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Military requirements for the post-Cold War environment are the central question of a large, somewhat disorganized, debate. The concept of conducting frequent and extended "peace operations" has produced a significant effort to understand both their political context and their military requirements. One category of peace operations, interventions to restore and maintain order and stability, continues its prominence as current news and as a recurring theme in nightmare visions of the future.

It is sometimes difficult to anticipate the force size and the time required to restore and maintain order in a failed or failing state. The force size is driven by two demographic revolutions of the last decades: dramatic growth in the populations of troubled states, and the movement of a considerable portion of that population to the cities. The movement from rural to urban settings is so significant that the populations of some cities exceeds that of many states. The duration of such operations is affected both by their inherent difficulty and by the implicit need in most cases to recreate internal forces of order. Duration adds another dimension, defined by the force available to conduct the intervention and the duration of each unit's stay in the region.

This article investigates the numbers required for stability operations, both for entire countries and individual cities, and explores the implications of those numbers for deployment, rotation, readiness, and personnel retention.

Army Field Manual 100-23, *Peace Operations*, defines the general concept of "peace operations." Within the broader category, "peace enforcement" is further defined as

> the application of armed force or the threat of its use, normally pursuant to authorization, to compel compliance with sanctions or resolutions--the primary purpose of which is the maintenance or restoration of peace under conditions broadly defined by the international community.[1]

Within the general definition of peace enforcement, "restoration and maintenance of order and stability" are those peace enforcement activities in which

> Military forces may be employed to restore order and stability within a state or region where competent civil authority has ceased to function. They may be called upon to assist in the maintenance of order and stability in areas where it is threatened, where the loss of order and stability threatens international stability, or where human rights are endangered.[2]

In this article, the term "stability operations" refers to operations in which security forces (combining military, paramilitary, and police forces) carry out operations for the restoration and maintenance of order and stability.[3]

The Problem of Numbers in Stability Operations

There are no simple answers to the question of how many troops are required for any sort of military operations. However, the purpose of stability operations--to create an environment orderly enough that most routine civil functions could be carried out--suggests that the number of troops required is determined by the size of populations. This section discusses the general rationale for such an approach, illustrates the range of force numbers that have been used in military operations that seem to correspond to the definition of stability operations, and suggests implications for current population sizes in operations now described as peace enforcement.

From the start, practitioners of counterinsurgency have been clear in stating that the number of soldiers required to

counter guerrillas has had very little to do with the number of guerrillas. As Richard Clutterbuck wrote of Malaya in 1966,

> Much nonsense is heard on the subject of tie-down ratios in guerrilla warfare--that 10 to 12 government troops are needed to tie down a single guerrilla, for instance. This is a dangerous illusion, arising from a disregard of the facts.[4]

Conversely, a "hearts and minds" counterinsurgency campaign places the focus on the people, the military consequences of which are requirements for population control measures and local security of the population. Population control measures and local security both demand security force numbers proportional to the population. The static forces that protect the population from insurgents and cut off any support the population might provide to them are essential to the campaign. Consequently, in any stability operation it is almost certain that the force devoted to establishing order will be both larger in numerical terms than the forces dedicated to field combat and more aligned to political aspects of a "heart-and-minds" concept of operations.

This requirement for forces other than in the jungle or its equivalent is a general condition. Over a range of stability operations in which opposition has not progressed to the stage of mobile warfare by main force units, the size of stabilizing forces is determined by the size of the population and the level of protection or control that must be provided within the state. Simply generating forces does not guarantee success. Forces in a stability operation serve a broader political-military approach than simply countering or eliminating insurgencies. The ability to generate forces for a stability or peace enforcement operation is a most necessary condition for success--for even successful political strategies in such situations have a military component. The generation of forces is thus a necessary but not sufficient condition for achieving stabilizing objectives.

This proposition is illustrated rather than proven through some historical examples, each of which is described briefly below. Figure 1, below, shows historical cases of forces devoted to particular stability operations.
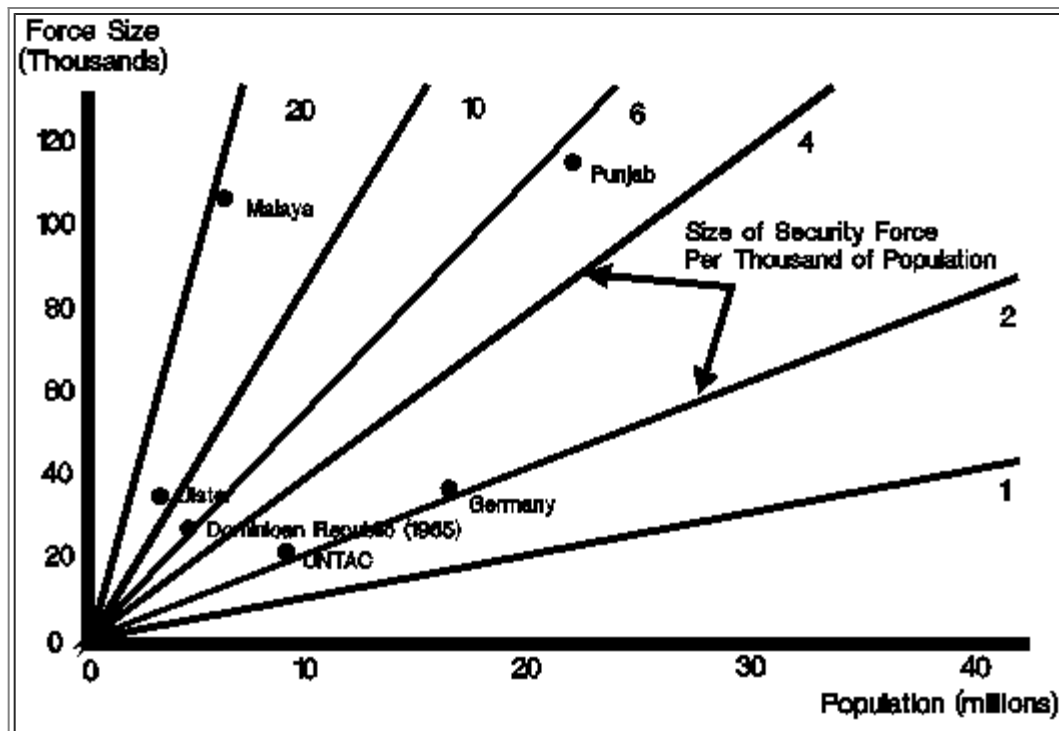

Figure 1. Security force numbers used in past stability operations.

The figure relates force size to population, showing the security force size per thousand of population. The figure portrays a range of situations, from enforcing the laws in a generally ordered society to situations of maintaining order where the rule of law has collapsed. The numbers shown are simply the aggregated number of police and army (the "security forces") used in particular cases to achieve results that do not always equate to "victory" or "success." The cases are suggestive rather than definitive, but they provide a sense of scale for the resources required in various

situations.

. *Force ratios of one to four per thousand of population*. At the low end of the force requirement scale are the police present day-to-day in generally peaceful populations such as the United States. Overall, the United States is policed at a ratio of about 2.3 sworn police officers per thousand of population. If the ratio is calculated to include the civilian support apparatus of police departments, the ratio increases to 3.1 law enforcement personnel per thousand.[5] Similar numbers are found in the United Kingdom (excluding Northern Ireland) and other European countries.

There are applications of numbers of this scale to military stability operations. The occupation of Germany immediately after the surrender used nine US divisions in the American Zone. In October 1945, policy changed and the operation shifted to a "police-type" occupation. This change led to the creation of the United States Constabulary (organized as a single large division) charged with the internal security of most of the American Zone of Occupation. The constabulary was created on the basis of one constable for every 450 German civilians (2.2 per thousand).[6] The force was entirely adequate to its limited objectives of enforcing public order, controlling black market transactions, and related police functions.

The UN Transitional Authority in Cambodia (UNTAC) deployed about 20,000 security forces (16,000 troops and 3600 civilian police) for a variety of duties that included supervision of the cease-fire and voluntary disarmament of combatants, supervision of about 60,000 indigenous police to provide law and order, and administration of a free and fair election. In a population of roughly 9.1 million, the UN force had a force ratio of about 2.2 per thousand of population. By itself, the UN did not have a presence outside of large population centers nor a plausible capability for coercion, control, or protection of either the combatant factions or the civilian population.

. *Force ratios of four to ten per thousand of population*. A number of operations have used security and military forces at such force ratios:

Ongoing operations in India's Punjab state against Sikh militants deploy a security force of about 115,000 (regular troops, paramilitary security formations, and police) to secure a population of about 20.2 million, giving a force ratio of 5.7 per thousand.[7] The counterinsurgency campaign in the Punjab has been denounced as routinely violating human rights by causing hundreds of disappearances and summary executions. In the face of some popular support for the insurgents, even such a harshly punitive campaign has required large forces to protect and coerce.[8]

In 1965, the United States intervened in the Dominican Republic to stave off an incipient civil war. The United States deployed soldiers and Marines to separate the protagonists and assumed responsibility for stability in much of the country, particularly the capital. Peak deployment of US forces brought 24,000 to stabilize a population of about 3.6 million, giving a force ratio of about 6.6 troops per thousand.[9]

. *Force ratios above ten per thousand of population*. Force ratios above ten per thousand have been mounted in stability operations. In 1952 the British forces in the Malayan Emergency deployed close to 40,000 regular troops from Britain and the Commonwealth as well as the regulars of the Malay Regiment itself.[10] At the same time, the police force had 29,800 regular police together with 41,300 special constables,[11] for a total full-time security force of more than 111,000. With a population at the time of 5,506,000, the British generated a force ratio of about 20 per thousand of population. If the Home Guard force of 210,000 (1953 strength, not all of whom were either armed or active at any given time) were added to the previous figure, the force ratio would be even higher.

In Northern Ireland the British government deployed for more than 25 years a security force of around 32,000 (including both British military forces and the Royal Ulster Constabulary) to secure a total population of just over 1.6 million, giving a force ratio of about 20 per thousand. The British have recently reduced their military forces as part of an ongoing peace process.

Implications of Force Ratios Based on Population

These population-driven force ratios have a number of implications. For total populations, they imply that stability

operations could demand large numbers of peacekeeping forces. For urban populations, they suggest that initial commitments could also be large. Finally, these ratios indicate that long-term commitments might be difficult to sustain without exacting unacceptable tolls on readiness or retention.

Implications for Entire Populations

The populations of countries in the underdeveloped world have expanded markedly relative to the population of the United States. More particularly, the populations of Third World countries have expanded even more dramatically relative to the size of the American military.

Figure 2, below, shows the population of various states on the framework used in Figure 1 to illustrate the historic force requirements for stabilization operations.
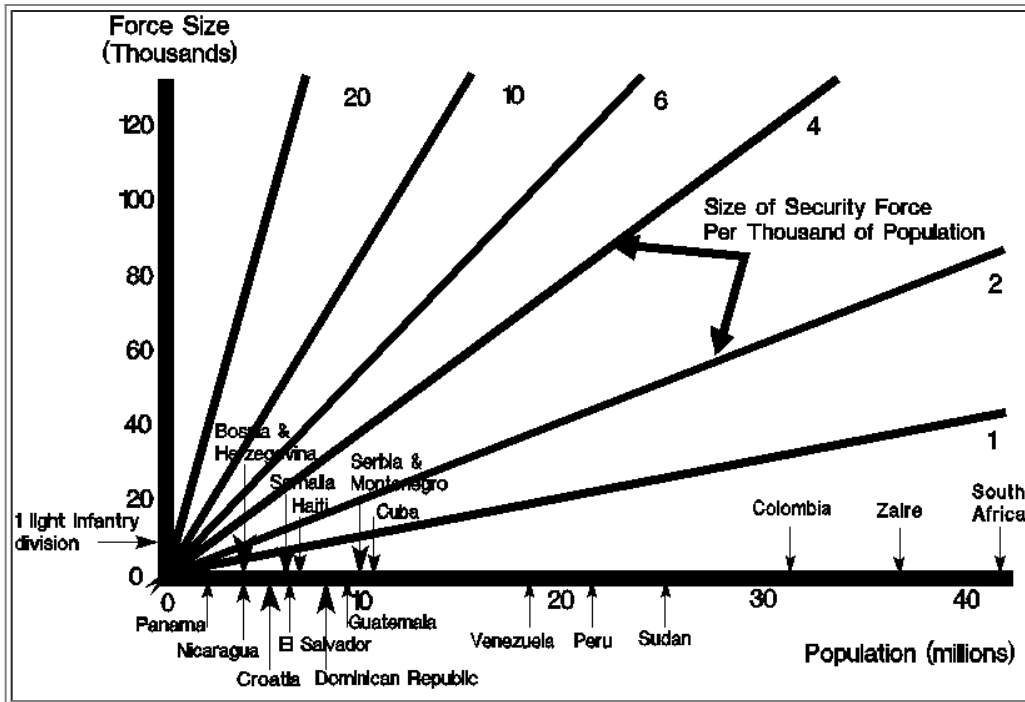

Figure 2. Security force size as a function of force ratios and current
populations of representative countries.

The figure suggests two implications. First, very few states have populations so small that they could be stabilized with modest-sized forces. Second, a number of states have populations so large that they are simply not candidates for stabilization by external forces. Between the two extremes are countries large enough that only substantial efforts on the part of great powers or substantial contributions from many states could generate forces large enough to overcome serious disorder in such populations. Consider, however, that even many of these countries have populations so large that relatively modest per capita force deployments would entail moving, sustaining, and employing tens of thousands of troops in what the Army calls a "bare-base environment." The more rustic the environment, the larger the logistics tail needed to sustain the force.

Implications at Smaller Scales, Problems with Cities

Some might propose avoiding the problem of total populations by dealing with entire countries a little at a time in some updated version of an enclave or oil spot approach. But the current sizes of starting points or regions in too many states create problems comparable to operations that undertake to deal with the entire state. If we assume that among the first operational tasks of a stabilizing force is securing the capital, entry ports, and principal cities, we must bear in mind that many of those cities are now so large that they themselves constitute major problems for stabilization.

				Capital's

Country	Population (millions)	Capital	Population of Capital (millions)	Population as percent of total
Columbia	34.0	Bogota	5.0	15%
Cuba	10.9	Havana	2.2	20%
Dominican Republic	7.6	Santo Domingo	1.3	17%
El Salvador	5.0	San Salvador	0.4	8%
Guatemala	10.3	Guatemala City	1.2	12%

Table 1. Populations of Capital Cities as Percentages of Total Populations. (Estimated populations circa 1993. Source: *Europa World Yearbook*, 1995.)

In interventions before World War II, the populations of countries in which the United States intervened were such that a small landing force of Marines and sailors often could secure the entry port. The populations of those ports and of the capital cities were generally small and in need of protection from the rural insurgents whose activities motivated the American intervention. Today that situation has changed significantly: capital cities and entry ports now have large populations frequently numbering over a million and, rather than being centers of stability on the fringe of disordered interiors, such cities are now more likely to be the center of disorder.

The problem of numbers is illustrated in the table above, giving the populations of some Caribbean and Latin American countries and their capital cities. Not only are the capitals heavily populated in absolute numbers, but many also contain a sizable percentage of the entire population of the country.

Beyond the absolute numbers of people in such cities, the cities themselves have developed in ways that complicate military operations. Much of the population of Third World cities lives in densely packed squatter settlements on the fringes of the core cities. As we discovered in Somalia, these aggregations of people in flimsy but densely packed shelters, clustered in areas without designed road access, are extremely difficult to patrol or control.[12]

The problem of numbers in the capital city or principal entry port presents an intervening power with a situation quite different from that of a traditional insurgency: Unless the capital city is quickly brought under both control and visible order, the credibility--locally and globally--of the intervention as a force for stability drains away together with whatever political legitimacy the intervention possessed. Therefore, establishing control over the large populations of such cities must be a major objective at the start of any operation, from which the conclusion is that any intervention force must have large numbers at the outset of operations.

The Problem of Numbers for Sustained Operations

The requirement for forces may extend well beyond the anticipated conclusion of an intervention. The United States tends to expect that the forces of other nations will replace American forces soon after initial operations. If such expectations are not met, American military forces can face substantial and long-term commitments. To sustain a force in a stability operation for any length of time, other forces must be available--either preparing for deployment to the operation or recovering and retraining from deployment. The ability to sustain an intervention force depends on the total number of available force units of the desired kind, the number of such units committed to the operation, the time required for training and deploying for the mission, and the time needed for recovery and retraining for the units' conventional missions.

All recent peace operations have relied on infantry-heavy units, either pure infantry or mechanized infantry. Other types of units, such as military police, civil affairs, and psyops, have carried out critical functions, but in manpower-intensive situations such as stability operations there has been simply no alternative to drawing on infantry for the bulk of the force. Other units--engineers, aviation, artillery--can provide support as in regular operations where appropriate,

or with proper training they can substitute for infantry. Furthermore, in bare-base regions, the logistics support force requirement will be substantial.

Table 2, below, shows the total numbers of infantry battalions and other units available within the existing force structure for both the Army (active and reserve) and the Marines (active).

Type of Unit	Active Army	Army Reserve or National Guard	Active USMC
Infantry battalions	42	56	24
Mechanized infantry battalions	26	42	-
Non-divisional Military Police companies	49	110	-
Terminal Operating companies	4	4	-

Table 2. Total 1995 Force Inventories for Some Representative Units.
(Source: Program Analysis & Evaluation Directorate, OCSA, US Army.)

There is an intimate connection between the total force size, the numbers deployed to an operational tour, the length of an operational tour, and the time before a unit or an individual next faces an operational deployment.

In Vietnam, American soldiers and Marines had operational tours as long as 12 or 13 months. In recent history, Western governments have been unwilling to impose such protracted tours. European countries and the United States now generally accept that units will conduct intervention operations in six-month increments (or less). Pure peacekeeping tours such as the US peacekeeping operations in Sinai and Macedonia have been six-month deployments. The same has held true for Marine deployments on presence operations. Commitment to peace enforcement operations, where the prospect of active combat is one of the conditions of the intervention, may develop a shorter rotation cycle.
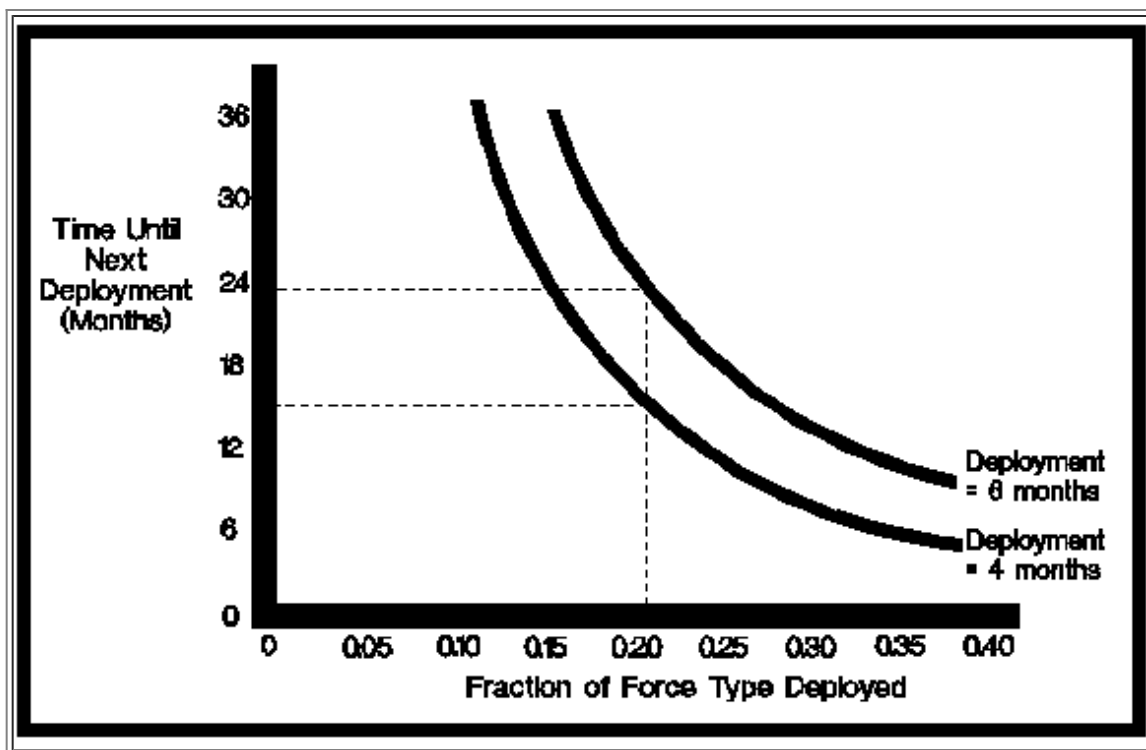

Figure 3. Time between deployments determined by the fraction of the force deployed.

Figure 3, above, shows the time between operational tours as a function of the total fraction of the units (or personnel)

of the given type deployed to the operation compared to the duration of the operational tour.[13] The time between operational tours is an important measure of the effect of the operation on the entire force in two ways:

- It defines the total time available for training, both that training required for the unit's stability role and the retraining required to prepare the unit for its original mission upon completion of the intervention operation.
- Over a sustained period, it represents the time available for relief between intervention operations for the now relatively large portion of the enlisted force which has chosen the military as a profession.

The general character of Figure 3 shows that, with short operational deployments, the time to next deployment rapidly decreases with the fraction of the force deployed. With one-fifth of the force deployed on this or related operations, the time until the soldier's next deployment is 16 months (with four-month operational deployments) or 24 months (with six-month operational deployments). With a third of the force deployed, the time to next deployment plummets to eight months (for four-month operational tours) or 12 months (for six-month operational tours).

These tour lengths have important implications for readiness and quality of life. If units have only a little more than a year for a cycle of retraining to original role, maintaining skills within their original role, and then training to special deployment tasks, it seems unlikely they will have time to progress to highly integrated combined arms training. This will affect even units that are not deployed; for example, an armored brigade that has had its mechanized infantry battalion deployed to an operation will not be able to train at brigade level or even be able to train battalion task forces by cross-attachment of mechanized companies to armor battalions.

The combination of force ratios, current populations, the size of existing infantry forces, and the implications for rotation can be astounding. Force ratios larger than ten members of the security forces for every thousand of population are not uncommon in current operations (Northern Ireland, or even Mogadishu). Sustaining a stabilizing force at such a force ratio for a city as large as one million (or for a country as small as one million) could require a deployment of about a quarter of all regular infantry battalions in the US Army. With current force sizes this means that within two years, every infantry soldier in the US Army would have been cycled through an operational deployment and many would have started on second deployments to the operational area.

The human consequences are potentially more grave. It is sobering to realize that, at a minimum, any extended commitment to a particular operation could mean many individuals would expect a deployment to that operation every year. It is difficult to predict the full range of effects on family life caused by frequent absences of military family members and their frequent exposure to combat-like conditions. While some might imagine that success in such ventures could breed praetorian ambitions in the military, this is hardly the most likely outcome of frequent returns to combat-like short tours. Those with experience of the Vietnam decade see such commitments leading to retention problems and the attendant increases in training costs, as well as the wearing away of the professional force so painfully established since the mid-1970s.

Implications

In the past decade, as civilian populations in underdeveloped states have exploded, the size of American and allied military forces has declined significantly. Interventions to restore and maintain order and stability place military forces squarely at the juncture of these two trends. As practiced in recent decades, intervention operations are troop-intensive, with the forces required related closely to the size of the populations in the failed or failing states.

The populations of many countries are now large enough to strain the ability of the American military to provide stabilizing forces unilaterally at even modest per capita force ratios. Many countries have populations so large that the United States could participate in their stabilization only through multilateral forces that bring together major force contributions from a large number of countries. And we must finally acknowledge that many countries are simply too big to be plausible candidates for stabilization by external forces.

If a stability operation must be sustained for an extended period, the rotation of forces can have a pronounced effect on the readiness of the rest of the force for other military missions. At the same time, the troops may face repeated deployments to combat-like tours for what appear to be less-than-vital national interests. The effects on retention and ultimately the professionalism of the force seem likely to be adverse.

NOTES

1. US Army, FM 100-23, *Peace Operations,* December 1994, p. 6.

2. Ibid., p. 7.

3. This expression reuses the early doctrinal term "stability operations" which is no longer a part of the lexicon. As defined in 1967, "stability operations" was that type of internal defense and internal development operations and assistance provided by the armed forces to maintain, restore, or establish a climate of order within which responsible government can function effectively and without which progress cannot be achieved. US Army, FM 31-23, *Stability Operations--U.S. Army Doctrine* (Washington: GPO, 1967). The term is relevant to this article in that it provided analytical and logical continuity between the conditions under which earlier operations were conducted and our present concepts of peace enforcement.

4. Richard L. Clutterbuck, *The Long, Long War: Counterinsurgency in Malaya and Vietnam* (New York: Praeger, 1966), pp. 42-43. See also the discussion of such "tie-down ratios" in Larry E. Cable, *Conflict of Myths: The Development of American Counterinsurgency Doctrine and the Vietnam War* (New York: New York Univ. Press, 1986), pp. 81-83.

5. Federal Bureau of Investigation, Department of Justice, *Crime in the United States 1993, Uniform Crime Reports for the United States 1993* (Washington: GPO, 1994).

6. Earl F. Ziemke, *The United States Army in the Occupation of Germany, 1944-1946* (Washington, GPO, 1975), p. 341.

7. Interview with Punjab's Director General of Police, Kanwar Pal Singh Gill, *Jane's Defence Weekly*, 23 January 1993, p. 32.

8. Human Rights Watch, *Human Rights Watch World Report 1994: Events of 1993* (New York: Human Rights Watch, 1993), pp. 162-63. Amnesty International, *An Unnatural Fate: "Disappearances" and Impunity in the Indian States of Jammu and Kashmir and Punjab* (New York: Amnesty International, 1993).

9. Lawrence A. Yates, Power Pack: U.S. Intervention in the Dominican Republic, 1965-1966 (Leavenworth, Kans.: Combat Studies Institute, 1988).

10. Noel Barber*, The War of the Running Dogs, The Malayan Emergency: 1948-1960* (New York: Weybright and Talley, 1971), pp. 156-57.

11. Federation of Malaya, *Federation of Malaya Annual Report, 1953* (Kuala Lumpur: Government Press, 1954), p. 223.

12. Problems of urban insurgency are overviewed in Jennifer Morrison Taw and Bruce Hoffman, *The Urbanization of Insurgency: The Potential Challenge to U.S. Army Operations* (Santa Monica, Calif.: RAND, MR-398-A, 1994).

13. The fraction deployed may be different depending on whether it is calculated on the basis of units or personnel. The fraction of personnel of a certain type deployed will be smaller than the corresponding fraction of units deployed because of the additional personnel slots for such personnel in other than TO&E units.

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