that conclusion he felt it necessary to raise two questions.

> Does the armaments complex - i.e. in particular the leaders of the military apparatus and the armaments industry - differentiate itself from other social groups in Soviet society? Does the armaments complex, or a portion of it, pursue an independent policy? (5)

Jahn first turned to Marxist-Leninist theory for the answers to these questions. Inherent in the concept of an MIC is the notion of a conflict of interests, the defence industrialists versus the common people and their democratic representatives. According to the Soviet Marxist thesis the notion of a Soviet MIC had to be rejected on the grounds that the system did not contain "vested interest groups with particular interests, standing in opposition to one another".(6) The argument continued that militarism was only peculiar to a class society which is inherently antagonistic. Socialist society was not an (antagonistic) class society, therefore militarism did not exist. A simple examination of the stated Soviet policy did not necessarily prove or disprove the existence of a military-industrial complex. Jahn recognised this and thus he began to scrutinise the state structure for clues.

He did not deny the fact that the Soviet Union possessed a large army and navy which were supported by numerous defence ministries and their enterprises. Not only were the armed forces the recipients of institutional backing, they also received the broad support of the population. Jahn contended that because the entire society was working for security, because society was

highly militarised, there was no reason for one sector to pursue the goal on its own and to the disadvantage of others. The unity of the people was represented in the bureaucracy which had become "something of a class ... and the governmental instrument itself. In Soviet society master and overseer [had] become one".(7) For this reason a military-industrial complex could not exist.

Vernon Aspaturian derived a different conclusion when he addressed the issue. In his article, "The Soviet Military-Industrial Complex - Does It Exist?" (1972), he established two possible definitions for a Soviet MIC.

> ...the term military-industrial complex suggests, in its broadest sense, a deliberate and symbiotic sharing of interests on the part of the military establishment, industry and high-ranking political figures, whose collective influence is sufficient to shape decisions to accord with the interests of these groups at the expense of others in Soviet society. In a more restricted sense, the concept implies an interlocking and independent structure of interests among military, industrial and political figures, that enables or impels them to behave as a distinctive political actor separate from its individual components."(8)

Aspaturian believed that a complex of this second type would exhibit a high degree of policy unity and that no such organisation yet existed in the United States, the Soviet Union or any other country. Karl F. Spielman in an article written in 1976 attempted to demonstrate the truth of Aspaturian's argument.(9) Spielman chose to look at the Soviet defence industrialists and their relationship with their main consumer, the armed forces. He argued that the structure of the defence sector and the nature of the relationship between supplier and consumer precluded the existence of a military-industrial complex. At the time that he wrote his article there were eight defence ministries, each of which oversaw the operations of several hundred enterprises and design bureaux. These eight ministries developed the weapons for, and sold them to five different military services. Because each ministry covered a different aspect of weapons production,

e,g tanks versus fighter planes, they did not necessarily target the same services. Nor could it be argued that at any given time a minister was representing all of his enterprises equally. There were occasions when one design would be promoted over another. Spielman concluded that while defence industrialists might cultivate relationships with each other, with the military and with the politicians they did not create a cohesive group. However, to argue that because ministers may at times act at cross purposes in order to garner support for a particular weapons system a military-industrial complex does not exist overlooks the fundamental purpose of such a complex. If we look again at the original definition proposed by Eisenhower as well as Aspaturian's first description it is clear that the main priority of such a grouping is to ensure its overall security. This is done by encouraging a government to pursue an economic policy conducive to the defence sector. The main bargaining tool is the security of the nation, something which no government would wish to jeopardise. When Aspaturian's first definition is applied it becomes apparent that a military-industrial complex exists in any country that has both a military establishment and an industrial sector.

Nowadays, there is no objection to saying that a military-industrial complex existed within the Soviet Union. While Soviet writers might have doubted the truth of that statement in the 1970s, by the 1980s they were using the term to denote their own defence sector.(10) Furthermore, the "conflict of interests" which Jahn claimed did not exist became increasingly apparent as Gorbachev attempted to initiate reforms within the defence sector. As will be detailed elsewhere in this thesis, reform was greeted cautiously by both defence industrialists and senior military personnel. As the reforms cut deeper into the sector efforts were made to subvert the course of the programme. These attempts were frequently played out on the political stage, two examples being the

formation of the Scientific-Industrial Union (*Nauchno-promyshlennyi soiuz* or NPS) which was intent upon slowing the pace of reform, and the participation of Marshal Yazov, the Minister of Defence, Oleg Baklanov, deputy chief of the Defence Council, and other leading military and defence industrial personnel in the attempted overthrow of Mikhail Gorbachev. While Gorbachev hoped to redefine security in terms of the economic and social well-being of the state there were others who continued to believe in the primacy of military strength. As a result sections of the political elite began to work at cross purposes.

SIMILAR SYSTEMS: AMERICAN & SOVIET MICs

In the concluding statements of "The Merchants of Death, Then and Now" (1972) Robert Ferrell complained that the MICs of the United States and the Soviet Union did not pay enough attention to each other.(11) True, they looked to see which weapons were being developed and by whom, but they did not spend enough time analysing how their respective organisations worked. Americans tended to assume that the complex within the USSR was a mirror image of their own, while Soviet analysts examined American military policies through the prism of Marxist-Leninist thought. Neither approach provided a clear picture of the abilities and limitations of the two defence sectors.

A country's armaments programme is determined by both government policy and the structure of the defence sector. While the declared policy aims of the Soviet and American governments were radically different, and the overall structures of their military-industrial complexes bore little resemblance to each other, there remained striking similarities in the day-to-day operations of both institutions. This was apparent as early as the 1950s. In his memoirs Nikita Khrushchev recalled a visit to Camp David. During a walk in the garden

Eisenhower explained how his military leaders would approach him and ask for money for a new project. His protestations that money was not available were of little consequence for the military would simply argue that the Soviet Union had already allocated funds for a similar programme and that America was running a very real risk of falling behind.(12) Khrushchev stated that the Soviet Armed Forces used the same tactics, "blackmailing" him with the threat of American superiority.(13)

The similarities did not end with political blackmail. In Dismantling the Cold War Economy Ann Markusen and Joel Yudken detail the history of the American military-industrial complex. They talk at great length of a "domestic economy scarred by prolonged commitments of physical, technological and human resources."(14) A range of industries have been created and nurtured by the Department of Defense (DOD or Pentagon). Within these industries work an elite corps of engineers and scientists. They are in a sense the product of the corporations for which they work. Recipients of various grants, they start their connection with the firm at a young age, and are generally recruited straight out of university. The high level of prestige associated with such a career is coupled with above standard wages, continuous on the job training, and the opportunity to work with equipment not available in most civilian industries.(15) The process of recruitment was similar in the former Soviet Union. A career in the defence industry often seemed the natural conclusion to a lengthy academic career studying chemistry, physics or engineering. The rewards once again included a high level of prestige and job satisfaction, improved wages, better quality of goods and services, better housing, and the opportunity to use advanced technology. In return for these privileges scientists and engineers in both countries must in effect sign an intellectual property agreement.(16) Their discoveries or creations are the property of the firm and the industry. The highly

secretive nature of the work demands that the system operate in this way.

While recruitment was the same, overall structure was different. In the Soviet Union the Ministry of Defence coordinated the activities of the armed forces while the Military Industrial Commission (VPK) performed a similar function for the defence and civilian ministries (of which there were 8 and 6 respectively) that operated in this sector.(17) On the purely defence side these included the ministries of aviation industry (Minaviaprom), defence industry (Minoboronprom), general machine building (Minobshchemash), radio industry (Minradioprom), shipbuilding industry (Minsudprom), electronics industry (Minelektronprom), civil aviation (MGA), and telecommunications (Minsviazi).(18) These ministries combined with the state committee for information processing (GKVTI) formed the Ministry of Defence Related Industries (MOOP).(19) They directed the operations of the design bureaux (KBs) and enterprises working within a related field. The design bureaux would compete for a contract from a particular service. For instance Mikoyan might compete against Sukhoi for an air force contract. The MiG (Mikoyan design) might win this particular bid but Sukhoi might win an army contract later. The ministries attempted to enhance yet stabilise competition within their sectors.

Diagram 2.1
The Structure of the Soviet Military-Industrial Complex

VPK

MOOP

Minelektronprom Minsudprom Minsviazia MGA GKVTI
Minaviaprom Minoboronprom Minobschchemash Minradioprom

Enterprises and Design Bureaux

In the United States the system was and is slightly more centralised. In the place of the Ministry of Defence and the eight defence industrial ministries there is but one Department of Defense which contracts work out to a limited number of enterprises.(20) The manufacturers, in competition with one another, design a product, be it a plane, tank or ship, and upon approval by the Pentagon in turn tender out the work for the component parts.

These dissimilar structures operated under comparable conditions. Markusen and Yudken, in describing the system that still prevails, have stated that "military-led industrial policy in the United States...operates as a command segment of the economy; the outright purchase of material, equipment, and research is its major mechanism".(21) This is in opposition to the free and competitive markets which operate elsewhere in the economy. Within a competitive system a number of companies compete against one another in order to satisfy consumer demand. This competition forces firms to ensure efficient and low cost production.(22) The consumer achieves the maximum benefit under this system. The consumer/supplier relationship is different within the defence sector. The consumer, in this case the government, finds itself dealing with a handful of dominant sellers (oligopolists).(23) Since competition, and therefore choice, is restricted the consumer is forced to pay higher prices. The government is not an innocent party in this relationship; over the years it has been willing to subsidise marginal firms in order to maintain an indigenous defence industry.(24) Further collusion is evident in the promotion of an industrial policy. Markusen and Yudken argue that the government has systematically promoted the defence sector and particularly the aerospace industry as a potential growth sector. As a result it has provided

financial and capital support, encouraged industrial collaboration, shaped competition, developed a trade policy and provided a guaranteed domestic market.(25)

This policy of *state managerial capitalism* resembles the approach adopted in the former Soviet Union.(26) It is the nature of a centrally planned economy to substitute the financial regulators of demand, supply and price with an economic administration which decides for itself how to allocate resources and plan production.(27) In the Soviet Union this task was performed by the State Planning Committee (Gosplan). While it devised plans for every sector of the economy, the defence sector, as detailed above, received special privileges in the form of increased levels of financial and capital investment.(28) As in the United States there was an industrial policy tailor-made for the defence sector.

The similar nature of the two systems means that the same types of problem were bound to be encountered in any attempt to initiate a programme of conversion: problems in dealing with the retraining of personnel so that they might operate in a more economically competitive environment and be able to enjoy the same level of job satisfaction; in retooling defence enterprises; and in easing the transition of the enterprise as a whole to the competitive market.

POSSIBLE SOLUTIONS?

Until the 1980s the solution to these problems was believed to rest within the economic systems themselves. In a 1962 United Nations report it was suggested that,

> In the economic life of all countries, shifts in the pattern of demand and in the allocation of productive resources are continually occurring in response to

> changes in technology, foreign trade, consumer tastes, per capita income, the age distribution of the population, migration and many other factors. Some industries grow more rapidly than others, while the output of certain industries may even decline in absolute terms. Such shifts involve a transfer of manpower and capital between occupations, industries and regions. The reallocation of productive resources which would accompany disarmament is in many respects merely a special case of the phenomenon of economic growth.(29)

It was argued that in the case of the United States the government need only increase expenditure on other types of goods and services, maintain a high level of consumer demand and apply fiscal and monetary policies in the appropriate manner.(30) In essence it was argued that the market would be able to adjust to the new conditions.

Stefan Doernberg of the Institute for International Politics and Economics in Berlin (GDR) was less sure of this approach. In his paper to the 1973 symposium on Economic and Social Aspects of Disarmament he argued that in capitalist societies the profit mechanism stood between production and needs. Because the satisfaction of the material, social and intellectual needs of the working people contradicted capital's need to ensure profit, the market mechanism would not be able to solve the types of problem which would arise as a result of conversion.(31)

It could be argued that the supremacy of the profit mechanism results in the overly defensive nature of the western military-industrial complex. The fear that profits will be reduced encourages actors within the complex to work as a more cohesive group in order to undermine the natural democratic processes of the state so that their position is ensured.(32) The relationship of the state in the capitalist system to its defence sector is one of both contractor and purchaser.(33)

As a result of this and because of the very nature of the defence system, as detailed above, the actions of the government in relation to the defence sector can have far reaching effects throughout the economy. It is perhaps for this reason that Soviet writers argued that militarisation and defence spending were essential to "the prosperity and even the survival of the capitalist system."(34)

In his article "Economic Consequences of Disarmament: The Soviet View" (1968) Joseph Wieczynski noted a change in the attitudes of some Soviet writers towards the role of the military-industrial complex in capitalist societies. L. Gromov and V. Strigachev in particular viewed military production as waste production.(35) This classification was based on a belief that military production yielded no lasting benefit to society. Defence expenditure created only a temporary economic boom. Over an extensive period of time militarisation would prove to decelerate the growth of overall production, retard technological progress, excessively develop heavy industry at the expense of light industry, and reduce the standard of living through higher taxes.(36)

Western writers have generally been split over the "wastefulness" of military production. It has been argued that money spent on the development and production of new weapons systems and the training and maintenance of military personnel could be better spent on education, healthcare and other services. Massimo Pivetti in his review article, "Military Expenditure and Economic Analysis", put forward the alternative argument that war production acts as a boost to economic development. He attributed the success of the US economy in the periods 1947-48 and 1967-68 to government purchases of goods and services. He claimed, correspondingly, that the deteriorating performance of the economy after 1969 was to a large extent the result of a reduction of government purchasing, which was 20 percent lower in real terms than in

1968.(37) An increase in defence spending in the 1980s produced a similar effect. Military expenditure rose at a rate of 6.7 percent per annum between 1980 and 1986.(38) Increased government spending resulted in a general boom within the economy and an increase in imports.(39) This would appear to have been a positive outcome for the US economy, but it was offset by the development of a sizable deficit. President Reagan's economic policy, popularly known as Reaganomics, called for lower taxation as well as stricter control of the money supply. In order to cover the increased expenditure the government had to raise its borrowing requirements, which in turn raised the national interest rates. High levels of interest coupled with low rates of inflation lured foreign investment causing the value of the dollar to rise to an unsustainable level which in turn caused competitiveness and thus exports to decline.(40) The outcome of Reagan's defence and economic policies closely resembles the hypothesis put forward by Gromov and Strigachev in the 1960s. It would appear that while increased expenditure in the defence sector can lead to an economic boom in the short-term, in the long-term it leads to decline. But, is it wasteful? In Leonard C. Lewin's polemical treatise, The Report From Iron Mountain (1967), it was argued that war, here implying not only the act of war but the production of weapons for war, could not be considered wasteful. To do so would imply a failure of function.(41) This, he argued, is not the case. Weapons are used to protect the state and its interests and, when properly used, this is what they do.

Lewin also proposed that war be considered a stabilising factor rather than a waste. By operating completely outside the framework of the economy of supply and demand, war production becomes the most effective way in which to deal with the surpluses, be they surpluses of production or of population. According to this argument military spending acts as a stabilising factor in

preventing economies from advancing too rapidly. At the same time it helps to structure the economy.(42) Advancements in weapons technology can hold benefits for the security of the state as well as the further development of the economy.

This question is not one which is easily resolved; however a compromise has been suggested. Rasler and Thompson in their 1989 survey of war and the economic growth question argued that,

> all or most wars probably involve some obvious and subtle mixture of destructive and constructive effects on war participants, [and thus] we are left with the possibilities that the net war impact on economic growth can be positive, negative, variable (positive for some cases, negative for others), or insignificant.(43)

Perhaps then the important question is not whether war is wasteful but whether it is cost-effective. Is the maximum benefit being derived from the level of input? Because each state is organised in a different manner for war the answer will vary from state to state. In the case of the Soviet Union, Mikhail Gorbachev determined that the military's claim on the state budget was no longer sustainable while the economy was experiencing negative growth. Thus the decision was made to redirect funds to the civilian sector.

Prior to the 1980s articles concerned with conversion appeared infrequently in the Soviet press and were generally concerned with the subject in the context of the capitalist systems.(44) When attention was turned towards the possibility of conversion within the Soviet Union it was presumed that few difficulties if any would be encountered.(45)

The arms race was considered the fault of the capitalist West, particularly

of the United States. In the socialist countries armament expenditure was determined "exclusively by the necessity of defence against a potential enemy."(46) Indeed Nikita Khrushchev while still First Secretary of the Communist Party of the Soviet Union (CPSU) argued that were it not for the arms race the money would be spent on housing and education.(47) Should the military competition cease, then conversion could begin.

Stefan Doernberg claimed that while the socialist countries, like their capitalist counterparts, would encounter problems of organisation and planning, of economic proportion and the allocation of manpower, of retraining and dislocation of the workforce, they would find solutions in the very nature of the socialist planned economy. Such a system provided for the active participation of the workforce in the planning process and its implementation.(48) While this claim would later be disproved by Soviet academics in the 1980s and the failure of the Gorbachev conversion programme, it was widely accepted in the 1960s and 1970s. Two separate United Nations documents supported this view. In the 1962 UN Report it was frequently suggested that the "framework of the general economic plans [would] ensure a desirable balance between demand and resources."(49) In a subsequent document it was concluded that within Soviet military enterprises and establishments no great alterations or wholesale replacement of equipment would need to occur, nor would there be any need for the relocation of labour or mass retraining.(50)

Two periods of Soviet history are generally cited in discussions of conversion, post-World War II and the Khrushchev era. It is arguable whether the first should be described as a period of conversion or a period of rebuilding. As a result of the enormous destruction and devastation which occurred during the war much of the equipment was unsalvageable.(51) In addition, those

enterprises which had been constructed during the war were geared entirely towards military production and thus "less convertible" than enterprises built during peacetime.(52) The relocation of the workforce also proved difficult because vast numbers had been evacuated east in advance of the German onslaught. Problems were encountered in physically moving people back to their homes and in rebuilding houses and a community infrastructure to support them. As a result there was a decline in industrial production in 1945 and 1946.(53)

The second period, the Khrushchev era, initially received a more favourable press. Attention was concentrated not so much on plant conversion as on the demobilisation of the armed forces. The 1962 UN Report claimed that no significant problems were encountered.(54) While remaining unspecific, Alexei Kireyev in a 1989 article argued that positive economic outcomes had been achieved as a result of the unilateral arms cuts of the 1960s.(55) Lincoln Bloomfield, Walter Clemens and Franklyn Griffiths have stated that the conventional ground force reductions which occurred between 1955 and 1958 were undoubtedly motivated by scarcities in agriculture, housing, light industry and in manpower.(56) Undoubtedly it was to these areas that the released manpower was redirected. The transition was not as smooth as has been asserted. In an article which appeared in *Izvestia* in 1991 officers voiced their concern that the Gorbachev disarmament programme would be handled as badly as the Khrushchev initiative.(57) They blamed poor planning on the part of the government for high levels of unemployment among officers and housing shortages. The system had not functioned as effectively as had been predicted. In 1979, Milton Leitenberg in an article in the *Journal of Peace Research* cited a Soviet spokesman who declared that the USSR would encounter problems in converting their defence industries.(58) It was unclear what these problems

might be, yet Leitenberg was convinced that they would be easily resolved.

The truth of the matter is that because neither system was exactly as it seemed or exactly as its government claimed it to be, neither economy was or is guaranteed a successful conversion programme. The American defence sector was coddled from an early age. The creation of an industrial policy specific to the defence sector has meant a highlevel of government involvement in its operations, an involvement not experienced in any other sector of the economy. The absence of normal market regulators within the industry still limits its ability to adjust to peaceful production. Not only must the firms develop new product lines, they must also learn a whole new set of rules. The end of the Cold War and the commencement of a period of prolonged disarmament have left the defence enterprises with two options: 1) divestment or 2) concentration.(59) Some firms have chosen to reduce dependence on arms sales and have sold off some of their military assets in order to improve liquidity. Other firms, particularly those with a civil and military product mix, have decided to sell off the civilian aspects and concentrate on increasing their share of a shrinking arms market. It must be said that the second option is the one more frequently chosen by large producers.(60)

The Soviet Union's experience of conversion, which is the specific topic of this thesis, differed from that of the United States. Lack of government impetus resulted in the inefficient operation of the planning system. While Gorbachev pursued a rapid disarmament programme, proper conversion appeared to remain an afterthought. Consideration was not given to the myriad ways in which disarmament would affect both the economy and society. The second problem was that any attempts to plan for conversion were hindered by the Soviet Union's lurching progress towards market reform. The defence sector

with 5,000 enterprises and approximately 40 million employees essentially existed as a planned economy within an even larger transitional market economy.(61) The very nature of this arrangement meant that the success of conversion would be limited.

ESTABLISHING AN HYPOTHESIS

If neither a free market nor a centrally planned economic system can ensure a smooth transition from an armed economy to a disarmed economy then what other methods are available to a government? Some authors have argued that it is not the economic system but the state structure which holds the key to successful conversion.(62) In its ideal form the state exists to protect its citizens from both external and internal threats. In order that this duty may be carried out society sanctions the use of force by the state.(63) As has been detailed above, the state develops a military-industrial complex which will enable it to defend society. This complex appears to be subordinate to the government, for it is the promotion of an industrial policy which gives rise to its existence. Leonard C. Lewin's Report From Iron Mountain proposed a different interpretation, that "war", including the preparation for war, is a social system in its own right.(64) Support for this claim was to be found in the relationship between "war" in this sense and the state.(65) The author argued that it was incorrect to assume that "war", as an institution, is subordinate to the social systems it is believed to serve.(66) If war were subordinate, if it existed only as a tool of policy, than disarmament and conversion would be a procedural matter; the system would be as easily dismantled as it was created. This is generally not the case. The Report used as evidence the limited success of conversion. Disarmament and conversion are understandably linked. When a programme of total and complete disarmament is pursued conversion is bound to be successful; note the

cases of Japan and Germany. When a government is interested only in a limited form of disarmament than conversion is far less successful.

Pursuit of a limited disarmament programme demonstrates that a government believes that peace will not last and thus that it is unwilling to damage its defence infrastructure. This signal is received both at home and abroad. Defence enterprises are encouraged that their services will be needed again, thus during the "famine period" they are willing to tighten their belts but they are not necessarily willing to restructure.(67)

For those enterprises unable to survive this period and forced to release their employees the demands that they place on the social sector in terms of debt relief and unemployment benefit have the potential to offset the economic savings the government would have hoped to have made as a result of disarmament. In order to prevent such a fate, enterprises, employees and members of the local community attempt to influence government by threatening the withdrawal of their support.(68) The military-industrial complex, contrary to popular belief, is not a faceless organisation; it is made up of individuals who are bound to suffer unless appropriate support programmes are in place when conversion begins.

Although the same type of democratic process could not be said to have existed in the Soviet Union, at least until its last two years, the military-industrial complex as a whole was still able to influence policy. The military did not defy Khrushchev openly, but neither did it give him its full support in 1964. In 1991 members of the MIC and the armed forces participated in the attempt to overthrow Gorbachev. Subsequently members of the defence sector have tried through various Russian parliamentary parties to moderate the course of

reform. In each instance it has been argued that government policy has put the security of the state and the stability of the defence regions at risk.(69) To withstand such criticism takes a strong political will, a coherent vision of the future and a great deal of organisation.

A state must be organised for peace just as it is organised for war. The Report proposed that the "fact that a society is organised for any degree of readiness for war supersedes its political and economic structure".(70) This argument is reminiscent of the one put forward by Machiavelli, and outlined in Chapter One. In The Prince he argued that war was the very basis of the state. In The Art of War he declared that a state had to have the means to protect its civic institutions and that these same institutions must in essence be geared to their own protection. The way to achieve this was to maximise the level of political organisation.(71) Within this context war becomes a factor which shapes both the external and internal structures of the state, thus fulfilling the foreign policy and unifying roles described by Garnett.

The political structure, created out of a need to defend society from an external attack, is maintained by the threat, however unlikely, that force will be used within a domestic context. The evaporation of a war system's credibility can therefore lead to the government's dissolution.(72) At least two incidents can be cited from Russian history in which a weak showing on the field of battle was immediately followed by a popular uprising. The first case was the 1905 Revolution. Following a resounding defeat at the hands of the Japanese, the Tsarist regime was then faced with a revolution which, although eventually suppressed, forced the system to change in certain respects. Again in 1917 revolution followed close on the heels of a poor military showing. Granted the Russian people were revolting against general economic and political situations;

nevertheless, if war had not aggravated the conditions, would the revolutionary flame have flared so high? When all is said and done, will the history books state that Gorbachev's attempts to curtail the military and its influence in Soviet society added impetus to the rebellions in the various republics?

It was argued in the Report From Iron Mountain that the political role of the armed forces and the war system is augmented by their social function. The military is a symbol of national unity, instilling pride and patriotism within the citizenry, tying it to the state. These bonds are further strengthened when national service is enforced, thus creating a shared experience. Military institutions are used to provide a moral code and a role in the social structure. They are also used to absorb excess labour, thus fulfilling one of war's economic functions.(73) These are themes which have been expressed elsewhere, most notably in Alexis de Tocqueville's *Democracy in America*.(74)

Governments interested in achieving complete and total disarmament are faced with the same question: how can all of the internal and external functions of war be fulfilled? The Report established a set of criteria for an alternative to the war system. According to these requirements the new system would have to provide an external necessity for a society to accept political rule; new institutions would have to be developed that were able to control the "socially destructive segments of society"; and, the system would need to balance the surpluses of production and population.(75) These criteria are essentially concerned with the political aspects of disarmament and conversion. If war is the basis of the state, then what reason does the state have for existence if war is removed? Can environmental decline or economic competition provide sufficient justification for the continuance of the state? Does society need to re-think the state and market structures?

Authors who have considered these types of questions have tended to adopt an economic rather than a political approach. They believe that economic and environmental issues can provide sufficient cause for the continuance of the state.(76) There has been a subtle change in the perceived function of the state, with a return to the liberal traditions of the 18th and 19th centuries.(77) In 1990 Vladimir Sokolov declared that the three main functions of the state were to provide "STABILITY of laws and economic relations, CONTINUITY in the commitments of successive governments and PROTECTION from crime and social upheavals".(78) Markusen and Yudken have proposed a fourth function: to provide a vision.(79) Their vision for America was a national economic development strategy.(80) Instead of having companies compete against one another to achieve short term economic gain the government should promote a vision of what the future could be if all individuals and corporations worked together.(81)

Soviet academics made similar proposals. In a country where until the late 1980s the government planned all aspects of economic development, Soviet specialists on the subject asked only that the state create the framework of conversion and allow the enterprises to see it through.(82) Soviet analysts appeared to fall in line with the recommendations for capitalist societies made by the 1962 UN Report on the Economic and Social Consequences of Disarmament. They spoke specifically of three rules which should be implemented: (1) the laws of supply and demand should guide the enterprises in their activities; (2) enterprises should adapt output to what they are technically capable of producing; and (3) enterprises should bid or compete for government contracts. These recommendations, made in light of the market reforms which were occurring or being considered during the Gorbachev era, brought Soviet and

American positions together on this issue and demonstrated that the two sets of assumptions and approaches were not so very different.

There was further agreement on proposals that conversion be planned well in advance of its implementation, that primary responsibility for planning occur at the enterprise level and that local and national governments should be involved in the process of capital redistribution.(83) There is one other area in which government needs to be involved and that is in the area of support for military and defence industrial personnel. Seymour Melman suggested in 1970 that the United States needed an equivalent of an economic bill of rights. Such a piece of legislation would cover retirement pay, separation pay, support for occupational retraining and relocation.(84) In the Soviet Union where responsibility for such matters initially rested with the enterprise frequent demands were made for state involvement as will be demonstrated in Chapter Five.

CONCLUSION

Contrary to popular opinion military-industrial complexes are neither impersonal structures nor completely divorced from the societies which they serve. They consist of individuals who, on a daily basis, perform what they mostly believe to be their patriotic duty, either by manufacturing weapons or by serving in the armed forces. Employees and military personnel contribute to their local economies while the defence enterprises, under suitable conditions, can contribute to the economic growth of the country as a whole.

Whether "war" is declared a social system in its own right, or the strong link between the defence and civilian sectors is recognised, careful planning

seems to be necessary if a "peace system" is to be established. The state's function is to provide both stability and vision. The way to accomplish this is initially to plan carefully for conversion. Any programme should have a recognisable beginning and end lest a new dependency be created.(85) An industrial policy which incorporates an economic bill of rights may be necessary. Once the state has created the basic framework for conversion, then it is up to the enterprises themselves to ensure its implementation. Policies of centralisation and decentralisation will need to coexist.(86)

Proposals for such a programme were a radical departure for both Soviet and American analysts. Calls for greater enterprise initiative and implementation of normal market regulators went against the basic principles of the Soviet command economy. But these ideas were in line with the radical proposals being put forward for the rest of the economy during the late 1980s.(87) In the United States demands for an opposite course of action were being made, that the state should become more not less involved in economic policy. Both countries seemed to be moving towards a middle ground, the formation of a policy of state managerial capitalism. Of the two countries the Soviet Union was the more dedicated in promoting such a policy, partially because its needs were greater.

The level of success enjoyed was limited because, while specialists on conversion considered a policy of state managerial capitalism to be the correct approach, the government, for military security reasons, favoured the continuation of a high level of state involvement in the defence sector. Another problem, one which has generally not been addressed by either American or Soviet writers, was the social role of the armed forces. The government curtailed the social remit of the military without providing it with a new role. In this

instance the government failed to provide a vision for the future and thereby caused political instability. Subsequent chapters will detail how the Soviet government failed to provide stability, continuity, protection and vision.

NOTES

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4. Ibid

5. Ibid, p. 179

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7. Ibid., p. 191

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9. Karl F. Spielman, "Defence Industrialists in the USSR", *Problems of Communism*, Sept/Oct., vol. XXV, 1976, pp. 34-51.

10. Vladimir Sokolov, "To the Market -- Under the Cover of the Army?" in *Soviet Law and Government*, Summer 1991, p. 73. Original article, "K rynku – pod prikrytiem armii", *Literaturnaia gazeta*, no. 37, 1990. Also Georgii Arbatov, "If Without Guile?, *Soviet Law and Government*, vol. 30, no. 3, Winter 1991-1992, p. 38. Original article, "A esli bez lukavstva?", *Ogonek*, no. 17, 1990. vol. 29, no. 2, 1985.

11. Robert H. Ferrell, "The Merchants of Death, Then and Now", *Journal of International Affairs*, vol. 26, no. 1, 1972.

12. N.S. Khrushchev, Khrushchev Remembers, vol. 1, pp. 548-549.

13. Ibid

14. Ann Markusen and Joel Yudken, Dismantling the Cold War Economy, p. 1.

15. Ibid, pp. 146-151.

16. Ibid, p. 148

17. Thierry Malleret, Conversion of the Defence Industry in the Former Soviet Union, p. 6.

18. Ibid. These are the ministries which existed after the July 1989 government

reshuffle.

19. Ibid

20. It should be noted that there is still competition for financing between the services in the DOD as well as between the military and NASA. See Markusen and Yudken, p. 84.

21. Ibid., p. 3.

22. Ibid, pp. 81 and 84.

23. Ibid, p. 84.

24. Ibid, p. 81.

25. Ibid, pp. 51-55.

26. The phrase is attributed to Seymour Melman. See Markusen and Yudken, p. 88.

27. J.N. Westwood, Endurance and Endeavour, 4th ed., p. 313.

28. Malleret, pp. 10-13.

29. UN Report, p. 22.

30. Ibid, pp. 24, 26 and 34.

31. Stefan Doernberg, "Disarmament in its Interelation to Political, Economic and Social Aspects" in Economic and Social Aspects of Disarmament, p. 26.

32. Ibid

33. Ibid, p. 19.

34. Joseph Wieczynski, "Economic Consequences of Disarmament: The Soviet View", *Russian Review*, vol. 27, no. 3, 1968, p.275.

35. Ibid, p. 276.

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37. Massimo Pivetti, "Military Expenditure and Economic Analysis", *Contributions to Political Economy*, vol. 8, March 1989, p. 59.

38. Saadet Deger and Somnath Sen, Military Expenditure: The Political Economy of International Security, p. 42.

39. Ibid, p. 44.

40. Ibid

41. Leonard C. Lewin, The Report From Iron Mountain, p. 66.

42. Ibid, pp. 70 and 68.

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48. Doernberg, p. 25.

49. UN Report, pp. 31, 36-37.

50. UN Economic and Social Council: Economic and Social Consequences of Disarmament, doc. E/3893/Add 1, 3/06/64, pp. 5-21, as quoted in Aleksandr Efremov, "The Effects of Disarmament on Employment in the USSR", *International Labour Review*, vol. 124, no. 4, July-August 1985.

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52. Ibid. It should be pointed out that even those enterprises which operate under the auspices of the various defence industrial ministries produce items for general consumption, i.e. televisions, radios, refrigerators, etcetera.

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55. Alexei Kireyev, "Cost Accounting For Disarmament Economics", *New Times*, 4.89, p. 16.

56. Lincoln P. Bloomfield, Walter C. Clemens Jr. and Franklyn Griffiths,

Khrushchev and the Arms Race, p. 278.

57. N. Andreev and V. Litovkin, "Tri pis'ma iz armii, 2. Ofitsery na rynke truda", *Izvestia*, no. 39, 14/02/91, p. 3.

58. Milton Leitenberg, "The Counterpart of Defence Industry Conversion in the United States: The USSR Economy, Defence Industry and Military Expenditure", *Journal of Peace Research*, no. 3, vol. XVI, 1979, p. 267.

59. Herbert Wulf, "Arms Industry Limited: the turning point in the 1990s", Arms Industry Ltd., p. 21.

60. Ibid

61. Julian Cooper, "The Soviet Union and the successor republics: defence industries coming to terms with disunion", in Arms Industry Ltd., pp. 88 - 89. Further discussion of the these figures will occur in Chapters Four and Five.

62. Expression of this opinion can be found in Lewin's Report From Iron Mountain, in Seymour Melman's article "Problems of Conversion From Military to Civilian Economy" in the *Bulletin of Peace Proposals*, vol. 16, no. 1, 1985, and in Markusen and Yudken's Dismantling the Cold War Economy.

63. Hague et al, Comparative Politics and Government, 3rd ed., p. 6.

64. Lewin, p. 60.

65. The Report actually uses the word war to denote conventional ("hot") war, the general condition of war preparation and the war system (the structure for preparation). Peace is understood to mean a permanent or quasi-permanent condition entirely free from war or the contemplation of war. See Lewin, p. 41.

66. Ibid.

67. Markusen and Yudken, p. 215.

68. Ibid., p. 197

69. Bloomfield et al, p. 280.

70. Lewin, p. ,61.

71. Ibid., p. 70

72. Ibid., p. 71

73. Ibid., p. 73. The second and third functions, as discussed earlier, are to act as both a mobilising and stabilising agent. See Lewin, pp. 67 - 68.

74. Alexis de Tocqueville, "On War, Society, and the Military", *Democracy in America*, as reprinted in War, ed. Leon Bramson and George W. Goethals, p.332.

75. Lewin, pp. 114-115.

76. M.S. Gorbachev, Perestroika, p. 143; Markusen and Yudken, pp. 246-247.

77. The purpose of the state is to guarantee civil liberties through progressive legislation. See An Intellectual and Cultural History of the Western World, vol. 2, pp. 231 -238. See also J.S. Mill, Utilitarianism, On Liberty, and Considerations on Representative Government, p. xxvi.

78. Sokolov, p. 70.

79. Markusen and Yudken, pp. 245-250.

80. Ibid., pp. 245-247; Melman, "Characteristics of the Industrial Conversion Problem" in The Defence Economy, p. 7.

81. Ibid.

82. V. Salikhov, "Ekonomicheskii mekhanizm effektivnoi konversii" in *Voprosy Ekonomiki*, 2/1991, p. 27.

83. Seymour Melman, "Problems of Conversion From Military to Civilian Economy", *Bulletin of Peace Proposals*, vol. 16, no. 1, 1985, p. 12. Lloyd Dumas, "Disarmament Economy in Advanced Industrial Countries -- The US and USSR, *Bulletin of Peace Proposals*, vol. 12, no. 1, 1981, p. 9. A. Kireev, "Proekty zakonodatel'nogo regulirovaniya i osushchestvleniya v zapadnykh stranakh", *Sovetskoe Gosudarstvo i Pravo*, 7/1990, p. 103.

84. Melman, "Characteristics of the Industrial Conversion Problem", p. 6.

85. Lloyd Dumas, "Converting the Military Economy" in Search For Security, p. 556.

86. Melman, "Problems of Conversion From Military to Civilian Economy", p. 12.

87. Robert W. Campbell, "The Soviet Future: Gorbachev and the Economy" in Gorbachev and the Soviet Future, pp. 59-61.

CHAPTER THREE
DISARMAMENT AND ITS IMPLICATIONS FOR THE SOVIET MILITARY'S ROLE IN SOCIETY, 1986-1991

Mikhail Gorbachev had a vision of a world in which a state's security was defined by its political and economic health and stability first, and then by its military power. It was hoped that in the future the Soviet Union would not be deemed a "one-dimensional superpower", its world standing resting solely upon its military might.(1) Initially, Gorbachev believed that slight reductions in the armed forces would be sufficient to encourage more open relations between East and West and that the policy of *uskorenie* (acceleration), introduced in 1986, would succeed in promoting economic growth. However, the problems within the economy were much more severe than Gorbachev initially realised. It soon became apparent that much more radical reform would have to transpire. This would include a reform of the armed forces so that the defence burden might be reduced.

Initially the armed forces were willing to support Gorbachev. However, troop reductions coupled with economic and political reform forced the military to transform its traditional role in society and in doing so shook the organisation to its core. As a result, dissent within the ranks, in addition to the upheaval of the reform programme, would prove to be a direct cause of political instability and Gorbachev's subsequent overthrow.

The purpose of this chapter is three-fold: 1) to establish the problems and limitations of the economic system and thus come to a better understanding of why disarmament was necessary; 2) to chart the course of disarmament, demonstrating how rapid and acute the cuts were; and 3) to analyse the effect of

the programme on the military.

THE STATE OF THE ECONOMY

In emphasising military strength over economic growth and stability, successive Soviet leaders had created a "militarised" economy. Yet, the armed forces merely exacerbated economic problems, they were not their cause. Leonid Abalkin, a leading Soviet economist, argued in 1988 that a centralised economy had two main functions:

> 1) The management of the national economy as a unitary whole. This included issues such as the strategy of economic growth, the determination of goals and priorities and the formulation of an industrial policy.
>
> 2) The creation of conditions for the effective, independent and responsible action of the basic links of the economy.(2)

Abalkin, and fellow economists Buzgalin and Kolganov, shared the opinion that the system had become over-centralised.(3) Enterprises were no longer the focus of nor participants in the planning system.(4) All too frequently plans were the result of a deal between representatives of different departments.(5) As a result there were two negative repercussions. First, decisions were made for the republics and regions without looking at how they were integrated into the overall system.(6) Second, the military benefited at the expense of the civilian economy. Because the government's top priority was security it was willing to ensure that the defence sector received all of the resources it needed.(7) So, while defence plants were allowed to maintain their own autonomous suppliers, they were also granted leave to pilfer the supplies of civilian enterprises should their stockpiles run low.(8) In prioritizing the smooth and efficient running of the military economy the government ensured inefficiency within the civilian

economy by allowing for the disappearance of equipment, spares and raw materials.(9)

The ability of the civilian sector to support its military counterpart and compete in international markets was further hindered by a failure on the part of the government to allow for technology transfers between sectors. Known as "spin-off", the transfer of technology between the military and civilian sectors has resulted in the West in advances in computer, communications and aeronautical technology, with benefits for both sectors. Soviet civilian industry did not enjoy the same level of benefit.(10) As a result, the lack of innovation led to a decrease in efficiency which in turned curtailed the civilian economy's ability to support its military counterpart in the arms race, a race which was increasingly technology led.

Failure to fully integrate the two sectors and examine the system in its entirety also meant that the adverse trends and difficulties which arose during the 1970s and 1980s were not corrected.(11) In the past accelerated rates of growth had been the result of dramatic increases in capital investment.(12) These increases in conjunction with an extensive use of resources had enabled the system to cope with imbalances (shortages of supply).(13) In pursuing such a policy the Soviet Union had, however, exploited its reserves of high quality, readily available raw materials. It became necessary to rely on poorer quality resources extracted from further afield. An increase in the overall production cost was necessary in order to cover the rise in transportation and purification charges.(14) The lack of technological innovation in civilian industry combined with the declining quality and supply of raw materials resulted in a decline in industrial output of 40 percent.(15) Declining rates of growth in other sectors, such as agriculture, limited the potential for capital investment and the pursuit

of an *extensive* policy of development (using resources to promote growth) in the 1980s (See Table 3.1).(16) Slowing rates of economic growth were accompanied by smaller increases in national income. This led Abel Aganbegyan, Gorbachev's chief economic advisor, to state that "unprecedented stagnation and crisis" had occurred in the period from 1979 to 1982.(17)

Against this backdrop, Soviet military expenditure continued to increase in real terms by 2 percent per year in the early 1980s and by 3 percent in 1986.(18) By the late 1980s it was believed that the defence sector's share of Soviet GNP was between 22 and 30 percent.(19) Competition between the defence and civilian sectors for resources could no longer be maintained and indeed the Soviet military seemed to recognise this fact.(20) The arms race was increasingly technology led and it was clear that the Soviet Union, with its aging industrial base, could not compete. (21) Some form of change was necessary.

Table 3.1
Aggregate Economic Performance 1955-87 (%) (22)

	Average Annual Growth					
	1955-1965	**1965-1970**	**1971-1975**	**1976-1980**	**1981-1983**	**1984-1987**
GNP	5.4	5.2	3.7	2.7	2.3	1.6
Industry	7.5	6.3	5.9	3.4	1.5	2.1
Agri-culture	3.5	3.5	-2.3	0.3	4.2	0.8
Services	4.0	4.2	3.4	2.8	2.1	N/A
Consumption	4.7	5.3	3.6	2.6	1.7	2.4
Investment	9.1	6.0	5.4	4.3	4.2	3.0

It was believed that the solution to slowing rates of economic growth was a reform of the economic mechanism and the democratisation of the management process.(23) The form of ownership did not need to change necessarily, just the method of directing the economy.(24) Proposals for reform of the economic mechanism were the result of a debate which had occurred in the 1960s between those economists who favoured the status quo and those who desired change.(25) The latter group believed that a shift towards "normal" market relations should occur. They argued that the science production association should be the basic economic unit and that contractual relations between customer enterprises and supplier enterprises should be promoted.(26) They also placed an increased emphasis on commodity-monetary relations and encouraged enterprises to become self-financing and accountable for costs. For twenty years the belief that economic methods were more efficient in optimising economic interests than administrative methods was largely dismissed by the government.(27) One possible reason is that the necessity for economic reform was not evident until the 1980s, or perhaps it was because economic reform deprives politicians of power and Soviet ministers were unwilling to relinquish control.(28) By the time Gorbachev came to power, however, reform could no longer be neglected.

In 1986 Gorbachev began to promote the policy of *uskorenie*. The purpose was to subordinate the economic mechanism to the task of accelerating the nation's socioeconomic development, not its military security.(29) In this instance acceleration would have to be achieved by improvements in scientific-technological capability, in organisation and in labour productivity and effectiveness.(30) The problem of labour productivity was tackled by implementing an incentive programme and an anti-alcohol campaign. Both met with limited success, and the decision was taken to implement a more

radical restructuring programme, *perestroika*, from 1987. The government attempted to modify the organisational structure by allowing greater enterprise initiative. The individuals who drafted the 1987 Law on the State Enterprise took their cue from the economic debate of the 1960s and made the enterprise the primary economic actor. As a result the involvement of enterprises in establishing their own plans and contractual arrangements increased.(31) These aspects of reform would be meaningless, however, without a corresponding reform of the pricing system. Although guidelines were established in 1987 and price reforms began in certain sectors in 1990 and 1991, the government, rather than the market, continued to set the price for many goods.(32) This was in opposition to one of the basic tenets of reform, that the state should plan overall strategy and not be involved in "micromanagement".(33)

The promotion of improved scientific-technological capability was one area in which the government could not decide whether to maintain a controlling interest or allow greater enterprise initiative. In 1987 two pieces of legislation were passed which allowed Soviet enterprises to establish joint ventures with their counterparts in CMEA and Western countries. The government hoped that the formation of such links would result in an increase in foreign investment and technology transfers. However, the legislation was so restrictive that foreign interest did not meet expectations.(34) The only alternative to improving the technology base was conversion of the defence sector. Government planners and civilian analysts alike believed that conversion and the transfer of technology from the defence to the civilian sector would result in an improvement in the capital stock and an increase in the production of consumer durables. There was also a general consensus that by cutting the defence budget and diverting funds back into the civilian economy growth could be improved.(35) As will be detailed in Chapter Five, the

government, as a result of pressure placed upon it by the military establishment, had to limit the extent of reform in the MIC. As a result, the defence and civilian sectors of the economy remained separate. Yet, initially, it was considered possible to divert resources from the defence sector, by reducing the Soviet Union's dependency on military security.

ON THE ISSUE OF DISARMAMENT

In the public lexicon disarmament is often confused with other issues. Under certain conditions disarmament connotes peace. In more general usage disarmament has become interchangeable with arms control and vice versa. Disarmament on its own means the complete elimination of conventional and nuclear arms from the political arena. Proponents of disarmament have generally viewed the existence of weapons as a direct cause of the arms race and war.(36) If the weapons did not exist they could not be used, and if they could not be used then there would be no pretext for war.

Supporters of arms control, on the other hand, believe that "wars are brought about by causes deeper than armaments".(37) Effectively, war begins in the minds of men -- a thought reminiscent of that expounded by Clausewitz concerning "hostile feelings and hostile intentions".(38) As a result of these beliefs, arms controllers have resigned themselves to the fact that weapons will always be present within the political arena. Therefore their aim has been to supplement "unilateral military strategy by some kind of collaboration with the countries that are potential enemies".(39) The hope is that this method will mitigate the potential level of fear between the adversaries by eliminating the aspect of surprise. A balance is sought in the levels of "good" (defensive) and "bad" (offensive) weapons, so that neither side will feel at a disadvantage.

Whereas, in the disarmament scenario, an increase in arms is bad, it may not necessarily be so in the context of arms control if it is used to balance against another type of weaponry.

Prior to 1987 the arms control approach was preferred to that of disarmament. The latter was perceived as Utopian because it demanded a dramatic change in human and state behaviour patterns.(40) Arms control was for the most part considered a more feasible alternative. One reason is that it had until recently been able to side-step the issue of verification. Furthermore it took into account that man always strives to produce goods and implements bigger and better than those which have gone before. Arms control allows for growth and advancement in the military sector.

Gorbachev and like-minded politicians considered disarmament, rather than arms control, as the key to creating a politically and economically stable Soviet Union. The disarmament process would guarantee international security and thus provide a window of opportunity for the government to initiate domestic reform. A reduction in armaments and expenditure would also free valuable resources for the civilian economy. Economic and political instability as well as a failure on the part of Gorbachev to adequately assess the role of the armed forces within society would limit the benefits of the disarmament programme.

Change within the military sector occurred quite rapidly, starting in 1986. It was in January of that year that Gorbachev made public his three step process for a nuclear free world. The initial stage of the programme called for the two superpowers to reduce their arsenals by 50 percent, setting a new ceiling of 6000 warheads per side in the remaining categories of weapons. Five to eight years

were allowed for the two countries to reach this new level. During this period Britain and France would halt the manufacture of any additional weapons, and an indirect freeze would be applied on other countries, thereby prohibiting the two superpowers from supplying weapons to their allies.(41)

All of the nuclear powers would be involved in stage two, scheduled to commence no later than 1990. During a five to seven year period the existing level of nuclear arms would be frozen world-wide and the stationing of one nation's missiles on another's territory would be prohibited.(42) This phase was set to surpass the first in reducing world stockpiles. Once the 50 percent mark had been met all the nuclear powers would begin to eliminate tactical nuclear weapons, i.e. all systems with a range of up to 1000 kilometres. At the same time the Soviet and American accord on the prohibition of space strike weapons would become multilateral and the testing of all nuclear arms would be stopped. An additional ban would be established on the development of non-nuclear arms "based on new physical principles that in terms of their destructive capability approach nuclear or other means of mass destruction".(43) These weapons were subsequently defined as beam, radio wave, infrasonic, geophysical and genetic weapons.(44) The elimination of all remaining weapons would occur in the final phase. Ideally, by the end of 1999 none of these systems would remain on earth. Their reappearance would be prevented by the signing of an accord.(45)

This type of proposal was not new. Over the years both the United States and the Soviet Union had expressed their desire to see a world free of nuclear weapons. What was significant about this proposal was its timing. The Plan for the Year 2000 came at a time when Soviet and American relations were at an all time low. Ronald Reagan, the US president, frequently referred to the Soviet

Union as the "Evil Empire", claiming that the Soviet government could not be trusted. Members of the Soviet government and the armed forces felt the same way about the American administration. Gorbachev's announcement of January 16, 1986 was an attempt to dispel the distrust on both sides. His generals claimed that his proposal was not an idle promise, and suggested that the very existence of such a detailed plan was proof of the Soviet Union's sincerity.(46)

Yet, the programme was not that detailed. While it provided dates for the completion of each stage it did not establish a strong legal or political framework for disarmament. There was no consideration of the nature of security relations in the post-nuclear era. Such issues would need to be discussed if a workable programme were to be drafted.(47)

Perhaps what gave the greatest boost to the disarmament process was not the plan itself but the government's willingness to act unilaterally and allow concessions. For example, the issue of verification had always been a stumbling-block in the disarmament and arms control process. Previously the Soviet Union would allow only national-technical means of verification, i.e. spy satellites. The United States had been pushing for some time for on-sight inspections. During the negotiations on the Intermediate Nuclear Forces Treaty (INF) Gorbachev finally agreed to this plan of operation, and the rules for and the limitations on these inspections were incorporated into the Protocol on Verification attached to the INF Treaty.

Although Gorbachev abandoned his ultimate aim of a nuclear free world by the year 2000 he remained committed to reducing the stockpile levels if only to free resources for the development of the economy. The INF Treaty was the first significant step in this process. Signed on December 8, 1987 the Treaty

applied only to 4 percent of all nuclear weapons, yet it was important because it succeeded in eliminating categories of weapons. Furthermore, it served as a catalyst for change in many other areas.

The Treaty called for the elimination of medium-range missiles (1000 - 5500 km. radius) and shorter-range missiles (500 - 1000 km. radius). In the USSR this classification covered the SS-20, SS-4 and SS-5 missiles, ground launched cruise missiles and the SS-12 and SS-23 shorter-range missiles. On the US side it encompassed the Pershing 1-A, Pershing 2 and BGM-109G missiles.(48) All missiles of a range of 500 to 5500 km. were to be destroyed, except for the 15 allowed to each side for museum purposes.

The Treaty succeeded in reducing the level of tension between the United States and the Soviet Union. It also appeased the West Europeans, who had been opposed to the deployment of medium-range missiles in Europe, thus improving Gorbachev's and the Soviet Union's standing with them. Furthermore, by discontinuing production in these categories the Soviet Union was able to initiate a programme of conversion within the now idle enterprises.(49) This was treated as an experiment into the possibilities of a large-scale conversion programme. It took some time, however, to assess the results of that experiment.(50)

The initial response of the Soviet military to the INF Treaty and the resultant conversion programme was one of general support. Leading figures within the General Staff assured the public that the elimination of these missiles was in line with the Soviet defence policy.(51) The Soviet generals agreed with Gorbachev that it was impossible to win a nuclear war and that therefore it was necessary to restructure the defence policy.(52) On the issue of economic reform

the military hierarchy again gave its support. The opinion of Colonel N. Karasev, a Candidate of Economic Science, was typical of the feelings publicly expressed by military personnel in 1987 and 1988. He stated that perestroika would lead eventually to the full satisfaction of the socioeconomic and defence requirements of the state.(53) Initially the military was willing to make sacrifices if it would improve their capabilities in the future.

One area in which the military was forced to make repeated sacrifices was in manpower. Generally, reductions in force strength demonstrate a certain commitment to peace and disarmament because a state is curtailing its ability to pose a threat and to react to one.(54) Gorbachev's speech to the United Nations on December 7, 1988 marked the beginning of major force reductions. Because he believed that international relations should no longer be conducted on the basis of ideological confrontation and military aggression and that states should instead work together in order to achieve solutions to common problems, he felt it necessary that both sides systematically withdraw from points of Cold War conflict.(55) To this end he outlined the Soviet Union's plans for the settlement of the conflict in Afghanistan and the withdrawal of troops from Eastern Europe and the Far East.

The stand-off between NATO and the Warsaw Pact forces in Europe was one of the most obvious symbols of the Cold War. Afghanistan, however, was an area where the superpowers had allowed the Cold War to grow hot. Although the armed forces of the USA and the USSR did not directly confront each other in Afghanistan, their governments armed the various factions of the republic.

The Soviet Union had enjoyed reasonably stable relations with the Afghan government since the 1920s. Any cooling in relations had generally

emanated from the Afghan side when the government feared too close a relationship with the USSR. During the 1950s the government of Prince Mohammed Daud turned to the Soviet Union for help in modernising the country. The USSR provided this assistance in return for guarantees that Afghanistan would remain a non-aligned country.(56)

In the mid-1970s the stable relationship began to change. Prince Daud, who had been out of power during the 1960s, returned to government in 1973 by siding with the communist People's Democratic Party of Afghanistan (PDPA or DPPA). In 1975-76 in an attempt to widen the support for the government Daud began to pull away from this grouping. Fearful that Afghanistan would drift into alignment with the United States and her allies the Soviet government under Brezhnev decided to back the PDPA rather than Daud. In April 1978 a coup was staged and Daud overthrown and subsequently killed. The new government was able to maintain a semblance of control until December 1979, but the internal splits within the party as well as the opposition forces which consisted of feudal lords, former officers and officials and the Islamic clergy finally succeeded in creating too much chaos within the country.(57) On December 27, 1979 Soviet forces moved in to restore order.

The Brezhnev Doctrine, formulated in response to the uprisings in Czechoslovakia in 1968 (the Prague Spring), indicated that once a foreign country had embraced a form of socialism acceptable to the Kremlin, it was to be prevented by the Soviet military from abandoning that position. Gunter Knabe has suggested that the decision to intervene in Afghanistan was based on this doctrine. Although not strictly part of the Socialist camp, Afghanistan was viewed as part of the larger family.(58) The main objective in the invasion was to replace the existing regime with a more stable and moderate government.(59)

While the reasons for the intervention may have been ideological, the reasons for maintaining an armed force were strategic. Anthony Arnold, a former analyst with the Central Intelligence Agency (CIA), has argued that there were essentially four reasons for maintaining a military presence. First, there was the belief that should Moscow demonstrate weakness in Afghanistan it would affect its hold on Eastern Europe. In a related argument it was put forward that other Third World nations might begin to suspect Soviet steadfastness as an ally. Failure to succeed in Afghanistan also had domestic implications. Afghanistan shares its borders with the Islamic republics of the former Soviet Union. There was great concern in the Moscow at the time that the *jihad* which had been launched in Afghanistan could be extended to these Islamic republics. Finally, the constant underlying fear was that Afghanistan might in the end become allied with the West and that the US would use the republic to spy upon or launch an attack against the Soviet Union.(60) Relations with China could also have been a motivating factor for the initial invasion of and the continued Soviet presence in Afghanistan. Indeed, in 1988 Milan Hauner, Professor of International Relations at the University of Wisconsin, proposed that Soviet action could have been based on a desire (1) to bring a decisive pressure to bear over the subcontinent by exploiting the conflict India had with both Pakistan and China; or (2) to complete the encirclement of China.(61)

Yet if these were the strategic considerations for maintaining a presence, then the strategic losses resulting from continued involvement were equally severe. First, like the United States in Vietnam, the Soviet Union succeeded in alienating itself from the support of the local population. The longer the Red Army remained in Afghanistan, the more likely it became that the *mujaheddin* would seek the assistance of the United States and that Washington would be willing to provide aid. Second, the occupation of Afghanistan became one of

three main obstacles to any future improvement in relations with China. Third, and most importantly, the invasion of Afghanistan brought to an end the détente process. President Reagan would use this act of aggression as a prime example of why the United States could not and should not trust the USSR.

By the time of Gorbachev's speech in December 1988 steps had already been taken to settle the Afghan situation. The Soviet Union had agreed to the Geneva Accords which stipulated that all foreign troops must quit Afghanistan. Gorbachev had wanted a resolution to the political situation prior to the withdrawal of Soviet troops, but had realised in the end that the political and economic costs of maintaining a force of over 100,000 men were becoming too great. As a result of *glasnost'* more media attention was being paid within the Soviet Union to the Afghan war. Ethnic groups and coalitions of soldiers' mothers were demonstrating against Soviet involvement in a war which by 1986 had claimed the lives of 10,000 soldiers.(62) The economic cost of the war was also substantive. Former Soviet Premier Nikolai Ryzhkov estimated the cost of the war at R5 billion per annum.(63) A cessation of hostilities would save the government several billion roubles, reduce the potential for domestic conflict at home and improve diplomatic relations with the United States and China. From the government's point of view the negative impact of a withdrawal from an unresolved conflict was outweighed by the very positive benefits. It was a sacrifice worth making.

In addition to the statements on Afghanistan, Gorbachev also announced the partial withdrawal of Soviet forces from Eastern Europe and Mongolia. Concessions within these two areas would prove to both the West and Asia that new thinking in Soviet foreign policy was not merely empty rhetoric but a true shift from the politics of confrontation. They would also signal the beginning of

a large scale withdrawal from points of Cold War conflict. In his address to the United Nations Gorbachev announced that Soviet troop strength would be reduced by 500,000 men. Of that number 50,000 were to be removed from the territories of the German Democratic Republic (GDR), Czechoslovakia and Hungary. Six armoured divisions were to be withdrawn from those same countries and disbanded. The number of troops within the European sector of the USSR was also to be decreased. All told the Soviet armed forces would lose 10,000 tanks, 8,500 artillery systems and 800 warplanes.(64)

This decision was greeted with surprise both in the West and the East.(65) Some Western analysts said that the numbers did not add up, that the number of men and tanks being withdrawn did not equal six tank divisions.(66) Gorbachev and his staff countered these accusations by stating that Soviet defence policy had been reformed and that all withdrawals would be made in line with the policies of new thinking and reasonable sufficiency.(67) Within the Soviet military scepticism was a little more difficult to dispel. General Sergei Akhromeyev announced his resignation following the statement on troop reductions. Although the official line taken was that he was being replaced by Mikhail Moiseev so that he could fulfil other duties, rumours spread about the state of his health and his opposition to the unilateral action.(68) Within the lower ranks, officers were said to be uneasy about the cuts.(69) Of the 500,000 men to be withdrawn, one-sixth were in the officer corps.(70) As stated previously, there was a general fear that the cutbacks would be unorganised. As will be discussed in below, this fear became reality.

Regardless of the hesitancy felt within the armed forces, the Soviet Union began bringing its men home. By 1989 *perestroika* was already well under way in the USSR, and as the programme developed it became apparent that the

government could not conceivably continue to spend such a large portion of its Gross Domestic Product on defence.(71) Therefore, the deployment of troops in Eastern Europe by the Soviet Union was no longer a tenable position. The December 1988 announcement of a partial withdrawal would prove to be the beginning of a much more extensive programme.

That programme consisted of a reduction of political and military involvement in Eastern Europe. While Gorbachev favoured some form of *perestroika* within the East European nations as a result of his policy of new thinking, a policy which advocated a hands-off approach, he could neither actively encourage or oppose reform in other countries.

The abandonment of the Brezhnev Doctrine surprised some of the Soviet Union's allies, particularly East Germany. As that country was being swept away by a series of mass demonstrations in 1989 its leader, Erich Honecker, looked to Gorbachev for support that was not forthcoming. The East German government had been prepared for a Tienanmen Square type of assault on the demonstrators, but this proposal was vetoed by Moscow. The Soviet government may have considered a change of leadership sufficient to stabilise the situation in East Germany, however it later became apparent that this would not suffice.(72)

The overthrow of communist rule in Europe in 1989 occurred in part because Gorbachev was willing to allow the WTO countries to chart their own courses. It can also be seen as a knock-on effect from the withdrawal of Soviet troops. The removal of the physical reminder of Soviet authority gave dissidents and reformers more leeway while at the same time restricting the manoeuvrability of those in power.

The result of the events in 1989 and of the reunification of Germany in October 1991 was that Soviet troops were forced out of Eastern Europe and back on to their own territory. As Czechoslovakia, Hungary, East Germany and Poland developed more democratic political systems demands grew for the rapid removal of the physical evidence of 40 years of repression. Czechoslovakia was the first to call for the withdrawal of Soviet troops. On January 9, 1990 the Minister of Foreign Affairs demanded the removal of the "temporary" troops, and by February 26 a treaty had been concluded.(73) The army had retreated by April 1991.

A similar arrangement was made with Hungary; negotiations with Germany and Poland, however, were much more difficult.(74) The decision to leave the GDR was not one the Soviet government could make on its own. Instead it was forced to solve the issue within the framework of what became known as the "2 + 4" negotiations.

Although the Gorbachev administration had been unwilling to bolster the faltering East German government in the summer and fall of 1989, it was nevertheless reluctant to condone the unification of the two Germanys in the winter of 1989 - 1990, especially if they were to be united within NATO. Gorbachev was prepared to accept extensive political change in the GDR, but he was unwilling to accept the right to German national self-determination.(75) It was believed that the acknowledgement of this right would lead inexorably to the dissolution of the borders between the Federal Republic of Germany (FRG) and the GDR and thus to the weakening of the Warsaw Pact.(76)

Moscow maintained that, so long as the GDR was both willing and able to continue as a state, unification should be rejected. The opening of the Berlin

Wall in November 1989 and the almost immediate "depopulation" of East Germany as people streamed towards the West forced the Soviet government to change its stance. Gorbachev gave his tacit agreement to reunification in January 1990; however, he stressed that the process should be carried out slowly and with all due consideration given to any potential difficulties.(77)

During the course of 1990 representatives of the USSR, the US, the United Kingdom and France as well as from the two Germanys met to discuss the external aspects of reunification. One of the main stumbling blocks was a united Germany's role in the security structures of Europe. The Soviet government was loathe to see Germany solely in NATO. East Germany was perceived as the cornerstone of the Warsaw Pact. It was believed that without it both the alliance and the European security structure as a whole would be destabilised. Unfortunately for the Soviet Union her allies did not share the same view.(78) As far as Hungary and Czechoslovakia were concerned the removal of Soviet troops from their own territory meant that it was only a matter of time before the pact disintegrated. Despite pressure from his own military establishment Gorbachev was forced to concede Germany's membership of NATO in July 1990.(79)

The "2 + 4" treaty was eventually signed on 12 September 1990. It was consummated by a series of Soviet - German agreements in October and November of that year. One of the five agreements dealt with the removal of Soviet troops from East German territory by the end of 1994. Another of the accords stipulated the terms of a generous financial offer of assistance on the part of the Germans to repay the Soviet Union for its willingness to allow German reunification.(80)

The withdrawal of Soviet forces from East Germany was an issue closely tied to the removal of the Northern Group of Forces (NGF) from Poland. Wary of a reunited Germany, the Polish government was initially reluctant to see Soviet troops leave its territory until guarantees had been made to ensure its security.(81) However, once the government discovered that the Soviet Union intended to transport 350,000 service personnel, 150,000 civilian personnel and 500,000 family members across its territory, without prior consultation, it decided to act.(82) The Western Group of Forces could not cross Poland until the fate of the 58,000 strong Northern Group of Forces had been decided. Demands were made for the withdrawal of the NGF by the end of 1991. Initially, the USSR was unable to comply owing to the logistical problems of housing all returning troops within the territory of Russia. Eventually a compromise was reached and the main body of the Soviet combat force left Poland at the beginning of November 1992.

During this period troops were being withdrawn not only from Europe but from all major outposts. The initial withdrawal from Mongolia was the result of Gorbachev's statement to the United Nations in December 1988. Of the 500,000 troops mentioned, 200,000 would be removed from the Far East, including 50,000 servicemen from Mongolia. As the three divisions of ground forces and all of the aviation units were being withdrawn it was decided that all Soviet troops should leave Mongolia. In March 1990 an agreement was reached, and the troops were withdrawn by the end of 1992.(83)

A reduction in Soviet troop strength in Asia had always been a prerequisite for improved relations with China. The decision in 1988 to withdraw troops from both Afghanistan and Mongolia contributed to the normalisation of relations between the two countries at the May 1989 Sino-

Soviet summit.

Soviet relations in Europe improved with the signing of the Conventional Forces in Europe Treaty (CFE). Both the beneficiary and the victim of the period in which it was negotiated, the initial impetus for discussing such a treaty had come from the Soviet unilateral withdrawal from Europe. It was believed that if the USSR was willing to withdraw partially from Europe and restructure the remaining forces then perhaps the Western powers should be able to do the same. The negotiations between the member states of NATO and the WTO began in March 1989 in Vienna. The two main aims were to (1) follow on from the unilateral action and achieve an even lower balance of forces deployed in the Atlantic to the Urals zone (ATTU); and (2) eliminate the ability to launch a surprise attack or to launch and sustain large-scale offensive operations. The two parties were beginning to reorganise their armies in terms of what the perceived to be 'reasonably sufficient' force considering lower levels of international tension.

The treaty did not deal with specific limits on personnel because it was assumed that there would be further unilateral reductions on both sides of the East - West divide and that a future CFE II agreement would establish appropriate guidelines. Instead, the treaty, signed on November 19, 1990, set a series of ceilings on weapons for the "collective holdings of each group of parties, for geographic regions and for individual member states". Each alliance would be limited to 20,000 tanks, 20,000 artillery pieces, 30,000 armoured combat vehicles, 2,000 combat helicopters and 6,800 combat aircraft.(84) A sufficiency limit had been set of 13,300 tanks and 13,700 artillery pieces for any one country; the Soviet Union, however, was forced to accept different totals because its allies wanted a greater share of the weapons. In the end the USSR was limited to 13,150 tanks

and 13,175 artillery pieces. The Warsaw Pact was forced to destroy 50,700 pieces of equipment. The Soviet Union's share of that was 25,000.(85)

Although the CFE Treaty went a considerable distance in limiting the forces of NATO and the Warsaw Pact it was quickly outpaced by events. Following Gorbachev's lead the member states of the Warsaw Pact began unilaterally reducing their own armed forces. On July 1, 1991 a treaty was signed which formally dissolved the Warsaw Pact, thus placing the structure of the CFE Treaty with its "group of parties" and "zonal sub-limits tied to geographic regions" into question. The break-up of the Soviet Union during the course of 1991 further hindered the implementation of the Treaty.(86) The former republics of the USSR, as well as some of the East European states, began to argue that the ceilings set by the CFE Treaty were no longer applicable.(87) In January 1992 General Ivanovich, Commander of the Rostov-on-Don military district, expressed the opinion that much as both sides wanted to see the ratification of the CFE Treaty, it might no longer be possible.(88)

His pessimism in the end was unfounded. As a result of a great deal of negotiation during the course of 1992, a solution was finally found to the problem of which states were responsible for the weapons of the former Soviet Union. In May 1992 at the Tashkent summit the members of the Commonwealth of Independent States (CIS) agreed that quotas would be set among them to apportion the weapons of the FSU. In an initial proposal Russia had argued that the share of weapons should be based on the total area of the state, the size of the population and the length of the borders which had to be defended. Under this formula Russia would have held 54 percent of the total of the 5 categories of weapons, the Ukraine 22 percent and Belarus 6.6 percent.(89) The non-Slavic European republics would have held 17.5 percent of the total

inventory.(90) In the end this was not the formula which was adopted. Russia received 51 percent, Ukraine 27.5 percent and Belarus 12 percent.(91)

Once the shares had been apportioned, it was necessary for each state to ratify the treaty. On July 10, 1992 the CFE Treaty was signed by 29 states.(92) The ratification process took nearly as long as the initial negotiations. It is fortunate that CFE I did not deal with reductions in personnel levels because in the scramble of the former Soviet republics to establish their own armed forces it might never have been settled.

The Strategic Arms Reduction Treaty (START I) and the Treaty on Conventional Forces in Europe, while dealing with different subject matters, have many similarities. Both treaties succeeded in significantly limiting various classes of weapons. The protocols on verification contained within each treaty also helped to create greater levels of openness and transparency in military relations. Both treaties were also plagued with difficulties as a result of the break-up of the Soviet Union.

Although START was conceived in a different era than CFE, its ultimate ratification hinged on the passing of the latter treaty. Negotiations began in June 1982 in Geneva, although no real headway was made until 1986. It was in that year at the Reykjavik summit and again at the Washington summit in 1987 that Reagan and Gorbachev began to outline the ultimate treaty. The negotiations were concerned with four questions, three of which dealt with how mobile land-based cruise missiles, air-launched cruise missiles (ALCMs) and sea-launched cruise missiles (SLCMs) should be defined and counted. The fourth question was concerned with the link between reductions in strategic offensive weapons and the limitations on strategic defences.(93)

During the course of 1989 compromises were reached on both sides. Two of the greatest obstacles to the talks had been issues of strategic defence and sea-launched cruise missiles. The Strategic Defence Initiative (SDI or Star Wars) was a project close to the heart of President Reagan. Gorbachev and the Soviet negotiators strongly objected to it. Reagan saw the system as being inherently defensive while the Soviet side believed that the project would lead to the militarisation of space and that it was thus inherently offensive. Although headway had been made on the START negotiations in 1986 and 1987 it was believed that more could have been achieved if Reagan had not clung so strongly to SDI.

George Bush, who succeeded Reagan as president in 1988, continued the White House's support of SDI. In the interest of obtaining a treaty the Soviet government backed down and agreed that SDI would be discussed outside the START framework. The Soviet government was also willing to concede that SLCMs should be limited within a separate framework. George Bush had been adamant that they should be protected from START and at the Malta summit in 1990 this had proved a hindrance to further negotiations.

In the end each side was limited to no more than 1,600 strategic nuclear delivery vehicles (deployed Intercontinental Ballistic Missiles or ICBMs, sea-launched ballistic missiles (SLBMs) and heavy bombers); 6,000 total accountable warheads; 4,900 accountable warheads deployed on ICBMs or SLBMs; 1,540 accountable warheads deployed on 154 heavy ICBMs; 1,100 accountable warheads deployed on mobile ICBMs; and an aggregate throw-weight of deployed ICBMs and SLBMs equal to 3,600 million metric tonnes.(94)

Simply agreeing the terms of the limitations did not mean, however, that Soviet/American negotiations were at an end. Initially there was some hesitancy on the US side over the treaty. Links were made between the ratification of START and the delayed ratification of the CFE Treaty.(95) Gorbachev himself admitted that there might indeed be problems with ratification. He is quoted as saying that,

> there will be talk of unilateral concessions here in Moscow, and of concessions to the Soviet Union in Washington. Others will say that the new treaty fails to live up to all the hopes for a peace dividend, since destroying missiles will also take considerable amounts of money....(96)

In the end it was the actual break-up of the Soviet Union rather than questions on concessions or fraudulent information transfers which delayed the ratification of the treaty.

At the time of the August coup it was believed that the Soviet Union held approximately 27,000 nuclear weapons of various classifications (air, land, and sea launched; and tactical and strategic). Of this total, 80 to 85 percent were presumed to be located within the territory of the Russian Federation (RSFSR), leaving approximately 4,500 warheads in other locations.(97) As the central command structure of the old state dissolved the individual republics began to claim ownership of the weapons. They linked the possession of nuclear warheads with an increase in international recognition and prestige.

Of the four republics which held nuclear stockpiles, two, Belarus and Ukraine, declared their intention to become nuclear-free zones -- on their own terms. The Ukrainians were most vociferous in their distrust of the Russians' ability to dispose of nuclear weapons-grade material. The Kravchuk government also decried Russia's attempts to position itself as the leading state of the CIS.

While Washington and Moscow wanted the START Treaty to remain bilateral, Kravchuk argued that all the former Soviet republics which held nuclear weapons should be treated equally.(98) Kravchuk won the argument in the end. On May 23, 1992 representatives from the United States, Russia, Ukraine, Belarus and Kazakhstan met in Lisbon to sign a protocol to START which recognised the responsibility of each of the signatories for the disposal of the nuclear weapons positioned on its territory.

Like CFE, START has formed the basis for further reductions. On June 16, 1992, less than a month after the protocol had been signed, President Bush and President Yeltsin of Russia agreed to make further cuts in the level of strategic nuclear weapons. It was proposed that by the year 2000 each country would retain no more than 3,800 to 4,250 nuclear warheads on strategic missiles, while the Russians would be allowed to keep 6,000 warheads on heavy missiles. In the second stage which would run until 2003, the total limit of weapons allowed to each country would be limited to 3,500. By the end of December these proposals had been formalised in the text of the START II Treaty, which was signed by Presidents Bush and Yeltsin on January 3, 1993. Within a ten-year period the two sides were expected to reduce their nuclear arsenals from approximately 10,000 warheads to about 3,000 strategic nuclear warheads for Russia and 3,500 for the United States.(99) Within the larger total each side would be allowed to retain approximately 500 land-based long-range missiles and 1,750 SLBMs.(100) In addition the US would be allowed 1,250 bomber-based warheads and missiles, while the Russians would have to reduce their arsenal to 750.(101) Despite the fact that the treaty went a significant way in reducing the nuclear arsenal of the two superpowers it did encounter opposition. Yeltsin's opponents threatened a rough passage for the treaty through parliament, claiming that Russia had perhaps given too much away.(102) Yeltsin was also accused of acting like

Gorbachev in courting the West.(103) Ratification of the treaty was delayed, but even if it had been passed quickly problems would still have arisen over the destruction of the weapons systems. As at the time of writing Russia does not have adequate facilities for storing or dismantling nuclear weapons-grade material. Unless it receives greater financial assistance from the West, it will not be able to build these facilities, and the treaty, as a result, will not be worth the paper it is written on.

A CHRONOLOGY OF SOVIET DISARMAMENT, 1986-1992

Date	Treaty/Action	Aims
16 January, 1986	Plan for the Year 2000	The proposed elimination of all nuclear weapons.
8 December, 1987	Intermediate Nuclear Forces	The elimination of approximately 5,000 medium and short-range missiles. The initiation of conversion programmes in 4 enterprises.
7 December, 1988	UN Speech	Settlement of the conflict in Afghanistan, with the withdrawal of 100,000 soldiers and a savings of R4.7 billion per annum (R300 million per year continued to be spent on arming Afghan troops until 1992). Reduction in size of the Red Army by 500,000 troops and six tank divisions (to be withdrawn from Eastern Europe and the Far East).

January 1990	Full Scale Withdrawal From Eastern Europe Begins	Total of 123,000 troops withdrawn from Hungary and Czechoslovakia.
February 1990	Negotiations begin for the withdrawal of remaining troops in Mongolia.	
12 September, 1990	"2 + 4" Treaty	The withdrawal of 350,000 servicemen, 150,000 civilian personnel and 500,000 family members. Receipt of economic aid from Germany.
19 November, 1990	Conventional Forces in Europe	Sets limits on conventional weapons for alliances and individual countries. USSR forced to destroy 25,000 pieces of equipment.
23 May, 1992	Strategic Arms Reduction Treaty	Places a ceiling on the number of nuclear weapons held by the US and USSR. A 30 percent reduction in the nuclear arsenal results.
November 1992	Troops begin to leave Poland	58,000 servicemen return to the USSR.

The rapidity and scope of the Gorbachev disarmament programme achieved two positive outcomes. First, it succeeded in reducing tension within the international arena. Although not all of the treaties were signed and ratified on schedule, a new era of co-operation had begun. Both East and West were willing to reduce their arsenals, conventional and nuclear, and work together in

establishing a new type of security. This major accomplishment allowed Gorbachev a window of opportunity in which to initiate deep and wide-scale reform. This was the second positive outcome. It was hoped that reductions in the defence budget and the initiation of a conversion programme would make a significant contribution to the development of economic reform.

On January 18, 1989 Gorbachev declared that over a two-year period reductions of 14.2 percent and 19.5 percent would be made in defence spending and defence production respectively. Both Soviet civilian and Western analysts questioned how, if the total figure of defence spending was not made available, it could be reduced by 14.2 percent. As stated in Chapter One, defence spending had been listed at approximately 20.2 billion roubles for several years, and this figure appeared highly unrealistic. Fyodor I. Kushnirsky, in an article in *Europe-Asia Studies* (1993), has attempted to explain this figure. He believes that this sum is realistic if, as he suspects, it applies only to the Ministry of Defence's share of the budget.(104) Money for R&D and the construction of military goods would be contained within the budgets of the various ministries in charge of production.

The revised figure for the proposed 1990 defence budget attempted to take into account spending in other sectors (See Table 3.2). The total defence outlays for 1990 were recorded at 70.9 billion roubles. This was a reduction of 6.3 billion roubles or 8.2 percent from the 1989 budget. Although the more detailed figures were welcomed, debates still continued over their accuracy. In a comparison of US and USSR spending on defence in 1989 it appeared that despite the vast size of the Soviet armed forces expenditure was still significantly less than in the United States (See Table 3.3).

Table 3.2
1990 Proposed Defence Budget
(in billions of roubles)(105)

Outlay Category	Cost
Procurement	31.0
Research and Development	13.2
Maintenance of Army and Navy	19.3
Overall Military Development	3.7
Pensions for Military Personnel	2.4
Other Outlays	1.3

Table 3.3
Comparative Expenditures in 1989 Prices
(in billions) (106)

Outlay Category	United States	Soviet Union
Maintenance	$160	R20.2 ($31.9)
Procurement	$80.7	R 32.6 ($51.5)
Research and Development	$37	R15.3 ($24.1)
Space	$29.6	R6.9 ($10.9)

(Official Roubles to Dollar Rate = 1.58:1)

Major General Medvedev, a Professor of Technical Sciences, in his response to an article written in 1990 by the Head of the Institute of US and Canadian Studies, Georgii Arbatov, claimed that these figures proved conclusively that the United States consistently outspent the USSR in defence. Arbatov rejected this claim arguing that if the figures were to prove anything they had to be true and accompanied by the prices of each type of item.(107) Arbatov's distrust was shared by other analysts in the Soviet Union and the West. Research demonstrated that if subsidies to defence manufacturers and hidden costs military police, civil defence measures, military aid, etcetera) were taken into account then Soviet military expenditure would range from R115

billion to R200 billion.(108)

The defence budget continued to appear underestimated. The projected spending for 1991 was announced as being R65 billion. This was a cut of close to 6 billion roubles from the 1990 budget, or an 8.5 percent reduction in 1990 prices.(109) The forecast for 1991, however, used numbers calculated on the basis of old, centrally fixed prices and the projected, free prices as of January 1, 1991. When this forecast was adjusted to account for inflation and a change in the system of taxation, 65 billion roubles became 96-98 billion roubles.(110)

Inflation caused a steady rise in the apparent figures for defence spending. For 1991 the planned allotment for defence was 96 billion roubles of which 39.6 billion were to be spent on weapons procurement; 12.4 billion on Research and Development (R&D); 30.7 billion on maintenance of the armed forces; 6.3 billion on capital investment; 4 billion on pensions and 3.2 billion on social provisions.(111) The revised estimate on total defence expenditure rose to 173 billion roubles.(112) A proviso was added which stated that by 1992 the figures for 1991 might rise to 250 billion roubles once the price increases were taken into account. Prior to the collapse of the Soviet Union it was estimated that the defence budget for the USSR could be as much as 529.4 billion roubles with Russia's share constituting 61.3 percent of the total.(113) It was forecast that in 1993 Russia's defence budget would reach between 1.55 and 1.65 trillion roubles.(114)

While inflation forced prices to spiral out of control, government ministers and advisers continued to claim that the defence budget was being reduced. Akhromeyev, while adviser to Gorbachev on military affairs, stated in 1991 that there had been an 8.5 percent reduction in defence spending.(115) In

December 1991 Yazov, then Defence Minister, proclaimed that expenditure on procurement had been slashed by 23 percent in 1991 and that this rate of reduction would continue in 1992.(116) External analysts challenged the validity of these pronouncements. One article in particular stated that by using 1991 prices and conditions the defence budget would actually increase in 1991 from 8.56 percent of GNP to 8.75 percent.(117) A subsequent report produced by the Institute of the USA and Canada (1993) stated that in Russia, which had agreed to support 65 percent of the budget of the Supreme Command of the Unified Armed Forces (the successor to the Red Army), actual defence spending had exceeded initial budget requests in 1992.(118) Although spending on procurement had been reduced, there had been sizable increases in spending on pensions and wages, on new housing for active and retired personnel, for the withdrawal of troops from Europe, and for the destruction of weapons resulting from the INF, CFE and START treaties.(119) It is debatable as to whether these costs had been calculated when Gorbachev initially announced reductions in the defence budget.

While the military initially supported reductions in the defence budget, it was very much aware that a diversion of resources would have a limited impact if structural reforms of the central planning system did not occur.(120) General Vladimir Lobov, who would later become Chief of the General Staff, argued in a 1990 article that the entire military administrative structure, political and economic, would have to change.(121) He believed that in terms of the economic structure, a transformation of the processes of military production and purchasing would need to occur; and that the laws of the market would need to prevail. Yet, as will be detailed in subsequent chapters, this did not happen. Indeed, attempts at reducing the defence budget and reforming the military sector appeared to be done in a piecemeal fashion. As *perestroika* progressed the

General Staff developed the opinion that financial sacrifices on the part of the military contributed little to the development of the economy and succeeded only in limiting its ability to defend the nation.(122)

THE SOVIET MILITARY'S CHANGING ROLE

Between 1988 and 1991 the Soviet government agreed, through disarmament treaties and unilateral actions, to cut its armed forces by approximately 1,031,000 men, to destroy 25,000 pieces of conventional military equipment and to limit its nuclear capability. Understandably, such dramatic cuts would have a serious impact on any military organisation. In the case of the Soviet Union, a country which was simultaneously undergoing major political and economic reforms, it meant a complete transformation of the military's role in society.

From the conception of the Worker and Peasant Army in 1918 the Soviet military had been entrusted with four equally important tasks: to maintain the peace, to defend socialism, to unify the state, and to educate the youth of the nation. In order to perform these charges effectively the Soviet military was integrated in to the Party and political systems.

One of Gorbachev's aims had been to depoliticise the armed forces, to limit their involvement in the process of political decision-making. This particular reform went against one of Lenin's strongest beliefs. In his "Armed Forces and the Revolution" he had stated that "the armed forces [could not] and should not be neutral".(123) He believed that for the armed forces to maintain its many guises -- defender, unifier and educator -- it was necessary to take on an increasingly political role. Marshal Grechko reasoned that the armed forces were

"of the people and for the people and this fact determine[d] their place in the political organisation of Soviet society".(124) While Gorbachev no doubt believed that the armed forces were "of the people and for the people", he concluded that they could better serve those people if their involvement in the decision-making process was limited. This did not necessarily mean that the role of the Party in the armed forces should be limited, just that their role in the higher Party structures should be.

Prior to reform, the military's main role in the decision-making structure had been as a supplier of information. Although this was clear, for many years the process itself was not. From the 1950s to the 1970s there was some confusion amongst Western analysts over the way in which decisions concerning the military were made. The primary question was the nature of the relationship between the Defence Council and the Politburo. The second question centred on the number of administration and information bureaux involved in supplying them with data. The supreme organ of the Party, the Politburo, was responsible for the coordination of information on economic, social, and defence issues. Prior to the reforms of the government structure which were implemented between 1988 and 1990, the Politburo held ultimate control of defence policy.(125) Once that policy was outlined, however, it was up to the Defence Council, as the state organ, to oversee its implementation.

Officially defined as the supreme organ of leadership of all military, paramilitary, and state security forces, the Council concerned itself with developing and strengthening the combat readiness of the Soviet armed forces. It dealt with questions of internal and external policy in economics, ideology, and diplomacy. In the early 1980s David Holloway and Howard Frost proposed two possible scenarios of operation. They suggested that the Council might have

investigated matters for which the Politburo did not have time, leaving major policy issues in the realm of the Politburo. This scenario placed the Council in a distinctly subordinate position by implying that it merely gathered information without analysing it. The second possibility set the Council on a more equal footing. Information available at the time tended to support the hypothesis that it analysed all major policy issues and made recommendations to the Politburo.(126) It was then responsible for providing an aggregated view of current situations, supplying details on economic and social trends, formulating policy, and presenting it to the Politburo for a vote. In this scenario the Council had far more responsibility and a greater capacity for influencing the Politburo's decision.

Information networks for the Politburo and the Defence Council were separate. The Politburo relied on data provided by the Central Committee Secretariat. Within the Secretariat were departments which dealt with military affairs. Again there was some discrepancy over the number of sections in existence. Holloway outlined three sections while Frost added a fourth. The core departments were (1) the Main Political Administration which was concerned with the moral and political state of the armed forces; (2) the Administrative Organs Department (AOD) which dealt with personnel matters; and, (3) the Department of Defence Industries (DDI) which oversaw military production.(127) Frost incorporated a fourth institution for the supervision of production, the Department of Machine Construction (DMC).(128)

Within the state structure, the Defence Council was at the pinnacle of a structure which consisted of the Ministry of Defence, the General Staff, and the Main Military Council (Collegium). Heading the hierarchy of the Ministry of Defence was the minister himself and two to three chief deputies who presided

over the institution. Beneath them were the deputy ministers who were typically the commanders-in-chief of the main branches of the armed forces. Next in line were the collateral staffs composed of the General Staff and the Main Political Administration. The division of labour among the collateral staffs was a prime example of "dual subordination", a theory frequently propounded when discussing any form of bureaucracy. This theory calls for the organisation of ministries and staffs on both horizontal and vertical lines. In the case of the Soviet military the General Staff was both a branch of the Ministry of Defence and a decision-making institution in its own right. The Main Political Administration existed as a component of the Central Committee Secretariat. Beneath the collateral staffs lay the base tier which consisted of the operating commands. These bodies directed the operations of the military districts (of which there were 15), the air defence districts (2), the fleets (4) and the groups of Soviet forces stationed abroad (4).(129) The Soviet Ministry of Defence was undeniably a "uniformed empire".(130) Matthew Gallagher and Karl Spielman described the Soviet Ministry of Defence as,

> both the steward of government in military affairs and the representative of the military in the councils of government. It [leaned] more to the second of these two roles, in part because of the professional habits and institutional interests of those who [manned] it.(131)

The loyalties of the Soviet officer were not unlike those of his Western counterpart.

While all the ministerial departments were charged with the duty of compiling information there was only one branch responsible for judgments on this material. The General Staff was dubbed the "brain of the army" by the late Marshal Boris Shaposhnikov. The responsibilities of the Soviet General Staff, as in any military establishment, were fairly comprehensive. Its tasks included the

detailed planning for the deployment of nuclear weapons, the control of military intelligence, and the organisation of training for the armed forces.(132) While this description of duties is substantial it does not seem to warrant the accolade, "brain of the army". What set the General Staff apart from other ministerial departments was its ability to conceive a functional military strategy from political doctrine.

Military doctrine consists of the views held at any given time by a state on the "purposes and character of a possible war, on the preparation of the country and the armed forces for it, and also on the methods of waging it".(133) Military doctrine is composed of two elements, the political, which should be the more dominant of the two, and the military-technical. The former aspect is concerned with the purposes and character of the war, while the latter deals with the methods of waging war. Under previous Soviet leaders the nature of international relations was defined by ideological confrontation. During peacetime emphasis was placed on the development or restructuring of the military forces to better combat possible opponents. Gorbachev's policy of new thinking encouraged a shift away from ideological confrontation towards cooperation. While this change of emphasis did not mean that the General Staff's central task, the conception of military doctrine, had changed, the manner in which it was accomplished had.

Initially the changes inflicted upon the military by Gorbachev, although noteworthy, were of a superficial nature. The two main areas in which his influence could be felt prior to 1990 were in the role of the Party and in personnel. In order to further his economic programme Gorbachev had found it necessary to implement political reform. As discussed above, the democratisation of the management process had been perceived as an important

element in promoting economic growth. Yet, to initiate this type of reform within any one sector without similar changes occurring throughout the system would have proved ineffectual. The policy of *glasnost'*, initiated in 1986, allowed for more open discussion of the problems facing the Soviet Union. In line with this, Gorbachev attempted to democratise the Party. Its destruction was not the intended goal, rather, it was hoped that a reformed Party would be able to lead the people into the 21st century.

The January 1987 Plenary Session of the CPSU Central Committee addressed the issue of democratisation of society. Gorbachev proposed reform in three main areas: on the shop-floor, within the electoral system, and within the Communist Party itself.(134) While few sectors of civil society were exempt from the proposed reforms, the military appeared beyond criticism. Gorbachev claimed that the armed forces were "fulfilling their international duty with credit".(135) Various generals, however, disagreed. Marshal Sergei Sokolov, then Minister of Defence, declared that many of the criticisms made by Gorbachev about the lack of democracy within political and economic institutions and the general level of ideological training could just as easily be applied to the military.(136)

Although 90 percent of the officer corps were members of the Party its role within the defence sector had actually been declining since the death of Stalin. During the Brezhnev era the military grew in size, strength, and importance while the political and ideological control of its operations withered. The Party Programme adopted at the 27th Party Congress in 1986 had attempted to change this state of affairs. The role of the Party was to be strengthened and under its guidance policy issues concerning the nation's defence and security as well as Soviet military doctrine were to be developed and implemented.(137)

Other reforms were suggested for the local level. The Red Army had always played a special role in Soviet society. It served to unify the nationalities. Mikhail Frunze, a Red Army commander, described the situation in these terms,

> The USSR is a union of working people of different nationalities. The Red Army is its reflection. It is not a national army, it is a union, a military union, to which every Soviet republic contributes her sons.(138)

The various republics had given their sons to the Red Army for the greater good of the people. The army in turn felt that it had an obligation to the people not only to defend them but to educate the young men and boys in its care. Thus closely allied to the role of unifier was the role of educator. Military service was a type of "nation-wide university" through the doors of which nearly all Soviet men passed. This "university" was not a new creation, indeed there was a direct link to the Tsarist system. From 1870 onwards young officers frequently considered themselves enrolled in a "national university" which united the empire, taught them patriotism and provided peasant conscripts with a basic education.(139) The Soviet curriculum included lessons on the art of war, organisation and discipline, physical training and ideological indoctrination.(140) Ideological training was the responsibility of the Party cells, Commissars and the MPA. Their goal was to indoctrinate the servicemen in the teachings of Marxism-Leninism and to instil greater loyalty to the Socialist Motherland.

Marshal Sokolov, then Minister of Defence, suggested several ways in which basic ideological training could be improved. He called for an increase in the "influence of the central apparatus on the maintenance of organisation and order among the troops", namely through the increased role of the MPA; for the strengthening of military discipline; for the enhancement of the role of political and theoretical training and the ideological and moral tempering of generals and officers; and, finally, for an overall increase in respect for the responsibility

exercised by officers.(141)

Many of these suggestions mirrored attempts to improve the political reliability of the troops in the late 1960s. Following the 23rd Congress of 1966, the Party, by expanding the authority of the MPA, tried to ensure the absolute loyalty of the officer corps to itself. Special schools were established at that time to produce political officers who received the rank of deputy commander and were made responsible for relaying Party policy and Party ideology to the troops.

Deputy commanders in charge of ideological education remained in existence until the fall of 1991, however their task grew increasingly difficult. Gorbachev had progressively shifted power away from the Party apparatus to the state structure. The Party's right to indoctrinate servicemen was called into question when demands for the rejection of Article 6 of the USSR Constitution were made at the CPSU Central Committee Plenum in February 1990. The clause which had guaranteed the CPSU a monopoly on power was duly reformulated on March 3, 1990. As a result the MPA was forced to fight a losing battle. Its directive stated that it was responsible for the morale and well-being of the Soviet troops, as well as for their ideological education. As the Party's position became less secure the MPA began to emphasise the former aspect of its directive rather than the latter. The education of the troops became its main focus. The August 1991 coup settled the issue of the Party's role within the armed forces once and for all. Following the collapse of the coup, Boris Yeltsin, as President of Russia, issued a decree on 22 August which called for the disbandment of Party cells in all army units located in the RSFSR. He declared this action necessary because of the support given by Party leaders in the armed forces to the Emergency Committee.(142) This action was followed by others of even greater significance. On 23 August Yeltsin suspended the activities of the Russian

Communist Party. The USSR Supreme Soviet, following Yeltsin's lead, suspended the activities of the Party throughout the nation. Its bank accounts were frozen and ownership of its buildings transferred to local councils.(143) As a result of these various actions the armed forces were transformed. The army was no longer the army of the Communist Party, the defender of socialism, but the army of the people.

During the transitional period as Party control weakened, Gorbachev attempted to assert personal control of the military. He began by initiating changes in the personnel structure. By 1989 almost 200 generals of the rank of lieutenant general had been retired or dismissed.(144) They were replaced by younger officers who shared the views of the General Secretary. An early opportunity to reshuffle the Ministry of Defence fell out of the sky in 1987 when a young West German pilot by the name of Rust managed to fly through Soviet air space undetected and land his Cessna plane in the middle of Red Square. This provided the perfect excuse for removing both the Minister of Defence, Marshal Sergei Sokolov, and the Commander-in-Chief of the Soviet Air Defence Forces, Marshal Aleksandr Koldunov. Overlooking some forty marshals and senior generals, Gorbachev appointed the former commander of the Far Eastern Military District, General of the Army Dmitri Yazov, as Sokolov's successor. Yazov had previously served as the Army General in charge of personnel. While in that office he had initiated a programme of personnel changes designed to advance the cause of perestroika in the military.(145) Yazov's promotion to Minister of Defence, although surprising to the West, made sense in terms of further implementing *perestroika* in the armed forces.

Gorbachev's reasoning was understandable. At the time he was trying to integrate the military into a broader policy process, while at the same time

strengthening the Party's -- and his own -- control over that process. By retiring older generals who might have carved out their own little niches in the ministries and by promoting younger officers to fill the gaps Gorbachev was attempting to build his own loyal cadre. He wanted this cadre to be composed of men like himself who had come of age during the Khrushchev reform era. These men supported Gorbachev and his policies until it began to appear that he had lost control of the reform movement.

Gorbachev's first attempt at changing the defence decision-making structure occurred in 1988. For many years the chairmanship of the Defence Council had been awarded to the General Secretary of the Party despite the fact that it was not formalised within the Constitution. In amendments to the Constitution in December 1988 a stipulation was added that the Chairman of the Supreme Soviet, i.e. Gorbachev, also acted as the Chairman of the Defence Council. This was the first attempt to clarify and centralise control under the state's rather than the Party's auspices.

The reins of control were tightened further by Gorbachev's attainment of the Presidential office. The powers permitted to the President were comprehensive, and where they concerned the military they inspired unease and curiosity. At the time the legislation was passed General Moiseev, then Chief of the General Staff, gave his support to the reforms and the centralisation of power.(146) He believed that the creation of the presidency would eliminate bottlenecks and discrepancies in policy which had occurred under the previous decision-making structure.

In the amended constitution of 1990, Article 127 firmly declared the general powers awarded to the President in relation to the military. He was the

supreme commander of the armed forces and as such was responsible for the "defence of the sovereignty of the USSR", its security and territorial integrity.(147) In order to achieve this he was responsible for "[coordinating] the activities of the state organs for guaranteeing the defence of the country".(148) In the eventuality that the Soviet Union should ever be attacked, the President was responsible for initiating general and particular mobilisation and for informing the Supreme Soviet.(149) Furthermore, in critical instances the President had the ability to assume total control, thereby relieving the other administrative organs of their responsibilities. To assist him in the "realisation of the general directives of foreign domestic policy" a Presidential Council was created.(150) Its makeup was similar to that of the Cabinet in the United States, with men representing internal affairs, the foreign ministry, defence, and economic and cultural interests.(151) The constitution was not explicit in its description of the role of the Presidential Council. In reality it turned out to be mainly a short-lived advisory body with the ultimate decisions being taken by the President.

For a time Gorbachev managed to tighten the reins of control but there is little evidence to suggest that the information channels were radically restructured before he was ousted. While *glasnost'* managed to affect most areas of Soviet society the Ministry of Defence remained aloof. Although data on military expenditure were published they were by no means a full account of the defence budget. How much the military spent and what it spent it on remained a secret. Without this information it was very difficult, if not impossible, for an unbiased and open debate to occur within any of the legislative bodies. Although Gorbachev headed many of the legislative organs the briefs which reached him concerning the armed forces were still processed in the same manner as under the previous administrations with only selected information making its way to the final report. Thus the military maintained its ability to

influence political decisions.

Eventually certain members of the upper echelons of the armed forces attempted to influence policy in another way. They actively participated in a coup against Gorbachev. While it initially appeared to analysts in the West that Gorbachev had strengthened his position by becoming President, head of the Defence Council, the Supreme Soviet and the Congress of People's Deputies, this was not the case. Throughout 1990 and 1991 he found himself desperately bargaining with the conservatives and the liberals to ensure that his reform programme went forward. This vacillation between the two sides cost Gorbachev a great deal of respect at home and confusion abroad.

Increasingly, the military could be seen as the victim, rather than the formulator, of policy. The armed forces had been forced into a rapid, massive and disorganised withdrawal from Europe and the Far East. They had witnessed the abandonment of the principles upon which the Soviet Union was based, thus calling into question their role as the defender of socialism and the belief that the military was a national university. Their ability to halt or prevent these monumental changes had been curtailed by the political changes occurring within the Soviet Union.

On the domestic front they perceived a country in turmoil. Perestroika had not succeeded in promoting economic growth, despite its increasingly radical nature. Political reform had achieved a certain amount of openness and democracy, but members of the military felt that this lead to a weakening of the ties which bound the republics to each other, and to an increase in political unrest. The military found itself usurping the traditional roles of the MVD and KGB as it was sent in to quell uprisings in Tbilisi and Nagorno-Karabakh in 1989

and the Baltic republics in 1990 and 1991. This was a role they were unsuited for, and they found that they were losing the support of the people they were there to defend.(152)

Conservatives within the military and other sectors of society felt that the proposed union treaty was the final insult. The treaty made no reference to a union of socialist republics, only sovereign ones voluntarily joined together within a democratic structure. Socioeconomic development, social, education, energy, and transport policies would be determined jointly by the republics and the central government. Only security and foreign policy, law enforcement and the all-union budget would remain under central control.(153) A decision was made to halt the progress of disintegration.

The organisation of the coup began months in advance. As early as February 1991 General Boris Gromov, First Deputy Minister of the MVD, conducted exercises in Moscow to test the ability of the troops to react in a crisis in a major industrial city. Could they secure the power centres? (154) As a result of these exercises it was believed that the troops would react appropriately. What the members of the Emergency Committee failed to take into account were the attitudes and beliefs of the junior officers.(155) Within the KGB, MVD and the armed forces the lower-ranking officers, while not necessarily caring for Gorbachev, supported the reform movement.(156) A military exercise was one matter, but an attempted coup was completely different. The Emergency Committee was able to seize power from Gorbachev but was unable to secure any area other than the Kremlin. Many of the elite forces which the Committee had counted on pledged their support to men like Yeltsin and the mayor of St. Petersburg, Anatolii Sobchak.

The Emergency Committee affected policy but not in the manner intended. Its aim had been to regain control of the faltering system and proceed with reform at a slower pace. The result of the coup, which only lasted from the 19th to the 21st of August 1991, was to accelerate the rate of change. Upon his return from his place of captivity on the Black Sea, Gorbachev attempted to regain control of the situation, but it was too late. Frightened by the thought of any type of union, the republics declared their independence. The main link which had joined them, the Communist Party, was banned. Gorbachev had become the leader of a rapidly disintegrating state. This situation lasted until December 1991 when a series of meetings between the Slavic and Central Asian Republics created the Commonwealth of Independent States.

As the state structure changed so too did the military establishment. The participation of Yazov initially affected the civil-military relationship within Russia. Immediately following the collapse of the coup, Boris Yeltsin was able to assert greater control of the military, although this lasted for only a short period. The military eventually reasserted itself. But while Yeltsin was able to dictate to the armed forces he was able to choose the high command, promote civilians within the defence establishment, and restructure the civil-military relationship.

Following his return to Moscow, Gorbachev appointed General Mikhail Moiseev, then chief of the General Staff, as acting Defence Minister. Within twenty-four hours he was stripped of his command as a result of his alleged involvement in the coup. Yeltsin played a leading role in determining who should then wield power in the military. He promoted those who had chosen to side with him during the coup. Marshal Evgenii Shaposhnikov was selected to replace Moiseev. General Vladimir Lobov became the chief of the General Staff and Colonel General Pavel Grachev became the deputy Defence Minister and

Chairman of the RSFSR State Committee for Defence and Security.(157)

Following the collapse of the Soviet Union in December 1991 and the emergence of the CIS, the various republics began to establish their own defence ministries. While Yeltsin and other Russian officials had argued that joint control of the armed forces should be maintained they were not slow to create their own defence establishment. On March 16 1992 President Yeltsin issued a decree which created the Russian Defence Ministry. It is responsible for personnel policy, budgeting, procurement of arms, and the provisioning of the Russian armed forces.(158) At the same time that Yeltsin created the Ministry he also named himself as acting Minister of Defence.

In subsequent decrees Yeltsin abolished the post of state counsellor for defence and dissolved the state committee for defence which had been in operation during the transition from Soviet republic to independent state. In late March he also ordered the creation of a state commission which would lay the groundwork for the new ministry.(159)

During this period of restructuring civilians were considered for defence-related positions. During the search for a new defence minister the names of Galina Starovoitova, advisor to Yeltsin, and Andrei Kokoshin, the Deputy Director of the USA and Canada Institute and Director for the Centre of Conversion and Privatisation, were put forward. In the end a military man received the top position, when Pavel Grachev became the Russian Minister of Defence in May 1992.(160)

CONCLUSION

In an attempt to defend the homeland successive Soviet leaders had achieved the militarisation of the state. The phrase "militarised state" generally connotates a society run by a military dictator. The Soviet Union was never governed in this manner. What made it a militarised state was not so much the overt actions of the military in government as the willingness of government and Party officials to subordinate the interests of society to those of the armed forces. Through the channels of decision-making and the administrative command system the resources of the state were used to ensure the growth and continuance of the military. It is this which caused the USSR to be termed a "militarised state".

While the military and civilian spheres were distinct, the reforms of the 1980s affected them in similar ways. In the past the armed forces were referred to as the "barometer of Soviet society". This was a particularly accurate tag during the late 1980s. Like other sectors of the bureaucracy, the military was aware that reform needed to occur, yet it felt threatened by change. The Gorbachev reforms radically altered the role of the armed forces in society. In acting in the capacity of defender, unifier and educator, the military was fulfilling the functions of military power outlined by Garnett. When these roles were taken away from it there was little else to do. Attempts to act as a "domestic policeman" backfired, causing support for the armed forces to decline. As a result a traditionally conservative institution felt that it was forced to defend its position and act against the legitimate political authority.

Arguably, reform of the military needed to coincide with the restructuring of society as a whole if a stable transition to a more democratic society was to occur. However, Gorbachev apparently failed to understand just how successful his predecessors had been in politicising the armed forces. They were closely

linked with both the Party and state structures, and any reform within this area would affect them. Ideally, reform of the armed forces should have been comprehensive, as suggested by General Lobov. Instead the measures only went so far, causing upheaval without providing a clear cut role for the army in the future. By ignoring the role which the military plays in society Gorbachev encouraged the instability he desperately needed to avoid.

NOTES

1. Anders Aslund, Gorbachev's Struggle For Economic Reform, p. 21

2. Leonid Abalkin, "A New Conception of Centralism", *Problems of Economics*, May 1988, p. 7. Original article entitled "Novaia kontseptsiya tsentralizma", *Ekonomicheskaia gazeta*, no. 5, December 1987.

3. Abalkin, p. 7; A.V. Buzgalin and A.I. Kolganov, "Methods of State Management of the Economy", *Problems of Economics*, April 1988, p.7. Original article entitled "Metody gosudarstvennogo upravleniya ekonomikoi", *Sovetskoe gosudarstvo i pravo*, 1987.

4. Buzgalin and Kolganov, p. 7.

5. Ibid.,

6. Abalkin, p. 8.

7. Russell Bova, "The Soviet Military and Economic Reform", *Soviet Studies*, vol. XL, no. 3, July 1988, p. 385. See also Ole Norgaard, "NPT East and West" in Gorbachev and Europe, pp. 54-56.

8. Edwina Moreton, "Comrade Colossus: The Impact of Soviet Military Industry on the Soviet Economy" in the The Soviet State: the domestic roots of Soviet foreign policy, p. 129.

9. Ibid., p. 131.

10. Ibid.,

11. G. Sorokin, "Growth Rates of the Soviet Economy", *Problems of Economics*, vol. XXIX, no. 8, December, 1986, p. 40. Original article, "Tempy rosta sovetskoi ekonomiki", *Voprosy ekonomiki*, 2/1986.

12. Ibid., p. 42

13. Igor Birman, "The Imbalance of the Soviet Economy", *Soviet Studies*, vol. XL, no. 2, April 1988, p. 215.

14. Stephen White, Gorbachev and After, p. 108.

15. Abel Aganbegyan, The Challenge: Economics of Perestroika, p. 3.

16. Ibid., p. 7 and Birman, p. 215.

17. Stephen White, Gorbachev and After, p.106. For the period 1951 to 1955 the averaage annual rate of growth was 7.3 percent. By 1981 that rate of growth had been reduced to 2.1 percent per annum. It is believed that economic growth as a

whole may have ceased altogether between 1980 and 1985. See Aganbegyan, p. 3.

18. Aslund, p. 15; Bova, p. 388.

19. Aslund, p. 15.

20. Bova, p. 385.

21. Aslund, p. 16.

22. Paul R. Gregory and Robert C. Stuart, Soviet and Post-Soviet Economic Structure and Performance, p. 133.

23. Stepan A. Sitarian, "Aspects of Political Economy in the Concept of Acceleration", *Problems of Economics*, November 1987, p. 78.

24. The opinions of A.M. Rumiantsev were expressed in the article "Economic Theory and Practice of Restructuring", *Problems of Economics*, November 1987, p. 62.

25. N.P Fedorenko in "Economic Theory and Practice of Restructuring", *Problems of Economics*, December 1987, p. 24.

26. Rumiantsev, p. 61.

27. Sitarian, p. 81.

28. Aslund, p. 10.

29. Sorokin, p. 43.

30. Ibid.,

31. John E. Tedstrom, "On Perestroyka: Analyzing the Basic Provision", *Problems of Communism*, July-August, 1987, p. 93.

32. Aslund, p. 132.

33. Tedstrom, p. 94.

34. Aslund, p. 140.

35. Gorbachev, in particular, felt that defence spending was a drain on the economy because it diverted resources from other important sectors. See Bova, p. 388

36. Michael J. Sheehan, Arms Control Theory and Practice, p. 6.

37. Martin Ceadal, Thinking About Peace and War, p. 105.

38. Sheehan, p. 7.

39. Ibid., p. 1.

40. Ibid., p. 9.

41. "Zayavlenie General'nogo Sekretarya Tsk KPSS, M.S. Gorbacheva", *Pravda*, 16/01/86, pp. 1-2.

42. Ibid.,

43. Ibid.,

44. TASS, "Osvobodit' mir ot yadernogo oruzhiya -- press konferentsiya v Moskve", Izvestia, 19/01/86, p. 5.

45. "Zayavlenie General'nogo Sekretarya Tsk KPSS, M.S. Gorbacheva", *Pravda*, 16/01/86, pp, 1-2.

46. "Osvobodit' mir ot yadernogo oruzhiya -- press konferentsiya v Moskve", *Izvestia*, 19/01/86, p. 5.

47. For a discussion of this topic see Security Without Nuclear Weapons?, ed. Regina Cowen-Karp.

48. "The Treaty Between The United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles" (1987), p. 3. Hereafter referred to as the INF Treaty.

49. The enterprises affected by the initial conversion policy were the Votkinsk Machine Building Plant, Barrikady Plant, M.I. Kalinin Machine Building Plant and the V.I. Lenin Petropavlosk Heavy Machine Building Plant. See the "Memorandum of Understanding Regarding the Establishment of the Data Base for the Treaty Between the USA and USSR on the Elimination of Their Intermediate-Range and Shorter-Range Missiles" (1987), pp. 58-66.

50. For further information on conversion see Chapters Five and Six.

51. A. Gorokhov, "Ishkhodya iz printsipov oboronitel'noi doktriny", *Pravda*, 17/12/88, p. 4.

52. For a discussion of the restructuring process see D.T. Yazov, "Kachestvennye parametry oboronnogo stroitel'stva", *Krasnaya zvezda*, 09/08/88, pp. 1-2. Also, "XXVIII S"ezda Kommunisticheskoi Partii Sovetskogo Soyuza -- D.T. Yazov", *Pravda*, 05/07/90, p. 4. General G.I. Salmanov also provides a discussion of the restructuring of doctrine in his article in *Voennaya Mysl'*, no. 3, 12/88.

53. See N. Karasev's article on the need for radical reform in economic

management which appeared in *Aviatsiya i Kosmonavtika*, 12/1987.

54. This is particularly true if reductions in personnel are accompanied by a decrease in arms. If, as was the case during the Khrushchev period, reductions in manpower are accompanied by an increase in the number of nuclear weapons than the image of a peaceful nation is negated.

55. M. S. Gorbachev, Izbrannye rechi i stat'i, vol. 7, p. 189.

56. Gunter Knabe, "The Soviet Invasion of Afghanistan", *Central Asian Survey*, vol. 7, no. 213, 1988, p. 134.

57. Paul Roth, "Afghanistan in der Sowetischen Informatsionspolitik" in Berichte des Budesinstituts fur Ostwissenschafliche und Internationale Studien, 18/1989, p. 96.

58. Oliver Roy, "The Lessons of the Soviet/Afghan War", *Adelphi Papers*, Summer 1991, p. 13.

59. Although the Soviet government had initially chosen to support the Communists over Daud, the government of Hafizullah Amin proved too radical for Brezhnev. Ibid., pp. 12-13.

60. Anthony Arnold, "Recent US & Soviet Experiences of War", *Central Asian Survey*, vol. 7, no. 2/3, 1988, p. 128.

61. Milan L. Hauner, "Soviet Geostrategic Position in the Southern Tier and the Occupation of Afghanistan", *Central Asian Survey*, vol. 7, no. 2/3, 1988, p. 90.

62. Knabe, p. 143.

63. Roger E. Kanet, "Changing Policy in Relations with the Third World" in Soviet National Security Policy Under Perestroika, p. 82.

64. "Vystuplenie M.S. Gorbacheva v Organizatsii Ob"edinennykh Natsii", *Izvestia*, 08/12/88, pp. 1-2.

65. TASS, "V press-tsentre MID SSSR", *Pravda*, 16/12/88, p. 7.

66. "Vystuplenie M.S. Gorbacheva v Organisatsii Ob"edinennykh Natsii" *Izvestia*, 08/12/88, pp. 1-2.

67. Gorokhov, p. 4.

68. Warren Shaw and David Pryce, Encyclopedia of the USSR: 1905 to the Present, Lenin to Gorbachev, pp. 93 and 230. See also "Khronika" in *Krasnaya zvezda*, 15/12/88, p. 2.

69. Maj. V. Kazakov, "Chto <<Likhozadit>> voennye kafedry?", *Krasnaya*

zvezda, 15/12/88, p. 1.

70. V. Markushin, interview with Gen. Maj. Yu. Lebedev, "Sokrashchenie Armii i Oboronosposobnost'", *Krasnaya zvezda*, 16/12/88, p. 3.

71. It is estimated that the Soviet Union may have spent up to 25% of GDP on defence. See the discussion in Chapter One.

72. Fred Oldenberg, "Moscow and the Reunification of Germany", *Berichte des Bundesinstituts fur Ostwissenschaftliche und Internationale Studien*, no. 38, 1991, p. 48.

73. TASS, "Withdrawal of Troops From CSSR Begins 26 February", translated by the Foreign Broadcast Information Service and reprinted by *FBIS* 26/02/90, pp. 29-30.

74. Demands were made for the removal of troops from Hungary on 19/01/90. An accord was signed on 12/03/90 and troops were to be withdrawn by June 30, 1991. See "Hungary Wants Soviet Troops Out By 1991", Paris AFP in English 18/01/90. Reprinted in *FBIS*, 19/01/90, p. 1. Also, TASS, "First Soviet Troops Depart Hungary 12 March", translated and reprinted by *FBIS*, 13/03/90, pp. 28-29.

75. Gerhard Wettig, "The USSR and Political Change in Eastern Europe", *Berichte des Budesinstituts fur Ostwissenschaftliche und Internationale Studien*, no. 25, 1990, p. 46.

76. Ibid., The Soviet government held this position roughly from October 1989 to January 1990.

77. Oldenberg, p. 48.

78. The Prague meeting of the Warsaw Pact occurred in March 1990. See Gerhard Wettig, "The Soviet Union and German Unification", *Berichte des Bundesinstituts fur Ostwissenschaftliche und Internationale Studien*, no. 38, 1990, p. 16.

79. Ibid.

80. Oldenberg, p. 49.

81. Roman Stefanowski, "Soviet Troops in Poland", *RFE/RL Report on the USSR*, vol. 1, no. 41, 13/10/89, p. 39.

82. Douglas L. Clarke, "Poland and the Soviet Troops in Germany", *RFE/RL Report on Eastern Europe*, vol. 2, no. 4, 25/01/91.

83. "Mongolia Agrees to Complete TW", *Current Digest of the Soviet Press*, March 2, 1990, pp. 8-9.

84. Michael Binyon and Michael Evans, "Paris summit gives belated welcome to post-Cold War era", *The Times*, 07/11/90, p. 9.

85. Ibid.,

86. Initial delay over implementation was caused by the Soviet military's shift of units beyond the area of the Treaty and by their redesignation of some units as KGB forces, thereby placing them outside the confines of the Treaty. While the two sides attempted to resolve these problems geo-political events overtook the disarmament process.

87. Lithuania's voice was the loudest in the dispute.

88. Interview conducted by the author with General Ivanovich at the Rostov-on-Don military headquarters on 23/01/92.

89. Douglas L. Clarke, "Implementing the CFE Treaty", *RFE/RL Research Report*, vol. 1, no. 23, 05/06/92, p. 51.

90. Ibid.

91. Ibid., p. 53.

92. Belarus failed to ratify the Treaty on schedule, however, the government agreed to abide by its terms until it was ratified. Ratification occurred in January of 1993. See Stephen Foye, ed., "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 29, 17/07/92, p. 56.

93. *Strategic Survey, 1989-1990*, p. 195.

94. Linton F. Brooks, "START: An End and a Beginning", *Disarmament: A Periodic Review*, vol. xv, no. 2, 1992, p. 13.

95. Marshal D. Yazov, "Eto sbalansirovannyi dogovor", *Izvestia* 01/08/91, p. 2.

96. TASS, "Itog mnogoletnykh usilii", *Pravda*, 01/08/91, p. 4.

97. Douglas L. Clarke, "Concern About Soviet Nuclear Weapons", *RFE/RL Report on the USSR*, vol. 3, no.37, 13/09/91, p. 3.

98. Stephen Foye and Douglas L. Clarke, eds., "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 18, 01/05/92, p. 61.

99. Daniel Green, "Big savings spur START 2 N-arms meltdown", *The Financial Times*, 30/12/92, p. 3. Jonathan Steele, "Summit Call to Clinton", *The Guardian*, 04/01/93, p. 1. The *Financial Times* , quoting a 1990 statistic, claimed that the US held 12,646 warheads while Russia had only 11,012. The *Guardian* stated that each side had approximately 10,000 warheads.

100. Simon Tisdall and Hella Pick, "Moscow and Washington agree strategic arms cuts", The *Guardian*, 30/02/92, p. 1.

101. Ibid.

102. Leyla Boulton, "Yeltsin faces powerful opposition to treaty at home", *Financial Times*, 30/12/92, p. 3.

103. Ibid.

104. Fyodor Kushnirsky, "Lessons From Estimating Military Production of the Former Soviet Union", *Europe-Asia Studies*, vol. 45, no. 3, 1993, p. 485.

105. "Report From the USSR Ministry of Defence, *Current Digest of the Soviet Press*, vol. 41, no. 50, p. 26. Original report appeared in *Pravda*, 16/12/89, p. 5.

106. "The USSR's Defence Budget", *Current Digest of the Soviet Press*, vol. 41, no. 23, pp. 14-15. Original report appeared in *Pravda*, 11/06/89, p. 5.

107. Georgi Arbatov, "If Without Guile?" in *Soviet Law and Government*, vol. 30, no. 3, Winter 1991-1992, p. 42. Original article, "A esli bez lukavtstva? *Ogonek*, no. 17, 1990.

108. Dmitri Steinberg, "Defence Allocation Under Gorbachev" in Radical Reform in Soviet Defence Policy, p. 76.

109. Robert L. Arnett, "The Soviet Debate Over the Future of the Armed Forces", *Defence Analysis*, vol. 7, no. 2/3, p. 284.

110. Ibid.

111. Roman Solchanyk, "Weekly Record of Events", *RFE/RL Report of the USSR*, vol. 3, no. 38, 20/09/91, p. 34.

112. Carla Thorson, "Weekly Record of Events", *RFE/RL Report on the USSR*, vol. 3, no. 45, 08/11/91, pp. 32-33.

113. The RSFSR's defence budget was forcasted at 323.5 billion roubles. The budget was actually 632 billion roubles in 1992. See Carla Thorson, "Weekly Record of Events" in *RFE/RL Report on the USSR*, vol. 3, no. 51, 20/12/91, p. 38. Also John Lepingwell and Alfred A. Reisch eds., "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 40, 09/10/92, p. 53.

114. Lepingwell and Reisch, p. 53.

115. V. Litovkin, "Skol'ko Stoit Oborona", *Izvestia*, 12/01/91, p. 3.

116. Carla Thorson, "Weekly Record of Events", *RFE/RL Report on the USSR*, vol. 3, no. 50, 13/12/91, p. 32.

117. Arnett, p. 284.

118. *Russian Defence Policy: Challenges and Developments*, ed., Sergei Rogov. A paper by the Institute of the USA and Canada and sponsored by the Center for Naval Analysis, 1993, p. 29.

119. Ibid., pp. 29-31.

120. Bova, p. 396.

121. General Vladimir N. Lobov, "Military Reform: Objectives, Principles and Content", *Soviet Law and Government*, vol. 30, no. 3, Winter 1991-1992, p. 59. Original article, "Voennaya reforma: tseli, printsipy, soderzhanie", *Kommunist*, 1990, no. 13.

122. J.B.K. Lough, "The General Staff and Economic Reform", SSRC Occasional Brief, no. 4, September, 1991 (RMA Sandhurst), pp. 1-2.

123. V.I. Lenin, "The Armed Forces and Revolution", Collected Works, vol. 10, p. 56.

124. A.A. Grechko, The Armed Forces of the Soviet Union, p. 102.

125. Alexander Rahr, "From Politburo to Presidential Council", *RFE/RL Report on the USSR*, vol. 2, no. 22, 01/06/90, p. 2.

126. David Holloway, The Soviet Union and the Arms Race, p. 110. See also Soviet National Security Policy Under Perestroika, ed. George Hudson.

127. Ibid.

128. Howard Frost, "Soviet Party-Military Relations in Strategic Decisionmaking", The Soviet Union What Lies Ahead, p. 62.

129. Mathew P. Gallagher and Karl F. Spielman, Soviet Decision-Making for Defence, p. 38.

130. Ibid.

131. Ibid.

132. Holloway, p. 11.

133. Sovetskaya Voennaya Entsiklopediya, vol. 3, p. 225.

134. Angus Roxburgh, The Second Russian Revolution, pp. 55-56.

135. "V Sovete Ministrov SSSR", *Pravda*, 27/01/87, pp. 1-5.

136. Polkovnik B. Pokholenchuk, "Perestroika -- delo kazhdogo: Sobranie partiinogo aktiva Ministerstva Oborony SSSR", *Krasnaya zvezda*, 18/03/87, p. 1.

137. "Programma Kommunisticheskoi Partii Sovetskogo Soyuza", *Kommunist*, 4/1986, p. 131.

138. M.V. Frunze, Selected Works, vol. II, p. 194, as quoted in Grechko, p. 121.

139. David R. Jones, "Russian Tradition and Soviet Military Policy", *Current History*, vol. 82, no. 484, 1983, p. 198.

140. Grechko, p. 109.

141. Pokholenchuk, p. 1.

142. Elizabeth Teague, Sallie Wise, Saulius Girnius, "Record of Events in the Week of the Coup", *RFE/RL Report on the USSR*, vol. 3, no. 35, 30/08/91, p. 57.

143. A resolution suspending the activities of the CPSU in Russia was passed by the Supreme Soviet on 29/08/91. Although this act was later deemed at least partly unconstitutional by the Russian Constitutional Court in November 1992, the decision came too late to save the party structure within the armed forces. See White, p. 26.

144. S. Bialer, "Gorbachev's Program of Change: Sources, Significance, Prospects", *Political Science Quarterly*, vol. 103, no. 3, 1988, p. 440.

145. Christoph Bluth, New Thinking in Soviet Military Policy, p. 31.

146. "Voennaya Reforma: deistvitel'nost' i perspektivy", *Krasnaya zvezda*, 18/11/90, p. 2.

147. "Zakon -- Ob uchrezhdenii posta Prezidenta SSSR i vnesenii izmenenii v Konstitutsiyu (Osnovoi Zakon) SSSR", *Krasnaya zvezda*, 16/03/90, pp. 2-3.

148. Ibid.

149. Ibid.

150. Ibid.

151. It is interesting to note that nine of the thirteen members of the Presidential Council were members of either the Politburo or the Defence Council, or in many circumstances both. The movement of these Politburo members to the Presidential Council in July 1990 signified the downgrading of the Party.

152. The Leningrad lawyer, Anatolii Sobchak, who was in charge of the Congress of People's Deputies investigating commission into the use of the army in

Georgia, found that the use of force had been excessive. He also concluded that Army troops should never have been used as they were untrained in peaceful crowd control. See, "O Sobytiyakh v g. Tbilisi", *Izvestia*, 29/12/89, p. 2. Also, Julia Wishnevsky, "Shevardnadze Said to Have Threatened to Resign in Dispute of Tbilisi Commission", *RFE/RL Report on the USSR*, vol. 2, no. 5, 02/02/90.

153. Stephen White, Gorbachev and After, pp. 179-180.

154. Gromov was responsible for the organisation of the OMON forces which were used so effectively in the Baltic Republics. Once appointed 1st Deputy Minister of the MVD he worked actively to restructure and professionalize the MVD forces. See Mark Galeotti, "The Role of the Security Forces", *RFE/RL Report on the USSR*, vol. 3, no. 36, 06/09/91, pp. 5-8.

155. The Emergency Committee consisted of the Chief of the MVD, Boris Pugo, the Vice President, Gennadii Yanaev, Defence Minister Dmitri Yazov, Chairman of the KGB, Vladimir Kryuchkov, the Prime Minister Valentin Pavlov, and Oleg Baklanov, Aleksandr Tizyakov, and Vasilii Starodubtsev. All but Starodubtsev had links with the securiity forces or the military-industrial complex.

156. Stephen Foye, "A Lesson in Ineptitude: Military Backed Coup Crumbles", *RFE/RL Report on the USSR*, vol. 3, no. 35, 30/08/91, p. 6.

157. Lobov did not hold his position long. He was forced out of office in December 1991. Marshal Shaposhnikov stated that Lobov had been asked to resign because of his refusal to follow the agreed reform programme. See V. Litovkin, "Vooruzhennye sily podchinyayutsya verkhovnomu glavnakomanduyushuzhennye i ministru oboronyi", *Izvestia*, 14/12/91, p. 1.

158. Douglas L. Clarke, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 13, 10/04/92, p. 43.

159. Stephen Foye and Douglas L. Clarke, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 15, 10/04/92, p. 43.

160. Pavel Grachev was appointed in May of 1992.

CHAPTER FOUR
THE IMMEDIATE ECONOMIC REPERCUSSIONS OF DISARMAMENT

In the Report From Iron Mountain Leonard Lewin argued that military-industrial complexes have the power to shape their societies, for good or ill. Generally, only the negative effects are recognised. When an opportunity for disarmament arises governments immediately look to see what they can retrieve from their MIC. Immediately following the implementation of the INF Treaty in 1988 and the unilateral Soviet disarmament proposal of the same year both East and West began to speak of the prospects for a "peace dividend". In the Soviet case claims upon the peace dividend were made by civil industry and also by agriculture, the health services, education, and other social services. The benefits to these areas were not immediate. The proposed reduction of the Soviet defence budget by 14.2 percent over a two-year period could not meet all the demands of society. Furthermore, the very act of winding down the armed forces posed additional costs before society could ever recoup the peace dividend.

In Chapter Two an attempt was made to establish an hypothesis. It was proposed that if a state is to achieve a peace dividend through conversion, then the programme, if it is to be successful, should be well planned, with a recognisable beginning and end. The state should be involved to the extent that it assists in the formation of an overall programme, developing what Melman termed an economic bill of rights and promoting capital reallocation. It is important to remember that a conversion programme should be directed at the employees of the defence industries ***and*** military personnel, because both types of individuals make up the military-industrial complex.

Within this chapter some of the immediate economic repercussions of disarmament in the Soviet context will be examined. The ideal programme which was established in Chapter Two will be compared to Soviet policy between 1986 and 1991. The specific areas of comparison will be employment policy in respect to personnel within the MIC, the destruction of weapons and the restructuring of the military, and the reinvestment of funds.

EMPLOYMENT AND TROOP REDUCTIONS

The Soviet Union suffered for a number of years from labour shortages. There were several causes for this phenomenon. Enterprises needed to maintain sizable workforces to compensate for poor technology. There was little automation in Soviet industry, and while this allowed for full employment it caused the USSR to fall behind the West in competitive markets. This problem was perpetuated by a constant influx of semi-educated peasants. While the labour pool remained large there was no need to invest in more efficient technology, however as it shrank the need increased proportionally. Yet because the lag time between the development and implementation of new technology was quite substantial managers were forced to maintain ever larger workforces in order to meet production quotas.(1) The government encouraged this policy by basing managerial salary scales on the number of people employed by the enterprise, and by linking the bonus funds to the overall wage fund.

These excess labour reserves enabled enterprises to adjust to spurts in production due to infrequent delivery of material supplies, and they also helped to compensate for chronic absenteeism due to alcoholism and low worker morale. Finally, labour reserves allowed factories to assist in the work of the community, such as harvesting, road repairs, and construction of schools.(2)

By hoarding personnel enterprises contributed to chronic labour shortages in regions such as Siberia. Few people actually wanted to settle in an area with poor living conditions. As a result labour was brought in on a contract basis. Once the contract expired the labourers took their money and returned to their homes elsewhere in the Soviet Union. As a result there was no sense of permanency or continuity within the community, thus further aggravating the labour problem within the region.

Economic reform in the Soviet Union created another employment phenomenon, one which was previously taboo: unemployment became a factor within the national economy. There were two types of unemployment -- voluntary (*nezanyatost'*) and structural. The first category included people who had wilfully chosen not to work, for example mothers of large families. The second was defined as the "chronic involuntary idleness of able bodied workers who are unable to find remunerative work".(3) This category of unemployment during the last days of the Soviet period was confined to small towns and cities in the southern regions. A shrinking birth-rate in the north coupled with the central planning agencies' predilection for placing new enterprises in the northern areas resulted in an over-abundance of jobs with too few people to fill the spaces. By contrast, rapid population growth outstripped the development of the local economies in the Central Asian Republics, and yet no knew jobs were created.(4) Structural unemployment is now more widespread throughout the Commonwealth of Independent States. Its very presence is the motivating factor for groups such as the Civic Union and their opposition to more radical economic reform.(5)

Estimates of the level of unemployment in 1991 varied. The Russian

Federation of Industrial Trade Unions and *Komsomol'skaya Pravda* in February 1991 placed the unemployment rate in the Soviet Union at 1.5 percent.(6) This was considered a reasonable level in comparison with many Western nations. Yet Soviet analysts were concerned that the rate could rise to 2-3 percent during the course of 1991 and even continue to grow beyond that.(7) The UN's *Economic Survey of Europe* for 1991-1992 stated that the number of people employed in 1991 in Russia was down 1.2 million compared with 1990.(8) By January 1992 60,000 people had registered as unemployed in Russian state unemployment agencies.(9) In the spring of that year the Russian government predicted that 2.2 million people would be receiving unemployment benefits and 1.6 million would be undergoing retraining at the state's expense. The International Labour Organisation (ILO) estimated that the figures would be substantially higher. They predicted that 10 - 11 million people would be unemployed by the end of the year, thus totalling 15 percent of the labour force.(10) This proved to be an overestimation, for while the actual figure were high, the number of registered unemployed totalled only 1,028,808.(11) This placed the unemployment rate at 8.8 percent. Official estimates suggested that more than 2 million Russians could be classified as "partially unemployed".(12)

The growth of unemployment, and underemployment, was directly related to the policy of *perestroika* and the transfer to the market. The policies of *khozraschet* (self-financing) and contract brigades initiated the problem of structural unemployment. Industries were encouraged to streamline production and cut costs and this invariably meant reducing the labour reserves. Those who maintained their jobs were those with highly technical, trained skills. As a result fewer new jobs are now being created throughout the CIS and the number of new entrants into the labour pool is increasing. If *perestroika* and the policies that have followed it are successful in improving the technological base of the

economy then the number of man-hours worked will continue to decrease, thereby aggravating structural or forced unemployment.

Reductions in the armed forces have further aggravated this trend. As discussed in Chapter One, in a society with a market economy and volunteer armed forces, military service can act as a sponge, absorbing excess labour. In the Soviet Union where service was mandatory the military acted as a drain on the employment pool. Seventy percent of the Soviet armed forces were conscripts.(13) The average term of service for the 18-year old conscript was two years. That meant half, or roughly 1.8 million men, needed to be replaced every year. Although it was difficult enough to get sufficient numbers of able-bodied men to fulfil the draft their release from active service, as a result of disarmament, caused problems within the civilian sector by increasing the labour pool. This problem was most notable in the southern regions. The Soviet armed forces relied heavily on the ethnic minorities to swell their ranks (see Table 4.1). Once released from service they rejoined the ranks of the unemployed. In order to curb this problem various analysts suggested that out-migration from these areas should be encouraged.(14) Viktor I. Perevedentsev, a senior research associate at thethen Institute of the International Labour Movement, also recommended that organisational, economic, and psychological assistance be given to those who wished to move from the countryside to the city.(15) He did not, however, suggest how the government should organise this assistance. Additional problems have arisen as a result of the collapse of the Union. Labourers are even less willing to leave their republics for work in other states.(16) Racial tensions have increased, partly as a result of the uncertain future of the economy, and have thus made living and working conditions even more adverse.

Table 4.1
Portrait of Nationalities in a Regiment in the Red Banner Volga Military District(17)

Russians -- 43%	Tatars -- 15%
Chuvash -- 12%	Uzbeks-- 6.3%
Bashkirs -- 5%	Mari --3%
Ukrainians -- 2.1%	Turkmenians -- 2%
Kazakhs --2%	Armenians -- 2%

Georgians, Ossetians, Mordvinians, Azerbaidzhanis, Tadzhiks, and other nationalities combined formed 5.6% of the total.

The upper echelons of the armed forces were not immune to the rise of unemployment. As a result of the disarmament programme it rapidly became a major concern for the corps of junior officers. For example, in 1990 in the Belorussian military district there were 1,726 officers, but as of February 1991 there were only 812 remaining.(18) In an interview conducted in November 1990, General Moiseev, Chief of the General Staff, predicted that if widescale reform were to continue the result would be the loss of jobs for 3.0 - 3.2 million men.(19) The redundancies would be the result not only of troop reductions but also of the military's attempt to liquidate duplicate and parallel organs and changes in the composition of central management.(20) General Moiseev claimed that the outcome of such restructuring would be the release of 1,300 generals, and reductions in the officer corps of 220,000 and in the corps of military and naval warrant officers and sailors of 225,000: a total of 446,300 men.(21) The officers released were all highly qualified and intelligent men. Many of them were specialists in engineering, radioelectronics, computers and computer-electronics. Despite these qualifications they feared that they would be unable to find employment as civilians.(22) They suggested that the state create a comprehensive pension scheme and provide training courses which would introduce them to the operations of a market economy.(23) In essence they were asking for the type of economic rights legislation recommended by Seymour

Melman. He had argued that if a state wanted to ensure a smooth transition to a disarmed economy it needed to provide economic assistance for the retraining and relocating of personnel. The Soviet government did not provide this and as a result many of the servicemen felt disgruntled by the lack of government initiative. In an attempt to rectify this situation more enterprising officers tried to find alternatives. In Poland the Northern Group of Forces had access to classes in economics run by the Polish government, while other officers, once released from the service, enrolled in courses at universities and institutes located within their home towns.(24)

Many of the courses on economics and the market economy which were available within the private sector were expensive. In 1993 a mission team studying the feasibility of a Russian officer conversion programme for the Organisation for Economic Co-operation and Development (OECD) reported that tuition for these types of courses ranged from $50 to $500, placing them out of the reach of many retiring officers.(25) Unfortunately, the pay received by those serving in the Soviet military was not substantial. In general, per capita earnings of military families were 30 percent lower than those of a working class family.(26) Earnings were lower because 50 percent of officers' wives were unemployed -- not because they wanted to be, but because there was no place for them.(27) Essentially, structural unemployment existed within the defence sector. In 1990 *Der Speigel* reported that servicemen returning from Eastern Europe were attempting to augment their family savings by selling their uniforms, guns, and even tanks on the black market.(28)

While the government did provide pensions to ease the officers' transition, no significant unemployment benefits were available initially. Several complaints were made about the pension scheme by those affected. The

younger members of the officer corps felt that the pension was discriminatory.(29) The "Law on Pensions for Servicemen" was targeted primarily at individuals who had served for an extended period of time or who had become invalids as a result of their service. Personnel who had served for 20 years received 40 percent of their wage. For each additional year served they received another 3 percent. They were entitled to up to 75 percent of their wages.(30) Assistance was also provided for the relocation of families.(31) For junior officers, however, very little money was provided, on average 50 roubles a month, and no help was given for relocation. Furthermore, commendations arising from their service were not forthcoming.(32) In a sense they were dishonourably discharged.

In 1991 the legislature of the Russian Federation addressed the issues of pensions and unemployment. Instead of creating a special pension scheme for service personnel it included them in the general pension fund. The legislation was passed by the Supreme Soviet of the RSFSR on January 15, 1991.(33) Pension contributions are made to the wage fund by the state, enterprises, organisations, and individuals.(34) While service personnel are dealt with in the pension legislation, many of those released from service as a result of disarmament are not covered.

The parliament continued its programme of social legislation when it passed the "Law on Social Guarantees for Labour" and the "Law on Public Employment" on April 19, 1991. Article 1 of the "Law on Social Guarantees for Labour" guaranteed a minimum wage of R180 per month as of October 1, 1991. This level was raised on January 1, 1992 to R195 per month in order to compensate for the liberalisation of prices.(35) The minimum wage was subsequently increased to 2,250 roubles a month. In January 1993 the Russian

Federation of Independent Trade Unions demanded that it be increased again to 4,400 roubles per month, effective from the first of February. The unions also demanded that it be gradually increased until it reached the minimum subsistence level which was estimated at that time at R6,500 per month. It was argued that the minimum wage should be linked to inflation and reviewed on a quarterly basis.(36) Persons losing their job are still entitled to 90 percent of the lowest wage.(37)

The "Law on Public Employment" dealt specifically with the issue of servicemen. Article 2 of the law defined the various classifications of employment. People serving in the armed forces are considered to be employed.(38) Article 3 officially recognised unemployment and detailed the procedures for registering as such.(39) Article 36, which dealt with military personnel made unemployed, stated that as soon as individuals registered their new status they would be entitled to compensation for twelve months. In the first three months they would receive 75 percent of their former wage. In the following four months they would receive 60 percent of that wage, and in the final months this would be reduced to 45 percent.(40) After that point they would become eligible for the minimum wage as determined by the "Law on Social Guarantees".

We now turn our attention to civilian employees of the MIC. Ellen Jones has shown that civilians played a limited role within the Soviet MoD, although they were widely employed throughout the branches.(41) Non-military employees found remunerative work in the lower echelons of the MoD -- areas such as military farms, schools, and academies, medical facilities, housing and supply organisations, and of course the MIC.(42) The Northern Group of the Soviet Army comprised 58,000 Soviet personnel, approximately 8,000 of whom

were civilian white and blue collar workers.(43) It is to be assumed that a civilian contingent of this size or greater was attached to every military group of the Soviet army. As these groups were withdrawn from the various territories not only were the conscripts and some of the officers returned to the civilian job market, so too were those in auxiliary positions. Since the Russian government has now taken responsibility for returning service personnel it can be assumed that they will be subject to the provisions in the "Law on Public Employment".

Civilians employed in the defence industries have been particularly affected by disarmament and the resultant conversion programme. Prior to the collapse of the Soviet Union there were over 500 defence enterprises and design bureaux undergoing conversion in full or in part. They were required either to completely halt their military output and switch to the production of consumer items or to diversify their product line. In 1990 it was suggested that by converting Soviet industries perhaps more than 500,000 people would lose their jobs.(44) By February 1993 600,000 people had become unemployed in the Russian defence sector alone, and only 300,000 of them had managed to find employment elsewhere.(45)

Enterprises in the civilian sector are also releasing workers as they attempt to cut costs and become economically accountable. Both the defence and the civilian sectors have this in common -- they are both releasing the poorly qualified, low paid labourers. Engineers, qualified technicians and managers are in high demand and there is bound to be competition between the two sectors for their services. For the short term, disarmament will lead to structural unemployment for the uniformed and non-uniformed employee.

This situation has led to an increasing number of calls being made to slow

down the reform programme in order to offer better social protection to workers. Part of this insistence upon greater social protection stems from the fact that the employment fund is not able to meet the demands placed upon it. As noted earlier, it is made up of contributions from the state budget and from employers. As a result of increasingly unstable economic conditions employers are withholding their taxes which form the basis of the state's contribution.(46) There is now simply not enough money to go around.

The Russian government's inability to deal with the economic situation during the course of 1992 and 1993 was compounded by the ongoing constitutional crisis. As a result of numerous amendments to the Russian constitution, which was originally adopted in 1978, it had become unclear which was the supreme organ of legislative power, the presidential office or the parliament. This constitutional crisis was exacerbated by two very strong personalities, those of President Boris Yeltsin and the then Speaker of the Supreme Soviet, Ruslan Khasbulatov. The flash point for conflict was the economy and the reform programme.

In an attempt to personalise the conflict the conservatives within the parliament, led by Khasbulatov, accused Yeltsin of dictatorial tendencies and the desire to create a cult of personality. He in turn claimed that the parliament did not have the country's interests at heart. Recriminations and compromises marked the political agenda of 1992. The compromises failed to hold and in March 1993 Yeltsin and Khasbulatov essentially declared a personalised war. Unable to work with the parliament in pressing through reforms Yeltsin declared presidential rule on March 20. Khasbulatov and the conservatives demanded his impeachment. Although 617 members of the Congress of People's Deputies voted in favour of impeachment they fell short of the required number,

needing a further 72 votes.(47) Yeltsin survived, but so too did his rival, for only 400 votes were cast to oust Khasbulatov, short of the 517 needed.(48)

Yeltsin attempted to break the constitutional deadlock by staging a referendum, asking the people who they favoured and which economic programme they preferred. Achieving victory by a narrow margin in the April 25 referendum, Yeltsin proceeded to draft a new constitution, one which would allow him to propose his own prime minister, to name other ministers without recourse to parliament, to call referenda, supervise foreign and defence policy, conduct international negotiations and be virtually immune from impeachment.(49) These proposals aggravated an already difficult situation and the parliament reacted by continuing the legislative deadlock, passing legislation which contravened Presidential decrees. As a result, economic and political reform was allowed to drift during the course of 1993. Those pieces of legislation which did pass often did not resemble their initial form, having been curtailed by either the President or the parliament. The legal conflict was eventually resolved in favour of President Yeltsin, following his orders to dissolve the parliament on September 21 and the subsequent storming of the White House in October. Following the submission of his parliamentary opponents Yeltsin announced that elections for a new parliament which would be subordinate to the President would be held in December. However, this resolution failed to mitigate the effects of the crisis on the economy. The failure to assist military and defence related personnel adequately in the transition to the civilian economy, combined with rampant inflation and general economic dislocation, would create further political unrest by giving support to hard-line nationalist groups, like Vladimir Zhirinovsky's Liberal Democrats, who favoured a return to a more stable and structured political system. Zhirinovsky's model for the state promotes the ideas of stability, continuity, and protection (for some at least),

concepts which Sokolov, as discussed in Chapter Two, suggested were the primary functions of the state. Zhirinovsky believes that such a state can be achieved through a resurgent military. The idea has proved very appealing to individuals who feel very dislocated as a result of disarmament.

WEAPONS REDUCTIONS AND MILITARY RESTRUCTURING

Should the political situation in Russia and the other republics deteriorate further the question of weapons will gain in importance. The purpose of treaties like INF, CFE, and START was to see not only the removal of various weapons from the theatre of operations but also their eventual dismemberment. The uninitiated believe that by destroying a weapons system a state can easily regain the money spent on its initial construction; unfortunately, this is not the case.

Both the INF and CFE Treaties established methods by which the weapons systems had to be destroyed. The INF Treaty envisaged the dismantling of all systems except for a quota of 15 missiles for museum purposes. Once the nuclear warhead device and guidance systems had been removed then the missile could be cut into pieces of specified dimensions, which could in turn be used for scrap. Demolishing any of the implements of war is naturally a long and arduous process. The metal used has been repeatedly fired and punched in order to bind the elements of magnesium, titanium, stainless steel, carbon steel, and aluminium. This process is used to provide the utmost protection to the occupants of the vehicle, making the item, be it a tank, warship, plane or submarine, as indestructible as possible. Therefore, to separate all these metals from one another a highly involved reverse process must be developed. In addition each element would have to be purified to remove any trace metals.

The USSR found it difficult to comply with the Treaty because it did not have an indigenous scrap industry. As a result it was forced to sell retired weapons systems to Western firms which turned them into scrap and then sold the components back to the Soviet Union. For example, warships were sold to foreigners at one dollar per unit of weight. Once the metals were melted down and purified they were sold back to the USSR in the form of imports for the increased cost of twenty dollars for the same unit of weight.(50) There was an added cost which had to be considered. The civilian enterprises would need to be retooled it they were to use these high alloy materials effectively. The Soviet Ministry of Automotive and Farm Machine Building Industries was unable to use titanium and aluminium alloys, certain plastics, and other materials requiring special processing without undergoing a thorough restructuring and retooling of its plants.(51) Although specific costs have not been detailed in Soviet literature on conversion it is clear that the retooling of plants and the development of whole new industries will incur additional costs before any money previously spent on the defence budget can be recouped, thus placing demands on monetary supplies not readily available. As a result, both the Soviet and Russian governments have advocated methods of destruction and conversion which do not increase expenditure substantially.

One such method was outlined in the INF Treaty. Once the payload was removed the missile could be "eliminated by explosive demolition or burning".(52) Those pieces not completely destroyed in the first stage would then be "burned, crushed, flattened, and destroyed by explosion."(53) The Treaty allowed for hundreds of missiles to be destroyed in this fashion. While this method did not allow for the recovering of money previously spent it did avoid further expense. No additional money was needed to set up a scrap industry or for that matter re-purchase scrap from the West at a distinct loss.

While some of the prescribed methods of destruction outlined by the CFE Treaty (1990) were similar, e.g. severing and explosion, there were other recommendations. Conventional weapons could be demolished using a hydraulic press; smashed using a wrecking ball; or converted.(54) It was this latter method which was the most appealing to the Soviet government. It was frequently claimed that swords could be turned into ploughshares, or rather tanks into tractors. It was unrealistic to assume that an entire tank with a few slight modifications could become an agricultural harvesting machine, however certain components did lend themselves to conversion (see Chart 4.2).

The final drive mechanism on a tank tread can be used on a tractor. The final drive is a wheel set slightly higher than the others within the tread. Located at the front of Soviet tanks, the drive wheel works much like the gear wheel of a bicycle, shifting up or down and adjusting the chain to accommodate changes in speed and grade. In addition, the energy of motion for a tank is propelled outwards at right angles. The final drive assists in converting this energy outwards. A tractor works on the same principles of gears and the horizontal movement of energy from a base point. Thus the transfer of the final drive wheel is an obvious choice in the process of conversion.(55)

While the final drive mechanism can be used on other pieces of equipment the actual treads on the larger tanks have little use in the civilian sphere. The treads on the shorter tanks and armoured personnel carriers, if widened, could be used on bulldozers. A bulldozer manoeuvres like a tractor and the tank, thus facilitating the transfer of tracks from one piece of machinery to another.

The gun or cannon of the tank has been proven to have direct benefits for

the civilian sector. The interior of each gun has a spiral track within it which facilitates the release of ammunition. The existence of this track makes it possible to thread the gun barrels together in order to from drill casings. The specially hardened metal used to construct these barrels makes them well suited for use as covers for drills in the mining industry. Guns were being used in this fashion as early as 1990. The 100mm gun was being used to puncture holes for field research and in the oil and gas industry they were being used to hammer anchor ties into the ground.(56) In the future it will become necessary to establish firms which can produce this type of equipment on their own. The use of guns for drill casings solves the immediate problems of what to do with retired military equipment and allows time for these firms to develop.

In a similar vein, the V-12 tank engines have been modified to fit the specifications of earthmovers, 100-ton cranes for strip mines, generators for mining operations,tunnel equipment, and huge haulers. This equipment is needed in the areas in which expanded growth must occur to redevelop the economies of the newly independent states, namely agriculture and construction.

Mobile missile launchers have also proved quite adaptable. Advertisements frequently appear in newspapers and journals like *Konversiya* or *Avtomobil'nyi Transport* showing liquid fuel transports which are in effect converted mobile missile launchers.(57) Robotics also appear to be an area for mutual civil-military development, as does computer technology. It would seem that these areas would provide the most benefits for conversion.

Chart 4.2
Potential Product Lines

Weapons System	Part	Future Product
Tank	Final Drive	For use in tractors
	Gun	Drill covers for mining operations
	V-12 Engine	Earthmovers, 100-ton cranes for strip mines, generators for mining operations, tunnel equipment, huge haulers
Armoured Personnel Carriers	Treads	Bulldozers
Mobile Missile Launchers		Liquid fuel transports

Since 1991 the government of Russia has maintained the Soviet government's attempts to carry out "partial conversion" of equipment, making the transition into areas which still have some direct tie to the military and technological spheres. This is a sensible approach and one which can reduce the costs of disarmament. It is clear, however, that money is not necessarily regained by destroying weapons systems. Frequently more money must be provided in order to destroy the weapon and extract the scrap. Peace dividends do not come from destroying weapons but from halting their production. Not even the release of personnel from service will result in immediate benefits for the economy as a whole. As has already been noted the cost of upkeep for military personnel is transferred from the defence budget to the social services budget once disarmament takes effect. Some analysts do believe that long-term benefits for the economy can be achieved if a transition is made from a conscript to a professional army.

From 1988 onwards there was an ongoing debate within the Soviet Union on the merits of a conscript army versus the benefits of a professional, volunteer

force. General Yazov initially denounced the idea of a professional army for two reasons. First, he believed that it was every man's duty to serve his country. Second, the General Staff considered the cost of converting to a professional army to be prohibitive.(58) The arguments in favour of a professional army were varied. They ranged from a need to bring *perestroika* to the military, to link military reforms to economic restructuring, and to mollify dissatisfaction in the republics with the existing system. In the final analysis the reasons for the transfer were all closely linked.

On of the chief obstacles to the reform of the Soviet system, in both the civilian and military sectors, was the reluctance of the bureaucracy to participate. Concepts like self-management were a direct threat to it. If decisions could be made at lower levels then there would be no need for the bureaucrats to make decisions affecting the tiniest details of life. *Perestroika* placed the jobs and the prestige of the *apparatchiki* in jeopardy.

In the Soviet Union the ratio of generals to soldiers was higher than in the USA, Great Britain, or the former West Germany. Captain V. Saitgareev called this phenomenon "general saturation".(59) He quoted statistics which showed that in the Soviet Union there was one general for every 700 servicemen, compared to 1:3400 in the USA and 1:2400 in the FRG.(60) The question arose, what did so many generals find to do?(61) The answer was literally everything. There were generals in charge of the hunting industry, of state printing offices, of sanatoriums, military orchestras, institutes, editorial boards, and there were even a number of generals, without doctoral or professional qualifications, heading academic institutions.(62) As a result of these findings other questions were posed: were some of these appointments really necessary? Would some of them have been better filled by civilians? If so would not the advancement of civilians

have cost the state less?

In 1990 People's Deputy V. Lopatin suggested that there should be a change in the personnel structure. He was in favour of reducing the number of highly paid officers and replacing them, where possible, with sergeants.(63) He also recommended that the use of civilian specialists in the army and navy be examined, especially where they participated in administrative organs, in support services, in medicine, financial security, technology, and military science. Where previously he had proposed that military restructuring be tied to overall economic reform, he now went further by suggesting that reductions and the reorganisation of staff levels should coincide with an increase in computerisation and the automation of management. Furthermore, and this is a point which is brought up by other authors, the remaining servicemen and all those who decide to join the services in the future should sign a contract of employment.(64) By enforcing such a regulation not only would the military be adopting the trappings of a market-run economy, it would also be protecting the rights of servicemen.

Writing in the same edition of *Voprosy Ekonomiki* , from their position as civilian analysts, S. Vikulov, I. Yudin, and V. Saitgareev also proposed that the armed forces should be run on economic principles, with wages and privileges guaranteed by a legal contract. They also called vehemently for a redefinition of military tasks. No longer should the army be used for civilian construction work or to settle internal disputes. They felt that the army should become depoliticised.(65)

Following the collapse of the August coup, the removal of Yazov as USSR Defence Minister and the appointment of Evgenii Shaposhnikov in his place,

military reform began to move forward. Many of the suggestions put forward by Lopatin, Vikulov, Yudin, and Saitgareev were adopted by Shaposhnikov and Lobov, Chief of the General Staff. In the days immediately following the coup Shaposhnikov advocated the depoliticization of the armed forces and their transformation into a largely professional army.(66) He and Lobov also argued that the Ministry of Defence should become a civilian department which would report directly to the all-Union President.(67) The two generals supported the idea of republican national guards but not the formation of national armies.(68)

The Soviet professional army, as perceived by Shaposhnikov and Lobov, would have been a mixed army employing both volunteer professionals and conscripts. New recruits would have served six months in a training unit in their home republics. After they had completed the initial training the would have been faced with two options. They could have signed a contract for 3-5 years and in return have received free food, clothing, housing, vacation travel and a monthly wage of 300-500 roubles.(69) Upon completion of this contract they could have signed on for an additional five years at a higher level of pay and with family benefits. Alternatively, a conscript could choose not to sign the initial contract, in which case he would be obliged to serve on more year of service. Shaposhnikov claimed that within 7-9 years this system would provide the requisite number of servicemen and decrease the defence budget.(70)

Various economists have contributed to the discussion of the costs of a professional army. In countering Yazov's claims that a transition to a professional army was economically unfeasible, Lopatin stated that in the 1970s when the United States cut its troop strength from 3.1 to 2.1 million men the Defence Department's budget was also reduced by 20 percent in constant prices.(71) When Great Britain reduced the number of men in uniform from

816,100 in 1954 to 407,500 in 1964 its budget allocations also decreased by 18.4 percent in real terms.(72)

Alternatively, Professor Vikulov argued that while a move to a professional army would hold long-term financial benefits, the effects would not be immediate. Just as the destruction of weapons systems required an initial financial outlay so too did reductions in force strength. He predicted that in 1990 general expenditure on maintenance for personnel would increase by 4-6 times.(73) He contended that a reduction in the armed forces of 2.5 million men would result in an increase in expenditure of 3-4 times.(74) This would be the result of an increase in the number of pensions being paid to dismissed personnel and improved wages for the remaining servicemen. However, there would still be indirect benefits to the economy. According to his calculations, it cost the national economy 4.8 thousand roubles per year to support one serviceman.(75) If the number of men in uniform was reduced by 1 million there would be a benefit to the economy of 5 billion roubles.(76)

He also argued that the expense of offering training courses would decrease with a reduction in the number of incoming personnel. This would result in a one billion rouble savings for the civilian economy.(77) The final advantage was that lower personnel levels would lead to a decrease in armament supplies by 10-15 percent, allowing for a saving of 3-4 billion roubles.(78)

In his contribution to the discussion Professor Yudin began with an analysis of General Yazov's prediction that a transition to a professional army would cost the state no less than 40 billion roubles.(79) Yudin considered Yazov's estimates of required government expenditure to be exaggerated. In 1990 35 percent of the Soviet military were professional servicemen. The remaining 65

percent, consisting of soldiers, sailors, sergeants, and master-sergeants, accounted for 2.6 million men.(80) Yudin argued that if those 2.6 million men were replaced by professionals each man released from duty would receive a maximum monetary allowance of 500 roubles a month which equalled the sum of 15.6 billion roubles per year.(81) He also argued that skilled labour should have higher rewards than manual labour and thus the rate of pay for officers and warrant officers would have to be increased by 150-300 roubles a month.(82) It was expected that the government would have to pay out an additional 2 billion roubles in order to meet this pay increase.(83) In the Soviet period it was believed that army pensions and wages would grow to a maximum of 17 billion roubles during the transition to a professional army.(84)

Citing Yazov, Yudin agreed that monetary allowances would have to be paid to soldiers, sergeants, sailors and senior officers, and their families. However, whereas Yazov had stated that a sum of 3-4 billion roubles would have to be paid only once, Yudin argued that money would have to be dispersed over 4-5 years at a cost of one billion roubles per annum.(85) This would have brought the total monetary allowances for one year up to 18 billion roubles rather than the 40 billion claimed by Yazov.

The Russian government now supports the view that a move to a professional army will help to decrease the defence budget. This is possible, but it may be that a decrease in the defence budget will appear as an increase in the social services budget once the onus of paying pensions and unemployment benefits to retiring personnel is transferred to a different branch of the government. The defence sector, however, remains faced with the difficulty of enticing new recruits into the service. Reports reveal that only 1 in 5 men answered the autumn call-up in 1992.(86) At present some divisions have only

30 percent of the manpower required.(87) For a smooth transition to a professional army to occur the Russians needed to recruit 100,000 men in 1992. Only 13,500 volunteered.(88)

Shaposhnikov's original plan had been to attract volunteers with a monthly wage of 300-500 roubles. As of January 1993 monetary compensation had risen to 6,000 roubles a month in an attempt to keep up with inflation.(89) According to statistics available in January 1993. Russian officers serving in areas of major ethnic conflict, like Tadzhikistan, were earning at least 50,000 roubles a month.(90) Some servicemen released from active duty have been tempted to act as mercenaries in return for high levels of compensation. One Russian officer was told by the Tadzhiks that they would pay him R2,000 for every hour of conflict, R10,000 per corpse, and R50,000 per tank destroyed.(91)

The Russian government had hoped to avoid these types of situations by keeping the armed forces under joint control, however, with the collapse of the Soviet Union each of the Republics laid claim to the Soviet forces on their territories in order to establish their own national armies.(92) One argument in favour of joint control of the military was that the cost of maintaining the armed forces would be equally distributed throughout the Republics. Russia claims that this has not been the case. The Russian government is financially responsible for the troops located on its territory and for CIS strategic forces in other Republics. Added to this is the cost of caring for the troops returning from Eastern Europe. Russia simply does not have the financial resources to cover all of these expenses.

REINVESTMENT OF FUNDS

In addition to trying to meet the needs of the military all of the Republican governments involved must also deal with the demands of other sectors of society for their share of the peace dividend. The chance of a substantial windfall resulting from the reductions in the military budget were always going to be negligible. In 1988 and 1989, the Soviet government and society at large began discussing the prospects for a peace dividend, yet it was apparent as early as 1989 that such a bonus would not stretch as far as the people wanted. If Western sources are used then the 1989 Soviet defence budget equalled approximately 121.2 billion roubles.(93) It was at this time that a reduction of 14.2 percent was announced. Equalling only 8.54 billion roubles, it could hardly meet the conflicting demands placed upon it by the civilian and military sectors. The areas specifically targeted by the government, and covered in this section, were housing, agriculture and medicine.

There was a pervasive myth that all the materials and instruments used by the armed forces were of a higher quality and standard than could be found in the civilian sphere. In regard to military housing this myth was blatantly false. Only 50 percent of military housing was equipped with basic conveniences.(94) Not only was it poorly fitted out, it was also overcrowded and afforded the soldier little privacy.

Despite this overcrowding a large proportion of Soviet officers were left homeless. This situation was aggravated by the rate at which troops were being withdrawn from Europe. In Belorussia, where many Soviet troops were restationed, construction workers were able to promise only that two new apartment blocks would be provided by the end of 1990.(95) In the spring of 1990, as the first troops and their dependents arrived in Gorkiy oblast from Czechoslovakia, families were housed in garrison hostels while local authorities

agreed to allocate space in the form of student hostels and apartments. Again it was promised that within three years more than ten apartment blocks and children's preschools would be built.

By 1990 the number of service families without apartments had reached 180,000. The average cost of a two to three room cooperative apartment was estimated at 15,000-20,000 roubles, therefore approximately 1.5-2 billion roubles would have been necessary at that time to build the requisite number of apartments.(97) Georgii Arbatov suggested that if the Soviet Union halted production on just one of the three aircraft carriers it had ordered there would be more than enough money to build at least 100,000 apartments for returning servicemen and their families.(98) While the General Staff might have considered security weakened by the loss of such a vessel, Arbatov argued that low morale and even poor health were far more detrimental.(99)

The General Staff was unwilling to forfeit its aircraft carrier and instead, in the negotiations for the 1991 budget, it asked for 1.65 billion roubles for housing construction. This sum was an increase from the previous year's allocation and was, the General Staff argued, connected with the programme for social guarantees for servicemen and their families.(100) However, even this sum could not meet all the housing needs of the army. In conjunction with the "2 + 4" Treaty (1989) the German government had agreed to provide the Soviet Union with 7.8 billion marks' credit to assist with the construction of housing for returning servicemen. This was to be spent on the creation of an infrastructure as well as the actual houses.(101) The German commitment in this area has continued, but even with this the plight of the former Soviet soldier is still a difficult one. There are reports that some men have waited as long as two years for adequate housing facilities.(102) The situation in Russia does not look like it

will improve in the near future.(103)

The housing problem in the military has its mirror image in the civilian sphere. One of Gorbachev's early promises had been that every family would have its own flat or house by the year 2000. To fulfil this promise 40-42 million apartments would have had to be built. Existing Soviet apartments provided on average 14.6 square metres of floor space per person.(104) It was calculated that 18.5 to 19 square metres would need to be allocated to each person in order to meet the requirement of a separate apartment for every family.(105) Changes in housing policy were expected to reduce demand and thus allow the construction budget to be stretched further. In 1988 three important housing decrees were issued which initiated the privatisation of the housing market. The first decree, passed in February 1988, was designed to "more fully [use] the increased spending power deriving from higher incomes and from money held in savings banks".(106) The decree, "On Measures to Accelerate the Development of Individual Housing Construction", encompassed four main points:

> 1) Banks were to make credit available to enterprises intending to start or expand production of building and decorating materials.
>
> 2) People relinquishing housing in the public sector were to be given preference in the allocation of building plots.
> 3) Access roads and all public utilities had to be provided to areas under development.
>
> 4) State banks were allowed to make advances of up to 20,000 roubles repayable over 25 years in the cities and 50 years in rural areas.

Furthermore, as a result of this decree enterprises were able to sell their housing to employees.

The second measure, adopted in March 1988, took the process a step

further by allowing cooperatives to purchase buildings from local soviets at discount prices and renovate them for their own eventual use or else build them from scratch. The third decree, published in December 1988, allowed tenants in residence to buy their flats and non-residents to bid for unoccupied apartments. The issuance of privatisation vouchers by the Russian government in the autumn of 1992 also enabled citizens to purchase their flats from the state. The actions taken by the Soviet and Russian governments sought to limit the state's responsibility for the maintenance of housing stock and transfer it to cooperatives and individuals. Since this legislation has not proven as successful as anticipated, the state must continue to play a role. In 1986 it was estimated that for roughly every two roubles spent on actual housing construction one rouble would have to be spent on the surrounding infrastructure.(107) Inflation in Russia has only increased the monumental bill which the government will have to pay. While converted military equipment can, and has, been used in the construction industry, it appears unlikely at this time that a transfer of funds from the defence budget will prove sufficient for housing requirements.

In both the food industry and the health sector, the military's contribution has been technical rather than financial. In 1988 the Soviet government decided that it would spend 80 billion roubles over a seven year period to improve food storage and processing facilities.(108) The defence industries were directed to manufacture equipment for various branches of the agro-industrial complex.(109) Specifically, 250 arms-manufacturing plants began designing and building new machines to improve the food processing industry.(110) The Russian government has continued the commitment to improving the technological level within the civilian agricultural sector.(111)

The production of medical equipment has also been a priority of defence

enterprises undergoing conversion. The state of Soviet health services was appalling in Western terms. Infant mortality had increased and in some areas, most notably in Soviet Central Asia, it had come close to Third World levels. On average there were 26 fatalities for every 1,000 live births.(1120 Life expectancy had decreased dramatically, with men attaining the age of 64 and women 73 years.(113) In 1988 the Soviet Union was ranked 50th in the world in terms of infant mortality and 32nd in terms of life expectancy.(114) It proved difficult to combat these trends as medicines and modern medical equipment were in short supply. However, the Soviet government did recognise the problem and tried to correct it. In 1988 the production of medical equipment increased by 7 percent in roubles over the 19?? value to a total of 1.2 billion roubles. Production of medicines also increased to 3.7 billion roubles. This sounded promising, yet it was enough to meet only 40 percent of the needs of the Soviet people.(115) Murray Feshbach calculated that 100 billion roubles a year was needed to halt these distressing trends and to bring the USSR back up to world standards.(116) Once again the Soviet government did not have the money, so they promoted the production of medical supplies within the converting defence enterprises. Products manufactured ranged from syringes to actual surgical equipment.(117) Following the Soviet government's lead, the Russian government has continued to target the medical sector as one of the key beneficiaries of conversion.

CONCLUSION

The aim of this chapter was to begin a comparison of Soviet conversion policy between 1986 and 1991 to the ideal programme established in Chapter Two. An initial observation demonstrates the limited success of the Soviet programme. While further evidence will be provided in Chapters Five and Six

to support this argument, it is clear from the evidence presented here that the Soviet government did not formulate an overall conversion programme. Situations were dealt with as they arose.

At this stage, the primary evidence to support this argument is the lack of an economic bill of rights. Although civilian economists and servicemen repeatedly requested the creation of such a programme, the government's response was simply to group service and defence related personnel with other classification of the unemployed. This is a dangerous approach to adopt for several reasons. First, in indoctrinating servicemen the importance of loyalty is stressed; loyalty to one's comrades, loyalty to the state, and the state's loyalty to the soldier. If, in the process of disarming and converting its military-industrial complex, the state fails to recognise this service then it is likely that disaffection will grow among the ranks and show itself in the form of political opposition. The military is in a position of power, controlling as it does the weapons of the state. In the Soviet Union the military was actively involved in the decision-making process, thereby underlining its power and importance. Despite Gorbachev's attempts to limit their role they were still able to voice their political dissent through military representatives in the Congress of People's Deputies and by support of politicians and parties. Civilian recommendations for the depoliticization of the armed forces and Shaposhnikov's and Lobov's attempts to put them into practice were admirable, however, they may have been naive. Lenin argued that it was impossible to depoliticise any military establishment completely.(118) This is true, for if war is to remain an effective tool of policy the military will always need to be represented in the corridors of political power and policy will have to be disseminated throughout the military establishment.

The treatment of retiring or discharged personnel may affect the state's

security as well as its stability. If an all volunteer force, or even one with a better ratio between volunteers and conscripts, were to be created in Russia then recognition for services rendered would become very important if new recruits were to be attracted. Arbatov had a very good point when he argued that morale may be as, if not more, important than a new aircraft carrier. In the Report From Iron Mountain, Lewin contended that a volunteer armed force could act as a sponge, absorbing excess labour.(119) However, this is possible only if military service appears as a viable economic alternative to employment in the civilian sector.

Promoting new areas of economic development is the primary function of any conversion programme. Yet if it is to succeed it is important, once again, to ensure that the specialised job skills associated with the defence industry are properly utilised and not depreciated.(120) In some cases the retraining and relocation of personnel would be necessary in order to maximise their skills. Soviet and Russian legislation failed to deal with these circumstances adequately.

The Soviet government did, however, achieve minor success in the promotion of capital reallocation. The transfer of investments was strongly advocated, and while it did not occur in sufficient measure, various pieces of equipment were converted for use in the civilian sphere with positive results. As will be discussed in Chapters Five and Six, the conversion of factories proved slightly less successful.

Peace dividends provide long-term benefits, not short-term economic windfalls. They are not achieved by destroying armaments but by halting their production and converting the industrial capabilities. The size of the dividend appears reliant upon the organisation of the plan and the amount of

restructuring necessary to maintain stability and security. In the case of Russia no real savings were achieved in the military field. In July 1992 the Minister of Finance, Vasilii Barchuk, claimed that the peace dividend had been used to cover the costs of establishing a Russian army, on the conversion process, the withdrawal of troops, the destruction of weapons, higher salaries and other personnel costs.(121)

If a state is fortunate the peace dividend can result in improved technology rather than pure financial gain. Once again, however, the plan must be comprehensive. Soviet conversion policy in regard to the defence industry is the subject of Chapter Five.

NOTES

1. Paul R. Gregory and Robert C. Stuart, Soviet Economic Structure and Performance, 4th ed., pp. 409-411.

2. Gertrude E. Schroeder, "Managing Labour Shortages in the Soviet Union", in Employment Policies in the Soviet Union and Eastern Europe, p. 6.

3. D.J. Peterson, "Unemployment in the USSR" in *RFE/RL Report on the USSR*, vol. 1, no. 34, 25/08/89, p. 6.

4. Ibid.

5. Arkady Volsky and the Civic Union have lobbied quite hard for the slow down of economic reform. They argue that until proper safety nets are in place the government cannot proceed with rapid reform. See Philip Hanson and Eliabeth Teague, "The Industrialists and Russian Economic Reform", *RFE/RL Research Report*, vol. 1, no. 19, 08/05/92, pp. 3-7.

6. R. Harzikulov, "Skol'ko bezrabotnykh prineset nam etot god?" *Komsomol'skaya Pravda*, 05/02/91, p. 2. See also *Economic Survey of Europe in 1991-1992* published by the Economic Commission for Europe -- UN, p. 140.

7. Ibid.

8. Ibid., p. 140. The number of persons employed in Russia in 1991 was 73.6 million people.

9. Ibid. The OECD reported the number of registered unemployed for January 1992 as 70,000. See Organisation for Economic Co-operation and Development, Russian Officer Conversion Programme (OCDE/GD (93)9), p. 14.

10. Philip Hanson, "The Russian Economy in the Spring of 1992", *RFE/RL Research Report*, vol. 1, no. 21, 22/05/92, p. 28.

11. Vitalii Golovachev, "Vosem' mesyatsev bez raboty", *Trud*, 24/02/93, p. 1.

12. Ibid.

13. Alan H. Smith, "Military Manpower Supply and Demand in the Soviet Union", The Soviet Union: What Lies Ahead, p. 236.

14. Viktor Perevedentsev, "Changes in the Structure of Employment and Entry into the Work Force", *Problems of Economics*, no. 10, 1988, p. 27.

15. Ibid.

16. Interview with Alexander Davydenko, Deputy Marketing Director of Granite Electrical Firm, Rostov-on-Don, 24/01/92.

17. Colonel V. Bezrodnyi and Major A. Koncharov, "Voinskii Mnogonatsional'nyi"
Krasnaya zvezda, 12/03/87, pp. 2-3.

18. N. Andreev and V. Litovkin, "Tri pis'ma iz armii, 2. Ofitsery na rynke truda", *Izvestia*, 14/02/91, p. 3

19. "Voennaya reforma: deistvitel'nost' i perspektivy", *Krasnaya zvezda*, 18/11/90, p.2.

20. Andreev and Litovkin, p. 3.

21. "Voennaya reforma", p. 2.

22. Andreev and Litovkin, p. 3.

23. Ibid., and "Voennaya reforma", p.. 2.

24. Andreev and Litovkin, p. 3.

25. OECD, Russian Officer Conversion Programme, p. 20.

26. V. Dyumarski and E. Shashchkov, "Zashchit' Zashchitnika", *Kommunist*, no. 3, February 1990, pp. 51-58.

27. Ibid.

28. "Eine Armee lost sich auf", *Der Speigel*, no. 37, 10/09/90, pp. 68-77.

29. Andreev andLitovkin, p. 3.

30. "Zakon Soyuza Sovetskikh Sotsialisticheskikh Respublik, O pensionnom voennosluzhashchikh" (Art. 14), *Vedomosti S'"ezda Narodnykh Deputatov SSSR i Verkhovnogo Soveta SSSR*, no. 23, 06/06/90, p. 514.

31. Andreev and Litovkin, p. 3.

32. Ibid.

33. "O Pensionnom Fonde RSFSR", *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, no. 2, 10/01/91, p. 36. Article 4 of this law deals specifically with those entitled to claim benefit.

34. Ibid. The employer must contribute 5 percent of its profits and the employee 1 percent of income to the wage fund.

35. Zakon Rossiiskoi Federativnoi Sotsialisticheskoi Respubliki, "O Povyshenii Sotsial'nykh Garantii dlya Trudyashchikhsya", *Vedomosti S'ezda Narodnykh*

Deputatov RSFSR i Verkhovnogo Soveta RSFSR, no. 17,, 25/04/91, p. 452.

36. Sheila Marnie, "News Briefs -- Supplement to the Research Report for 25-29 January 1993", *RFE/RL Research Report*, vol. 2, no. 6, 1993.

37. "O Povyshenni Sotsial'nykh Garantii dlya Trudyashchiksya", *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, no. 17, 25/04/91, p. 452.

38. Zakon Rossiskoi Federativnoi Sotsialisticheskoi Respubliki, "O Zanyatosti Naseleniya v RSFSR", *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, no. 18, 02/05/91, p. 516.

39. Ibid.

40. Ibid., p. 529.

41. Ellen Jones, The Red Army and Society, p. 103-104.

42. Ibid., p. 104.

43. "Soviet Forces Commander Discusses Northern Group" on Warsaw PAP in English. Reproduced by the Foreign Broadcast Information Service in the *FBIS Daily Soviet Report*, 17/04/90, p. 3.

44. Gennadii Vasil'ev, "O konversii po-delovomu" in *Pravda*, 21/08/90, p. 5.

45. Carroll Bogert and Robert Selly, "Arms Makers, Yes -- Arms Merchants, No", *Newsweek International*, 01/03/93, p. 22. In 1992 Arkady Volsky stated that as many as 1 million people could be released from the defence sector by the middle of that year (*Pravda* 29/01/92). The actual unemployment figures for the MIC are not far off from that prediction. Since a debate is still ongoing over the actual number of peoples employed and affected by the MIC and a second debate over the pace of conversion is also being conducted it is difficult to determine just how many people will lose their jobs as a result of conversion. For more information on both of these debates see Chapter Five.

46. Pavel Razin, "Hard Times for Joint Ventures Directors", *Delovye Lyudi*, July-August 1992, p. 39.

47. John Lloyd and Leyla Boulton, "Yeltsin Survives Vote in Congress to Impeach Him", *Financial Times*, 29/03/93, p. 1.

48. Ibid.

49. Jonathan Steele and David Hearst, "The President Who would become Tsar", *The Guardian*, 03/06/93, p. 9.

50. Alexei Kireyev, "Conversion in the Soviet Dimension", *International*

Affairs (Moscow), no. 5, 1990, p. 93.

51. Ibid., p. 97.

52. "Protocol on Procedures Governing the Elimination of the Missile Systems Subject to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate Range and Shorter Range Missiles", p. 4.

53. Ibid.

54. Stephen J. Ledogar, "Issues Relating to the Destruction of Weapons -- Including Environmental Impact", *Disarmament Topical Papers*, no. 8, pp. 283-284.

55. I would like to thank Mr. Steve Wilde of the Itec Co. in Des Plaines, Illinois for his assistance in explaining the operations of Soviet military equipment. A former tank engineer in the US Army, Mr. Wilde is familiar with Soviet made equipment. The discussion took place in July 1990.

56. "Conversion Blamed for Arms Black Market" originally appeared in *Komsomol'skaya Pravda*, 01/02/90, pp. 1 &4 and was translated and reprinted by the Foreign Broadcast Information Service in *FBIS Daily Soviet Report*, 08/02/90, pp. 100-102.

57. *Konversiya*, November 1990, pp. 3-5. See also "Konversiya -- Narodnomu Khozyaistvu", *Avtomobil'nyi Transport*, no. 3, 1990, pp. 8-9 and N. Feofilov, "Avtomobil'naya versiya konversii", *Avtomobil'nyi Transport*, no. 11, 1990, p. 13.

58. Yazov and Akhromeyev were agreed on this position. See "Armiya i perestroika", *Sovetskaya Rossiya*, 14/01/89, pp. 1 & 3.

59. V. Saitgareev, Captain 2nd Rank, "Ekonomicheskie Korni Sovetskoi Voennoi Byurokratii", *Voprosy Ekonomiki*, no. 10, 1990, p. 32.

60. Ibid.

61. The phrasing of Saitgareev's question is actually "Why are there three times the number of generals in our army as there are in the USA?", Ibid. p. 32.

62. I. Yudin, Dr. Econ. Sci., "Voennaya reforma i ekonomicheskie realii", *Voprosy Ekonomiki*, no. 10, 1990, p. 26.

63. V. Lopatin, "Armiya i Ekonomika", *Voprosy Ekonomiki*, no. 10, 1990, p. 6.

64. Ibid., p. 12. See also articles by S. Vikulov, I. Yudin and V. Saitgareev in *Voprosy Ekonomiki*, no. 10, 1990.

65. Saitgareev, p. 39.

66. Stephen Foye, "Evgenii Shaposhnikov: A New Defence Minister for a New Era", *RFE/RL Report on the USSR*, vol. 3, no. 37, 13/09/91, pp. 9-10.

67. Scott R. McMichael, "Military Reform Plan Begins to Take Shape", *RFE/RL Report on the USSR*, vol. 3, no. 43, 25/10/91, p. 8.

68. Ibid. National units had existed between 1918 and 1938, and while they enjoyed early success they were eventually disbanded. The underlying principle was that if all men in a particular unit came from the same region they would be more willing to defend it. This was indded valid, however, the reverse was also true. If a crisis arose in another area the national unit was less willing to defend an area not its own. Furthermore, as the size of the Soviet military increased it became more and more difficult to disseminate information to the various national troops. See Scott R. McMichael, "Soviet National Military Formations, 1918-1938", *RFE/RL Report on the USSR*, vol. 2, no. 16, 20/04/90, p. 4. See also Grechko, pp. 115 & 124.

69. Ibid, p. 9.

70. Ibid.

71. Lopatin, p. 12.

72. Ibid.

73. S. Vikulov, "Voenno-Ekonomicheskaya Reforma: Sushchnost' Soderzhanie, Problemy", *Voprosy Ekonomiki*, no. 10, 1990, p. 19.

74. Ibid.

75. Ibid.

76. Ibid.

77. Ibid.

78. Ibid.

79. Yudin, p. 23.

80. Ibid.

81. Ibid.

82. Ibid.

83. Ibid.

84. Ibid.

85. Ibid.

86. Bogert, p. 21.

87. Ibid.

88. Ibid.

89. Ibid.

90. Ibid.

91. Ibid., p. 24.

92. Ukraine was the first to make such a declaration. In January 1992 the Republic laid claim to the 400,000 troops located within the territory. In addition it also claimed ownership of the Black Sea Fleet, the ownership of which was contested until recently. While other Republics followed Ukraine's lead, the Baltic Republics simply demanded the removal of all Soviet troops and began to create their own armed forces form the ranks of the civil opposition forces of the independence movemnts. In another scenario, Russia is actually assisting republics, like Turkmenistan, in establishing their armed forces.

93. Dmitri Steinberg, "The Soviet Defence Burden: Estimating Hidden Defence Costs", *Soviet Studies*, vol. 44, no. 2, 19992, p. 257. Also Saadet Deger and Somnath Sen, Military Expenditure: The Political Economy of International Security, p. 63.

94. "Soobshchenie Ministerstva Oborony SSSR", *Argumenty i Fakty*, no. 51, 1989, p. 4.

95. "Difficult Conditions For Troops Leaving Hungary" originally appeared in *Krasnaya zvezda*, 17/05/90, p. 2. Translated by Foreign Broadcast Information Service and reprinted in *FBIS Daily Soviet Report*, 17/05/90, p. 24.

96. "First Troops Withdrawn From CSSR Arrive" originally broadcast on Moscow Domestic Service. Translated by the Foreign Broadcast Information Service and reprinted in *FBIS Daily Soviet Report*, 06/03/90, p. 36.

97. Georgii Arbatov, "If Without Guile?", *Soviet Law and Government*, vol. 30, no. 3, p. 43. Original article, entitled "A esli bez lukavstva?", appeared in *Ogonek*, no. 17, 1990.

98. Ibid., p. 44.

99. Ibid.

100. "Voennyi byudzhet: prevaritel'noe obsuzhdenie", *Krasnaya zvezda*, 13/11/90, p. 1. In the 1990 budget no specific figure was given for howuing construction. In a report on the draft plan for 1990 it was stated that military construction, overall, would be reduced by 15 percent, while maintaining the volume of housing construction. maintenance of the Army and Navy was budgeted at 19.3 billion roubles, down from 20,2 billion. For further information "On the USSR State Budget for 1990 and the Fulfillment of the Budget for 1988. A Report by V.S. Pavlov, USSR Minister of Finance." It originally appeared in *Izvestia*, 26/09/89, pp. 4-6. Translated and reprinted in *Current Digest of the Soviet Press*, vol. XLI, no. 41, 1989, pp. 7-13. Also "Report from the USSR Ministry of Defence", originally in *Pravda* 16/12/89, p. 5. Translated and reprinted in *Current Digest of the Soviet Press*, vol. XLI, no. 50, 1989, p. 26.

101. N. Medvedev, "Valyutnye doma dlya sovetskikh voennykh", *Izvestia*, 02/01/91, p. 2.

102. The construction of housing for Soviet soldiers is seriously behind schedule. See Stephen Foye and Douglas Clarke, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 6, 07/02/92, p. 55.

103. Ibid. See also Stephen Foye, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 6, 07/02/92, p. 55.

104. Gregory D. Andrusz, "A Note on the Financing of Housing in the Soviet Union", *Soviet Studies*, vol. 42, no. 3, July 1990, p. 562.

105. Ibid.

106. Ibid.

107. It was estimated that nearly one trillion roubles would need to be spent to achieve Gorbachev's goal. Of that total, 600 billion would be spent on actual housing construction and 300-500 billion roubles on infrastructure. See L. Velikanova, "Kazhdoi sem'e otdel'nuyu kvartiru", *Literaturnaya Gazeta*, 24/09/86, p. 10.

108. See *RFE/RL Report on the USSR*, vol. 1, no. 1, 06/01/89. See also "Razvivat' arendu, perestraivat' ekonomicheskie otnosheniya na sele", *Pravda*, 14/10/88.

109. Aaron Trehub, "Gorbachev's Military Cuts: The Domestic Background", *RFE/RL Report on the USSR*, vol. 1, no. 1, 06/01/89.

110. "Potentsial oboronnykh otraslei -- razvitiyu agroproma", *Izvestia*, 20/11/88, p. 2.

111. Zakon Rossiiskoi Federatsii "O Konversii Oboronnoi Promyshlennosti v

Rossiiskoi Federatsii".

112. Stephen White, Gorbachev and After, p. 86.

113. Ibid.

114. Ibid.

115. TASS, 02/01/89.

116. D.J. Peterson, "Goskomstat Report on Social Conditions in 1989", *RFE/RL Report on the USSR*, vol. 2, no. 6, 09/02/90, p. 5.

117. See Chapters Five and Six.

118. Lenin stated that, "the armed forces cannot and should not be neutral. Not to drag them into politics is the slogan of the hypocritical servants of the bourgeoisie who have in fact always dragged the forces into reactionry politics." See Lenin's Collected Works, vol. 10, p. 56.

119. Leonard C. Lewin, The Report From Iron Mountain, p. 67.

120. Ibid., p. 51.

121. Michael Ellman, "Shock Therapy in Russia: Failure or Political Success", *RFE/RL Research Report*, vol. 1, no. 34, 28/08/92, p. 57.

CHAPTER FIVE
DISARMING THE MILITARY ECONOMY: A FRAMEWORK FOR CONVERSION

An assessment of the long-term prospects of disarmament and conversion in Russia requires an analysis of the limited achievements of the Soviet programme. Expectations of the conversion programme were, perhaps, unrealistic. Insufficient allowance was made for the strong motivation on the part of vested interests to limit the effects of the programme and ensure only slow implementation occurred. Furthermore, the contradictions of the transitional system may have been too great to overcome. Central planning in one sector could not coexist with the initiation of market principles in another.

THE AIM OF CONVERSION

The strict definition of conversion (*konversiya*) is as a process involving change in productive output, from consumer goods to military supplies. Peace is assumed to be the prevailing condition until an outbreak of war requires the mobilisation of production methods to provide for conflict. War's end would theoretically lead to a reconversion to the manufacture of civilian goods.(1) Generally, however, conversion simply means the transfer of productive capabilities from one sector to another. In accordance with the 1920s policy of military assimilation (*assimilyatsiya*) the Soviet economic system had been structured in such a way that the transition from military to civilian production should have been relatively straightforward. As defined by S. Ventsov, then head of the mobilisation sector of the Red Army Staff, the policy had two components. First, military factories with excess capacity would produce consumer goods which shared a technological base with current military output. Secondly, conditions were to be developed within civilian enterprises to allow

for the manufacture of military hardware in the event of war.(2) It was hoped that this doctrine would provide adequate means for the production of military equipment but do so within a relatively small "core" of defence enterprises.

In fact the "core" of defence enterprises in the Soviet Union was never small. Those attempts made between the 1920s and 1980s to disarm a significant proportion of the armed forces and convert military production, proved largely fruitless. From the end of World War II until the late 1980s only one period could be described as a period of conversion, from 1953 to 1955. Premier Malenkov's commitment during these years to decreased military spending in favour of consumer goods represents the strongest evidence of a conversion policy pre-Gorbachev.(3) This is especially true in the context of increased East-West tension and increases in Soviet troop numbers to five million by 1953. Malenkov was ousted in 1955 and succeeded by Khrushchev who had formulated his own military policy. Although Khrushchev initiated harsh cuts within the conventional forces and the surface fleet he did not couple this with significant reductions in R&D. Believing that the way to achieve parity with the rival superpower was to obtain a nuclear capability he increased military appropriations by 12 percent in the late 1950s.(4) The specific areas which enjoyed benefits were R&D, the missile force and the submarine fleet, to the detriment of conversion.

By 1964, the year in which Khrushchev was ousted and Brezhnev was elevated to the post of First Secretary, the military had obtained a firm grasp on the finances of the state. The sector had become "hypertrophied", while its management had become "supercentralised", a trend which was to continue until the 1980s.(5) The management of the defence sector was discussed in Chapter Two. At this point, however, it is important to understand just how

large the defence sector was. By the 1980s there were approximately 5000 defence enterprises and design bureaus.(6) According to Dr. Romil K. Shchenin of IMEMO there were 10 million engineers and workers in the defence enterprises at this time. Another 20 million people worked within military and civil-military design bureaux. He suggested that a further 10 million were involved in community support. In all some 40 million people, out of a total working population of 158,911,000, relied on the defence sector for their livelihood.(7) If conversion were to succeed in the 1980s the programme would have to address the supercentralisation of management and assist in the transition of defence employees to the civilian economy.

These issues were partially addressed in the government's proposals. Although a formal conversion programme was not issued until the winter of 1990, the government did have a general idea of what it wanted defence conversion to achieve. Writing in *Izvestiya Akademii nauk SSSR: Seriya Ekonomicheskaya* in 1989, the economist K.P. Samsonov outlined the government's proposals for conversion. It initially hoped to achieve a seven-point objective which ranged in topics from pure economics (the change in supply and demand curves), to financial differentials and the restructuring of the command-administrative system. From the very beginning, however, problems existed for the realisation of each of these seven points. The government hoped to improve the national welfare by increasing the production of goods for national consumption (consumer durables) and by developing the housing construction industry and the service sector.(8) To accomplish this a change in infrastructure needed to take place in both the civilian and defence sectors. This would have meant a transfer of management skills, thus the retraining of staff. To improve the housing construction industry and increase civilian involvement in this sphere both money and resources needed to be

redirected to the domestic economy. The government also hoped to eliminate financial disproportion.(9) For this to occur the budget needed to be not only cut but also restructured, with a careful reassessment and reapportionment of finances to different sectors.

Also on the government's provisional agenda was the broadening of investment possibilities in the national economy. The government planned to increase the volume of capital investment in the civilian branches, transfer part of the equipment and production power of the defence sector to civilian production, increase the quality of original equipment, and reconstruct and re-align branches of civilian industry, starting first with those which were most technically backward. Point four called for the transfer of technology from the defence sector to the civilian sector in order to improve the qualitative level of production.(10) The main source of increased capital investment was to be the cuts in the defence budget. But in proportion to the demands placed by the civilian branches, the money released by the defence cuts was insufficient. The transfer of equipment and production power proved more difficult than originally anticipated as civilian enterprises needed to undergo a complete overhaul to accommodate the new technology. Not only had the factory to undergo technical changes, but the staff also needed to be retrained. Some administrators felt that it would be easier to start from scratch than to overhaul the enterprises.(11)

Point five addressed the primary issue, the nature of the military system. It demanded that the defence and civilian sectors be clearly defined and treated in an equal manner with resources being distributed appropriately.(12) This could occur only if the laws designed for the civilian sector (for example the Laws on Enterprises and Cooperatives) were applied in equal measure in the defence

sector. The programme also called for the disentanglement, requalification and increased efficiency of the utilisation of labour resources. The efficiency of labour resources would be merely a side issue of any conversion programme. Unemployment or shortages of employment fall in the realm of social legislation. A conversion programme could cover only certain aspects of the re-qualification of labour, the slack would have to be picked up by other legal decrees and social programmes.

The final point of the plan dealt with increasing the volume of foreign trade, perfecting the import and export structures, and broadening the export possibilities for machine construction.(13) This item depended on the successful achievement of each of the preceding goals and the issuance of new government directives on foreign imports and the export of Soviet goods for hard currency. During the 1980s the government made various attempts to improve its export earnings. One way was to allow joint ventures between domestic and foreign firms. While joint ventures contributed to the development of the civilian economy, foreign access to military enterprises was restricted. This is not to say that it did not occur (indeed one case is discussed in Chapter Six): it simply meant that the defence enterprise in question could not produce strategic items. If a joint venture was to be formed the enterprise had to be manufacturing goods with a civilian application already. The prospect of creating a joint venture and receiving foreign capital and technology was employed as a motivating factor for conversion.

Arms exports were another source of hard currency. Between 1980 and 1991 the USSR sold a total of over a 166 billion dollars worth of armaments.(14) Arms transfers were perceived as more of a political tool than an economic benefit. As a result, the majority of weapons transfers went to the Third World

in an attempt to swing support away from America. Generally, the recipients were not in a position to pay for the weapons, especially in hard currency, thus profits from this type of export were limited.(15) In the late 1980s it was suggested that the Soviet Union increase the number of arms transfers for hard currency in order to increase export income. To do this, however, would require the maintenance of the defence structure. This policy would be incompatible with the full implementation of a conversion programme. Due to limited hard currency reserves the Soviet government chose to give priority to continued military production for arms sales instead of pushing ahead with conversion.

As can be seen, all these issues were and are mutually connected and mutually conditioned; they depend on many factors -- the scale of conversion, the urgency in solving different problems, techno-economic and technological capabilities, and political will.(16) As the number of problems considered urgent in the USSR grew these objectives had to be further compartmentalised. Further difficulties arose because while there was agreement on the aims of conversion, the methods were in dispute.

It is clear from Samsonov's outline of the government's intentions that several different policies were placed under the heading *konversiya*. Alexei Kireyev, a political economist, denounced this approach. For him conversion could not be the "diversification of arms production resulting in munitions factories starting to furnish a wide range of goods in addition to their traditional output".(17) Diversification, in his opinion, was merely an extension of the former policy of *assimilyatsiya* and generally manifested itself in the manufacturing of equipment for light industry and the agro-industrial complex in the defence industries.(18) The MIC had always been involved in producing consumer items such as televisions, radios, washing-machines and the like. He

believed that if conversion were to be equated with diversification it would merely signify an increase in the scale of the Ministry of Communications and the radio industry's involvement in the household electronic market.(19)

Nor did Kireyev feel that conversion should be used to mean the transfer to civilian industries of "new technologies, inventions or know-how worked out in the military sector".(20) As he pointed out, in market economies this process is known as "spin-off". Although it holds benefits for the civilian economy and has been responsible for providing such things as high frequency radios, teflon and computers, it should not be confused with conversion.

Kireyev further believed that neither the sale of military hardware and technology on the arms market, nor the sale of hardware at home or abroad for scrap should be used as examples of conversion. In his opinion, the Soviet Union had confused the issue by applying the term conversion to what were in reality processes of diversification, spin-off and sales. Conversion, for Kireyev, meant only one thing: the closing of defence industries, their refitting, and their eventual production of purely consumer goods.

Shchenin adopted a slightly different and perhaps more realistic stance from the one taken by Kireyev. Shchenin wrote that the process of diversification does hold certain benefits for defence enterprises. For many enterprises the cost of fully converting to civilian output is prohibitive. The process of diversification can be used to wean the enterprise from military orders and state financial support.(21) While he would agree with Kireyev that conversion should symbolise either a radical cut or the termination of arms production, his method for this was in fact diversification. He argued that in pursuing the ultimate goal, conversion, the state should employ all available

methods. Since diversification can facilitate the achievement of the state's aim it should not be dismissed out of hand simply because it was not conversion.

The definition of conversion was not the only issue in dispute, so too were its pace and scale. Despite the emphasis placed on conversion by the Soviet government it was initiated on an amazingly small scale -- either within individual enterprises in accordance with the INF Treaty, or at the level of individual republics. Part of the problem was that conversion was subject to the pace and scale of disarmament, it did not dictate that pace. This had happened before in the Soviet Union and with equally negative results.(22)

The policy was also affected by confusion over the meaning of reasonable sufficiency. Samsonov theorised that before one could talk about conversion one must understand what was meant by "reasonable and reliable" sufficiency of defence. As discussed in Chapter One, reasonable sufficiency was "the marrying of political and military doctrines to achieve international stability and security". Reasonable sufficiency placed its emphasis on political discussion and compromise with just the hint of a threat of military force. A state had to decide how big a "hint" it wished to give. If it wanted to retain a large force then the opportunities for a comprehensive conversion programme diminish, with the factories continuing to produce items for the defence sector. If, on the other hand, the government felt that a large armed force was no longer necessary then more enterprises could undergo conversion, thus having a greater effect on the rehabilitation of the economy.

The lengthy debate in the Soviet Union over the level of force which qualified as reasonably sufficient had a delaying effect on the emergence of a comprehensive policy of conversion. The central question was, "how does one

define a reasonable limit, provide the best correlation of expenditures in defence and the national economy and still guarantee the security of the country?"(23) Since 1992 the primary question for the Russian government has been "whom does it declare as its enemy?" If it has no known enemy how can it determine a level of defence which is reasonably sufficient? So long as these questions remain, conversion will be hampered, and limited benefits will arise for the economy.

A related debate concerned the reduction in levels of secrecy in Soviet society. Neither disarmament nor conversion could be achieved without greater openness or *glasnost'*. In an article entitled "From the Cult of Secrecy to the Information Culture", Vladimir Rubanov, the department chief at the scientific Research Institute of the USSR Committee of State Security, described secrecy as a "kind of indicator of the political development of society and the degree of democratisation of its social institutions".(24) The bureaucracy had flourished under Stalin and Brezhnev. It had taken control of society and this control shrouded the state in darkness and ignorance. As Karl Marx stated, "the universal spirit of bureaucracy is the secret and secrecy."(25)

Rubanov believed that the regime of secrecy was allowed to grow because of the "dogmatism of governing traditions and disorientation in the determination of political, economic and social priorities".(26) In this case the word "disorientation" could be interchanged with "subordination". Social and economic interests were subordinated to the needs of the political. Foreign policy by nature generated secrets in order to protect the interests of the state. If social and economic interests were being subordinated to politics and foreign policy then they would either generate their own secrets or be enveloped in those of the foreign policy. The military by nature was a highly secretive

organisation. When an entire state and its economy became militarised, for Rubanov, they necessarily became secretive. The process was further aggravated when information classification was uncontrolled, as was the case in the Soviet Union. So long as these conditions prevailed, power was alienated from society and "the constant reproduction of this alienation in politics, economics, and the social sphere" was promoted.(27)

Gorbachev initiated the programme of *glasnost'* in 1986. Its immediate effects were felt in the social sphere -- the mass media no longer followed strict Party line and a more open coverage of the hardships of the Soviet people was allowed.(28) As restrictions were lifted from the voice of the people greater openness filtered into the government. Searching questions were asked and answers were expected. *Glasnost'* reached the military to the extent that there were debates on reasonable sufficiency and living conditions for service personnel, but other aspects of the military sector remained in concealment. The true size of the defence budget remained undisclosed until the 1990s. Soviet analysts had a general idea of what the items of expenditure were, but doubt remained as to how much was actually spent.

Rubanov believed that the limited success of *glasnost'* in the military sector was attributable to the fact that the "conversion of secrecy" was orchestrated by the very people who had the most to lose should it succeed. The "conversion of secrecy" was planned by the KGB, the MVD, Gosplan, the Ministry of Defence and the Academy of Sciences. As a result self-interest stood in the way of development. Real reform could not occur in this sector unless there were a programme for the classification of secrets.(29) The conversion of the defence industries was initially hindered by this failure to reduce the level of secrecy within the bureaucracy.

Conversion was also adversely affected by a general uncertainty over the way in which it should be managed. Initially many writers on the subject felt that a superstructure needed to be established. They argued that conversion should be organised on an international as well as national level. Soviet ministers and analysts considered an international plan for conversion justifiable considering that disarmament affected one and all and that complete disarmament could not occur without the cooperation of all the nations of the world. In his 1988 speech to the United Nations Gorbachev called for a programme of conversion under its auspices. Following that speech an increasing number of Soviet academics called on international organisations to outline a policy for disarmament and development, for an international fund to be established to assist enterprises in their transfer to the rails of peaceful production, and for an international programme to guarantee the sale of goods from converted enterprises.(30)

Demands were also made of the Soviet government to develop a national framework for conversion. Since it was the national government which would define the terms of reasonable sufficiency it was therefore the government which would determine the number of facilities available for the conversion process. It was for this reason that people's deputies, economists and academics called for the creation of an all-Union conversion programme. Those who believed that a state programme should be drafted also demanded that it be ready for implementation prior to commencement of full-scale disarmament. They argued that the nation would be able to derive the greatest economic benefits if the plan were prepared in advance. This ideal scenario did not materialise. Large-scale disarmament began in 1987-1988. The INF Treaty was signed in December 1987 and implemented in April of the following year. It was also in

1988 that Gorbachev announced his plan for unilateral disarmament. The official State Programme for Conversion was not passed, however, until the winter of 1990, a full two years after the implementation of the INF Treaty and the unilateral reductions.

Despite the fact that a national programme did not emerge until the close of 1990, from 1987 onwards attempts were made at the national, republic and enterprise level to initiate change in the defence economy. Sometimes these changes were coordinated between levels, but more frequently they were enacted independently of each other. The end result was confusion and the deterioration of the most profitable sector of the economy.

In an article entitled "Kuda poskachet kentaur?" (1990), economists Yurii Yarmenko and Evgenii Rogovskii argued that the scientific-technical and productive potentials of the defence enterprises were the last real resources for the national economy.(31) The policy of conversion had to preserve this resource, develop its potential and distribute it throughout the national economy. They stressed, however, that to orientate any programme of conversion within the MIC would serve only to "preserve the organisational, economic and technological separation of the defence and civilian spheres of the economy".(32) One of the major obstacles to conversion in the former USSR was the barrier which existed between the defence and civilian sectors. Two early attempts to link these separate sectors were the Law on State Enterprises and the Law on Cooperatives.

The Law on State Enterprises (Associations) was implemented in the hope that it would transfer enterprises to the market economy. Adopted in July 1987, it was also supposed to apply to both civilian and defence industries, on the

assumption that enterprises (both state and cooperative) were the basic unit of the "single national economic complex".(33) The main aim of this law was to push enterprises towards full self-accounting, self-financing and self-management. In order to promote this course of action the legislation also reduced the state's responsibility for the debts of enterprises.(34) Should an enterprise prove incapable of managing itself efficiently and find itself faced with bankruptcy the state reserved the right to cease production.

It was also intended that the Law on Cooperatives (May 1988) should be applicable to both civilian and defence sectors. It built upon the principles exemplified by the Law on State Enterprises. Cooperatives, like enterprises, were considered the main component in the "unified national-economic complex" (Art. 1(4)). As with an enterprise, a cooperative was expected to be run on the principles of socialist economic management, self-financing, and economic accountability (Art. 17(1)). Unlike enterprises, however, cooperatives were allowed to draw up their own plans independently, without interference from the state (Art. 18(1) and Art. 29). Furthermore, cooperative activities were to be conducted solely on a contract basis rather than dictated from above (Art. 17(3)).

Within the Soviet defence sector there were approximately 5,000 enterprises. Of this number only 400 together with 120 design bureaux were chosen to undergo some form of conversion/diversification.(35) It must be assumed that in the first instance the 4,600 enterprises which were not undergoing conversion were not affected by these two pieces of legislation. They continued to receive orders from the state, their output was paid for by the state and they were given priority access to raw materials.(36) For the 520 institutions which were experiencing reform the application of these laws was not stringent. It has been suggested that they were not really transformed at all. K. Gonchar,

from IMEMO, has claimed that 90 percent of production capacities were being reserved for military output. Even the portion which was converted had to remain "within the framework" of military-oriented technology.(37) Thus output continued to be determined by the state rather than the enterprise.

Yet despite retaining control of production decisions the government adopted a mixed approach in other respects, particularly when those decisions concerned non-strategic enterprises. There were a number of cases in which enterprises were forced to fund their refitting out of their own development funds, while in other cases the state was willing to assist enterprises faced with bankruptcy.(38)

A fundamental mistake, and one which was made repeatedly until the collapse of the Union, was that economic reform legislation was not applied in equal measure in the two sectors. For the defence industries to be regulated by supply and demand they needed to be placed on an equal footing with their civilian counterparts. The conversion of secrecy would have been an instrument in ensuring this equality. The blinkers needed to be removed so that a fair analysis could be made of the defence economy as a whole. To curtail expenditure or to transfer funds there needed to be an understanding of how the military economy worked. Military production is only part of the military economy.(39) Once the analysis had been made then the way would have been open to deregulate as much of the MIC as was possible or warranted, in effect the deregulation of the MIC in terms of "reasonable sufficiency" of the economy.

The second step in reforming the defence economy came with the signing of the INF Treaty. As a result of the treaty six enterprises underwent full conversion while others involved in the production of missiles began the

process of diversification.(40) Although there was no official state plan at that time, two "operative programmes" were in existence. Effective for the same time period (1989-1995), they covered the production of technological equipment for the light and food industries and for the output of "goods for national consumption" (*tovary narodnogo potrebleniya,* TNP). These target areas were chosen by the state, and the programmes developed by the VPK and the defence branches of Gosplan. By organising the programme in this manner the heavy-weight position of the military industries within the economy was maintained. The organisation for new civilian production was supposed to be derived from the technological potential of the defence branches. This meant that construction bureaus (KBs) and scientific production offices (NPOs) carried that burden of innovation and development. In order to cope with this burden these organisations attempted to maintain their special powers, enabling them to secure resources and investment from the state. This redirection of resources, particularly financial resources, caused a further depletion of materials within the civilian sector, and the transfer of ideas and technology did not occur. Effectively a second economy was created within the defence branches.(41) Under these conditions the potential success of conversion was limited.(42)

The official state programme for conversion did little to improve this situation. Drafting of the programme began in 1989. Involved in its creation were the USSR State Planning Committee, the USSR Council of Ministers' Military Industrial Commission, the USSR Ministry of Defence and various civil ministries and experts concerned with the question of conversion. The completed programme was presented to the Presidential Council in September 1990.(43) The Council accepted its proposals and forwarded it to the then Prime Minister Nikolai Ryzhkov, as representative of the Soviet government, for his signature.(44) He signed the document on December 14, 1990. The next stage in

the process was for the programme to be ratified by the Supreme Soviet.(45)

There appears to be general agreement that the final programme was not as detailed in its recommendations as earlier drafts had been.(46) This may have been because by autumn 1990 the government had already lost overall control of the conversion process. Very much aware of the mixed results of the "operative programmes", the government had to be seen taking a stand. Its action turned out in the end to be too little, too late.(47)

The broad aims of conversion were outlined within the programme, yet their implementation was not sufficiently detailed. The leading goal was to liberate the productive capabilities and the scientific-technical potential of the defence complex and reorientate them in order to satisfy the demands of the civilian economy. Light industry, the agricultural, medical and environmental sectors were deemed the areas most in need of assistance. The development and production of technology was to be increased in both the defence and civilian sectors. What benefits arose within the defence sector were, if possible, to be transferred to the civilian economy. The programme also called for a thorough review to be conducted of how defence expenditure and military procurement were to be reduced. It was the aim of the government programme to maintain the level of expenditure on military production and research and design at an absolute minimum.(48)

More specifically the programme spoke of changing the field of aviation to facilitate the growth of passenger and transport services; of modernising shipping and increasing the production of ships for transport and export services; of promoting space technology on the international market; and developing the fibre-optic industry and thus telecommunications.(49) It is interesting to note

that the recommendations made within the State Programme were different from ones made in the operative programmes. The emphasis here was on providing basic technology rather than finished products for national consumption.

FINANCING CONVERSION

By promoting the production of transferable technology rather than finished consumer goods the government hoped to reduce the costs associated with full-scale conversion. Even so, the expected costs proved to be quite substantial. In 1990 it was estimated 41.5 billion roubles was necessary for the refitting of approximately 300 newly built "frozen" military plants.(50) A further 40.5 billion roubles was required for subsidies in R & D, this was apart from the substantial amount of hard currency necessary for Western know-how.(51)

Although the conversion programme was not as as detailed as it could have been it did make some proposals for finance and technology. The plan called for the establishment of a Conversion Fund by the beginning of 1992. State-run, the fund was used by enterprises to maintain their workforce or finance scientific research and development for the manufacture of consumer goods.(52) Another solution for the enterprises was to increase their exports abroad for hard currency which they could then reinvest in order to produce goods for national consumption. Initially the Soviet and Russian governments pledged to reduce arms sales, however, the need to obtain hard currency overrode political considerations. Although the Russians have become more overt in the way they market their defence products, organising airshows on the scale of Farnborough to promote their MiG-29s and other fighter planes and allowing the Kalashnikov factory in Tula to sell independently outside state

agencies, total exports of major conventional weapons have decreased.(53) Soviet arms exports were down from over $9 billion in 1990 to just under $4 billion in 1991; the trend has continued in Russian exports.(54) There is concern that the sale of arms will hinder the progress of conversion and that arms proliferation will spiral, but so long as the Russian economy remains unreceptive to the goods produced by converting enterprises and Western markets remain closed to these same domestic products defence enterprises will have little choice but to sell the goods they manufacture best.(55)

Before the sale of weapons to the highest bidder was openly condoned academics and administrators alike attempted to devise alternative schemes for financing conversion. In the first edition of a publication entitled *Konversiya* (1990) several authors discussed the need for a bank geared towards servicing enterprises beginning the conversion process.(56) Vasilii Panferov, President of the international company Russian Experiments and Technology, called for the establishment of a share-holding bank for conversion which would be open not only to converting enterprises but to any other interested clients as well.(57) His contention was that if the converting enterprises were anchored to the commercial sector via a share-holding bank pressure would be removed from the state and there would be a greater chance for success for the enterprises. Panferov was correct in assuming that converting enterprises needed to be tied to the commercial sector. However, because of the rapidly deteriorating situation in the political and economic arenas these enterprises were not able to wait for the establishment of special share-holding banks. What they turned to were banks already in existence which could offer them special rates or programmes. The USSR Bank for Housing and Municipal Services and Social Development, for example, began to offer guaranteed credit and free financial advice for all economically efficient projects associated with conversion.(58)

In line with another economic reform several defence enterprises were privatised. Setting a precedent, the Saratov Aviation Plant (SAP) and the Saratov Electrical Units Production Association (SEUP) became the property of their workers in January 1991.(59) The privatisation plan stipulated that the worker collectives should gain all the rights to ownership, use and disposal of their property and the right to appropriate and dispose of the profits and other revenues.(60) To facilitate the purchase of shares by employees 42 percent of the total value of assets at SAP and 48 percent at SEUP were donated to the employees in the form of a free down-payment.(61)

When Permavia, an aviation firm formerly known as Aviadvigatel, was privatised the share offer was opened up slightly. Starting in May 1991 Permavia began offering shares to employees who had been with the association for at least five years, and to legal entities (i.e. enterprises and organisations). Foreigners were still strictly prohibited from participating in the share offer. Individuals were allowed to purchase up to 100 shares, with one share priced at R250. It was hoped that the share offer would gross R4,000,000.(62)

Aviadvigatel had specialised in the development, testing, pilot production and exploitation of jet aircraft engines. The new Permavia planned to scale down this operational range. Instead the employee owners of Permavia intended to repair aircraft engines; promote the use of the IL-76 for cargo service and manufacture lightweight modern metal furniture and other consumer goods. Apparently the managers of the joint-stock company viewed engine repairs as the real bread-winner. They planned to increase the volume of repairs to 120 engines per year at a cost of R500,000 an engine. In accordance with the laws on enterprises and cooperatives Permavia was attempting to become self-

financed and chose its own methods of operation.

Privatisation of defence enterprises on a mass scale has proved difficult. The belief persists, however, that the rapid privatisation of state assets will lead to a market economy. In the autumn of 1992 the Russians moved ahead with their privatisation programme. Vouchers worth R10,000 were issued to every Russian citizen. Initially these vouchers were only to be used in order to purchase shares of enterprises in which they had been employed.(63) Subsequently, the legislation regarding privatisation was liberalised. Voucher holders were allowed to purchase shares in the state and service sectors and in the housing market as well. Furthermore, they were no longer restricted to places in which they themselves were employed.(64)

The privatisation of defence industries is continuing, but only on a limited basis. While there is a great deal of Western interest in the military industries of the former Soviet Union, that interest can only be acted upon once the enterprise has been fully converted.(65) While that number is increasing, it remains a small proportion of the overall number of defence enterprises.(66)

The stipulation that defence firms be converted prior to foreign involvement means that the hard currency which these enterprises and the economy as a whole need will be slow in coming. As early as 1988, when Gorbachev first mentioned conversion within an international context, the government sought outside assistance in its attempts to demilitarise the economy. At first politicians and academics alike spoke of the need for an international body to oversee conversion in all nations. Next they suggested that the West should guarantee the purchase of goods produced by converting enterprises. Finally they sought only straightforward financial assistance.

At the Group of Seven Conference (G7) in July 1991 Gorbachev asked for the involvement of foreign investors in the conversion of his state's defence enterprises. He wanted Western companies to participate jointly with state-run industries in a $30 billion to $40 billion plan to transform the Soviet defence industry.(67) The response of the G7 nations was derisory. Immediately following the July conference a Japanese delegation visited the USSR in order to assess the situation. There were reports that the Japanese had pledged half a billion dollars to the conversion campaign.(68) Shchenin claimed that no money was received prior to the collapse of the Soviet Union.(69) Nor was any money received from any other nations at that time.(70) Individual funding bodies have subsequently established "conversion desks" to deal with programmes initiated by defence enterprises in the republics of the former Soviet Union, however, money is not always forthcoming.(71)

Although some foreign firms have been willing to establish joint ventures in both the defence and civilian sectors, many businesses have held back from investing in the region. One of the initial obstacles to foreign investment in the USSR was the absence of guarantees for the export of profits.(72) During the course of 1992-1993 the most frequently cited excuse was that firms would rather wait until the political and economic situation had stabilised before they invested.(73) Yeltsin's liberalisation programme has, however, succeeded in attracting foreign investment. Continued investment interest is important for the success of conversion. Conversion is an expensive business. Sizable funds are required to convert productive capabilities, reorganise the personnel structure and modernise technology.

TRANSFER OF PERSONNEL

Attitudes towards the reallocation of the personnel structure have changed during the course of the conversion debate. Initially Soviet administrators believed that the easiest way to reform and revive the economy would be to transform the civilian industries into mirror images of their defence counterparts. Planners spoke not so much of retraining civilian personnel as of transferring military management teams. The argument behind such a proposal was that because the defence industries were in the habit of producing high quality goods for demanding customers, they must be run by very disciplined managers. Once these managers were transferred to the civilian sector they would be able to instil discipline and control among their civilian workers, and be able to do so within the framework of self-financing and economic accountability. This argument proved false in two ways. First, the defence industries were never held economically accountable to civilian consumers, therefore defence managers had little experience to bring to the new look civilian sector. Second, the transfer of management teams did not allow for natural growth and development in the civilian sector. Instead it merely represented the imposition of a formula and style.

There is a further point which must be made. Frequently, both Soviet and Western analysts have approached the issue of conversion with the belief that they can use ideas, technology, and personnel from the defence sector in order to transform the civilian economy. But can elements of the military economy be removed without changing its basic structure or must it too undergo a form of "perestroika"? Management is deeply involved in the structure of the military economy.(74) If the best and brightest of defence management were transferred to civilian enterprises it is doubtful whether the military industry would be able to meet its future obligations. It would be more efficient for both branches

concerned to re-train personnel rather than relocate them. Should certain aspects of defence operations seem significant for the more efficient conduct of the civilian enterprises then by all means the lessons should be based on those points of reference. By the same token, the lessons learned by civilian managers in regard to *khozraschet* should be passed on to the defence complex. Should further defence cuts be in the offing, or should more enterprises undergo full conversion, it can only help if the managers are able to operate within tighter budget constraints and if they have an awareness of what a market economy involves.

Conversion not only affects the managerial sphere, it also has a great effect on the individual workers. The economist A. Levin, in his article "Konversiya: opyt i problemy", discussed the issue of unemployment. He admitted that if a policy of conversion were followed this problem would be unavoidable.(75) As stated previously, some 40 million people relied on the defence sector for their livelihood. In 1990 it was suggested that 500,000 defence workers would lose their jobs as a result of conversion.(76) However, owing to the absence of a coherent defence policy the military-industrial complex had to curtail production. Furthermore, as a result of economic reform, industries were encouraged to streamline production and to cut costs. This invariably meant reducing the enterprise labour reserves. As a result, in 1992 the defence enterprises lost 600,000 personnel and the R&D establishments' workforce was reduced by 200,000.(77) These factors coupled with the break up of the Union and the headlong rush by the Republics towards the market will have undoubtedly contributed to the number of defence employees made redundant.

Converting enterprises are generally expected to make redundancy payments to former employees. Many have found it difficult to meet such

obligations. The case of the Elektrostal plant illustrates this point. Owing to conversion the plant lost its biggest orders from the Soviet Ministry of Defence. The plant treasury was already R20 million in the red when its profit intake was decreased by a further R6 million per annum.(78) Despite these losses the enterprise was still expected to fund the re-equipment of its plants as well as pay off those workers made redundant. After much petitioning of Gosplan, the USSR Ministry of Finance and the USSR Ministry of Metallurgy compensation was obtained for the wage fund.(79) This was a long and arduous process to go through every time an enterprise manager felt the need to lay off more workers. The Union and Republic governments did attempt to simplify matters. Significant guarantees and compensation for workers of converting enterprises were established in the basic legislation of the USSR and Republics for the Employment of the Population (art. 5, 26, 27, 29) and in the law of the RSFSR on the employment of the Population and the Social Defence of the Citizens of the RSFSR (April 1991). Supplementary compensation was offered by the Russian Conversion Fund which was established in 1992.

Obviously not everyone in the defence sector has been or will be made redundant. Attempts have been made to re-train personnel. This, however, is a matter which solves some problems while creating new ones. There is certainly a need for the re-training of defence employees if conversion is to succeed. Although the engineers in the military-industrial complex are highly trained specialists they lack the skills to deal with certain areas of civilian production.(80) This inability has served to hinder the progress of conversion and as a result the demand for consumer goods has not been met sufficiently.

The retraining of specialists, however, takes both time and money -- commodities in short supply. At one point it was suggested that the country

should have a system for retraining skilled specialists that would make it possible for a person, in the course of one or two years, to obtain a civilian specialty at the same level as his former work. The operational conversion plan did indeed propose to re-train and relocate personnel in the shortest time possible while also maintaining their production qualifications, professional prestige and job satisfaction. Unfortunately this has not always been possible.(81)

Obtaining a civilian post which demands the same qualifications as a positions in the MIC and allows the employee to enjoy equal benefits and the same level of prestige appears to have been difficult for some defence personnel. For example, at the V.P. Chkalov aviation factory several thousand staff specialists whose jobs were eliminated refused to be trained in other professions and left the enterprise.(82) In the writings on conversion much has been made of the unwillingness of defence sector employees to accept less prestigious jobs.(83) Samorodov in his article on conversion and its consequences for labour stated his view that indeed too much had been made of this point. He argued that the transfer of defence employees to the civilian sector should not prove to be an insurmountable obstacle since about one-fifth of them voluntarily left their jobs each year and always succeeded in finding alternative employment.(84) If Samorodov is presuming that the defence sector had a smaller labour reserve, say of 9 million(85), then his argument that the potential dislocation of the workforce is exaggerated is acceptable. If, however, Shchenin's calculations on the size of the workforce are correct, then there is sufficient reason for concern about the repercussions of conversion for the workforce.

TRANSFER AND MODERNISATION OF TECHNOLOGY

The transfer of technology and the re-equipping of factories have caused

additional problems for defence enterprises. In the early stages of conversion the problem which needed to be solved was how to transfer technology to the civilian sector. Essentially there were two points to consider: should the defence complex make a direct transfer of equipment or should it seek to disseminate information on the process of production? Both aspects had their inherent difficulties. These issues remain relevant but now another question is being asked: how does the defence sector update its own plants?

Initially defence enterprises attempted to provide their civilian counterparts with higher quality equipment. There were problems at both ends. The defence ministries felt that to meet satisfactorily the demands of refurbishing civilian enterprises, not only did they have to give them machinery, they also had to provide crews to install the equipment and instruct the new owners on its operations. The military argued that it did not have the manpower and time to provide full service to each and every civilian enterprise.

At one stage the state hoped to facilitate matters by placing certain civilian industries under the control of the MIC. It was thought that by placing these enterprises under the management of the Ministry of Defence the transfer of technology would somehow be easier. What they discovered instead was that it was often simpler to close down an old plant and build a new one than try to modernise a plant whose assets were hopelessly outdated.(86)

Eventually a new method of transferring technology was created, the commodities exchange. The first military exchange was an off-shoot of the Russian Commodity and Raw Material Exchange (RCRME) and the Central Institute for Mechanical Engineering Research (CIMER). The military exchange sought to solve the problem of matching buyers with sellers. Previously,

enterprises in both sectors experienced difficulties in coaxing raw materials and components out of suppliers. The defence enterprises had the added difficulty of trying to find buyers for their finished products.(87) The exchange incorporated several different organisations: the USSR Exchange for Defence Industries, secret broker offices of the VPK, Office 500 (a liaison office for the VPK-RCRME) , a secret department of the Russian National Bank, an insurance company, and a special department of the economic news agency. The purpose of the exchange was to facilitate the transfer of goods and services between the defence and civilian sectors.(88) Goods circulating strictly within the confines of the MIC were dealt with secretly on the MIC exchange. Goods to be sold by civilians to defence enterprises or vice versa went through the 500 Office and were auctioned openly on the RCRME.

To judge from its description the military exchange is very much a means to transfer technology and finished goods rather than a commercial venture. The military have, via another exchange, entered the commercial sector. ESTRA was established by some of the major defence industrial plants as a commercial stock exchange, which deals in radio, electronic and computer equipment, communications media, and productions processes.(87) If ESTRA is successful it will go some way in tying the enterprises of the defence sector more securely to the economic reforms and the market mechanism.

As for the second issue -- how does the MIC update its own plants? -- this is still difficult to solve. Part of the problem stems from the way in which the sector was structured. Rather than retool old facilities plant managers sanctioned the construction of new buildings every time a new product line was in prospect. In a market economy an enterprise would expand into a market by building facilities as they were required, rather than building the facilities before the

contract was assured.(90) The defence sector in the former Soviet republics is now burdened by excess capacity and high overhead costs. The cost of converting these facilities is sizable and there is an almost desperate need to put the facilities to some kind of use. There have been several cases in which defence technology has been wasted on or misused in the process of manufacturing civilian goods.(91) Since the pressure to produce finished goods for the consumer market has been removed more thought may be put into the best way to convert the technology.

The solution to this problem has in essence been determined by the enterprise's perceived role in the economy. Under the Soviet system the enterprise played only a small part in planning its own production. The Laws on Enterprises and Cooperatives attempted to change this by stressing that they were the basic units of the "single national-economic complex" and by encouraging managers to accept more responsibility for planning for the future of their enterprises.

The confusion and delays witnessed in the Soviet state's promotion of a conversion programme further shifted the burden on to the shoulders of the defence enterprise managers. Over time a greater number of Soviet analysts supported the shift from national to local control of conversion. In his 1990 article "Proekty zakonodatel'nogo regulirovaniya i osushchestvleniya v zapadnykh stranakh", A. Kireev discussed the proposed roles of both the national government and the individual enterprises by examining the experiences of America, Sweden and Britain in converting their military industries. He pointed out that in America and Sweden the governments established councils to regulate both the defence economy and the process of conversion. The composition of the councils was similar in both nations,

consisting of representatives from the ministries of trade, labour, health, education and social development. Also present were those representing the interests of the housing construction industry, transport, regional development and of course the military.(92) The councils were established to synthesise the needs of society, to eradicate potential problems and generally to ease the transition "on to the rails of peaceful production".

In 1990 the USSR Academy of Sciences, the Central Board of Trade Unions and the Peace Fund established the Soviet National Commission for Promotion to Conversion. Composed of 33 scientists, political figures, representatives of the defence industrial complex and a number of military and civilian experts, the Commission's aim was to act like its Western counterparts and promote practical solutions to different conversion problems.(93) This was a step in the right direction but ultimately the impetus needed to come from the enterprises themselves.

This was effectively the lesson Soviet military reformers learned from the Lucas Aerospace experiment.(94) In the 1970s when the military-industrial complex in Britain was being scaled down, the board of Lucas Aerospace turned to its workers for advice on conversion. The engineers and science officers were asked to compile a list of peaceful products they felt the enterprise was capable of manufacturing. The list of 140 possible product lines was eventually narrowed down and the result was that Lucas branched into aspects of commercial aviation. The lessons learned from the three case studies were that enterprises and governments need (1) to analyse the scale of production and labour resources and (2) to adjust to the demands of the national and world markets.

In order to implement these lessons academics of various disciplines

urged that the military-industrial complex be regulated by the market. Specifically they spoke of three rules which should be implemented: (1) the laws of supply and demand should guide enterprises in their activities; (2) enterprises should adapt output to what they are technically capable of producing; and (3) enterprises should bid or compete for government contracts.

Although it has at times been difficult for enterprises to adjust to the new guidelines, the collapse of the Union has made it imperative that they do so. Initial attempts by the Republics, while still under Soviet control, to delineate their powers posed problems for conversion. In a sense a custody battle took place for the ownership of the defence enterprises. Russia in its "Law Guaranteeing the Economic Basis of Sovereignty of the RSFSR" and the Ukraine and Belorussia in their decrees on state sovereignty all laid claim to the enterprises, regardless of their military or civilian nature, on their territory.(95) A legislative battle erupted with both Soviet and Republican governments declaring that their laws took precedence over the others. The ownership of the defence was of great concern to the central authorities. Although it has been said that the Republics would never have taken control of strategic enterprises the question was not completely resolved until the collapse of the Union.(96) It has been estimated that of the 600 enterprises affected by some form of conversion by August 1991 approximately 460 were located in the RSFSR, 94 in Ukraine, 19 in Belorussia (now Belarus), and 11 in Kazakhstan.(97) Each of these republics has adopted its own conversion programme.(98)

The Russian government, unlike its Soviet predecessor, acted quickly to promote conversion. The nine defence industry ministries were abolished in 1991 and the defence enterprises were placed under civilian control. Furthermore, the Russian Programme for Conversion was passed by the

legislature on 20 March 1992. Like the programme passed by the Soviet government the Russian plan was vague in many respects; however, the Russian government attempted to compensate for this by aligning it with other legislative acts on finance and investment. The actual law on conversion outlines the government's commitment to defence reform, but shifts the burden of organisation on to local and city councils. It is up to future legislation to flesh out how conversion should proceed. While this may be a beneficial approach in that it ties conversion to overall economic reform, it may also hinder the progress of conversion should more orthodox figures regain control of the reform process. Political events during the course of 1992 and 1993 made that point abundantly clear. Initially the government announced that 70% of the MIC would shift its output to civilian production (i.e. diversify). Ten percent of these enterprises would have to convert 80-100% of their output. It was presumed that intense conversion would last for three to four years and that the bulk of government spending would be during this period. It was suggested that conversion of the MIC would cost $150 billion.(99) However, the government did not have $150 billion to spend. Arkady Volsky, leader of the industrialist group Civic Union, has argued that the cost of conversion in financial and human terms is too great. He favours a slower programme in which only three percent of the enterprises would be converted per year. His argument is that it would be easier to budget the costs over a longer period of time and thus the government would be able to avoid a dramatic rise in unemployment.(100)

RUSSIAN FINANCING OF CONVERSION

The government has continued to pursue conversion and is now examining alternative methods of financing the effort. The two main ways, other than direct state subsidy, are the sale of weapons for hard currency and

foreign investment. In line with Article 9 of the 1992 Law on Conversion, converted enterprises "have the right to engage independently in foreign economic activities in accordance with the legislation of the Russian Federation". Article 9 grants converted enterprises the right to sell weapons abroad, to obtain foreign investment and to establish joint ventures so long as they strictly adhere to all laws which govern such activity, and in particular the law on Foreign Investments in the RSFSR.(101)

Despite loud cries of protest at the export of weapons this particular piece of action went ahead. On July 24 1992 legislation was passed which sanctioned the sale of armaments for hard currency. The Ministry of Foreign Economic Relations is now responsible for issuing defence firms with the appropriate licences. The government based this action on the belief that once the defence enterprises had established sufficient hard currency reserves they would discontinue the sale of weapons abroad and begin converting production. Opponents of this policy argue, and rightly so, that it only delays conversion and there is a very real risk that the production lines for the weapons will never be mothballed.(102) They feel that it would be safer for all concerned to halt weapons production completely, re-equip the productive facilities and begin to manufacture consumer goods immediately. Proponents of this latter policy are also in favour of more direct foreign involvement in conversion through investment and the establishment of joint ventures.

As demonstrated in the earlier discussion of privatisation, foreign investors can only become involved once the enterprise is fully converted. This means that the enterprise is not receiving the inflow of capital it needs during the most difficult period. Dr. K.P. Samsonov, laboratory head of the Scientific Research Economic Institute of the Ministry of Economics, and O.A. Khokhlov,

administrative chief of the Russian President's Committee on Conversion, have suggested ways to correct this problem. In their 1992 article "Privatisation as a Source of Self-Financing for Conversion Processes", they declared that one of the main goals of privatisation and conversion was the "creation of conditions for the restoration of economic relations among its enterprises in Russia and other CIS countries."(103) For this to occur the state must closely control and coordinate the processes of destatization and privatisation of the defence complex with its anti-monopoly policy.(104) Samsonov and Khokhlov stated their belief in the vital importance of involving foreign investors in the transformation of the defence sector and suggested a programme which would accomplish this goal. The first step would be the reorganisation of state enterprises into state joint-stock companies. Step two would involve the transfer and sale of stocks to enterprise personnel and management. The third and subsequent steps would witness the sale of enterprise stock to commercial structures, private persons and foreign investors through auction or on another basis, taking care to assess the peculiarities of enterprises belonging to the defence complex.(105) One of Samsonov and Khokhlov's main complaints has been that insufficient funds have been directed to the conversion programme. Under the current, general privatisation programme all proceeds go to general budget funds at different levels. Under their proposed programme 30% of the proceeds would go to the enterprise collective, 40% to the regional conversion fund, 20% to the federal fund and 10% to miscellaneous programmes.(106) They also outlined the various accounts which should be formed within any conversion fund. They include an investment account for the development and production of civilian goods (60%), socioeconomic support (10%), and support of scientific-technical potential (30%).(107) Samsonov and Khokhlov agree that the conversion of the defence sector can prove to be a self-financing exercise and that the implementation of their programme could make this a reality.

The current reality is that such a programme is not in place and that enterprises are looking for other means of financing. One alternative method is to create ties with a foreign firm through the establishment of a joint venture. Although the defence firm must still be going through the process of conversion it does not need to be fully converted prior to contact being made. The establishment of joint ventures will be discussed in greater detail in Chapter 6.

A third current method of establishing ties involves the purchase of insolvent enterprises. Although this method would demand a greater capital investment from the foreign firm, it does provide a 'foot in the door'. Foreign investment in insolvent enterprises is permitted by the 'Decree of the Russian President on Measures for Support and Recovery of Insolvent State Enterprises and Application of Special Sanctions on Such Enterprises' which was issued on June 14, 1992. State enterprises will be declared insolvent when a) they fail to meet liabilities to the budget for three months; b) they fail to meet the demands of corporate bodies and individuals with property claims to such enterprises within three months of the due date; and c) they accumulate debts which exceed double the value of the assets of the enterprise.(108) Once an enterprise has been declared insolvent by the Russian State Property Management Authority a competition will be held to transfer the enterprise to independent management. The competition is open to "entrepreneurs - corporate bodies and individuals, including foreign ones."(109) Foreign investors are also allowed to purchase firms which are being sold as a result of liquidation. In both cases the foreign investor would need to submit an application to the Russian State Property Management Authority, show proof of solvency and place a deposit of 10% in the first instance and 50% in the latter.(110)

This is an important ruling for the defence sector. Many military enterprises have found that the costs of conversion exceed their available savings. These enterprises are now faced with bankruptcy. Although a foreign investor may not be involved in privatisation he may purchase a bankrupt enterprise. It may be assumed that this is one of the key ways into the defence sector simply because Arkady Volsky and Alexander Titkin, the former Minister of Industry, tried so hard to prevent the closure of the defence enterprises as a result of bankruptcy by increasing the levels of subsidies. This decree will demand careful study in the future.

To entice foreign investment, be it within the civilian or the defence sector, more incentives need to be in place. The Russian government now realises this and has attempted to establish safeguards for the foreign investor. The 'Law on Foreign Investment in the RSFSR', passed in July 1991 and amended in April 1992, insures investors against a worsening in the conditions of investment. Should the economic situation deteriorate, which it has done, investors are allowed to invoke the provisions of the legislation which existed at the time of their registration for up to ten years.(111)

The Russian government also intends to change the procedure for registering foreign-owned companies. Enterprises with a charter capital of not more than R10 million will be registered by local government. Those companies with a charter capital of R10 to R100 million will be registered by the committee for foreign investment. Any enterprise with a capital base of over R100 million must be registered by the government of the Russian Federation.(112) Prior to registration the shares of the founders will be checked by an auditing firm appointed by the government.

In order to protect Russian industry as well as the foreign investor the Russian government is set to impose tighter licensing legislation in those areas considered ripe for foreign investment, such as aerospace, utilisation of land, mineral and other natural resources and operation involving real estate, hard currency and securities. No specific details have as yet been published.

CONCLUSION

Just as the history of the conversion programme in the late 1980s has and will influence the prospects for republican efforts at conversion and or defence development, the history of the Soviet defence sector before the Gorbachev reforms affected their potential. The logic behind the 1920s policy of *assimilyatsiya* was to create a small but efficient and flexible defence sector. Unfortunately, that policy was replaced by one which advocated a massive defence sector made up of large scale production facilities which could meet the threat of a future attack far more rapidly. While these facilities were able to meet the demands of the Cold War they were neither flexible nor efficient. A cumbersome and unwieldy defence sector was created which resembled not so much a series of enterprises working towards a common goal, but a collection of fiefdoms ruled by managers/autocrats who were willing to protect themselves and the state from an external threat posed by the West, and perfectly capable of protecting themselves from an internal threat posed by a reform minded government. In this respect they began to collectively resemble the military-industrial complex described by President Eisenhower in the 1950s.

Egbert Jahn and others claimed in the 1960s and 1970s that such an institution did not exist in the Soviet Union. Plans for conversion proposed during this period were predicated on the assumption that since there was no MIC no opposition could be expressed to a centrally imposed plan. In these

conditions conversion would be a relatively straightforward matter. Yet, as has been indicated, vested interests did exist and they controlled the flow of information to the government making the imposition of a programme of reform difficult. The progress of reform was further hindered by confusion over the ultimate aim of conversion and the lack of government commitment. As has been discussed, the initial aim of the programme was to produce finished consumer goods. This was latter modified to the promotion of the means of production. The level of government commitment also changed. Initially state support was reasonably high when it was believed that, in accordance with the 1962 UN Report, the government need only change the emphasis of its directives for a shift in production to transpire. As awareness grew that the economic system lacked the potential for internal change and that structural reforms were needed support for conversion waned. Problems within the defence sector were evident, but it still appeared as the most profitable and efficient sector of the national economy and the one most likely to generate a much needed hard currency income in the future. It would appear that a decision was taken to promote conversion in word rather than in deed. The potential for short-term capital gain outweighed the distant promise of more balanced, long-term economic growth.

Yet even if Gorbachev had managed to transform the Soviet planned economy into a fully functioning market economy, in the initial stages, as is currently the case in Russia, there would have been insufficient funds to promote conversion in the manner advocated by the UN Report. If we recall, the Report suggested that in the case of the United States the government need only increase expenditure in other types of goods and services, maintain a high level of consumer demand and apply fiscal and monetary policies in the appropriate manner, the market would do the rest.(113) Currently the Russian

government has insufficient funds to promote conversion, provide for the unemployed or develop new industries without external support, and its economy is closer to that of a market oriented one than that which existed in the late Soviet period.

In Chapter Two an ideal conversion programme was outlined. Within that programme the primary function of the state was to provide both stability and vision by carefully planning for conversion. It was suggested that any conversion programme have a recognisable beginning and end lest new dependencies be created. As has been demonstrated, the Soviet government did not plan for conversion in sufficient detail. Nor did it highlight the beginning and end of that programme. Indeed, if Gonchar is to be believed conversion never began under Soviet authority. Lack of planning is further evidenced in the absence of an economic bill of rights, which forms one of the main pillars of the ideal programme. The final element of the thesis is that policies of centralisation and decentralisation need to coexist. While the state must take the initiative of promoting conversion the individual enterprises must shoulder the burden of implementing that programme. This final point will be the subject of the following chapter.

NOTES

1. K.P. Samsonov, "Ekonomicheskie problemy konversii", *Izvestia Akademii Nauk SSSR Seriya Ekonomicheskaya*, no. 3, 1989, p. 48.

2. S. Ventsov, "Narodnoe khozyaistvo i oborona SSSR", also "Za industrializatsiyu" in J. Cooper, "The Civilian Production of the Soviet Defence Industry" in Technical Progress and Soviet Economic Development, 1986, p. 33.

3. Jonathan R. Adelman, "Toward a Typology of Communist Civil-Military Relations", Communist Armies in Politics, p. 24.

4. Ibid.

5. V. Salikhov, "Konversiya: retrospektiva i perspektiva", *Ekonomicheskie Nauki*, no. 2, 1990, p. 59.

6. M. Spekler, A. Ozhegov, V. Malygin, "Konversiya oboronnykh predpriyatii: vybor strategii", *Voprosy Ekonomiki*, no. 2 1991, p. 15.

7. A. Samorodov and other authors have estimated the number of people working in the defence sector at between 4 and 5 million (Samorodov, p. 558). Shchenin's figures are substantially higher but his numbers may be calcualted on the basis of the total number of civilian and defence personnel working on military products as well as civilian goods under the auspices of the Ministry of Defence (Interview with Dr. Romil K. Shchenin at the University of Glasgow 19/06/92). For the total number of people in employment see The Former Soviet Union in Transition, Table 2, Age and Sex Structure, 1989, p. 1037.

8. K.P. Samsonov, "Ekonomicheskie problemy konversii", *Izvestia Akademii Nauk SSSR Seriya Ekonomicheskaya*, no.3, 1989 p. 50.

9. Ibid.

10. Ibid.

11. A. Kireyev, "Conversion in the Soviet Dimension", *International Affairs* (Moscow), no. 5, 1990, p. 97.

12. Samsonov, p. 50.

13. Ibid.

14. Herbert Wulf, "The Soviet Union and its successor republics: arms exports and the struggle with the heritage of the military-industrial complex", Arms Industry Ltd, p. 139.

15. Ibid., p. 128 and Channel 4 Evening News, 27/07/92.

16. Samsonov, p. 50.

17. Kireyev, p. 95.

18. Ibid.

19. Y. Adamov, "Economic Reform and Conversion" in *International Affairs* (Moscow), no. 1, 1990, p. 115.

20. Kireyev, p. 92.

21. Romil K. Shchenin, "Arms Production Conversion as an Economic Component of Disarmament", IMEMO Paper, 1990, p. 3.

22. Salikhov, p. 59.

23. Samsonov, p. 52.

24. Vladimir Rubanov, "From the Cult of Secrecy to the Information Culture" in *Soviet Law and Government*, Summer 1989, p. 11. The article originally appeared in *Kommunist*, no. 13, 1988.

25. Ibid.

26. Ibid.

27. Ibid.

28. *Glasnost'* did not immediately guarantee freedom of the press. Even after the promotion of *glasnost'* as public policy the Soviet government frequently threatened to reimpose restrictions on the media. The Russian government has done the same. In July 1992 it threatened to limit the powers of the press. See the *Guardian* 16/07/92.

29. "Okonchanie doklada o Gosudarstvennom byudzhete" in *Pravda*, 28/10/88, p. 5.

30. V. Shatrev, "Konversiya voennoi promyshlennosti i sovremennyi mir", *Khozyaistvo i pravo*, no. 11, 1989, p. 95.

31. Yu. Yarmenko and E. Rogovskii, "Kyda poskachet kentaur?", *Ekonomika i zhizn'*, no. 36, Sept. 1990, p. 11.

32. Ibid.

33. USSR Documents 1987: The Gorbachev Years, ed. J.L. Black, p. 163.

34. Ibid.

35. M. Spekler, A Ozhegov, V. Malygin, "Konversiya oboronnykh predpriyatii: vybor strategii", *Voprosy Ekonomiki* no. 2, 1991, p. 15.

36. Kireyev, p. 98.

37. Michael Checinski, "The Conversion of the Soviet Arms Industry", *Osteuropa-Wirtschaft*, no. 36, 1/1991, pp. 18-19.

38. See the discussion on the retraining of personnel.

39. V. A. Yurkov, "Konversiya i razumnaya dostatochnost' voennogo proizvodstva", *Izvestia Akademii Nauk SSSR Seriya Ekonomicheskaya* no. 5 1989, p. 80.

40. Of the six only three are frequently mentioned. They are: loshkar-Ola and Yuryuzan Machinery Plants and the Lenin Forge Shipyard. In 1990 40 more enterprises were added to the number of those supposedly undergoing full conversion. See A. Samorodov, "Conversion of the Soviet Defence Industry and its Consequences for Labour", *International Labour Review*, vol. 129, no. 5, 1990, p. 560.

41. E. Rogovski, "Ekonomicheskaya programma konversii oboronoi promyshlennosti", *Voprosy Ekonomiki*, no. 2, 1991, p. 3.

42. Ibid.

43. V. Smyslov, "Gosudarstvennaya programma konversii oboronnoi promyshlennosti", *Voprosy Ekonomiki*, no. 2, 1991, p. 3.

44.John Tedstrom, "Industrial Conversion and Consumer Goods Production" in *RFE/RL -- Report on the USSR*, vol. 3, no. 19, May 10 1991, p. 4.

45. After having examined government records it appears that the programme was not actually ratified by the Supreme Soviet but simply became law by force of government order.

46. Tedstrom, p. 4.

47. Interview with Dr. Romil K. Shchenin at the University of Glasgow on 19/06/92.

48. Smyslov, p. 3.

49. Ibid., pp. 4-6.

50. Checinski, p. 24.

51. Ibid.

52. Smyslov, p. 7.

53. Channel 4 Evening News 27/07/92.

54. Herbert Wulf, "The Soviet Union and the successor republics: arms exports and the struggle with the heritage of the military-industrial complex", Arms Industry Ltd., p. 126.

55. For an argument against this method of operation see Yuri Nazarkin, "Some International Aspects of Conversion", *International Affairs* (Moscow), July 1992, p. 20.

56. The first edition of *Konversiya* appeared in November 1990.

57. V. Panferov, "My mozhem vyigrat' desyatki let", *Konversiya*, no. 1, November 1990, p. 2.

58. Samorodov, p. 568. See also Chapter Six for further discussion of the banking structure and conversion.

59. Alexander Isaev and Lev Ivanovsky, "Two Soviet Defence Plants Privatised", in *Kommersant*, 14/1/91, p. 11 (English language edition).

60. Ibid.

61. Ibid.

62. Grigory Volchek, "Joint-Stock Company to Help Defence Industry to Survive", *Kommersant*, 03/06/91, p. 9 (English language edition).

63. To be able to purchase shares in an enterprise you had to have been employed by that firm for at least five years. The state would maintain a controlling share in the enterprises. See "Statute on Closed Subscription to Shares in the Privatization of Government and Municipal Enterprises", *Kommersant*, 04/08/92, pp. 24-26 (English language edition).

64. Channel 4 Evening News report on privatisation in Volgograd, 08/02/93. Foreigners are allowed to participate in the privatisation of the service sector. See *Kommersant* 04/08/92, pp. 26-27.

65. Foreign particpation in the privatisation of the defence industries is governed by the general laws on investment. See "Foreign Economic Activities of Enterprises Under Conversion", *Foreign Trade* (Moscow), June 1992, p. 46.

66. Estimates are that there are now over 40 enterprises in Russia which have been fully converted. See Samorodov, p. 560.

67. Fred Coleman, "A Summit Surprise: Gorbachev's Radical Offer", *Newsweek*,

29/07/91, p. 8.

68. *Keesing's Record of World Events*, vol. 37, no. 10, 1991, p. 38539.

69. Shchenin interview, 19/06/92.

70. Germany has pledged substantial amounts of money to assist in the construction of housing for Soviet servicemen. They have not, however, specifically promised money for conversion.

71. Both the European Bank for Reconstruction and Development (EBRD) and the European Union's funding branch for the newly independnet states, TACIS, have established conversion desks. The majority of TACIS projects are concerned with Russia. Although a conversion desk was established for the Ukraine in 1992 and declared a priority for funding it has not received any financial support in the past two years. Telephone interview with Andrew Dolan, Director St. Andrew Foundation, 23/01/95.

72. Coleman, p. 8.

73. Dolan interview 23/01/95.

74. Yurkov, p. 85.

75. A. Levin, "Konversiya: opyt i problemy", *Planovoe Khozyaistvo*, no. 7, 1990, p. 99.

76. G. Vasil'ev, "O konversii po-delovomu", *Pravda* 21/08/90, p. 5.

77. Julian Cooper, *The Conversion of the Former Soviet Defence Industry*, 1993, p. 12.

78. "O pensiyakh po norme spravedlivosti", *Sovetskaya Rossiya*, 17/01/90, p. 2.

79. Ibid.

80. One example is of a defence plant ordered to switch from the manufacture of automated processing machines for weaponry to machinery for sausage production. They developed a highly efficient machine with one problem. The engineers and technicians failed to forsee that a temperature imbalance would cause the meat to spoil. The product was scrapped and the factory is now producing disposable needles. See E. Varshavskaya, "Konversiya: nadezhda i real'nost' -- pirogu pechet sapozhnik...", *Trud*, 20/02/90, p. 2.

81. The proposal outlined by the operative programme is in line with the Constitution of the Union of Soviet Socialist Republics, 1977 (art. 40) which states that workers made redundant must be given new jobs in "accordance with the quantity and quality of work done...including their right to choose their trade or profession, type of job and work in accordance with their inclinations, abilities,

training and education with due account of the needs of society". See V. Fal'tsman. "Ekonomicheskaya kontseptsiya konversii" in *Voprosy Ekonomiki* no. 9 1989, pp. 89-100 for a discussion on the state's failure to meet this obligation.

82. V. El'makov, "Konversiya: Sibirskii variant", *Rabochaya Tribuna*, 28/01/90, p. 2.

83. See for example Kireyev.

84. Samorodov, p. 566.

85. Cooper, *The Conversion of the Former Soviet Defence Industry*, p. 5.

86. Kireyev, p. 97.

87. William Millinship, "Russia's military machine bids farewell to arms and begins to feed the man", *The Observer*, 07/04/91, p. 14 and Kireyev, p. 97.

88. Alexander Loktev, "Military to Participate in Moscow Exchange", *Kommersant*,, 25/03/91, p. 4 (English language edition).

89. Alexsander Loktev, "Defence Sector Producers Set Up Exchange", *Kommersant*, 24/06/91, p. 5 (English language edition).

90. Nicholas Forte and Shelley Deutch, "Defense Conversion in the Former U.S.S.R.: The Challenge Facing Plant Managers", The Former Soviet Union in Transition, p. 733.

91. There have been a number of cases in which defence technology and materials have been wasted in the production of consumer goods. One example is of the plant that has used high grade titanium for ordinary garden spades. See Samorodov, p. 567.

92. A. Kireev, "Proekty zakonodatel'nogo regulirovaniya i osushchestvleniya v zapadnykh stranakh", *Sovetskoe Gosudarstvo i Pravo*, no. 7 1990, p. 103.

93. R.K. Shchenin, "Arms Production Conversion as an Economic Component of Disarmament", p. 10.

94. Kireev, p. 103.

95. For details of these decrees see *Kommersant*, 29 Oct.- 5 Nov. (Russian language version), p. 9; *Narodnyi Deputat*, no. 12, 1990, p. 28; *Kommunist Ukrainy*, no. 9, 1990, p. 5.

96. An interview with General-Lieutenant Ivanovich in Rostov-on-Don 23/01/92.

97. John Tedstrom, 'Industrial Conversion in Ukraine: Policies and Prospects" in

RFE/RL Report on the USSR, vol. 3, no. 34, 23/08/91, p. 12.

98. The Ukrainians face a long and difficult time ahead in terms of conversion. In an interview with V Antonov, head of the conversion programme in Ukraine, it was revealed that there are 700 defence enterprises in that republic. See *Ukraine Today: Media and News Features Digest*, compiled by RFE/RL Research Institute, no. UF-217, 12/07/92. Julian Cooper claims that at the time of independence there were approximately 1.2 million people employed in 344 defence enterprises. See Cooper, *The Conversion of the Former Soviet Defence Industry*, p. 5.

99. Interfaks, "Konversiya oboidetsya v millardy dollarov", *Izvestia*, 14/10/92, p. 1.

100. Keith Bush, "Russia's Latest Program for Military Conversion", *RFE/RL Research Report*, vol. 1, no. 35, 04/09/92.

101. Zakon Rossiiskoi Federatsii O Konversii Oboronnoi Promyshlennosti v Rossiiskoi Federatsii.

102. Nazarkin, p. 20.

103. K.P. Samsonov and O.A. Khokhlov, "Privatisation as a Source of Self-Financing of Conversion Processess", *Problems of Economic Transition*, May 1993, p. 71. The article originally appeared under the heading "Privatizatsiya kak istochnik samofinansirovaniya konversionnykh protsessov" in *Rossiiskii Ekonomicheskii Zhurnal*, no. 8, 1992.

104. Ibid., p. 71.

105. Ibid., p. 65.

106. Ibid., p. 66.

107. Ibid.

108. "Decree of the Russian President on Measures for Support and Recovery of Insolvent State Enterprises (Bankruptcies) and Application of Special Sanctions on Such Enterprises", *Kommersant* 23/06/92, p. 27 (English language edition).

109. Ibid.

110. Ibid.

111. "Russian law on foreign investment to be revised" originally produced by Itar-Tass on 10/04/92. Reproduced in *Moscow Narodny Bank Ltd. Press Bulletin*, no. 1056 20/05/92, p. 11.

112. Ibid.

113. Refer to Chapter Two.

CHAPTER SIX
CONVERSION IN PRACTICE:
A CASE STUDY OF ROSTOV-ON-DON

The collapse of the Soviet Union and the emergence of the Commonwealth of Independent States in the winter of 1991 changed many components of the political and economic structures while leaving other aspects untouched. Nowhere was this more evident then in the defence economy. The rise of the newly independent states called into question the very ownership of the defence enterprises and the future progress of conversion, while at the same time leaving the managers of these enterprises as much in the dark as they had been under Gorbachev.

As discussed in Chapter Five, when the various Soviet republics declared their sovereignty in 1991 they were fairly obscure about their intentions towards the defence enterprises. It later became apparent that these enterprises had remained firmly under the control of the defence sector and the central government. That situation changed, however, in August 1991. With formal independence in December 1991 came the desire to establish indigenous security structures. Each of the former Soviet republics in turn laid claim to the defence industries located within its territory.(1)

These actions concerned the Russian government, which was attempting to inherit the mantle of the Soviet Union and maintain overall stability in the region. The proliferation of nuclear and conventional weapons among small, relatively unstable nations was also of grave concern to Western governments.(2) The Russian government and specifically Marshal

Shaposhnikov, Chief of the Armed Forces of the Commonwealth, pledged to settle the question of ownership through the use of treaties between the independent states.(3) Lieutenant-General Vladimir Ivanovich, Army Chief of Staff for the Rostov-on-Don military district, made it clear that the republics could take control of all defence enterprises which were not of a strategic nature.(4) This solution in itself seems reasonable. However, relations among the members of the CIS have failed to stabilise and if anything have continued to deteriorate. Negotiations on economic matters failed to take place owing to conflict over the ownership of the armed forces of the former Soviet Union. Ukraine in particular loudly voiced its opposition to Russia acting as the sole negotiator for the CIS in disarmament talks as well as to Russia's claim to be the owner of the Black Sea Fleet. The lengthy conflict gave rise to another: the ownership of strategic nuclear weapons was also in question, with the Ukrainians loathe to relinquish their weapons because of the possible threat emanating from a politically and economically unstable Russia. Although they subsequently agreed to the terms of the START Treaty and relinquished their nuclear weapons the animosity felt on both sides hindered closer economic relations.

Although at the time of writing a central authority remains in control of strategic assets, other defence enterprises are now subject to the conversion programmes of the Republics in which they are situated. The defence economy as a whole suffered confusion and mismanagement as a result of the Soviet conversion programme. It is not yet evident whether the new Republican programmes can repair the damage. Ivanovich, in particular, has argued that the collapse of a strong central power to oversee the administration of conversion will further hinder the process of reform.(5) The General is not against market principles being applied to conversion, indeed he believes that

they could prove beneficial. However, he is of the opinion that there should be some form of coordination among the Republics to ensure the success of defence reform. In January 1992 when the interview with General Ivanovich occurred, Republican conversion programmes were not formally linked. This changed on January 13, 1993 when Viktor Antonov, Minister for the Ukrainian conversion programme, and his Russian counterpart, Viktor Glukhikh, signed an agreement to further the level of cooperation between the two states in the fields of rocket and space technology, aviation, radioelectronics and civilian goods.(6)

Coordination, generally, has been difficult not only between Republics, but also between the government and the military and between the defence and civilian sectors. Despite the hopes of civilian analysts there appears to have been little consultation between the branches during the drafting of either the Soviet or the Russian conversion programmes. Enterprise managers were not consulted on the best ways of implementing such a programme, and, if Ivanovich is to be believed, neither was the military.(7) In the General's words, "Conversion is a political question, discussed and decided by politicians".(8)

The confusion and disillusionment encountered during the conversion process has led many defence engineers to consider leaving not only their factories but also their homeland. Conversion, a political question, has generated a second political question: how to stop the exodus? This problem is of grave concern to both the West and the CIS. The Western powers fear that defence engineers will be lured to the Middle East where they will receive a sizable remuneration for their skills in manufacturing nuclear weapons. The CIS states also fear this outcome, but perhaps what they fear most is the resultant brain drain.(9) In 1992 the Russian government considered a new emigration policy for employees of the military sector. The government planned to increase

wages and improve the living standards for those working in this sector. If that policy failed to entice them to remain at home then a statute of limitations would be imposed. Depending on the branch in which the engineer worked and his knowledge of new technologies he would have to remain in the country for a predetermined number of years or until that knowledge was no longer deemed relevant.(10) In essence the new Russian law closely resembled the Soviet version. In addition, the Russian government is now receiving financial assistance from the United States in order to keep scientists and engineers in employment.(11)

There are numerous problems facing the converting enterprises. The following section details the difficulties encountered and the solutions proposed by several enterprises located within the territory of the Russian Federation, and particularly within Rostov-on-Don. There were several reasons for choosing the city for a case study. Located 500 miles south of Moscow, on the mouth of the River Don, it is a city proud of its history of defending 'Mother Russia'. It is viewed by older residents as a bulwark against the Asian population to the south, as the last defence against Hitler's invading troops in 1941, and as a contributor to the defence economy. While the city is located in a fertile agricultural region its main industries are geared towards defence production. Rostov-on-Don is representative of many such cities dotted throughout Russia. Although not a 'closed city', it is responsible for producing key components for the defence sector. Conversion places many jobs at risk.

Much of the attention on conversion has been centred on enterprises in St. Petersburg and Moscow, because they are the first points of entry for Western businessmen. Defence enterprises in these cities have, on average, received more assistance from local and state governments. Rostov's distance from

Moscow means that less attention has been placed upon it by the Russian government and Western investors. For the most part, the enterprise managers and city counsellors will have to solve the problems posed by conversion on their own. Therefore, it is more representative medium-sized Russian cities and their experience. Generally, the obstacles encountered and the hopes that remain for the future are the same for all the enterprises examined.

CONVERSION IN ROSTOV-ON-DON: A CASE STUDY

Within Rostov-on-Don there are six defence electronic firms and one helicopter factory in addition to the civilian manufacturing units.(12) Ivanovich, the Army Chief of Staff for the district, was fairly dismissive of attempts at conversion within the region. He stated that the defence enterprises were producing only a limited number of consumer goods and that this output was generally insignificant. He also stated, when interviewed in January 1992, that their main activity was to perform repairs, and that this was particularly true of the helicopter factory.(13) After further interviews with enterprise managers in Rostov-on-Don a different picture emerged. The enterprises might not be producing consumer goods in the sense that they were manufacturing vacuum cleaners and the like, but they were attempting to create items which can be used in the sphere of medicine or which would generate further productive capabilities.

There are three enterprises which seem to have made some headway in either diversifying or converting their productive output. First, there is Chaszavod. Built before the Revolution, Chaszavod promotes itself mainly as a manufacturer of watches and clocks. While it certainly produces timing devices, they have not always been for civilian applications. The military equipment

which these devices have been applied to are of an unspecified or classified nature. The enterprise, located in the centre of Rostov, is trying once again to emphasise its civilian orientation. As of January 1992 Chaszavod was maintaining its programme of diversification and attempting to branch out into the aviation industry. However, with Aeroflot experiencing financial hardship and the defence sector in confusion after the collapse of the Union, it was finding it quite difficult to procure any orders. As a result the management found it necessary to reduce its workforce.(14)

Granite, an electronics firm, has also had to reduce its workforce as a result of conversion. Founded in 1958 under the auspices of the Ministry of the Electronics Industry of the USSR, its purpose was to provide electrical devices for other military industries. Granite is a medium sized, middle-stage enterprise which provided devices for radio navigation and anti-missile systems. For the most part its products were designated for the Ministry of Radio Production, although even before conversion it produced items for the civilian sector.

Conversion took its toll as early as 1989. Within two years orders from the Ministry of Defence were cut by 70 percent. This came as a great shock to the management. It meant that there was less money to finance the firm's reprofiling and to support the workforce. The restructuring process has had and will continue to have a severe impact on the lives of the employees. In 1989 there were 5,000 people employed by Granite. By January 1992 there were 4,000. The assistant marketing manager predicted that by the end of 1992 there would be only 3,000 employees remaining.(15)

As of January 1992 unemployment had not yet registered as a major concern in Rostov-on-Don. The general attitude was that there were enough

private cooperatives being established to absorb the newly released workforce. However, there are not many cooperatives which can provide the type of work to which these engineers are accustomed. In order to acclimatise its workers to the new economic condition Granite has established a compulsory staff retraining programme. The administration hopes to achieve two goals: (1) to enable the remaining staff at Granite to meet the challenges of operating in a market economy; and (2) to assist those employees made redundant in surviving in the new economic system. Essentially the enterprise is attempting to fulfil its previous responsibility of supporting and caring for its workforce.

Instruction in Western-style economics forms the core of the curriculum. The course lasts one to two months depending on the attitudes of the students. Engineers occasionally lack enthusiasm for the programme, however, they generally recognise its worth by the time it concludes. Those who do particularly well are selected for further instruction. Alexander Davydenko, the deputy marketing director, was just such a candidate. Having completed Granite's course he went on to take an intensive English course and further instruction in economics at institutes in Austria and Finland.

The reorganisation of the productive output has proved slightly more difficult. Granite did not receive any assistance from the government once the defence orders were cut. Unlike other enterprises it was not given suggestions on what it should produce. It was effectively left on its own.

While literature on conversion has stressed the need for and the difficulties to be encountered in retooling, many enterprises, like Granite, have attempted to manufacture products which require little or no retooling of the enterprise. Thus in compiling a new list of products Granite has relied on

previous experience. Its main emphasis has been on microwave electronics (for examples of Granite's productive output see Appendix A). Under the old system enterprises could work only in selected frequencies designated by MinRadProm.(16) Now with deregulation, or rather the collapse of central control, firms may produce equipment in any frequency they choose. Granite's range of products now includes the following:

> 1. Microwave vacuum tubes (klystrons, magnestrons, travelling wave tubes, discharges)
>
> 2. Microwave ferrite isolators and circulators (microstrip coaxial, waveguide types)
>
> 3. Microwave passive devices (directional couplers, power dividers, filters)
>
> 4. Microwave devices with semiconductor elements (amplifiers, mixers, modulators) (17)

In addition to producing equipment for radio and telecommunication satellites Granite manufactures systems for civilian aircraft and terminals. Aside from industrial components it also produces children's walkie-talkies, ultrasound medical equipment, food processors and crystal. Although rather dated in design the walkie-talkies were a relatively new product for Granite in 1992. Crystal had been manufactured by Granite for considerably longer. On display within its museum were vases, goblets, chandeliers and even a mammoth crystal ashtray, examples of Granite's best work. The managers are interested in exporting these items to the West.

What appeared to be the most profitable product under development was the ultrasound surgical equipment. The instruments were designed after consultation with local physicians. Alexander Davydenko announced that Granite was the only firm in Russia manufacturing this type of equipment. In 1992 it began promoting this machinery heavily on various Russian exchanges.

In order to increase the knowledge of this type of technology it also began running training programmes for doctors. Although the level of technology appeared behind Western standards it was still a major development in Russian medicine. The ultrasound equipment may prove to be a valuable export to the Third World.

Granite appeared to be making some headway in producing new civilian technology but there were problems in getting products to the consumers. As a result of the sudden collapse of the central planning system and the break-up of the Union many enterprises were finding it difficult to acquire the supplies they needed.(18) This was in part due to the fact that Republics were hoarding all raw materials and finished products for their own development. While Granite had managed to acquire most of the supplies it needed, it still lacked one crucial material -- lumber. A large of supply of wood was necessary for the construction of packaging for ultrasound equipment. As a result of high inflation, many enterprises and individuals have now resorted to barter as a means of obtaining what they need.(19) In the case of Granite and the lumber supplier, the supplier no longer wished to be paid in roubles; instead he wanted to exchange his commodity for 15 ultrasound machines which he could in turn trade for something else.(20) The only problem was that Granite could not ship the equipment to the supplier until it had received the wood to properly package the machines.

The search for new customers is another problem which Granite must solve. While it had been allowed to export products since the 1970s, it had never had direct contact with its purchasers. Enterprises working under the Soviet Ministry of Defence had to go through certain channels in order to trade abroad. Within the Soviet Ministry of Foreign Economic Relations there was a

military department known as the Central Technical Administration (CTA). This branch would place special orders with the enterprise on behalf of a foreign company. Once the equipment was finished it would be sent to the Ministry which would then send the product on to the buyer. If the equipment was purchased by an East European country then the account would be settled in transferable roubles. If the country was outside the bounds of the CMEA then the account would be settled in hard currency, usually in dollars. This former arrangement has posed two problems for enterprises like Granite. First, the nonconvertibility of the East European currencies has made it difficult to settle outstanding accounts. The second problem is that because there was never any direct contact between producer and consumer it has been very difficult either to maintain or to develop client relationships.

Several different methods have been devised to facilitate trade. The Russian Ministry of Foreign Economic Relations has assumed the role of the CTA. The Ministry orders arms from the defence enterprises and then its specialised export body, Oboroneksport, attempts to find buyers. The production firm receives a percentage of the receipts in hard currency. The second method is to allow enterprises free access to the world market as is the case of the Kalashnikov factory in Tula.(21)

Granite has devised a third method. In conjunction with eleven other enterprises, it established a joint-stock company called Elektrontorg. The aim of this company is to assist the defence enterprises in their search for new customers. In return for a 2 percent commission for every contract signed Elektrontorg provides assistance in matching buyers and sellers. Once a deal has been made Elektrontorg takes care of both the customs clearance and taxes. In essence this new joint-stock company has taken on the duties of the CTA.(22)

Alexander Davydenko seemed quite enthusiastic about what Elektrontorg could do for Granite. Questions have been raised, however, about similar joint-stock companies. During the course of 1991 several government directorates reorganised themselves into concerns, joint-stock companies or associations. Some managers view these so-called concerns as a 'sham', while others, like Davydenko, are quite enthusiastic about them.(23) It remains unclear whether Elektrontorg had a previous history or if it is a completely new creation. On the basis of Davydenko's comments it would appear that it did not have any prior connections with the directorates.(24)

In the newly emerging economic system the aim of enterprises is to receive payment in hard currency. Granite has accounts with Promstoriya Bank, a Russian investment bank. Granite's marketing department favours this bank because of its excellent contacts with foreign banks. According to Davydenko it takes perhaps two to three days for payments to clear. The other benefit is that Promstoriya has nothing to do with Vneshekonombank. When the latter bank collapsed in 1991 many enterprises lost both their rouble and hard currency assets. Granite managed to avoid this fate and is now slightly better able to compete in the new market conditions.

Currency payments of whatever kind are still hard to come by and that is why Granite has taken steps in addition to joining Elektrontorg, to improve its standing. One way is by renting out its resources. One piece of property owned by Granite is designed specifically for training purposes. This building contains an auditorium, two large reception halls, classrooms, and computer facilities (the computers are manufactured by Granite). The auditorium and one of the halls are rented out to local businesses and community groups for various

functions. In 1992 Granite was trying to promote itself as a conference facility. The second hall, which has a bar and catering facilities (basically the former staff lunchroom), is now used for wedding receptions. The classrooms and computer facilities are available for use by staff and their children. The corridors are frequently filled with youngsters on their way from one computer course to another. While Granite may not be making a great deal of money from these ventures, it is making some small profit. In preventing its facilities from suffering disuse it is also maintaining its links with the community.

Granite is involved in another venture which is more promotional than preventive. On January 25, 1992 a computerised exchange was established in Russia. What makes this exchange different from others is that the KGB is involved: the new system operates on the old KGB communications links. There are eight communication centres in Russia, three of which are known to be located in Moscow, St. Petersburg, and Rostov-on-Don. Enterprises which decide to list themselves on the exchange promote at least two products at an established price. For example, as of January 1992 Granite began marketing its walkie-talkies at 100 roubles a set. A buyer in Moscow noting the price listed on his computer screen would commence trading on the basis of that price either raising or lowering the bid as he saw fit. The marketing personnel at Granite feel that by using the KGB communications links they will be able to reach a wider audience for their walkie-talkies and ultrasound equipment.

FOREIGN INVOLVEMENT IN CONVERSION

The dream for many defence enterprises is either to find a foreign partner or receive external financial assistance. Granite has foreign customers (most notably in former Czechoslovakia) but no firm has yet come forward to form a

joint venture. Various governments, in the past, have offered both financial and technical assistance to the Russians at large so that they might be able to convert their defence industries.(25) The aims behind these offers were

> 1. to reduce the military potential of the USSR;
> 2. to provide a basis of stability by providing a benign occupation for civilians and military procurement staff and workforce;
> 3. to create a means of satisfying the civilian needs for goods and systems.(26)

In 1990 an American delegation composed of Congressional representatives and businessmen visited the Soviet Union in order to assess the situation and determine what type of assistance they could provide during the conversion process. Their offers were rejected.(27) In 1991 Japan presented the Soviet government with an aid package totalling $2.5 billion, which included trade credits and technical assistance for defence conversion.(28) In the latter half of 1991 the US government again extended an offer of assistance, and on this occasion the offer was accepted.(29)

Technical and monetary assistance is not simply doled out. Of necessity there is a selection process involved. The British government has established an investigative body to determine the most likely recipients for aid. Representatives from the MoD, Royal Ordnance, Imperial College in London and management consultants at Coopers & Lybrand have come together in order to select likely candidates able to undergo conversion and develop along Western lines. This British body is seeking monetary assistance from the Foreign and Commonwealth Office (FCO) and the European Union (EU) to enable it to have a greater effect on the development of the enterprises in Russia. At the time of writing, however, the results of its applications are not available.(30)

The initial aim of its study was to select five enterprises which would be

worthy of aid and then "develop them along Western lines of management, producing goods approaching world standards and then using them as models for others in the [former] USSR to follow".(31) In selecting these enterprises one important condition has been established: "that the top management of the factories to be studied should be convinced of the need to change and to collaborate with the [team] in order to learn how to compete in a world market economy".(32) Of course the unwritten condition is that the enterprises possess a strong enough and stable enough productive base in order to undergo the rigours of the transformation to a 'western-style' enterprise.

In the report released by the investigative body (hereafter referred to as the Kennaway Report, after the chief consultant from Imperial College) two additional reasons why the defence enterprises should be targeted for aid were provided. Like the Soviet planners the authors of the Kennaway Report saw the defence enterprises as a means for generating foreign currency. They also agreed that the military factories were the "least ineffective of all the Soviet design, development and producing organisations".(33) Soviet enterprise managers viewed foreign involvement as a means by which they could acquire Western technology, equipment, training, foreign currency and access to international markets.(34) In another study of Soviet enterprises under the transformation of the economic system (the Boeva Report) it became apparent that the enterprise managers had come to realise that they need some guidance if they were to compete on world markets. They were aware of the disarray caused on Western markets in 1990 when Soviet metal producers undercut Western prices.(35) They were conscious of the fact that if they adopt unscrupulous tactics they would hurt their own chances of long-term stable development. Although they desired aid, some enterprise managers were wary of their trust being abused. In the Boeva Report one enterprise manager voiced the opinion that Western parties in joint

ventures were "as interested in the potential of Soviet producers as in teaching them the rules of the international trading game."(36)

This certainly poses a problem for long-term stable growth, but so too does the current state of the defence enterprises of the former Soviet Union. The Kennaway Report made clear that even in 1991 not all the defence enterprises were in as good a condition as originally presumed. Certainly, many of these factories were better off than their civilian counterparts but that does not mean that they matched western technological standards. One example is Elektropribor-Pushkino. Like so many of the converting enterprises Elektropribor is part of the electronics industry. This firm mainly produces fractional horsepower (FHP), alternating current electric motors. Unlike other firms studied in the Kennaway Report it has not adapted well to the environment of conversion. There are several marks against it. Its premises are disorganised and unsanitary. Its productive capabilities are badly dated and its flow of raw material supplies is sporadic. The initiative for change is almost non-existent.(37) The head of the enterprise, Makarov, has an "old Bolshevik attitude" and believes that the West has nothing to teach him.(38) The attitude of the General Manager may be the most significant strike against its possible conversion.

Elektropribor-Pushkino is certainly not the only example of a defence enterprise in disarray. Some of the adverse conditions could easily be rectified with foreign assistance. The Kennaway Report has already made recommendations for the redesign of plant facilities and the modernisation of productive capabilities. However, foreign assistance may not be forthcoming unless the attitudes of the management are changed. The greatest advances in the conversion process have been made by those firms which are managed by

people with youthful attitudes and a willingness to demonstrate a certain level of initiative. The marketing department of Granit is a prime example of this theory. The department is headed by two men, both in their early to mid-thirties, with engineering backgrounds and training in Western-style economics. Both men seem eager to learn and willing to take risks. The collapse of central authority in what was the Soviet Union has resulted in a very interesting economic situation. In a sense the slate has been wiped clean and for the moment there are no longer any hard and fast rules. Survival in these economic conditions depends on continuously correct assessments of the ever-changing economic situation and the ability to manage risk safely.

Managers who attempt to cling on to the old methods of operation, like Makarov, may be swiftly thrown aside. The members of the former Communist Party have, since February 1992, participated in demonstrations against the government, yet until recently the general mood of the populace has been to renounce any former allegiance to the Communist Party.(39) During a visit to the country in January and February 1992, it appeared that it was not considered fashionable to espouse Communist ideology or to tout the old ways of conducting business. With the worsening of the economic situation, however, public support for the "old days" has increased. While the western press has concentrated on the crisis in government and public dissatisfaction, economic reform at the grass-roots level has proceeded. Men like Makarov, unable to keep abreast of changing economic conditions, may have already lost their jobs or alternatively their factories. Furthermore, more "wily" managers have learned to adapt to the new conditions and despite privatisation have remained in their posts as directors of the defence firms. It remains to be seen how fully they support conversion.

Independent foreign firms have made their own attempts to establish partnerships with former Soviet enterprises and thereby force their way into the CIS/Russian domestic market. Progress tends to be slow but the results can be highly beneficial for all concerned. The foreign firm can reduce the cost of production through the use of cheap but well-qualified labour while the Russian firm is able to obtain Western technology and hard currency.

Kelvin Hughes Limited, for instance, formed a joint venture with Gorizont, a former defence enterprise located in Rostov-on-Don in 1991. Gorizont was formed just over 40 years ago under the auspices of the Soviet Ministry of Shipbuiliding. Its list of products includes merchant marine navigation radars for deep sea operating vessels and coastal and river fleet vessels. In the past it also supplied the military with navigational radars and land-based radar systems. Prior to the initiation of conversion Gorizont employed 9,000 people. By January 1992 the workforce had been scaled down to approximately 7,000. This reduction was due to a loss of defence contracts and the removal of the Party organisation from within the company.(40)

Kelvin Hughes, a British-based firm, conducted business with the Soviet Union for around fifteen years. During that time it built up numerous contacts within the relevant ministries and through various merchant marine and river fleet operators. In 1989 it decided to establish a joint venture and as a result of its contacts was put in touch with Gorizont. Kelvin Hughes and Gorizont have been joined in their venture by two other Russian firms. Kelvin Hughes and Gorizont each hold a 45% share in the venture while the other two firms each possess only a 5% stake. As stipulated by Soviet law foreign firms involved in a joint venture were unable to hold a controlling interest within that venture.(41) The foreign firm is allowed to guide the venture by having one of its directors act

as the chairman of the board of directors. These are the conditions under which Gorizont and Kelvin Hughes are operating.

After close to three years of negotiations production began in November 1991. The current operational programme involves Kelvin Hughes sending knocked-down kits of parts from England to the venture's final assembly and test process in Rostov-on-Don. The piece of equipment being manufactured is the HR 3000A display, a radar system for deep sea vessels above a certain gross registered tonnage (g.r.t). Kelvin Hughes is hoping that the venture will eventually be able to manufacture certain parts as well as produce other types of navigational equipment. Its commercial director was unwilling to specify the nature of their commerical arrangements, i.e. how money earned from the venture is distributed between partners and how it is removed from Russia. He did imply, however that the collapse of the Vneshekonombank and the political and economic crises had affected operations.(42) As Davydenko of Granite explained, the declaration of bankruptcy by Vneshekonombank wiped out the savings of a large number of enterprises in both the defence and the civilian sectors.(43) The influx of capital from Kelvin Hughes may enable Gorizont to survive future crises.

Enterprises unable to secure a foreign partner must find other ways in which to earn foreign currency. As outlined in Chapter Five there are three options open to defence enterprises: full conversion, diversification, and sell-off. Full conversion is seen as a long-term prospect, diversification as a short to medium term prospect and sell-off as an immediate prospect. The Soviet government intially believed that it could improve economic conditions by a massive sell-off of defence products. One of the earliest experiments in generating hard currency reserves was through the efforts of a cooperative with

strong links to the defence sector. The cooperative was known as ANT. It was the government's first experiment in the field of sell-off and its first failure in the transition from an armed economy to a disarmed economy.

Every state with a military-industrial complex is to some extent involved in the export of military hardware. The Soviet Union was certainly no exception. In 1988, for example, the USSR sold 12.8 billion dollars' worth of defence equipment. That sum was equivalent to over one-third of the world's volume.(44) The export of Soviet-made weapons was conducted on two levels. First the USSR provided credits for its "socialist partners" in order that these nations might purchase Soviet-made weapons. Frequently the repayment of credits was overlooked. Secondly, the government sold weapons in order to increase their hard currency reserves. In 1989 it was already becoming apparent that these reserves were dwindling.

As discussed in the previous chapter, conversion was promoted as a way to increase the government's hard currency reserves. Despite the emphasis placed on conversion it was fairly evident that the transformation of the enterprises would not occur rapidly enough to meet the immediate demands of the consumers and stem the outward flow of hard currency. Early in 1989 the CPSU launched an attempt to create stable financial sources for both the rouble and foreign currency.(45) In line with this directive Nikolai Ryzhkov, then Prime Minister, signed secret decree number 924 for the Council of Ministers of the USSR on May 30 1989.(46) ANT was born.

ANT was an inter-branch state cooperative concern. Its purpose was to acquire Western consumer goods and sell them on the Soviet domestic market. In order to accomplish this ANT was given permission to buy Soviet-made

goods and either trade them for the desired Western item or sell them for cash. In principle this was a good plan. In practice it turned out to be something quite different.

The only products available in the USSR at the time capable of being exchanged for consumer durables or of fetching a reasonable price were those in the defence sector. What was involved was not defence-manufactured refrigerators or televisions, which have a tendency to self-destruct, but military technology. As has been stated the sale of such technology was not opposed by the Soviet authorities so long as it was done through normal channels. For example, the export of aviation equipment was handled by Aviaexport, while the Central Technical Administration, a unit of the Ministry of Foreign Economic Relations, dealt with other aspects of the defence trade. ANT operated outside of these agencies and relied instead on the manipulation of political contacts.

Vladimir Ryashentsev was the general director of ANT. However, in the ensuing scandal V.K.Dovgan, the head of Vzlet NPO, a design bureau with which ANT was associated, played the leading role. ANT had close links with the defence ministries. These links would have been deemed acceptable if the ensuing trade had been legal. However, in later investigations by a government-appointed committee the network of defence ministries supporting ANT was viewed as suspicious and considered a type of state-run mafia.(47)

Vzlet NPO was a unit of the Ministry of the Radio Industries. Dovgan, because of his background, managed to convince the Ministry of Aviation Industry to allow ANT to represent it in special sales of aircraft abroad, thereby bypassing Aviaexport.(48) It would appear that initially the sale and or barter of aircraft and the relevant technology was legitimate. Through the contacts made

during the course of this trade ANT negotiated the sale of the latest model T-72 tank. This tank was of particular interest to Western intelligence because it was believed to incorporate a special glass-reinforced plastic armour.(49) Once a possible buyer was located Dovgan negotiated the "purchase" of twelve of these tanks with the plant director, V.S. Seryakov, at the Uralvagonzavod tank plant in Nizhnii Tagil. The tanks were placed on a train and shipped to the port of Novorossiisk on the Black Sea. They were listed on the manifest as "non-dismantled cargo for resmelting". In their "non-dismantled" state they were fitted with machine guns, optical sights and vehicle stowage.(50)

The tanks failed to arrive at their final destination, presumed to be France, for at this point both the KGB and the press stepped in . The suspicions of the two institutions were aroused by the movement of a tank echelon from the Urals to the Black Sea during peace time.(51) The story was made public on January 14 1990. A Moscow television station announced its intention to produce a programme about the incident. Gorbachev responded by establishing a special investigative committee. As a result of the investigation Dovgan and Ryashentsev were dismissed from their posts while ministers of various defence ministries were severely reprimanded for being lax in their duties and not paying proper attention to export controls.

The ANT scandal is unfortunately not an unusual case. At the time it was seen as quite distressing. People were surprised that such an event could happen and by the extent of elite involvement.(52) To a certain extent the ANT scandal succeeded in tarnishing the image of conversion. It was no longer a panacea for the economy's ills but rather a method by which politicians and enterprise managers lined their pockets. The incident has been displaced in the collective memory by more recent corruption scandals within the military establishment,

yet it continues to act as an important reminder of the types of precautions which should be in place when dealing in arms.

ANT remains in existence despite the fact that the scope of its operations has been curtailed. The Soviet government was forced to wait for the enterprises to convert and market their goods abroad and to rely only on the previous method of sales: the marketing of the MiG-29 at the Paris Air Show. The Russian government, as discussed in Chapter 5, has proceeded with the sell-off of various weapons, despite loud opposition. It has stated that the export of "strategic raw and other materials and equipment" should be accompanied by the appropriate licenses.(53) A system of export controls was also established by Presidential Decree (11/04/92) and state regulation (12/05/92). The decree created an export control commission which consists of representatives from the Ministry of Foreign Affairs, the Ministry of Economy, the Ministry of Defence, the Ministry of Science, the Higher School of Technological Policy, the Ministry of Industry, the Ministry of Foreign Economic Relations, the State Customs Committee, the Ministry of Security, the Committee for the Protection of Economic Interests of the Russian Federation, the State Committee for Supervision over Nuclear and Radiation Safety and the Russian Academy of Sciences.(54) The Regulation went on to enumerate the various duties of the individual bodies which make up the Commission.(55) The government was obviously attempting to protect itself from future accusations of impropriety. Yet the imposition of new controls did not mean that the government would withdraw from the international arms bazaar, instead it actively pursued new contracts. A report in the *Financial Times* on February 16 1993 stated that Mr. Andrei Kozyrev, the Russian Foreign Minister, had proposed an "arms sales for arms conversion plan".(56) He specifically requested free and open competition between Russian and Western firms in the international arms market. The

Foreign Minister classified this plan as another form of economic assistance.(57) It appears to matter very little whether or not the governments of the West agree to this plan of action for the Russians intend to promote arms sales vigorously. In November 1992, Petr Aven, then Russian Minister of Foreign Economic Relations, told the Congress of People's Deputies that the government intended to increase weapon sales to China, India, Iran and possibly Taiwan and Malaysia.(58) While rumours of a deal with China circulated, the government was busy agreeing to the sale of 3 kilo-class submarines to Iran, 30 MiG-29 fighters to Malaysia and 20 more to India.(59) Although sizeable amounts of money were made in these deals, $1.35 billion in the case of the submarines, it remains doubtful whether the policy will be successful in meeting all the demands placed upon it.

CONCLUSION

The transition from an armed economy to a disarmed economy is fraught with difficulties. As has been established, the main aim of the state is to provide stability and direction. Failure to achieve these aims is the result of a lack of coherent and non-conflicting directives. As a result, relatively well-organised and efficient enterprises have fallen into disarray. Enterprises which were poorly managed and operating at a loss under the old system have a dim future under the new economic conditions.

Despite these conditions conversion can still be successful. The drawback is that the benefits of conversion will not be felt within the timeframe and on the scale first imagined by the Soviet and Russian governments. Experience to date suggests that if conversion is to be successful, certain conditions look as if they will have to be met. Suggestions made in the Kennaway Report should be

added to those enumerated in the "ideal programme". First, the managers of the defence enterprises should be convinced of the need to change. Obiviously there are different levels of conviction and they have been represented by the various cases examined within this chapter. Granite can be viewed as an atypical-positive example. The conditions that it has faced are the same as for any other medium-scale enterprise but their approach has been markedly different. The management of Granite are convinced of the urgent need for reform and have been working diligently to transform their productive output in order to meet the demands of both the domestic and foreign markets. Its marketing department has also been enthusiastically facing up to new economic challenges. Most of the literature on conversion has suggested that retooling and retraining are the greatest barriers to successful conversion. Granite seems to have found a way around that hurdle by sticking to the technology it knows best and limiting the amount of retooling. Its very size may prove to be an advantage because it is not as concerned with the high costs of maintaining excess capacity. The future for Granite looks relatively positive.

Gorizont would appear to be a standard example. Although willing to collaborate with Kelvin Hughes in order to learn how to compete in a world market economy, business has proved particularly difficult for the joint venture as a result of both political and economic unrest.(60) But just as Kelvin Hughes may teach Gorizont how to operate in a world market, Gorizont may show Kelvin Hughes how to operate in the Russian domestic market.

ANT is a typical-corrupt example. While the management of ANT and Vzlet NPO demonstrated initiative it resulted in a negative impact. The collapse of the old economic system and the slow emergence of its replacement have created a very special situation in the Republics of the former Soviet Union. The

laws defining the economic structure at times appear confusing. Do the old Soviet laws apply or do the new Russian ones? Have any laws been drafted at all which deal with a particular situation? There is everything to play for and everything to lose. If ANT and Vzlet NPO had been operating in the present conditions perhaps their business methods would not have been viewed as criminal: renegade perhpas, but not criminal. However, in 1989 there were still strict laws governing export trade, and these laws were breached.

So, initiative must be present within the top management but it must be channeled in the proper direction. The good of the enterprise, which will lead to an improvement in the overall economy, must come before an increase in personal wealth.

The second condition to be met if conversion is to be successful involves foreign investment. Professor Steven Rosefielde has written that because of the irrationalities of the Soviet economic system Western aid would be squandered.(61) If Western nations were providing only monetary aid they would undoubtedly be pouring money into a bottomless pit. However, financial aid coupled with technical assistance could be highly beneficial to all concerned. As discussed in Chapter Five, the G7 states have attempted to devise such packages of assistance with limited success. Action should continue to be taken by governments to stabilise the economy of the CIS, but the greatest stability will come from efforts of individual enterprises.

The role of governments should be to establish guidelines for the safe operation of business. The Soviet government under Gorbachev did a disservice to converting or diversifying enterprises by not providing them with any guidelines. Davydenko feels that the government failed to provide any

assistance whatsoever during Granite's attempts to convert. In his opinion the enterprise was left completely to its own devices.(62) Another enterprise manager described the effects of conversion in this way: "It was as if the enterprise had been tripped while running at full speed."(63)

The Russian government must work quickly to change this situation. First, it should to work towards the stabilisation of economic relations between Republics. With the current state of the economy the ownership of a naval fleet should be secondary to who owns the bakery and whether they are willing to sell the bread. Second, Yeltsin should try to avoid the mistakes made by Gorbachev. He needs to encourage his government to produce a conversion programme that provides the defence enterprises with guidelines and links them to the overall reform programme.

Meanwhile Western governments and international organisations should assist those firms which are interested in doing business with the enterprises of the CIS. One suggestion would be to eliminate or reduce the list of products deemed unacceptable by the United States for sale within the CIS. Another alternative would be for governments to offer firms willing to invest and operate in the CIS some form of financial aid or export credit guarantees. At present the International Financial Corporation, a unit of the IMF, and the European Bank for Reconstruction and Development are willing to underwrite deals with the CIS. However, many businessmen are unaware of this support.(64)

There is a very real risk that conversion will continue to be mismanaged. If conversion is to succeed then governments and enterprises should attempt to coordinate their efforts. It is the initiative, the adaptability, the enthusiasm and

the hope of the management teams which will drive the enterprises forward. These characteristics should be capitalised on by the government. The best way to do this is by providing stable conditions in which all enteprises can operate.

Gorbachev was correct in saying that conversion is an international issue.(65) The panic which has arisen over the control of the former Soviet Union's weapons stockpile merely confirms that belief. The international community should not promise that all goods manufactured by converted enterprises be traded on world markets, as suggested by some Soviet and Russian economists. Natural product selection should still occur. The international community can help to ease the transition of the Soviet armed economy. By doing so the community would not only provide "a basis of stability" for the former Soviet Union, it would also ensure a more stable and prosperous environment for itself.

NOTES

1. For example Lithuania declared ownership of 3 defence enterprises while Ukraine declared ownership of over 700 facilities.

2. Press reports generally dealt with the misgivings held by Western political leaders towards the emergence of numerous small powers with nuclear weapons capability. See for example *The Guardian*, 19/12/91.

3. V. Belan, "Armiya na poroge reform", *Sovetskaya Rossiya*, 20/09/91, pp. 1-2.

4. Interview by the author conducted in Rostov-on-Don on 23/01/92.

5. Op cit.

6. Lidiya Kudryavtseva, "Printsipi vzaemin v sferakh oboronnogo virobnitsva ta konversii" aired on "Godina Pik" on 13/01/93, 17:00. Reprinted in *RFE/RL Ukraine Today, Ukrainian News Digest*, 14/01/93, p. 4.

7. In the interview the General gave the impression that military involvement had been limited and on key issues they had been completely ignored.

8. Op. cit.

9. Tom Post, Pia Hinckle, Fred Coleman, "Selling Nuclear Missiles and Minds", *Newsweek International*, 13/01/92, p. 12.

10. Yurii Nazarkin, "Some International Aspects of Conversion", *International Affairs* (Moscow), July 1992, pp. 22-23.

11. OECD, Russian Officer Conversion Programme, p. 20.

12. The defence electronic enterprises are: Chaszavod, Granite, Gorizont, Gradient, Elektroaparat, and Telephonezavod.

13. Interview with General Ivanovich, 23/01/92. A later interview with Alexander Davydenko, deputy marketing director of Granite contradicted this opinion.

14. Information on Chaszavod obtained in an interview with A. Davydenko on 24/01/92.

15. Op. cit.

16. Op. cit.

17. Promotional material published by Granite in 1991.

18. Davydenko interview.

19. Irina Boeva and Shironin Viacheslav, "Soviet Arms Manufacturers in the Summer of 1991", pp. 6-7. A research report for the Scientific-Industrial league of the USSR, Institute of Economic Policy (USSR Academy of National Economy and Academy of Science) and International Institute for Applied System Analysis.

20. Davydenko interview.

21. Laure Desprès, "Conversion of the Defence Industry in Russia and Arms Exports to the South", *Communist Economies & Economic Transformation*, vol. 6, no. 3, 1994, p. 381.

22. Davydenko interview. Various other organisations have been formed in order to provide assistance to Russian defence firms in their search for future contacts and economic assistance. Frequently academics are at the forefront of establishing consultancy firms. Two which have come to my attention are 1) Dr. Romil K. Shchenin from IMEMO. A specialist in defence conversion, Dr. Shchenin is a co-founder of International Aerospace Systems Agency. The firm acts as a link between defence enterprises and foreign investors; 2) Dr. Anna V. Skuropat works in the Pacific Centre on Economic and International Studies in Vladivostok. Dr. Skuropat's specialisation is social planning. She too is trying to direct investment to needy enterprises. Various other organisations such as the Moscow Commercial University, Consortium Dvoiniye Technologii, the Military Industrial Investment Company and Kominform all provide different types of directories, data banks and commercial information. It would appear that the role of the CTA is being adequately filled.

23. Boeva, p. 4.

24. At the time of my interview with Davydenko I was not aware of the Boeva study. Davydenko was fairly forthcoming with information therefore I believe that if Elektrontorg did have a previous history it would have been mentioned.

25. America and Japan offered financial and technical assistance to the Soviet Union in 1990 and 1991. Germany has offered credits and technical aid and the G7 nations proposed an aid package in July 1991.

26. Alexander Kennaway, "Notes on a Visit to the USSR, October 15-22, 1991, Imperial College London.

27. Sergei Morgachev, "US - Soviet Cooperation in Military Conversion Strikes Out", *Kommersant* (English language version), 19/11/90, p. 11.

28. *Keesing's Record of World Events*, vol. 37, no. 10, 1991, p. 38539.

29. Leyla Boulton, "Moscow Seeks Help to Pay Cost of Industrial Conversion", *The Financial Times*, 21/02/92, p. 2.

30. Kennaway Report, p. 1. TACIS, the funding body for the European Union in Eastern Europe, has its own conversion directorate and is now funding small-medium scale conversion projects in the former Soviet Union and Eastern Europe. The selection process for projects is much the same as the one employed by the UK. Interview with Beatriz Martins, Adminstrator, TACIS-Coordinating Units, Edinburgh, 12/10/94.

31. Ibid.,

32. Ibid.,

33. Ibid.,

34. Boeva, pp. 10 and 8.

35. Ibid.,p. 8.

36. Ibid.,

37. Kennaway, p. 12.

38. Ibid., p. 11.

39. This opinion is based on discussions held with various people -- lecturers, artists, students, construction engineers and former military officers -- during the course of a visit to Russia in January and February 1992.

40. Information on employee figures provided by G.R. Smith, Commercial Director at Kelvin Hughes Ltd., on 19/03/92.

41. See the Soviet Law on Joint Ventures.

42. Smith, 19/03/92.

43. Davydenko interview, 24/01/92.

44. Alexei Izyumov, "Konversiya: eksportnyi variant", *Moskovskie Novosti*, 22/04/90.

45. Nikolai Andreev, "Delo ANTa: Esli ekonomika-tenevaya, to v sovetskikh usloviyakh eto oznachalo chto ona postroena na zdravykh printsipakh", *Izvestia*, 15/01/92, p. 3.

46. Ibid.

47. Ibid.

48. Dovgan was assisted in these efforts by First Deputy Head of Section of the State Foreign Economic Commission, V.S. Grinev. See Steven Zaloga, "Soviets

Civilianize Tanks; T-72 Tank Sale to West Foiled", *Armed Forces Journal International*, April 1990, pp. 26-28.

49. Ibid.

50. Ibid.

51. Alexandr Bovin, "ANTichnaya Istoriya", *Literaturnaya Gazeta*, 06/03/91, p. 6.

52. Andreev, p. 3.

53. Art. 10, Zakon Rossiiskoi Federatsii O Konversii Oboronnoi Promyshlennosti v Rossiiskoi Federatsii.

54. "Decree of the President of the Russian Federation on Measures for Creating an Export Control System in Russia", *Foreign Trade* (Moscow) no. 6, 1992, p. 42.

55. See the "Regulation on Military-Technical Cooperation of the Russian Federation with Foreign Countries", *Foreign Trade* (Moscow) no. 6, 1992, pp. 43-44.

56. John Lloyd, "Russia Offers U.S. Arms Sales Deal", *Financial Times*, 16/02/93, p. 3.

57. Ibid.

58. John W.R. Lepingwell and Alfred A. Reisch, "Military and Security Notes" in *RFE/RL Research Report*, vol. 1, no. 49, 11/12/92, p. 59. it was noted that as sales increased to the listed countries they would be decreasing to Eastern Europe, Cuba and Vietnam. The new Russian policy is to exchange weapons for cash, not credit. In 1991 Russia exported arms worth $7.8 billion, of which $5 billion worth of weapons were either given away or sold on low-interest credit. 1992 sales were expected to exceed $3 billion.

59. Stephen Foye and Alfred A. Reisch, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 43, 30/10/92, p. 60. Also John W.R. Lepingwell and Alfred A. Reisch, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 49 11/12/92, p. 59 and Lepingwell and Reisch, "Military and Security Notes", *RFE/RL Research Report*, vol. 1, no. 5, 18/12/92, p. 65.

60. Smith, 19/03/92.

61. Steven S. Rosefielde, "The Soviet Peace Dividend: Financing the Transition to Market Socialism", in Radical Reform in Soviet Defence Policy, p. 63.

62. Davydenko, 24/01/92.

63. E. Varshavskaya, "Navoii repetitsiya rynka -- nelegkim putem idet konversiya predpriyatii oboronnogo kompleksa", *Trud*, 05/08/90, p. 2.

64. Opinion based on comments made by participants at the Glasgow-Rostov-on-Don Seminar held at the University of Glasgow, April 1-2, 1992.

65. Mikhail S. Gorbachev, "Vystuplenie v Organizatsii Ob"edinennykh Natsii, 7/12/88", in M.S. Gorbachev, Izbrannye rechi i stat'i, vol. 7, pp. 199-200.

CHAPTER SEVEN
CONCLUSION

The Soviet conversion programme was a failure; at least this is the opinion of several writers on the subject.(1) Various reasons for this outcome have been cited, the most frequent of which is that the Gorbachev government failed to plan for disarmament and conversion. Although the government recognised the negative effect of the arms race on the economy it failed to consider the potentially negative repercussions of a poorly orchestrated conversion programme. In a country in which detailed plans still governed economic development, a programme for conversion was not issued until the transformation of the defence sector was supposed to be well under way. Although conversion was heralded as the panacea for the nation's economic ills it was left to chance.

Professor Laure Desprès has argued that the absence of a conversion programme contributed to the destruction of the planned system.(2) Enterprises like Granite which had lost their state orders were forced to fend for themselves. They did so by creating links with other enterprises in similar situations. By the time the conversion programme was at last adopted in the winter of 1990, the planned system itself had virtually ceased to function.(3) In its place a new system had emerged. Alexei Makushkin has described this system as one in which *oboronka* (defence) enterprises established and strengthened horizontal structures between enterprises and organised relations with the authorities at all levels.(4) At the height of the Soviet period an enterprise would turn to the state for capital or financial aid; now in the transitional period it looks to other enterprises, ones which formerly operated under the auspices of the same defence ministry, for that assistance.(5) The main aim of these structures is to

preserve the technological potential through the rapid development of highly profitable production facilities that take market conditions into account.(6)

Rather than being viewed as a failure these attempts at structuring the rudiments of a specialised market could be viewed as a clear success. In Chapter Five a definition of conversion was offered: a process involving change in productive output. Iurii Khromov would view that definition as a narrow or traditional one, for it interprets conversion as a "structural organisation that affects military production alone."(7) He argues instead that if conversion is viewed in a broader sense it "coincides with the transformation of the entire economic system and is a transition from a state, highly militarised economy to a "mixed" market economy with complementary private and social forms of enterprise".(8) While the Soviet conversion programme did not succeed in meeting all the demands of the civilian economy it did begin the process of orienting the defence sector around market procedures.

As in other sectors of the economy and society as a whole, the Russian defence sector remains in a transitional period. In 1993, A. Shulunov, the Chairman of the League to Assist Defence Enterprises, described MIC managers in these terms:

> some involved themselves in trade, possibly in an illegal way, some passively waited for instructions from above, certain others, the most experienced, bright and enthusiastic were trying to protect their workers' collective and get out of a difficult situation at a minimum loss.(9)

Shulunov's classifications coincide roughly with the ones offered in Chapter Six: typical-corrupt and atypical-positive. In the preceding chapter, enterprises like Gorizont which were willing to collaborate with Western firms, but were finding competition within the market place difficult were described as

standard. Shulunov and others might prefer to place that monicker on those enterprises which continue to wait passively for instructions from above. It is this group which has been accused of giving continued credence to the existence of a military-industrial complex within Russia. Evgenii Kuznetsov has studied converting and diversifying enterprises in great detail and while he would agree that there are those MIC managers who are guilty of attempting to obstruct the implementation of government conversion policy they are not without their reasons.(10) He claims that the military-industrial complex can be viewed as a pyramid. Only the top of this structure, which employs about 20% of the labour force, is strictly military-specific and cannot be converted to civilian use.(11) The remaining 80% of this pyramid consists of plants which manufacture dual-use technology, which does not require conversion, or else which is so inefficient that it would be cheaper and less time consuming to scrap it altogether.(12)

Yet to do this is a frightening prospect because of the very nature of the former Soviet defence sector, with the self-sufficiency of enterprises and the number of "closed" defence cities. Kuznetsov claims that by the end of 1991 three types of segmentation could be identified:

> 1. territorial immobility of labour (one-company towns);
> 2. informational stratification (industrial structure divided between insiders);
> 3. imperfect substitution among similar intermediate products that were produced by defence-related ministries;
> 4. stratification of manufacturing processes employed in the defence sector with respect to their military specificity. (13)

In order to ease the transition of both enterprises and their employees, managers have petitioned for and received subsidies from the government. Approximately 55% of all credits and subsidies received in 1992 were used to maintain employment and wages.(14) The rise in inflation between 1992 and

1994 meant that those subsidies, on average 40,000 roubles, covered less and less. The declining value of credits, the reduction of state orders from $3 billion in 1992 to $2 billion in 1993, and government non-payment for orders which had already been completed meant that enterprises could no longer wait for directions from above.(15) It soon became apparent that if enterprises were to survive at all they would have to follow the route of the atypical-positive plant, they would have to implement their own individual conversion programmes. According to estimates made by Kuznetsov, the share of enterprises following a fragile real adjustment strategy increased from 25% in 1992 to 50% in 1994.(16) The atypical-positive example may soon be known as standard-positive.

There is some concern, however, over the wisdom of allowing individual plants to implement their own conversion programmes without consideration of the larger picture. It is true that if conversion, in its broader sense as defined by Khromov, is to be successful then government will undoubtedly have to release its control of a significant share of the sector while at the same time remaining involved in the establishment of "safety nets" in the form of unemployment wage funds, retraining and relocation programmes. To date, the government and some economists have operated on the premise that in order to create this distance between government and defence sector privatisation should be strongly promoted. For instance, Mikhail Malei, President Yeltsin's advisor on conversion, has advocated that the market should operate conversion and that the defence sector should be privatised.(17) As indicated in Chapter Five, this has already occurred to a certain extent. Yet, because of reasons of security and the efforts of the military-industrial complex, only those sections of the enterprise which have been converted have been privatised. Thus, since there are insufficient funds for conversion, for the reasons stated above, privatisation of the defence sector has proceeded slowly.

Oleg Gapanovich, the chairman of the St. Petersburg City Soviet's Commission on Military Industry and Defence Conversion, expressed his concern in 1993, that "privatisation had become more a political campaign and less an economic reform."(18) If this is true, than like any political decision it can be revoked. Indeed, Vladimir Polevanov, the former Minister of Privatisation, pledged to renationalise privatised companies.(19)

It was argued in Chapters Five and Six that part of the reason for the limited success of conversion was the government's failure to link conversion adequately with other economic reforms. If conversion is to prove successful in the long-term than this is a problem which must be rectified. Economists like Faramazian and Borisov may be correct to argue that "under the conditions of the transition to a market economy, converted enterprises should be totally privatised and organisationally separated from the defence complex," but the process should not end there.(20) The phrasing of their statement would leave one to believe that while the majority of the sector might sever its ties to the defence economy there would remain a core of enterprises within the military-industrial complex. Thus Russia would be left with a "mixed market economy with complementary private and social forms of enterprise."(21) In such an economy there is need for a national industrial policy.

Calls for the creation of such a policy have increased. Shulunov has declared that while there was "no well planned, logical and adequately financed conversion policy", it was not too late to devise a long-term industrial policy.(22) The creation of an appropriate programme could serve to link the defence sector and the economy as a whole. Thus we return to the concept of an ideal conversion programme. The conclusion was reached in Chapter Two that the primary function of the state is to provide both stability and vision. It was

recommended that the way to accomplish this, initially, is to plan carefully for conversion. A programme should have a recognisable beginning and end, lest a new dependency on the state be created. It was also suggested that an industrial policy which incorporates an economic bill of rights might be necessary. That particular conclusion addressed the issue of enterprise conversion but it still has relevance for the larger military-industrial complex, one which includes military personnel. Programmes for retraining and relocation of military personnel are equally important, both in social and political terms. If the needs of the military are addressed adequately the role of military in society may prove less of a political determinant than at present. Thus, an industrial policy would serve to promote economic and political stability.

As part of the ideal programme policies of centralisation and decentralisation were also recommended. These policies would need to coexist in the sense that while the state would create the basic framework for conversion it would be up to the enterprises to implement that policy in the best way possible. In the case of the Soviet Union and its successor, Russia, a mixed message has been sent to the defence sector. The government has tended to advocate a policy of decentralisation through the promotion of programmes like privatisation. It has also been seen to shift the responsibility of conversion squarely onto the enterprises by its failure to develop a viable national conversion programme. Yet, there has also been a tendency to support marginal defence enterprises through the offer of subsidies and grants, thus prolonging the inevitable transformation of the defence sector.

It could be assumed that as the conservatives gain the upperhand over reform-minded politicians in the Yeltsin government the prospects for conversion in Russia will diminish. This may not be the case, however.

Enough damage has been done to the technological and financial infrastructure of the defence sector through the erosion of state orders and the loss of international clients to make some form of change necessary. Simply renationalising those defence plants which have been privatised and continuing to maintain a military-industrial complex which employs twenty-five percent of the Russian labour force will not guarantee the prosperity of the sector.(23) Downsizing appears to be the policy of the future for defence industries throughout the Western world.(24) An increasing number of Russian MIC managers have reached that conclusion for themselves and thus are now willing to proceed with the restructuring of the defence sector.(25) In the course of restructuring the attitudes of MIC managers will play a key role. Kuznetsov has put forward the hypothesis that successful conversion rests upon two critical characteristics of managerial history: *diversity* of technological and organisational challenges experienced and R&D *intensity* of the output produced (i.e. managers of high-tech enterprises are quicker to adjust).(26) His hypothesis is supported by the evidence in the Kennaway report and by the conclusions drawn in the preceding chapter. It is those enterprise managers who are most forward-looking who will shape the military-industrial complex of the future.

Faramazian and Borisov predict that that complex will be much smaller and compact. While there will continue to be state involvement in the sector, in the way that the United States government is involved in the defence sector, the new complex should function on the basis of the new (market) principles.(27) Their suggestions mirror those of Seymour Melman when he called for a policy of state market capitalism.

While there are those in the West who might decry the continuance of a

military-industrial sector subject to continued government involvement in the form of state market capitalism in a politically unstable Russia, it should be recognised that the Russian government, no matter its political hue, is unlikely to forgo state security. As Faramazian and Borisov have suggested, the maintenance of a military-industrial complex, albeit in a smaller form, should not be regarded as an attempt to preserve or restore militarism.(28) The aim of the Russian government, the aim of any government, is to maintain a national economy that ensures not only prosperity, but national security as well. The best way to do that is to provide the conditions in which stability will prevail.

NOTES

1. Evgenii Kuznetsov, "Adjustment of Russian Defence-related Enterprises in 1992-94: Macroeconomic Implications", *Communist Economies & Economic Transformation*, vol. 6, no. 4, 1994, p. 482; R. Faramazian and V. Borisov, "Two Approaches to Military Economy and Conversion", *Problems of Economic Transition*, vol. 36, no. 8, 1993, p. 53. Original article: "Dva podkhoda k voennoi ekonomiki i konversii", *Mirovaya ekonomika i mezhdunarodnye otnosheniya*, no. 3, 1993; Alexei Makushkin, "From Conversion to Deindustrialisation?", *Problems of Economic Transition*, vol. 38, no. 9, 1993, p. 37. Original article "Ot konversii k deindustrializatsii?", *Svobodnaya mysl'*, no. 7, 1992.

2. Laure Després, "Conversion of the Defence Industry in Russia and Arms Exports to the South", *Communist Economies & Economic Transformation*, vol. 6, no. 3, 1994, p. 370.

3. Ibid.

4. Makushkin, p. 43.

5. Kuznetsov,pp. 473-502.

6. Ibid.; Makushkin, p. 43. The establishment of Elektrontorg by Granite and other enterprises illustrates this point.

7. Iurii Khromov, "Conversion, Reforms and Security", *Problems of Economic Transition*, vol. 36, no. 7, 1993, p. 40. Original article, "Konversiia, reformy, bezopasnost'", *Svobodnaya mysl'*, no. 17, 1992.

8. Ibid.

9. Desprès, p. 373.

10. Kuznetsov, p. 481.

11. Ibid.

12. Ibid.

13. Ibid.

14. Ibid., p. 485-489.

15. Després, p. 381.

16. Ibid., p. 489.

17. Després, p. 372.

18. Erik Whitlock, "Defence Conversion and Privatisation in St. Petersburg", *RFE/RL Research Report*, vol. 2, no. 24, 11/06/93, p. 24.

19. Chrystia Freeland, "Russian reformers losing sell-off battle", *Financial Times*, 11/01/95. It is suggested in the article that the move to renationalise property stems from opposition forces within the defence sector.

20. Faramazian and Borisov, pp. 54-55.

21. Khromov, p. 40.

22. Després, p. 372.

23. Kuznetsov, p. 473.

24. Herbert Wulf, "Arms industry limited: the turning-point in the 1990s", Arms Industry Limited, p. 21.

25. Kuznetsov, pp. 485-489.

26. Ibid., p. 480.

27. Faramazian and Borisov, p. 57.

28. Faramazian and Borisov, p. 57.

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APPENDIX

"GRANITE" ELECTRONIC COMPANY

Dear sirs,

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Our Company is much interested to promote mutial Business in the US and European electronic market.

Our range of products includes the following :

1. Microwave vacuum tubes (klystrons, magnetrons, travelling wave tubes, discharges).
2. Microwave ferrite isolators and circulators (microstrip, coaxial, waveguide types) .
3. Microwave passive devices (directional couplers, power deviders, filters) .
4. Microwave devices with semiconductor elements (amplifiers, mixers, modulators).

"GRANITE" has own Design and Research Office . "GRANITE" guarantees high quality , military electronic standards and manufacturing according to the requirements of our partners.

We have good business links with many leading electronic firms and science centers in our country. We believe there are three main areas of possible cooperation which are worthwhile to investigate :

1. Utilization of production capabilities of "GRANITE" for foreign partner's products .
2. Utilization of foreign partner's existing marketing structure for representation of "GRANITE"-made electronic components .
3. Foundation of joint information center to collect and distribute information in the field of electronics .

We are open for suggestions from your side on any other mutial business relationships that are in the area of our expertise and which can be beneficial for both parties.

Regards

Deputy Marketing Director A. Davydenko

МИУ-79, МИУ-79-1

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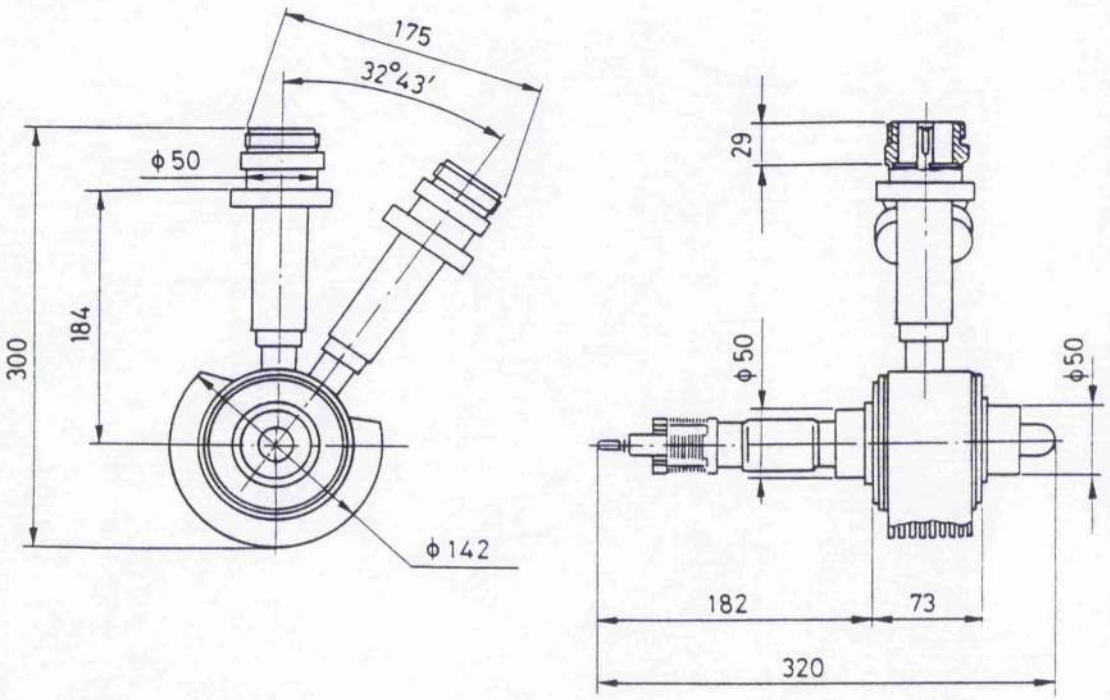
Представляют собой усилители дециметрового диапазона со скрещенными полями.
Применяются в выходных каскадах передатчиков наземных РЛС.
Конструкция – пакетированная или полупакетированная.
Охлаждение – воздушное (МИУ-79) или водяное (МИУ-79-1).
Ввод и вывод энергии – коаксиальные.



ОСНОВНЫЕ ХАРАКТЕРИСТИКИ

ТИП	МИУ-79	МИУ-79-1
Диапазон частот, ГГц	1,215–1,28	1,215–1,28
Выходная мощность, импульсная, кВт	40	100
Выходная мощность, средняя, кВт	0,57	2,5
Коэффициент усиления, дБ	19	13
Длительность импульса, мкс	25	25
Напряжение анода, кВ	10,5	18
Ток анода, А	6,5	10

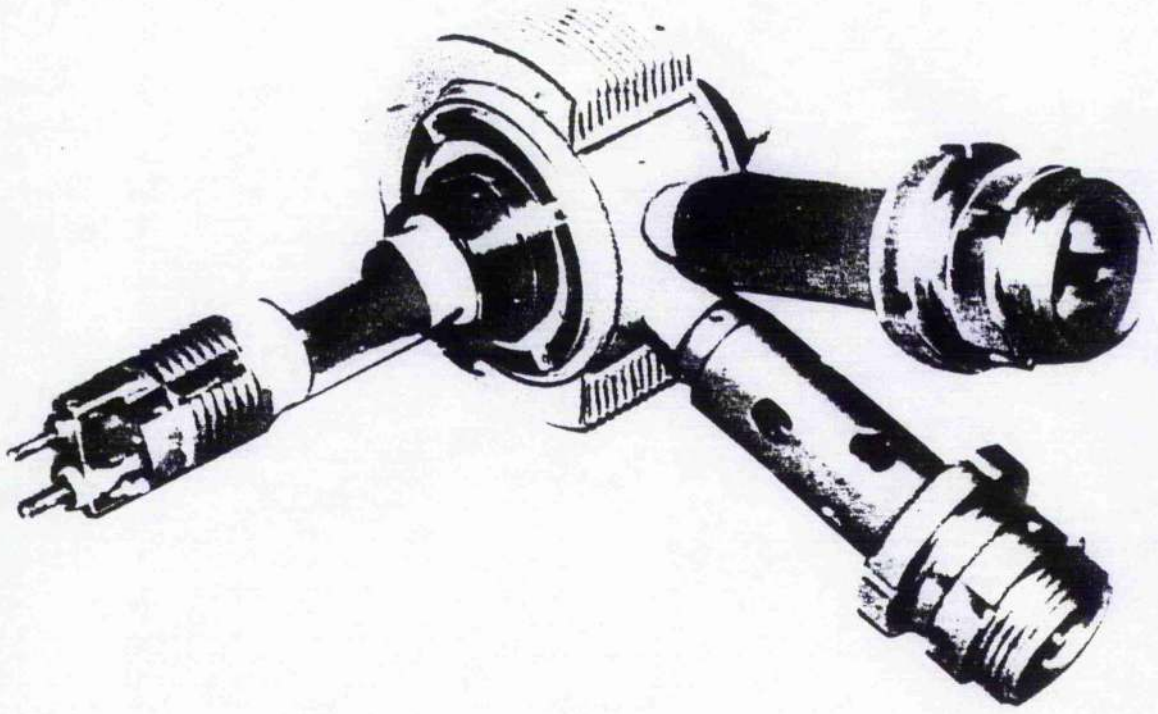
ЭЛЕКТРОНИНТОРГ Лтд. 125315, МОСКВА, УЛ. УСИЕВИЧА, 24/2

Телефон: 151-72-41, 155-40-38
Телефакс: 151-54-41, Телекс: 411326

МИУ-79, МИУ-79-1

L-BAND AMPLITRONS

They are L-band crossed-field amplifiers used in output stages of ground radar transmitters.
Construction – packaged or half-packaged.
Cooling – air (МИУ-79) or water (МИУ-79-1).
Power input and output – coaxial.



GENERAL CHARACTERISTICS

TYPE	МИУ-79	МИУ-79-1
Frequency range, GHz	1,215–1,28	1,215–1,28
Pulsed output power, kW	40	100
Average output power, kW	0,57	2,5
Gain, dB	19	13
Pulse duration, мсs	25	25
Anode voltage, kV	10,5	18
Anode current, A	6,5	10

ELECTRONINTORG Ltd. 24/2, UL. USIEVICHA, 125315 MOSCOW, USSR

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НД-01

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Предназначен для однонаправленного распределения СВЧ-энергии в различных радиотехнических системах малого уровня СВЧ-мощности.
Имеет от 2 до 6 выходных каналов.
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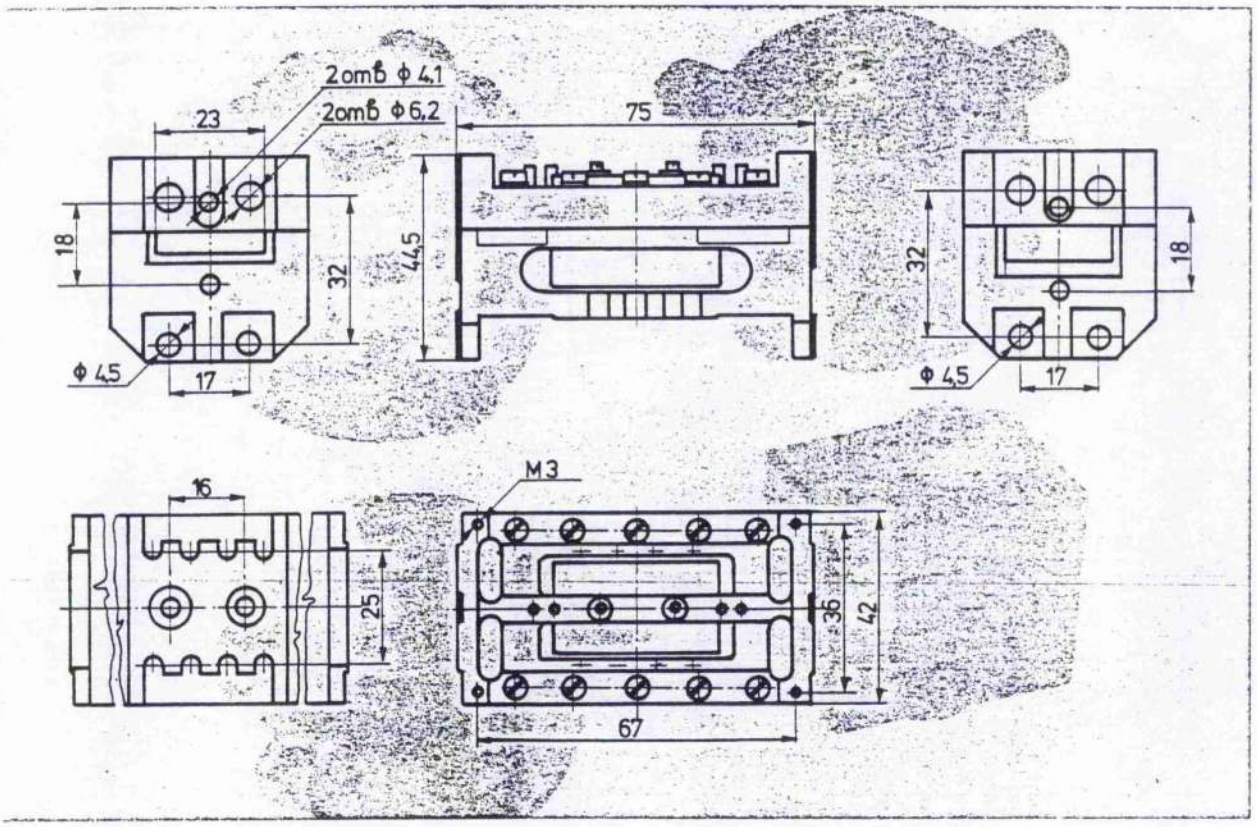
СВЧ-выводы:
– для 2-х канального, вход – волноводный
– I канал, вход – волноводный, сечением 23 × 10 мм.
– II, III канал – коаксиальная линия, 50 Ом.
– IУ канал, выход – волноводный, сечением 23 × 5 мм.



ОСНОВНЫЕ ПАРАМЕТРЫ

ТИП	НД-01
Рабочая полоса частот, %	9
Обратное затухание и развязка между каналами, дБ, не менее	40
Вносимые потери (без учета деления), дБ, не более	1,1
СВЧ-мощность, непрерывная, Вт, не более	0,5

ЭЛЕКТРОНИНТОРГ Лтд – 125315, МОСКВА, УЛ. УСИЕВИЧА, 24/2
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НД-01

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The divider has from 2 to 6 output channels.
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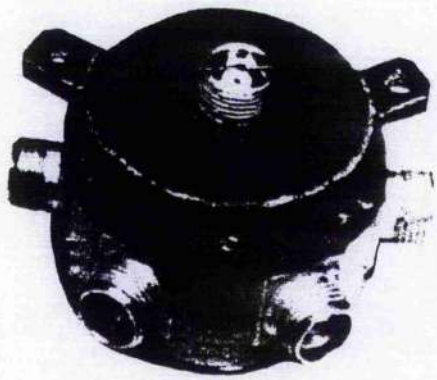
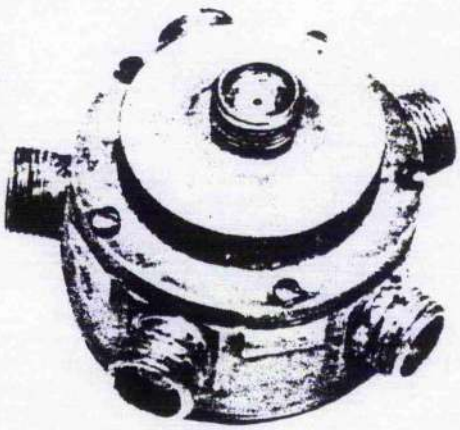
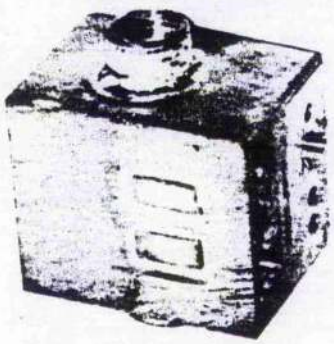
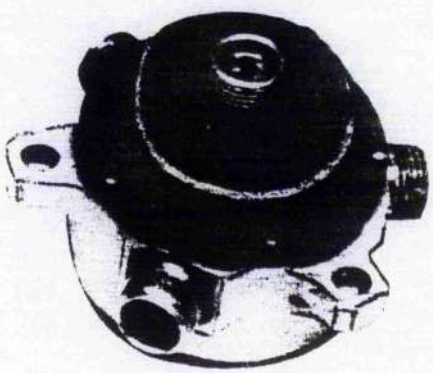
Microwave leads:
– input-waveguide for 2-channel divider
– 1 channel – input-waveguide with a cross-section 23 × 10 mm.
– II, III channels – coaxial line, 50 0m.
– IY channel – output-waveguide with a cross-section 23 × 5 mm.









GENERAL CHARACTERISTICS

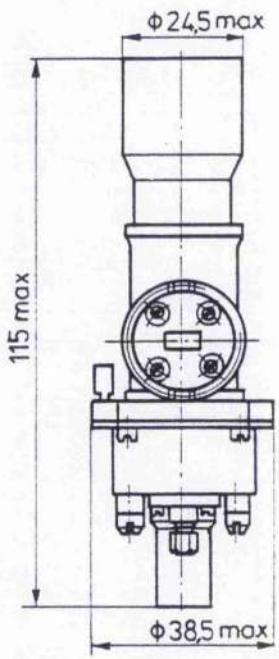
TYPE	НД-01
Operating frequency band, %	9
Return damping and isolation between channels, dB, no less than	40
Insertion losses (without division), dB, no more than	1,1
Continious microwave power, W, no more than	0,5

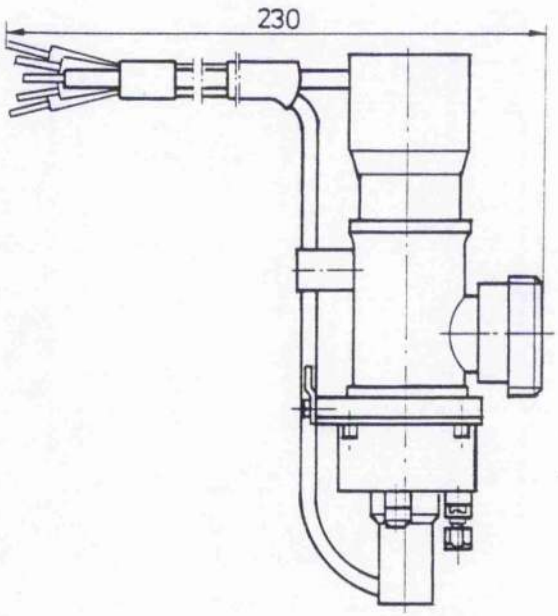
ELECTRONINTORG Ltd. 24/2 UL. USIEVICHA 125315 MOSCOW USSR
Telephone: 151-72-41, 155-40-38
Telefax: 151-54-41, Telex: 411326

К-187

КЛИСТРОН ОТРАЖАТЕЛЬНЫЙ

К-187 – серия механически перестраиваемых по частоте отражательных клистронов, предназначенных для использования в качестве гетеродинов в различной радиотехнической аппаратуре.
Охлаждение – форсированное, воздушное.
Вывод энергии – волноводный, сечением:
К-187 А, Б, В – 3,4×7,2 мм.
К-187 Г, Д, Е – 5,5×11 мм.





ОСНОВНЫЕ ХАРАКТЕРИСТИКИ

ТИП	К-187
Диапазон частот (6 литер), ГГц	16,6–39,8
Выходная мощность, мВт	11
Напряжение накала, В	6,3
Ток катода, макс. (при напряжении луча 1500 В), мА	20
Ток накала при напряжении 6,3 В, А	1,0
Габариты, мм	115×38,5×230
Масса, г	230

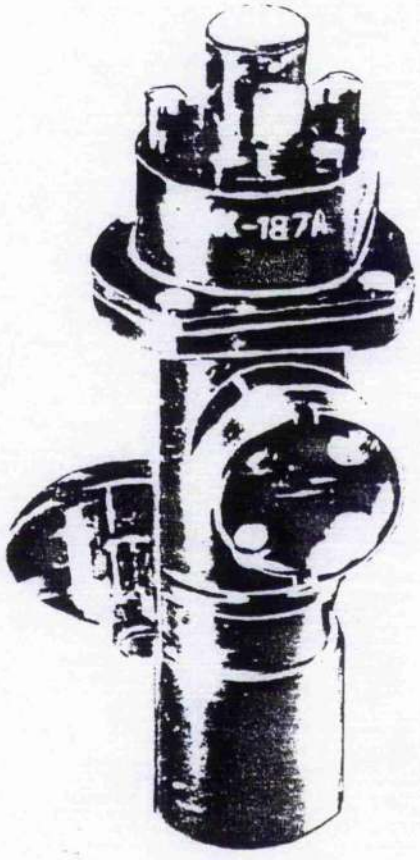
ЭЛЕКТРОНИНТОРГ Лтд. **125315, МОСКВА, УЛ. УСИЕВИЧА, 24/2**

Телефон: 151-72-41, 155-40-38
Телефакс: 151-54-41, Телекс: 411326

K-187

REFLEX KLYSTRON

The K-187 – series of mechanically tuned reflex klystrons intended for use as a local oscillator in different electronic equipment.
Cooling – forced air.
Waveguide output with a cross-section:
K-187 А, Б, В – 3,4×7,2 mm.
K-187 Г, Д, Е – 5,5×11 mm.



GENERAL CHARACTERISTICS

TYPE	K-187
Frequency range (6 modes), GHz	16,6–39,8
Output power, mW	11
Filament voltage, V	6,3
Cathode current max. (at beam voltage 1500 V), mA	20
Filament current, at 6,3 V, A	1,0
Dimensions, mm	115×38,5×230
Weight, g	230

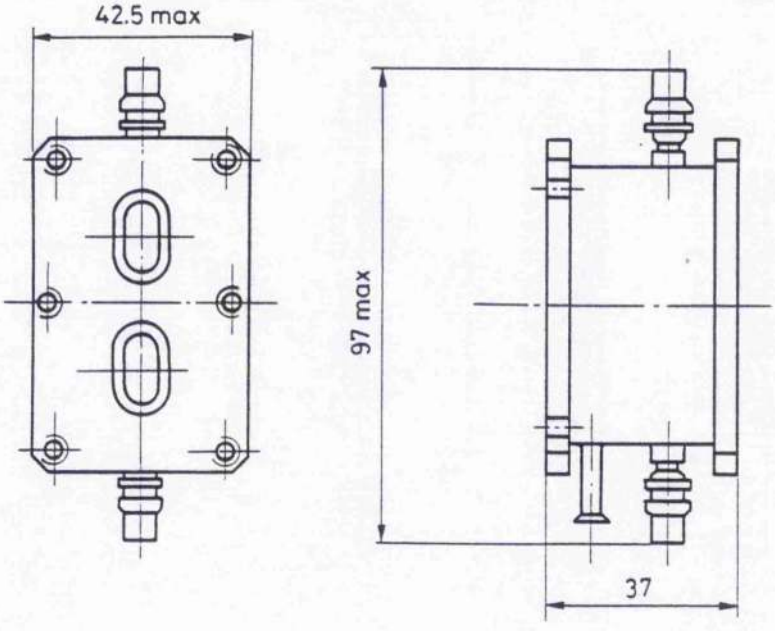
ELECTRONINTORG Ltd. 24/2, UL. USIEVICHA, 125315 MOSCOW, USSR

Telephone: 151-72-41, 155-40-38
Telefax: 151-54-41, Telex: 411326

РР-184

СДВОЕННЫЙ РАЗРЯДНИК ЗАЩИТЫ ПРИЕМНИКА

Представляет собой сдвоенный волноводный разрядник защиты приемника проходного типа, предназначенный для защиты малошумящего смесителя или усилителя.
Разрядник обладает 5%-ной полосой рабочих частот и не требует какой-либо подстройки в процессе эксплуатации.
ВЧ-выводы – волноводные, сечением 23 × 10 мм.



ОСНОВНЫЕ ХАРАКТЕРИСТИКИ

ТИП	РР-184
Диапазон частот, ГГц	9,3–9,8
Импульсная мощность, кВт	0,4–1,0
Длительность импульса, мкс	0,15–1,0
Коэффициент заполнения	0,001
Потери пропускания, дБ	1,5
Время восстановления, мкс	3,0
Мощность зажигания, мВт	1500
Габариты, мм	97 × 42,5 × 37
Масса, г	300

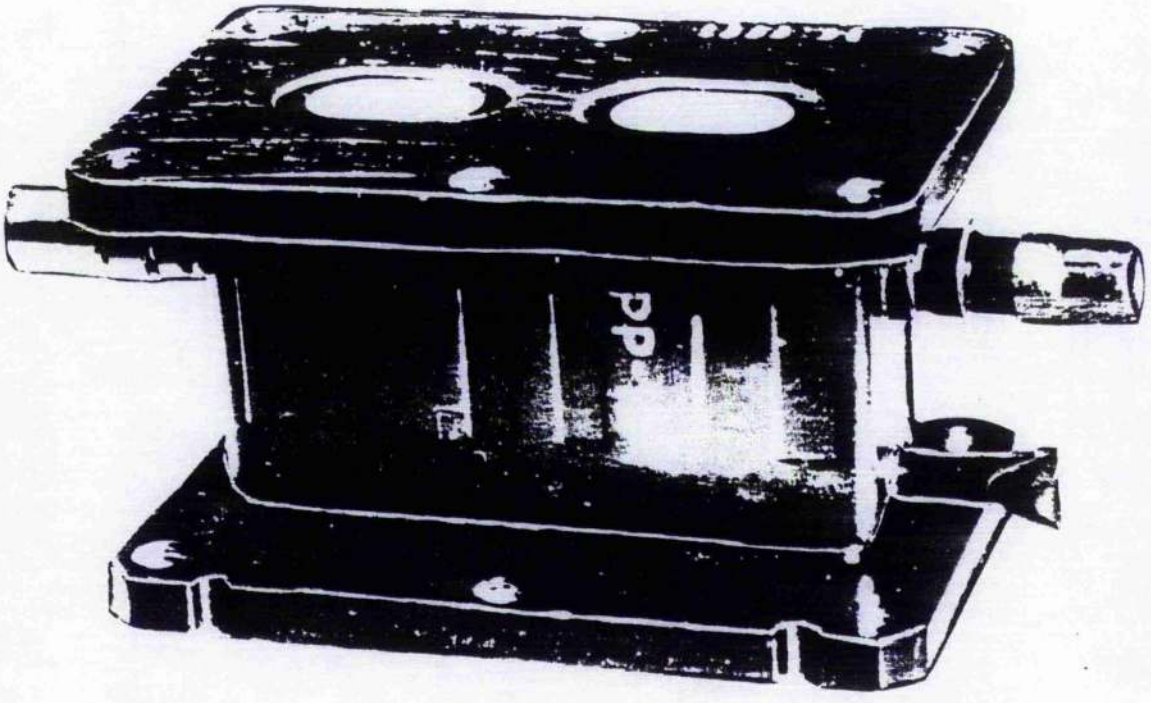
ЭЛЕКТРОНИНТОРГ Лтд, 259 **125315, МОСКВА, УЛ. УСИЕВИЧА, 24/2**

Телефон: 151-72-41, 155-40-38
Телефакс: 151-54-41, Телекс: 411326

PP-184

X-BAND DUAL TR-TUBE

It is a dual waveguide bandpass TR-tube for low-noise solid-state mixer or amplifier protection. It has a 5% operating bandwidth and does not require any tuning in service.
Microwave leads – waveguide with a cross-section of 23 × 10 mm.



GENERAL CHARACTERISTICS

TYPE	PP-184
Frequency range, GHz	9,3–9,8
Peak power, kW	0,4–1,0
Pulse duration, mcs	0,15–1,0
Duty cycle	0,001
Insertion loss, dB	1,5
Recovery time, mcs	3,0
Breakdown power, mW	1500
Dimensions, mm	97 × 42,5 × 37
Weight, g	300

ELECTRONINTORG Ltd. 24/2, UL. USIEVICHA, 125315 MOSCOW, USSR

Telephone: 151-72-41, 155-40-38
Telefax: 151-54-41, Telex: 411326

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