

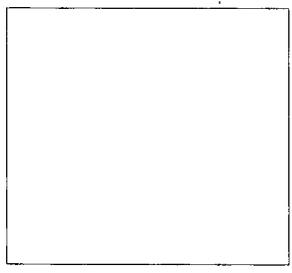
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Warsaw Pact Ground Forces Reserve Systems

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An Intelligence Assessment

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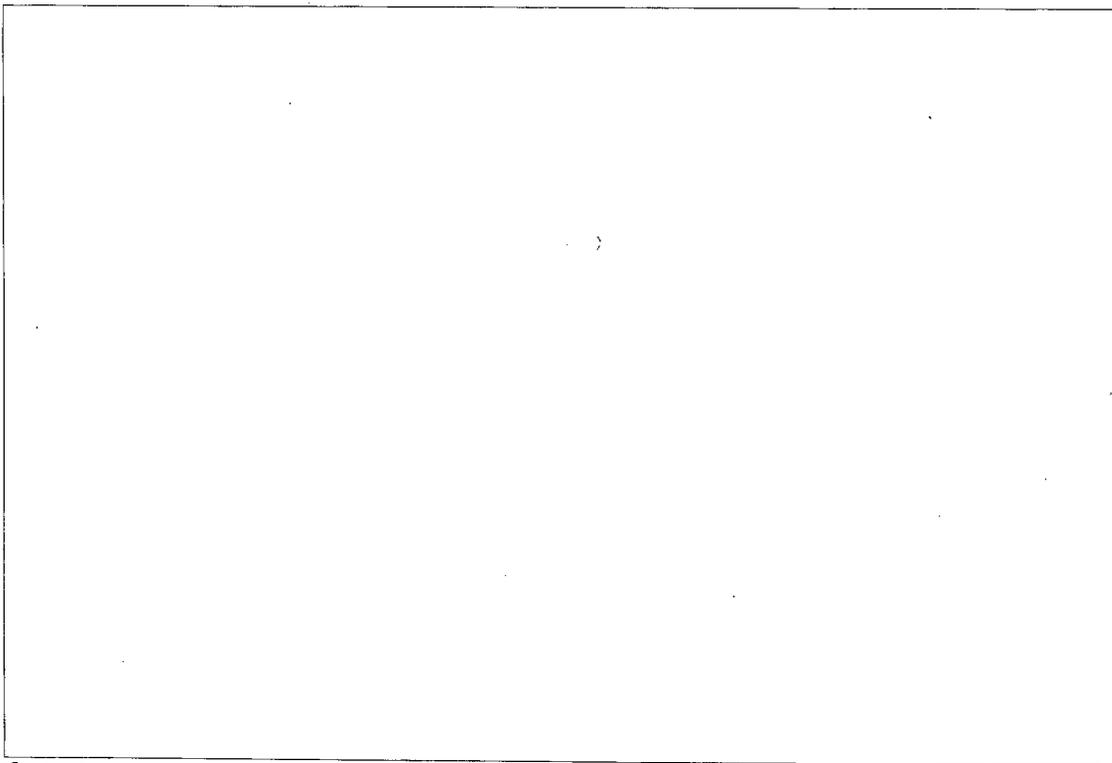
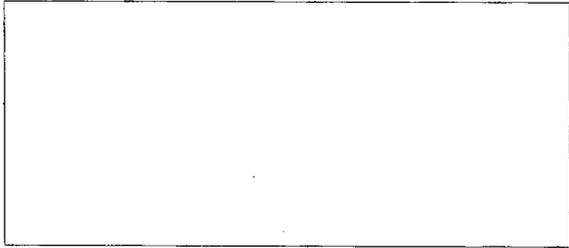
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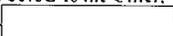
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Warsaw Pact Ground Forces Reserve Systems

An Intelligence Assessment

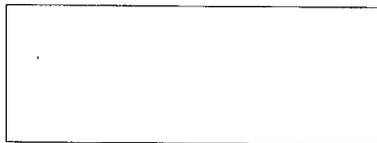
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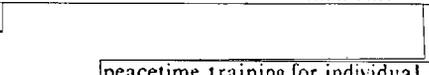
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Warsaw Pact Ground Forces Reserve Systems

Key Judgments
*Information available
as of 1 December 1982
was used in this report*

The Warsaw Pact depends on the mobilization of large numbers of reservists to prepare its ground forces for a major war. Its pool of reservists includes several million men—enough to fill out all existing units, to provide replacements for casualties, and to form additional units during a protracted war.

Because units filled out with reservists conduct little training in peacetime, we believe that they would be less effective after mobilization than units manned by trained conscripts. 

 peacetime training for individual Pact reservists is inadequate to maintain their skills after active duty or to develop cohesion in units manned largely by reservists. The shortcomings in mobilized units can be overcome by additional training, as was done prior to the invasions of Czechoslovakia and Afghanistan, or the consequences of reduced unit effectiveness can be accepted in the face of an immediate threat, as was done during the early stages of World War II.

The need for reservists varies widely among Pact divisions, and these variations impose different constraints on mobilization in each region. In general, Pact divisions are manned in peacetime at higher strength opposite NATO's Central Region and China than in other regions. As a result, reservists are less critical to the Pact's ability to mobilize first-echelon divisions for operations against NATO's Central Region or China than for operations against potential enemies in other theaters. Reservists, however, are critical for subsequent operations in every theater.

On NATO's flanks and opposite Southwest Asia, reservists are the mainstay of Pact military capabilities. The Soviets might require several months to retrain reservists for major campaigns in these regions unless better prepared units were transferred from other theaters.

The Soviets have been reluctant to use reservists in limited operations. Only a small percentage of the Soviet troops that entered Czechoslovakia in 1968 were reservists, and trained conscripts replaced reservists in Afghanistan in 1980 before Soviet units were committed to offensive operations against the local insurgents. This reluctance to use reservists suggests that the Soviet military leadership has a relatively low opinion of their combat proficiency.

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Despite legal obligations for regular reserve duty, training for Pact reservists is infrequent and superficial.

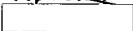
[redacted] reservists are seldom called up more than once and that most of their reserve duty is devoted to tasks that do not improve military skills, such as maintaining equipment and harvesting crops. The most frequent type of actual training is an alert exercise that is intended to assure the Pact's ability to mobilize quickly but does not provide practical training in military skills.

In addition to the limited and erratic character of training for individual Pact reservists, the frequency of reserve training varies with the peacetime manning of the units, creating further distinctions in readiness among units. Generally, divisions that require few reservists conduct reserve training at least annually during fielded exercises. Divisions that depend heavily or completely on reservists only fill out a few subordinate units for training in a given year and usually mobilize completely only every five years to conduct an exercise.

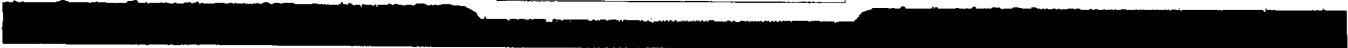
Because of their role and training, non-Soviet Warsaw Pact (NSWP) reservists may be better prepared than Soviet reservists, and the units which depend on them may be more effective immediately after mobilization than comparable Soviet units. A large percentage of the NSWP divisions, particularly those opposite NATO's Central Region, are manned at high strength in peacetime and require relatively few reservists to mobilize. As the manpower available for conscription declines in the 1980s, however, the role of reservists in these countries may increase. East Germany, for example, regularly uses reservists to enhance the readiness of its active divisions and calls up these reservists for longer periods than any other Pact country. In 1982 the East Germans increased the cumulative obligation for reservists from 24 to 36 months.



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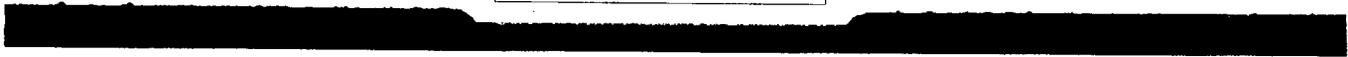
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Warsaw Pact Ground Forces Reserve Systems

The Mobilization System

Manning and Conscription Practices

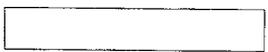
Unlike the United States, which relies on organized Reserve and National Guard units to expand its armed forces in an emergency, the Soviets and their Pact allies maintain the base for wartime expansion primarily in their active armed forces.



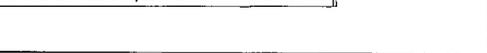
Pact units, manned at varying levels in peacetime, provide the framework for rapidly integrating reservists upon mobilization. In peacetime, a primary function of Pact units is to train conscripts who, upon discharge, are incorporated into the pool of reserve manpower and are assigned to local active units for reserve training and mobilization.

Unclassified Soviet writings have described the military commissariat system, and [redacted] have reported on the interaction between military commissariats and military unit staffs. According to these sources, the General Staff's Organization-Mobilization Directorate has the overall responsibility for managing manpower for the Soviet Ground Forces. This directorate oversees the operations of mobilization components of division, army, and military district (MD) staffs and military commissariats (*voynkomaty*) at the rayon, oblast, and republic levels within the governmental hierarchy (see figure 1). The military commissariats manage the induction of conscripts and maintain records on tens of millions of reservists who are theoretically available for mobilization.

The operations of this manpower system are largely determined by the Soviet conscription cycle. Soviet conscripts are inducted twice each year at which times approximately one-fourth of the conscripts in most Soviet units are replaced. This process involves the induction of several hundred thousand new conscripts each May and November and the subsequent release into the reserves of similar numbers of older conscripts who have completed two years of active duty. As a result, the vast majority of the Pact's adult



The regular influx of newly discharged conscripts into the Soviet reserve system coincides with a semiannual review of the mobilization system at the local level. In each unit the staff's mobilization component prepares detailed plans and determines the numbers and types of reservists required for mobilization.



The local military commissariat is responsible for meeting these requirements; together with the unit's staff it reviews the roster of reservists every six months to make any necessary changes. Reservists who are no longer available, for example, would be replaced by unassigned reservists with the same skills. If such reservists were not available, unassigned reservists would be called up and trained in the necessary skills.

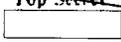


[redacted] those who had been trained in new skills while reservists usually were from the Central Asian and Far Eastern republics. [redacted] former infantry and construction troops were most likely to be reclassified and retrained. In some instances, however, reclassification was merely a "paper" exercise. One [redacted] from the Odessa MD, for example, [redacted] reclassified as a medic when called up for an exercise even though he was never trained in this specialty. It is not clear whether this is a widespread practice.

The Soviet army requires large numbers of junior officers because they are placed in many positions noncommissioned officers usually would fill in Western armies.

[redacted] Soviet military schools do not graduate enough

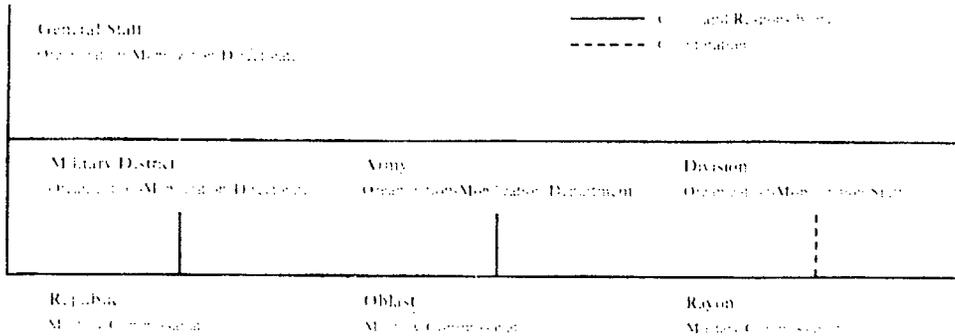
males have had some military training and are included in the reserves.



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[Redacted]

Figure 1
Soviet Organization for Conscription and Mobilization



[Redacted]

professional officers each year to meet these needs, and the Soviet Ground Forces depend on reserve officers to fill shortages. [Redacted]

To provide the needed reserve officers, most Soviet males who attend universities or technical institutes must undergo military training. Their training often is designed to make use of their educational backgrounds. Thus, engineering students probably would be trained as combat engineers and automotive engineering students as maintenance officers. [Redacted] upon the completion of this training, the graduates are commissioned as reserve officers, and their records are sent to Moscow to determine which will be called up for two years of active duty. Usually less than 50 percent are called up within the first two years after graduation. The records of the remaining new reserve officers are sent to their local military commissariats. These

[Redacted]

officers may be called up for reserve training and to participate in periodic training courses and alerts. [Redacted]

The manpower systems in the NSWP armies are based on the Soviet model. Our understanding of these systems is based on the respective national defense laws as elaborated by unclassified writings [Redacted] Some differences do exist among the Pact armies; these differences are most apparent in the terms of service and conscription cycles. Active duty for conscripts is 18 months in East Germany and Hungary and 16 months in Romania instead of the Pact standard of two years. Unlike the rest of the Pact, conscripts are inducted every eight months, instead of every six months, in Romania. [Redacted]

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[Redacted]

[Redacted]

Table 1
Warsaw Pact Mobilization Authorities

Country	Administrative Level	Military Commands
USSR	Republic oblast rayon	Military District staff Military Commissariat
East Germany	District (WBK) county (WKK)	Military District staff
Poland	Province (WSZW) region (WKV)	Military District staff
Czechoslovakia	County (OVS)	Military District staff
Hungary	County replacement command	Army staff
Bulgaria	District community military	Army staff Administration
Romania	County military center	Army staff

[Redacted]

Although economic factors certainly influence Soviet decisions on military manpower, the impact of national economic priorities is more apparent in some of the NSWP armies. In Poland, Czechoslovakia, and Bulgaria, for example, those men eligible for conscription who instead choose to work for extended periods in dangerous industries, particularly in mining, are exempt from military service. This option, however, probably applies only to a small percentage of the men eligible for conscription in any of these countries [Redacted]

The Pact's reserve systems would continue to satisfy the military's need for manpower after existing units had been filled out and deployed. Classified Pact writings indicate that, during a protracted conflict, organization-mobilization staffs and military commissariats must provide personnel to replace casualties and man new units. The Soviet reserve system satisfied these needs during World War II but has not been tested since then [Redacted]

The Alerting Process

The only major changes in the Pact mobilization system over the past decade have been improvements in the means and procedures to control the transition to war. Classified Pact writings [Redacted]

indicate that the Soviets have exerted considerable pressure on their allies since the mid-1970s to increase force readiness, particularly to improve the alerting process. To satisfy Soviet demands, the NSWP countries during the late 1970s ratified a new Pact statute on stages of alert within units, and in 1981 they introduced new communication systems to integrate the NSWP general staffs into the Soviet strategic alert network. These changes have reduced the time required to alert all Pact forces and have streamlined the procedures to mobilize units [Redacted]

Pact norms governing each unit's initial response to an alert are stringent [Redacted] the norms for each unit are based on the type and peacetime manning of the unit, the season, and the proximity to potential enemy forces. On receiving an alert, the active cadres of Pact units are responsible for the quick and orderly evacuation of essential equipment from garrison to nearby assembly areas. In general, units are expected to begin moving out of garrison within 30 to 60 minutes [Redacted]

Alerts are called frequently to test the capability of units and reservists to respond within the allotted time; however, the intent of such tests is usually circumvented by the participants. Commanding officers [Redacted] usually warn their subordinate units of an alert so that advance preparations can be made to ensure satisfactory performances [Redacted] units would not have passed these tests without prior warning and special preparations. In the few instances of genuine surprise alerts [Redacted] units almost invariably have failed, and frequently the commanders have been replaced [Redacted]

A recent US study of the alerting and mobilization process in Soviet divisions has questioned the ability of these units to meet demanding norms without advance warning. The ability to respond to an alert depends on peacetime manning; units that are manned at the lowest levels naturally require more [Redacted]

[Redacted]

[Redacted]

Pact Alerting Systems

The alerting process is central to the Pact's concept of readiness and, ultimately, to the Pact's mobilization system. It includes the communication systems by which Pact commands alert subordinate forces and the procedures by which units mobilize. These procedures are intended to meet all military contingencies, including a surprise nuclear attack, and to enable all Soviet and NSWP commands to initiate the transition to war by ordering the deployment of units, the mobilization of reservists, and the necessary preparations for civil defense.

Analysis of classified Soviet writings indicates that there are two levels of alerting systems within the Pact: strategic and operational. On the strategic level, the Soviet strategic warning network connects the Soviet General Staff to the commands of the Soviet military districts and groups of forces and to the NSWP general staffs.

On the operational level, separate communication systems within each of the military districts, groups of forces, and NSWP armies permit the commanders to alert their subordinate units, military commissariats or their equivalents, and local civil defense authorities collectively or selectively. The Soviets and three of the NSWP armies - East Germany, Czechoslovakia, and Bulgaria - have automated alerting systems that can alert all or selected units. The remaining NSWP armies - Poland, Hungary, and Romania - use older equipment to alert all units.

time. Moreover, these norms apply to emergencies when the survival of the unit rather than its ability to fight is at stake. The systematic preparation of a unit for war would require much more time. A computer simulation indicates that mobilization could require from one and a half days in divisions that are at or

near full strength and up to 10 days in divisions that are not manned in peacetime. Even if one accepts these times, which are considerably longer than the stringent Pact norms of 30 to 60 minutes, the Pact can still deploy large numbers of divisions in a relatively short period.

an impressive ability, despite problems, to assemble reservists quickly upon alert. This ability to mobilize quickly, however, does not guarantee immediately effective operations. The ability of most Pact divisions and nondivisional units (those directly subordinate to front and army commands) to use equipment effectively and to conduct complex operations depends on the numbers and types of reservists mobilized and their quality of training.

The Role of Pact Reservists

The need for reservists varies widely among and within the Pact ground forces. The main factors that determine the role of reservists in Pact units are:

- Peacetime manning.
- Types of military skills.

Peacetime Manning

manning in Pact units ranges in a definable pattern from units that are at or near full strength to units that are not manned in peacetime. The Soviets broadly define their divisions as being "ready" or "not ready" for combat following mobilization according to their peacetime percentage of full-strength manning and according to associated variations in training. Ready divisions can initiate military operations immediately after mobilization; not-ready divisions require some training in order to operate effectively. Each category also includes several less formal subdivisions based on finer gradations of peacetime strength (see tables 2



Table 2
Warsaw Pact: Peacetime Manning Levels of Soviet Ground Divisions

Type	Manning Level (percent)	Number of Divisions
Ready		
Full Strength	95-100	40*
Reduced Strength I	70-85	22
Reduced Strength II	55-70	32
Not Ready		
High-Strength Cadre	25-40	39*
Low-Strength Cadre	5-25	52
Mobilization Base	0	25

* Includes six airborne divisions.
* Includes one airborne training division.

and 3). Although the NSWP armies do not use the ready, not-ready designation, their units are also manned at differing levels in peacetime.

Differences in peacetime manning are also common among subunits within divisions, primarily in Soviet reduced-strength and cadre divisions and their NSWP equivalents, and they usually relate to the relative contribution of each subunit to the division's immediate combat readiness. Thus, combat elements in these divisions are usually manned at higher levels than

The three types of ready divisions are defined as full-strength ready, reduced-strength ready I, and reduced-strength ready II and are manned in peacetime between 55 and 100 percent. Not-ready divisions are defined as high-strength cadre, low-strength cadre, and mobilization-base divisions according to peacetime manning between 0 and 40 percent. The US Intelligence Community describes Soviet as well as NSWP ground divisions as Categories I, II, or III based on estimates of manning between 75 and 100 percent, 50 and 75 percent, and 10 and 50 percent, respectively. Because mobilization-base divisions are not manned in peacetime, these are not included in the US categories of Pact ground divisions. Mobilization bases are depots for the major combat equipment needed to form a division. To field such a unit, additional vehicles—up to 1,000 trucks in some cases—must be requisitioned and 10,000 or more reservists called up.

support elements are even in reduced-strength Soviet divisions, an artillery regiment might be manned at 50 percent, for example, while medical and chemical defense units might be at 10 to 15 percent.

Peacetime manning practices also determine how reservists are integrated into divisions upon mobilization. Our analysis indicates that Pact units commonly would either assign individual reservists directly to fill out high-strength units or activate entire units manned only with reservists. In the first case, individual reservists are usually assigned to positions requiring relatively little skill. For example, individual reservists are often assigned as ammunition carriers in artillery units or as additional riflemen in motorized rifle squads. These reservists are not essential to the unit's ability to operate, although they would add to the unit's endurance after it had sustained casualties. In the second case, units are mobilized primarily or completely from the reserves and require personnel with a full range of demanding as well as undemanding skills.

The type of unit determines the peacetime manning in the Pact's nondivisional units, and units of the same type usually are manned at similar levels throughout the Pact. Nondivisional surface-to-air and surface-to-surface missile units and signal units were manned at high strength in all Pact armies, while nondivisional artillery, engineer, and logistic units were manned at low levels.

Military Skills

The member countries of the Warsaw Pact have sufficient numbers of reservists who have served during the past two to five years to fill out all existing ground units. To mobilize these units, we estimate that the Soviets would need about two and a half million reservists and the NSWP countries more than

Table 3
Warsaw Pact: Peacetime Manning Levels of NSWP Ground Divisions

Type	Manning Level percent	Number of Divisions	East German	Polish	Czechoslovak	Hungarian	Bulgarian	Romanian
Category I	75-100	33	6	10	4	3	3	7
Category II	50-75	12	0	3	3	1	2	3
Category III	30-50	10	0	2	3	2	3	0
Mobilization base	0	12	4	2	2	0	3	0

* Includes one airborne and one seafaring division.
* Five Bulgarian tank brigades are also considered Category I.
* Three Romanian mountain infantry brigades, not included in this table, also are considered Category I.

three-fourths of a million reservists (see table 4). We believe the Pact's reservist pool is large enough to sustain a mobilization on this scale, but the availability of reservists with particular skills is also important, and significant shortcomings exist here, especially in technical skills.

Combat Skills. In peacetime, Pact motorized rifle and tank units in divisions at each level of readiness are manned at higher strength than support elements, such as logistic and engineer units. This practice ensures that large numbers of infantrymen and tankers are discharged from active duty and become reservists each year. It also reduces the Pact's relative need for reserve infantrymen and tankers during mobilization and ensures that a large pool of reservists with these skills would still be available after filling up existing units to replace casualties and to form additional units during a protracted conflict.

The Soviets probably could satisfy their mobilization need for infantrymen and tankers with reservists who had served within the past two and a half to three years (see table 5). Some other Pact armies might be able to satisfy their need for these skills with reservists who had served within one year. (S)

Technical Skills. In order to satisfy their mobilization needs for reservists with technical skills, the Warsaw Pact countries would have to call up many reservists who would have had no active service in more than five years. Divisional and nondivisional support units are manned at very low levels or not at all in peacetime. Thus, the numbers of recently discharged reservists with these skills is small in comparison with the Pact's needs, while the importance of these technical personnel to the proper functioning of their units is high.

Both divisional and nondivisional artillery and engineer units are manned at low levels in peacetime. Relatively few artillerymen and engineers, therefore, are released into the reserves each year. In order to mobilize these units fully, artillery reservists who had been released more than six years earlier and engineer reservists who had been released more than five years earlier would be needed. More than half of the artillery reservists would be required for nondivisional units (see table 5).

Table 4
Warsaw Pact Ground Forces Reservists: Need and Availability

	Wartime Strength	Peacetime Strength	Reservists Needed	Reservists Available With Active Service	
				Within Two Years	Within Five Years
USSR	4,330,000	1,830,000	2,500,000	1,460,000	3,660,000
East Germany	200,000	120,000	80,000	120,000	300,000
Poland	650,000	250,000	410,000	170,000	440,000
Czechoslovakia	300,000	150,000	150,000	108,000	270,000
Hungary	110,000	70,000	40,000	50,000	130,000
Bulgaria	210,000	130,000	80,000	80,000	200,000
Romania	210,000	170,000	50,000	200,000	500,000

medical units in all Pact armies are manned at very low levels in peacetime. To mobilize these units, Pact armies would have to call up virtually all available reservists who had any prior active service in this skill and probably would be forced to call up civilian medical personnel who had never served.

Regional Variations in Peacetime Readiness and Requirements for Reservists

The number of ready and not-ready divisions allocated to each theater is indicative of Soviet willingness or unwillingness to rely on reservists in different areas depending upon the likely threat and time available to prepare for war (see figure 2). The 82 ready divisions that do not rely heavily on reservists represent a disproportionate share of Soviet power. These divisions are equipped with more modern and more powerful weapons than are the not-ready divisions. This distinction in weapons is compounded by differences in the capabilities to use these weapons and to operate effectively as divisions. Ready divisions can operate effectively immediately; not-ready divisions must mobilize reservists and conduct additional training to achieve similar levels of proficiency.

Because of differences in equipment and training, we estimate that not-ready divisions would be one-fourth to one-third as effective as ready divisions before mobilization and one-half to three-fourths as effective after additional training. If all existing not-ready divisions were mobilized and trained, the total capabilities of Soviet ground divisions would more than double (see table 6). Because ready divisions are already at or near maximum effectiveness, their share of the increased Soviet power would fall. The average ready division, however, still would be more powerful than any individual not-ready division.

The concentration of ready divisions reflects Soviet perception of the military threat in each region and the time available to prepare for war. Thus, the Soviets have 60 of their 82 ready divisions opposite NATO's Central Region and China. As a result, the impact of reservists in these areas is less than in other regions. The Soviets would not undertake military operations in any theater without mobilizing not-ready divisions to ensure superiority and depth of forces over any potential enemy. The not-ready divisions in the western USSR, for example, would have a

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Table 5
Availability of Soviet Reservists
With Recent Active Duty by Skill

Skill	Years Since Active Duty Needed To Satisfy Requirement
Lt. Col.	2.5
Infantry	3.1
Engineer	5.2
Artillery	6.8

On the basis that the Soviets mobilize reservists with the most recent active service, this table shows the maximum years that would have elapsed prior to mobilization since reservists in certain skills had served on active duty. Estimates of Soviet requirements for reservists for these skills were made by comparing US assessments of the wartime and peacetime manning of these units. Calculations of wartime manning were based on the current order of battle and the table of organization at full strength. Estimates of peacetime strength were based on our assessment of the peacetime manning of these subunits in each category of Soviet divisions and the "divisional units. Forty percent of peacetime manning—that is, the personnel released during two conscription cycles after deducting the long-term service personnel—was assumed to equal the number of conscripts released into the reserves each year. Typically, Soviet units mobilize 10 to 15 percent more personnel than required during mobilization exercises to compensate for reservists who have not responded. Therefore, 90 percent of reservists were assumed to be available.

major role in sustaining a campaign against NATO, according to Soviet writings and exercises. At least initially, some of these divisions might have less demanding missions, such as guarding lines of communications, which require minimal effectiveness and could be undertaken after mobilization with little additional preparation.

The Soviets may change the disposition of divisions after mobilization to improve their capabilities in some areas. For example, they could transfer ready divisions into a theater at the outset of an operation as they did during the invasion of Afghanistan. Indeed, they might be forced to transfer divisions into some areas. For example, the US Intelligence Community judges that Soviet forces in the Far East would

require substantial reinforcements from outside the region to undertake a major campaign in China.

The Western Theater. The 35 ready divisions in the Western Theater, the only area in which ready divisions outnumber not-ready divisions, provide most of Soviet military capabilities against NATO's Central Region. These divisions constitute 82 percent of the assessed potential effectiveness of the 64 Soviet divisions in this theater at mobilization. The impact of reservists in this area would increase after the initial stages of war with NATO when not-ready divisions would be committed for subsequent operations.

Major deficiencies in equipment and training complicate comparisons between Soviet and NSWP divisions and among the NSWP ground forces. Of the 67 NSWP divisions, 43 nominally are manned and trained as ready units. Because the modernization of Soviet Ground Forces outstripped the NSWP, these divisions are less powerful than their Soviet counterparts. This distinction is further compounded by less intense training in NSWP divisions. In the most extreme cases, the Romanian ready divisions are equipped and trained at levels comparable to Soviet not-ready divisions.

The Far Eastern Theater. The disposition of Soviet forces along the Sino-Soviet border demonstrates the importance of ready divisions. The 25 ready divisions in this area represent 72 percent of the capabilities of the total 57 Soviet divisions in the theater. The ready divisions would delay any Chinese incursion while remaining divisions mobilized. The Soviets probably would use the not-ready divisions at reduced levels of effectiveness to repulse Chinese forces but would provide additional training before offensive operations.

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Table 6
Regional Impact of Soviet Ground
Division Mobilization

	Divisions		Share of Potential Combat Effectiveness at Mobilization (percent)		Share of Potential Combat Effectiveness After Training (percent)	
	Ready	Not Ready	Ready	Not Ready	Ready	Not Ready
Total force	82	128	71	29	47	53
Western Theater	35	29	82	18	61	39
Far Eastern Theater	25	22	72	28	50	50
Southeastern Theater	9	22	58	42	35	65
Southwestern Theater	6	22	52	48	26	74
Northwestern Theater	4	7	71	29	47	53
Strategic Reserves	3	16	40	60	19	81

The relatively sparse population in the Far Eastern Theater may also increase the importance of individual reservists for mobilization. [redacted] an absolute shortage of reservists in the Transbaikalian MD was overcome by assigning reservists from the Far East MD for mobilization. Soviet units in the Far Eastern Theater might require additional troops—conscripts and reservists—from the western USSR to satisfy their needs for manpower during a protracted campaign in China. [redacted]

Other Theaters. In other theaters, the impact of reservists on Soviet military capabilities is much larger. Not-ready divisions predominate on NATO's flanks, opposite Southwest Asia, and in the interior of the Soviet Union. The Soviets could initiate limited offensive operations in these areas with the few available ready divisions in each theater. In order to ensure superiority over enemy forces and to sustain a campaign, however, they must mobilize reservists and train not-ready divisions. In the Leningrad MD, for

example, only four of 11 divisions are assessed as ready. For an invasion of Norway, the Soviets would need additional divisions to ensure superiority over NATO reinforcements as well as Norwegian units and to guard the lines of communication over difficult terrain. [redacted]

Training for Reservists

Pact reserve training responds to the needs of individual units rather than the legal obligations of individual reservists. Despite nominally stringent legal obligations, analysis [redacted] indicates that training for the average Pact reservist is infrequent and superficial. The average reservist is rarely called up. When he is, he devotes almost half his time to activities that do not improve his military skills, such as maintaining equipment and harvesting crops. The

frequency and amount of reserve training also vary considerably among Pact armies. Our analysis of training for Pact reservists indicates that the Soviets provide more total training for reservists than most of their allies do, but Poland, Czechoslovakia, and Hungary conduct more frequent training. []

Factors in Training of Reservists

The unit's need for particular military skills largely determines the type and frequency of reserve training. An analysis of Soviet manning practices indicates that a large number of reservists with logistic and support skills would be required upon mobilization. Reservists with these skills [] frequently perform the same or similar functions in civilian life. Thus, their civilian occupations reinforce their military skills and reduce or eliminate the need for additional military training. Reservists with uniquely military skills, such as operating weapons constitute a smaller proportion of those required upon mobilization. These skills, however, deteriorate after active duty and must be reinforced periodically with additional training if the proficiency achieved on active duty is to be maintained. []

Legal Obligations of Reservists

The legal obligations for training by individual Pact reservists are determined by the national defense laws that are based broadly on the 1967 Soviet Defense Law. The Soviets divide reservists into two categories - more or less than one year of active service - and further subdivide these into three classes by age. Generally, reservists who have served two years on active duty and who are between 18 and 35 years old constitute the primary source of manpower for mobilization and have the greatest obligation for additional training. The NSWP categories for reservists, however, are based solely on age. []

The maximum amount of time a reservist must spend in training depends on his category and the Pact country in which he lives (see table 7). The youngest reservists - that is, those in Category I - may be called up in most Pact armies generally up to a

maximum of three months in any year, while the obligations of the oldest reservists - that is, those in Category II or III - usually are limited to a single callup for up to one month. The sole exception to this rule is Czechoslovakia, which limits the legal obligation for all reservists to one month every three years. Pact national defense laws, except in Bulgaria and Romania, set maximum cumulative obligations for reserve training. In a crisis, however, these laws permit the national military commands to extend the callup of any reservist beyond the legal maximum. Moreover, brief periods of reserve duty, such as alert exercises, are not counted as part of a reservist's fulfillment of his legal obligation. []

[] the Czechoslovak national authorities (and probably those in other NSWP countries) set annual ceilings on reserve training and schedule it to reduce the impact of absent workers on the civilian economy. []

The legal obligations of reserve officers in most Pact armies are greater than those of enlisted men. In addition to callups, officers are annually subject to lectures or training courses conducted by local military commissariats or their NSWP equivalents or by military units. []

Training of Pact Reservists

A statistical analysis [] indicates substantial differences in the frequency and duration of reserve training among the Pact ground forces (see table 8). With the exception of Czechoslovakia, training does not correspond to statutory obligations. In actuality, training is infrequent and superficial for most Pact reservists. []

[]

[]

Table 7
Warsaw Pact:
Active Duty Obligations of Pact Reservists

	Enlisted		Officers	
	Each Obligation	Cumulative Maximum Obligation	Each Obligation	Cumulative Maximum Obligation
USSR	Up to 3 months per year	24 months	Up to 3 months every 3 years	24 months
East Germany	Up to 3 months per year	36 months	Up to 3 months per year	36 months
Poland	Up to 3 months per year	18 months	Up to 3 months per year	24 months
Czechoslovakia	Up to 1 month every 3 years	4 months	Up to 1 month every 3 years	5 months
Hungary	Up to 3 months every 3 years	18 months	Up to 4 months every 3 years	24 months
Bulgaria	Up to 3 months every 3 years	None	Up to 3 months every 3 years	None
Romania	Up to 3 months every year	None	Up to 3 months every year	None

* Increased from 24 months in March 1982.

[redacted]

Despite differences in frequency and duration of reserve training, certain general patterns appear to be common among the USSR, Poland, Hungary, Czechoslovakia, and East Germany:

- Reservists are rarely called up until at least three years after active duty.
- Reserve officers are called up more frequently than enlisted men.
- Most reservists are only called up once. The small proportion of reservists who are called up more than once are likely to be called up frequently but for brief periods (see table 9).

A comparison of reports [redacted] indicates that many of the differences in reserve training practices among Pact armies reflect different national concepts of the role of reservists. The East Germans, for example, use reservists in active units in peacetime to maintain higher levels of combat readiness during and after troop rotation. To achieve this goal, East German reservists are called up for the longer periods but less frequently than any other Pact reservists. East Germany's reliance on reservists may be increasing to compensate for fewer young men available for conscription. In March 1982 East Germany extended the

maximum cumulative obligation for reserve training from 24 to 36 months. As the manpower available for conscription declines in the 1980s, other members of the Pact also may change their defense laws.

To maintain cohesion and proficiency, the Poles assign reservists to the same units for long periods, often five years or more, and call them up frequently for short periods of refresher training. Polish reservists are more likely than other Pact reservists to be called up repeatedly. The Hungarians also use reservists to support field training by active units and consequently call them up frequently for short periods.

The Czechoslovaks, who have the lowest legal obligation of all Pact members for reserve training, call up reservists to support field exercises about four years after their active duty. [redacted] reservists frequently are called up to guard garrisons while the active unit conducts field exercises. No training is conducted for reservists during this period.

[redacted]

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Table 8
Warsaw Pact:
Selected Reserve Training

	USSR		Hungary		East Germany	Poland	Czechoslovakia
	Officers	Enlisted Men	Officers	Enlisted Men	(Ar Ranks)	(Ar Ranks)	(Ar Ranks)
Average frequency of callups	1.6	1.2	1.4	1.5	1.3	1.0	1.4
Total number of days in reserve duty	27	34	27	31	25	11	27
Hours, in years, between active duty and first callup	5.1	4.6	3.2	4.6	6.4	3.9	4.5

Hungarian reserve officers usually serve on active duty for 11 months as officer candidates before entering universities or technical institutes, and three to seven months after graduation. This practice increases the number and duration of callups for Hungarian reserve officers in comparison to those of other Pact armies. The Romanian Army also conducts training for reserve officers in two phases.

Only a small fraction of the average reservist's time during callups is devoted to training. We calculated figures on the basis of the Soviet sample for officers and enlisted men (see table 10). The average Soviet enlisted reservist spends 54 percent of his reserve duty maintaining vehicles or harvesting crops and only 16 percent of his time in practical training or field exercises. The average Soviet reserve officer spends his reserve duty primarily in lectures and theoretical instruction rather than in practical training or field exercises (5).

Reports from different parts of the USSR also indicate some tentative regional differences:

- Reservists are more likely to be called up repeatedly in the Far East, particularly in Transbaikal, than in other military districts.
- Reservists in the Transbaikal and Central Asian MIDs are more likely to be called up for training in new skills.

- Reservist training is more likely to be perfunctory in the southern USSR than elsewhere. These military districts frequently callups for one day solely to familiarize reservists with their mobilization assignments.

- Certain skills, particularly drivers, engineers, and doctors, were more likely frequent callups.

Reserve Training Patterns

Reserve training in units is conducted regularly, although the frequency of training varies by manning and type of unit. Reservists are called up for various kinds of training:

- Refresher training and field exercises.
- Lectures and classroom instruction.
- Alert and mobilization exercises.
- Labor.

Refresher training and field exercises are the most effective methods of maintaining reservists' skills.

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Table 9
Selected NSWP Reserve Training

	Hungary		East Germany (All Ranks)	Poland (All Ranks)	Czechoslovakia (All Ranks)
	Officers	Other Ranks			
Number of callups	1	1	1	1	1
Total days on reserve duty	42	17	90	20	28
Interval between active duty and first callup in years	3.5	3	6.3	4.6	3.8
Days in first callup	42	10	60	14	28
Interval between first and second callup in years	5	1.3	5	2.6	3.8
Days on second callup	2	9	60	10	27

* In all cases, data represent statistical medians.

[Redacted]

Training Within Soviet Divisions. [Redacted] every division mobilizes at least once every five years for a general inspection. Ready divisions call up reservists for subordinate regiments once or twice a year to support field exercises. Some of these callups, however, may only involve small numbers of reservists. Analysis of reserve training in the subordinate units of not-ready divisions over the past decade indicates a different pattern of activity (see table 11). Tank, artillery, and engineer regiments in these divisions apparently call up sufficient reservists once or twice each year to train about one battalion. Reserve training rotates each year among the three motorized rifle regiments (MRRs) of a not-ready motorized rifle division. The MRR conducting training during a particular year mobilizes enough reservists to conduct field training with at least one of its battalions. The three MRRs only mobilize at the same time every fifth year during the division's general inspection. [Redacted]

Training in Soviet Nondivisional Units. Refresher training is conducted annually by at least one subunit in each nondivisional artillery and engineer unit.

[Redacted]
[Redacted]
[Redacted]
units called up small numbers of reservists several

times each year and integrated these reservists into subunits for refresher training. Other nondivisional units which rely on reservists conduct less frequent training. [Redacted] Kiev MD [Redacted] army headquarters unit called up reservists only every five years. [Redacted]

Training in NSWP Divisions. Distinctions noted in the frequency of reserve training in Soviet ready and not-ready divisions are also evident in NSWP divisions at comparable levels of manning. Similarities in manning practices and training cycles among all Pact members tend to lead to similarities in reserve training practices. In addition, reserve training must also meet the requirement of joint training by Pact units. [Redacted]

Bulgaria and Romania conduct annual regional mobilization exercises each spring. As many as 10,000 reservists may be called up during these exercises, but we do not know how these reservists are distributed among units. [Redacted]

[Redacted]

Table 10
Tasks for Soviet Reservists

Percent

	Officers	Enlisted Men
Transport and vehicle maintenance	14	8
Harvest support and manual labor	0	54
Weapons training (individual and crews)	10	12
Field training	3	4
Classroom instruction or lecture	72	21
Alert or muster	1	1

Training in NSWP Mobilization-Base Divisions. In contrast to the Soviets, the East Germans and Poles conduct frequent training for reservists assigned to their mobilization-base divisions. There is no information on reserve training in similar divisions in any other NSWP army.

The East German experience in the early 1970s demonstrated the impact of infrequent training on the effectiveness of mobilization-base divisions. In the early 1970s, the East German mobilization-base divisions, which are collocated with military schools, conducted reserve training every five years. A mobilization and field training exercise in one of these divisions in 1971, however, demonstrated this practice's shortcomings. In the exercise, the reservists were unable to perform effectively until the active cadre intervened. The East German authorities concluded that these divisions would require at least one month of training after mobilization to operate effectively.

To reduce the need for postmobilization training, reserve training in these East German divisions has increased substantially since the 1971 exercise. The associated military schools now train

Table 11
Frequency of Reserve Training in Soviet Divisions

Type	Ready Divisions	Not-Ready Divisions
Motorized rifle regiment	1 to 2 times per year	2 times in 5 years
Tank regiment	1 to 2 times per year	1 to 2 times per year
Artillery regiment	2 times per year	2 times per year
Engineer regiment	1 time each year	1 time each year

Does not include divisions that are not manned in peacetime. Training in these units only requires small numbers of reservists. Except during a division's general inspection, training in other units usually involves only sufficient reservists to field from one company up to one battalion.

small groups of reservists several times each year. all four divisions have conducted staff and/or field training at least annually since 1979.

Reserve training is also conducted frequently in the two Polish mobilization-base divisions. Polish internal security regiments are the active cadres for these divisions and supervise the training of reservists assigned to the units in these divisions. low-level reserve training was conducted several times each year. These divisions conduct full mobilization exercises every five years, but they occasionally mobilize one regiment for field training with active Polish units. one of these divisions performed better than some active Polish units during an exercise in the early 1970s.

Implications

Reliance on reservists creates a corresponding demand for regular, effective training. The preceding analysis indicates that peacetime reserve training in most Pact units is inadequate to maintain the proficiency of individual reservists or the effectiveness of

not-ready divisions. If training is irregular or ineffective, the potential effectiveness of units that rely on reservists will be reduced substantially. In the extreme case, such units might not be able to function immediately after mobilization. [redacted]

Through extensive testing, the US Army has determined that these factors are critical in learning and retaining military skills: complexity of the task and the method and frequency of training. The more steps required to accomplish a task, the more time required to master it. Training must include practical experience as well as theoretical instruction, and this practical training must be repeated frequently to maintain established levels of proficiency. According to US Army psychologists who have studied the learning process in US troops, the rate at which proficiency deteriorates varies among individuals, but the greatest loss of proficiency generally occurs within the first year after training. [redacted]

The alternative to the potentially wasteful investment required to maintain reservists' skills at high levels of proficiency is to retrain only when necessary. US Army tests have demonstrated that skills, once learned, can be relearned quickly. Pact military planners apparently use this factor in reserve training. Thus, after two weeks or less of refresher training, [redacted] Pact reservists often performed satisfactorily during field training exercises. They were expected to perform only a few tasks, such as constructing a pontoon bridge, and only these tasks were undertaken during training. [redacted]

The Role of Pact Reservists in Crises

The role played by Soviet reservists during crises over the past 15 years probably reflects the Soviet military's assessment of them. They were mobilized prior to the invasions of Czechoslovakia in August 1968 and Afghanistan in December 1979. [redacted] in each case, the Soviets conducted deliberate preparations and retrained their reservists systematically over several months. Training for reservists in not-ready divisions in the western USSR began roughly

three months before the Soviets moved into Czechoslovakia, and some units in the Turkestan MD began training reservists nine months before the Soviets invaded Afghanistan. Despite these preparations, however, when the Soviets committed units, they relied primarily on units manned by conscripts and professional soldiers rather than reservists. [redacted]

In each case, some not-ready divisions had difficulties mobilizing and retraining reservists. The problems that emerged did not prevent mobilization because the Soviets had time to correct them. Moreover, the units that experienced difficulties mobilizing may not be representative of the typical not-ready division. If the Soviets had been forced to respond to an attack, however, some of these divisions would not have been able to respond and the ability of other units to operate effectively would have been impaired. [redacted]

The Invasion of Czechoslovakia

[redacted] the Soviets began to prepare units in Eastern Europe and the western USSR to invade Czechoslovakia in the late spring of 1968 when negotiations with the Czechoslovak Government failed to reverse the political reforms made. Despite this systematic training of not-ready divisions, [redacted] they were held in reserve. Only Soviet ready divisions crossed the Czechoslovak borders when the invasion actually began. [redacted]

The Pact invasion of Czechoslovakia is the only example of joint military operations by Pact units in a crisis. In contrast to the deliberate preparations in Soviet units, the NSWP contingents conducted little, if any, additional training. [redacted] the Polish division that entered Czechoslovakia had recently failed an inspection, and [redacted] at least one of the Hungarian units was committed with newly arrived, untrained conscripts. The training that had been conducted in NSWP units was typical of peacetime training rather than final preparations for a major



military operation [redacted] the Bulgarian unit that participated required several weeks of training in the USSR under Soviet supervision before the invasion [redacted]

The preparations conducted in ready and not-ready Soviet divisions in the USSR differed markedly. [redacted] ready divisions [redacted] integrated individual reservists into subunits and conducted individual and small unit training [redacted] not-ready divisions, on the other hand [redacted] systematically retrained reservists by sending them to individual refresher training as well as through divisional field exercises. These final field exercises apparently were used by MD staffs before the invasion to evaluate the effectiveness of training and probably to certify these units as fit for commitment [redacted]

Despite such lengthy preparations, the training in not-ready divisions was not always adequate [redacted] the 59th Guards Motorized Rifle Division, a not-ready unit in the Odessa MD, in July 1968. Despite more than a month of training, the MD commander considered the division's performance unsatisfactory during a week-long field exercise and ordered the unit to conduct additional training. Widespread illness among the reservists prevented further training, but the division was kept in its training area until Soviet forces had established control in Czechoslovakia. Similarly, [redacted] several months of chaotic and ineffective training for reservists in [redacted] a not-ready division in the Carpathian MD. During this period, like the division in the Odessa MD [redacted] did not participate in the final invasion [redacted]

The Invasion of Afghanistan

The invasion of Afghanistan demonstrated that the Soviets were willing to mobilize and commit not-ready units if the situation demanded immediate action.

[redacted] Turkistan and Central Asian MDs during 1979 [redacted] military preparations in divisions [redacted] a deliberate Soviet buildup in Turkistan during that period. In

addition to these preparations, one not-ready division and several nondivisional support units in the Central Asian MD were mobilized in December 1979 on the eve of the invasion. The nondivisional support units were committed immediately when the Central Asian division moved into Afghanistan in March 1980 [redacted]

Soviet preparations for military contingencies in Afghanistan occurred in two phases. [redacted] several not-ready divisions were mobilized in March 1979 in response to the death of Soviet advisers in Herat. As the immediate crisis passed, the Soviets began to upgrade manning and training in two not-ready divisions in the Turkistan MD. To provide this additional manpower, an unscheduled, limited conscription was conducted in the western USSR in July, and a compressed training program was introduced in these units. Training continued even after the divisions had entered Afghanistan and established base camps. Before the units were committed to combat against the Afghan insurgents in early 1980, the reservists in these divisions were replaced by conscripts [redacted]

The preparations for the invasion exposed several deficiencies in the Soviet reserve system. These problems did not prevent the Soviets from committing units or from achieving their initial goals, but they did prolong preparations and raise doubts about the effectiveness of some units. [redacted] these problems were:

- Poor matches of reservists' skills with unit requirements. Many of the reservists called up for one tank regiment had been tank commanders on active duty but were assigned as tank drivers upon mobilization.
- Lack of familiarity with available equipment. Some reservists were called up as drivers for armored personnel carriers, but they had never driven the older models that were in these units.



- Ethnic reliability. Many of the Central Asian reservists who were mobilized in March 1979 were replaced by Slavic conscripts in July. In addition, Central Asians and ethnic German reservists who did participate in the invasion were replaced by conscripts in early 1980. At that time [redacted] there were reports that the reservists had "dishonored" themselves in Afghanistan [redacted] when the one not-ready division in the Central Asian MD conducted its emergency mobilization on the eve of the invasion, many reservists did not report as ordered and bribed medical authorities to provide excuses.

- Poor training [redacted] although training was conducted for several months before the invasion, it was poorly organized and superficial. [redacted]

Apparently, the Soviets have tried to address some of these problems [redacted] the commander of the Tadzhik Republic Military Commissariat was relieved because of problems during the mobilization, and [redacted] the frequency of alert exercises by military commissariats in this area has increased markedly [redacted]

[redacted]

[redacted]

Implications

On two occasions when the Soviets have invaded bordering countries, problems have emerged in their reserve system. They were able, nevertheless, to commit units and to achieve their initial objectives. Each time, however, the initial Soviet successes depended on the quality of available ready divisions. Although the Soviets provided extensive retraining for reservists before each operation, when they finally committed their forces, the role of reservists was limited. Thus, they demonstrated a clear preference for using ready units manned by conscripts. The ability of the reserve system and postmobilization training to prepare not-ready divisions for a major crisis has not been tested fully [redacted]

Conclusions

The relative contribution of reservists to Soviet and NSWP ground forces places different constraints on the Pact's capability to prepare for war in each region. Reservists have little impact on the Pact's ability to mobilize first-echelon divisions quickly opposite NATO's Central Region and along the Sino-Soviet border. They would, however, have a much greater impact on its ability to bring up the large second-echelon forces that Pact writings [redacted] indicate would be needed to defeat NATO or China. Similarly, many of the NSWP divisions in the Western Theater rely less on reservists than NSWP divisions in the Southwestern Theater do. Opposite NATO's flanks and Southwest Asia, on the other hand, reservists are the mainstay of Soviet ground

[redacted]

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forces. This dependence limits Soviet capabilities to undertake major campaigns without lengthy preparations in existing units or transferring some ready units from the other regions. [redacted]

The primary goal of the Pact's reserve systems is to mobilize quickly. The system is well organized and is tested frequently. Despite the reservists' frequent training, however, problems usually have emerged during genuine surprise tests and actual crises. The problems would not prevent mobilization, but some units, particularly not-ready divisions and nondivisional units, would require more time to complete preparations than Pact norms for alert allow. [redacted]

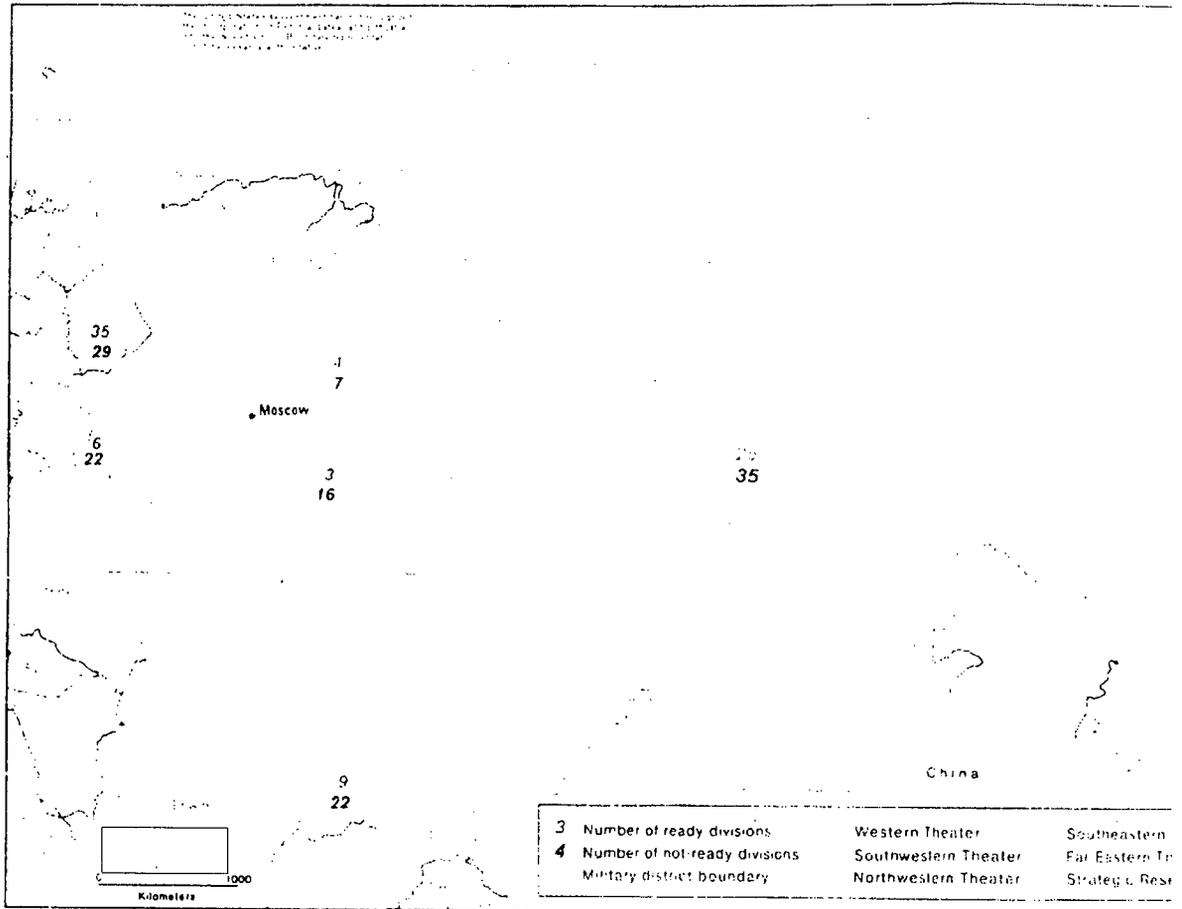
The infrequent nature and poor training for Pact reservists after their active service emphasizes the need for training in units after mobilization. Thus, the Soviets' apparent reluctance to use reservists in Czechoslovakia and Afghanistan may reflect their assessment of the relative proficiency of conscripts and reservists. In these limited operations, the Soviets were able to rely on conscripts. Given the preponderance of low-strength units, the Soviets would have little choice but to rely on reservists and to provide them the necessary training in not-ready units before undertaking major operations against NATO or China. [redacted]

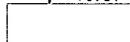
The Soviets and their allies are becoming increasingly dependent on reservists for wartime expansion of their armed forces because they are continuing to increase the numbers of low-strength and mobilization-base divisions in their force structure. These new divisions are for the most part equipped with surplus, aging weapons handed down by the more ready divisions that are being modernized with new gear. This process is creating a large mobilizable reserve force consistent with Soviet doctrine—and World War II experience—which teaches that the High Command must be able to generate massive reserve forces to ensure a sustained successful war effort. [redacted]

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Figure 2
Soviet Ground Divisions by Theater





2
Ground Divisions by Theater

