Workshop Report

DEFENSIVE RESTRUCTURING OF GROUND FORCES IN EUROPE

A report on a workshop cosponsored by the Institute for Defense and Disarmament Studies and the RAND Corporation in Washington, DC, on 17 January 1989.

Contents

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1. Presentation by Lutz Unterseher of the International Study Group on Alternative Security Policy (SAS), Bonn, FRG.

Unterseher began by outlining the SAS view of the major deficiencies in NATO's current defense posture:

** While NATO's current conventional forces are widely perceived to be incapable of providing an effective forward defense of Germany, its nuclear first-use policy is becoming less and less tenable.

** NATO's growing emphasis on high-tech, deep-strike weapons is generating ever greater demands on its scarce defense funds. Further, these weapons are relatively unreliable and unlikely to meet planners' expectations of high accuracy at long range.

** Many of NATO's forces are geared toward preemption or deep strikes and, hence, are "time-sensitive" and destabilizing. This is especially true of tactical nuclear weapons. Further, the alliance's large operational reserves and overly centralized logistics system offer lucrative targets to potential attackers.

** Given current demographic and economic constraints, NATO can retain its large operational reserves only at the cost of leaving "gaps" in its forward line of defense. In short, the very contingency for which the operational reserves are maintained -- a frontline breakthrough -- is made more likely by their size.

** NATO's overemphasis on armor-heavy forces dangerously simplifies the challenge facing any potential aggressor.

** Given the coming shortage of potential draftees in the FRG (and elsewhere) and growing alliance-wide pressures to restrain defense spending, NATO makes too little use of reserves and devotes too great a proportion of its personnel to support roles rather than combat.

The Spider and Web Defense

Turning to the SAS solution to these problems, Unterseher described the "spider and web" defense model. He maintained that by combining a static infantry net with (smaller than current) mechanized forces, it would, if implemented, provide a deep and flexible forward defense without the current gaps. According to SAS estimates, such a defense could halt and destroy a WTO invasion force within 20-40 km of the inter-German border. Further, he claimed, an SAS-style defense would conform to new demographic and economic realities and would better contribute to stability in Europe.

Next, Unterseher described in detail the nature, functions, and synergistic interaction of the network infantry web and

mechanized spider forces. The network infantry component consists of 450 infantry battalions, each assigned to a fixed forward area. Dispersed underground shelters would afford the infantry protection against artillery barrages. Immediately adjacent to the inter-German border, the model prescribes establishing a fire zone on which nearby forces could concentrate their fire. Together the fire zone and web would extend about 52 miles west of the border.

Only 150 of the network battalions -- those deployed relatively close to the border -- would be maintained at full strength in peacetime. Although the other 300 would have only 25 percent active peacetime personnel, a decentralized mobilization process would guarantee that they could quickly be brought to full strength.

The mobile element comprises 150 combat battalions (including 80 non-FRG formations). Most would deploy within the area-covering net and have about 90 percent of their personnel on active duty in peacetime. To ensure optimal exploitation of the terrain, the model incorporates a variety of mobile force types (armor, cavalry, and light mechanized infantry units).

According to Unterseher, the mobile and area-covering elements are designed to interact like a spider and its web. The network infantry units would supply continuous information on enemy movements and operate a decentralized system of stationary supply depots for the mobile forces. They could also block, delay, attrite, split up, and canalize invading units.

Because the mobile forces would be able to mass for short periods, they could block, contain, counterattack, and ultimately destroy an intruder. Since the web would hamper an intruder's movements and support as well as provide covering fire for mobile elements, these could be smaller than today's armored and mechanized forces. In turn, the web would benefit from the support of the spider formations, which could extricate exposed infantry or help repair gaps in the net.

The SAS-proposed defense would offer the enemy few lucrative targets because its network units would be dispersed and its mobile ones would be relatively small, . And, Unterseher emphasized, since the mobile forces could operate optimally only within the net, they would not contribute to Eastern fears of a cross-border attack.

2. Response by Professor Barry Posen, MIT Center for International Studies, Cambridge, Massachusetts, USA.

Professor Posen launched the discussion segment of the workshop with his own reflections on the SAS model. He structured his remarks on several levels: grand strategy, operational/theater strategy, tactics, and the human level. He also addressed the implications of the SAS model for arms control.

** Posen noted that if nuclear weapons are taken out of the equation, the deterrent value of NATO's forces is greatly reduced. The SAS force structure does create a very high level of uncertainty for the Soviets, however uncertainty is only one kind of deterrent value, and real catastrophe is another. There is not much potential here for a real catastrophe for the Soviets at the conventional level.

** Also at issue is what is needed to deter this adversary at this time. With the changes Gorbachev is making it may appear that the kind of military capability that the SAS is advocating can dissuade this adversary at this time.

** Posen also warned against being overly doctrinaire about the destabilizing effects of offensive capabilities. It may be possible through different arrangements of forces to maintain some of the good things that offensive capabilities convey -- like greater uncertainty about the potential costs of aggression -- without necessarily causing the kinds of mutually interacting preemptive incentives that some offense capabilities can create.

** Suppose either Northern or Southern Europe is threatened preferentially. Under the SAS proposal we must ask what kind of help can the center provide the North or South. "The effects of the possible battle" inherent in whatever offensive forces NATO has on the Central Front will serve to fix some Soviet forces which can not be used for attacks to the North or South. If we remove these offensive forces we need to consider what effect it will have on other areas.

** The SAS posture removes the risk of counteroffensives all along the front. However a lot of the adversary's forces normally are committed to screening; this creates a lot of uncertainty in the adversary's mind and fixes a lot of its forces. Do we want to give up this uncertainty?

** Is it really true that all capabilities to cross the line must be weeded out to increase strategic stability? If your ground forces don't have the capability to do operational level offenses then why are tactical fighters and shallow strike weaponry so threatening? Perhaps tac air can substitute for some of the missing operational reserve capacity.

** The problem of cross-corps support and the interdependency of spider and web forces. If spider forces are drawn out of a sector to support another corps then the dissolution of the effectiveness of the corps of origin may be quite fast.

** The resilience of static infantry forces to a determined breakthrough attempt is a critical question. What happens if the adversary is free to throw large numbers of tactical fighters with large numbers of high-explosive bombs and fuel-air explosives, and large numbers of artillery undeterred from concentration because you have no counter-attack capability up and down the front? Is this force structure resilient to that kind of force, or does it have a certain kind of brittleness? Anyone who has used even a simple simulation program knows that if you find yourself short of mechanized and armored units and you try to move around with a volksgrenadier or static infantry unit you will be in a nightmarish situation.

** Perhaps even the web infantry forces need a tank-like weapon (self-propelled, armored, kinetic-energy gun platform). Historically infantry forces have placed a priority on acquiring tanks and tank destroyers when they were available.

** Barriers create two kinds of problems. If barriers are permanent the adversary will (using modern intelligence capabilities and precision guided weapons) locate them, suppress them, and move around them. If you are setting up barriers after mobilization and you are very dependent on the cohesion of this barrier/obstacle system then the adversary will specialize to get in there before you set things up, thus creating incentives to move to a more preemptive doctrine.

** Cohesion at the human level is an issue. Some of what keeps soldiers going is the hope of relief. Question here is can infantry have a reasonable expectation of relief from the spider forces? If as the spider forces get worn down and exhausted, if there is no operational reserve to come to the rescue, does the system's morale degrade precipitously?

** The SAS approach works best if it is run by one army. The type of command and control and the level of cooperation amongst units required is best achieved under one national army. Having a multi-national force under the SAS concept is a little more complicated than Lutz has suggested.

** The SAS reforms could cut two ways regarding mobilization decisions. If one has an explicitly defensive posture then it <u>may</u> be possible politically to get an earlier mobilization decision. On the other hand, given the expanded role of the Bundeswehr under this plan for the initial defense, there is a little more political and diplomatic onus on the German decision under this structure. We have to ask ourselves whether this

would be good for achieving good mobilization decisions.

The lion's share of the blood price for combat, if dissuasion fails, is going to be paid by German soldiers; the other allies specializing in mechanized and air forces are paying a price more in capital, while the Germans pay in blood. This potentially makes the German decision to mobilize more difficult.

** Regarding demographics and economics, the SAS model appears to be substituting German bodies and blood for capital at a time when Germany is probably richer than it has ever been, but has a manpower shortage. Countries forced into this situation before have not been in a happy situation. In 1944 the German army was forced to use infantry armed with simple weapons (bazookas, medium machine guns, mortars, mines) on the western front. These forces often gave stellar defensive performances. The exchange rate for material was very favorable, but for manpower was unfavorable. Such infantry has to pay a very high blood price to stop highly mechanized forces.

Do we have populations we want to ask to wage this kind of war? The issue here is that massed infantry warfare, nationalism, militarism and the cult of the offensive have frequently traveled together in history. This specter will not appear immediately if you move toward this kind of posture, but if you weed nuclear weapons out of this structure, if you depend on the will of the individual fighting soldier and cohesion of the front, countries begin to act in ways that encourage these values.

** It would be great if we could get more specialization in NATO defense industries, but we are not going to get it. Independent sovereign nations have to be concerned with the possibility that they will be on their own someday; countries that have a weapons capability will try to maintain that capability as a hedge. This is very significant barrier to cooperation.

** In a conventional arms control context aspects of the SAS structure may provide density and depth that would make breakthrough less likely than if the current structure were simply maintained with fewer units. In an arms control context, if both sides are reducing the size of their armored forces and increasing the density of truly defensive forces up and down the line, then some of these defensive defense ideas seem to be a lot more stable than if carried out unilaterally.

** The SAS approach raises some very important alliance cohesion questions as well. Posen suggested that the American military appears superfluous in the SAS concept. There are many members of the Alliance community, amongst them many Germans, who fear most of all the U.S. leaving the Alliance. It might not be a good idea to create a structure which will allow European neutralists or American isolationists to say "They can do it on

their own, they don't need the Americans, let's go home and save some money."

3. Workshop Discussion

During the discussion segment participants explored three issue areas: (1) macro-level concerns about maintaining extended nuclear deterrence, the costs and benefits of counteroffensive capabilities, and the likely effect on alliance cohesion of implementing an SAS-style defense; (2) micro-level concerns about the battlefield effectiveness of the SAS-proposed force elements; and (3) implications of the model for arms control.

Responding to Barry Posen's comments regarding nuclear deterrence, Unterseher pointed out that the SAS model in fact includes a sea-based minimum nuclear deterrent to forestall a WTO nuclear attack and to increase any potential invader's uncertainty about the price of aggression. Further, although the presence of battlefield nuclear weapons may compel an enemy force to disperse, that can also be accomplished with modern conventional weapons of 10-20 km range.

Following up Posen's suggestion that a NATO non-preemptive cross-border counterattack capability might strengthen crisis stability several participants insisted that NATO also needs to retain a deep-strike capability. One argued that simply deploying the Multiple Launch Rocket System (MLRS) with rockets having a 100-150 km range would provide a "defensive way of extending the battlefield."

Unterseher retorted that because of the underlying political instability in Eastern Europe and the proximity of Berlin to the FRG border, any NATO cross-border capability would be provocative. Further, he argued, deep-fire weapons are too expensive and unreliable, and place unrealistic demands on intelligence systems. By contrast, the shorter-range indirect-fire weapons suggested by SAS are less provocative, cheaper, and more dependable.

Several participants joined Posen in wondering if the SAS's heavy reliance on rapid mobilization reserves would not exacerbate the very problems of provocation and vulnerability to preemptive attack the model is meant to alleviate. Would Western mobilization of the net appear to the East as a prelude to an assault? And would the mobilization centers be attractive targets for a WTO preemptive attack?

Joshua Epstein answered that the degree to which raising an

SAS-type shield would threaten the East depends on the size and nature of the mobile "sword" forces that complement the shield. Unterseher quickly added that his model's mobile element does not constitute an offensive operational reserve in the usual sense: it has smaller component units and fewer personnel. In addition, its weapon mix is not geared toward deep-strike missions.

Responding to concerns about alliance cohesion Unterseher agreed that the United States would have a smaller part; but it and the other allies would still play a vital role, furnishing mobile ground forces and, most importantly, tactical air and naval power. Moreover, this division of labor would make the most of the unique strengths of each nation.

How Big a "Bumblebee"?

Workshop discussion of the battlefield effectiveness of the SAS-prescribed forces began with one participant asking, How big a bumblebee can this web handle? Among the particular issues raised were the vulnerability and flexibility of the web units, their ability to perform all the tasks required of them, and possible morale problems arising from their decentralized organization.

Regarding force-to-space requirements, some participants noted that the web, once mobilized, would be denser than current NATO forward forces. However, others thought that its more static character would make it quite vulnerable to mass attack. Could such an attack overwhelm sections of the web defense? Joshua Epstein noted that answering this question for the SAS-proposed forces or any others requires a much more thorough analysis of the force-to-space problem than currently available.

Examining the mission of the web infantry, some workshop participants wondered if the infantry units could indeed perform their many tasks under pressure. (These include intelligence gathering, engaging the enemy with direct and indirect fire, and furnishing logistics support for spider forces.) Along similar lines Posen suggested that decentralized deployment might have the effect of undermining the morale of individual units. When under attack and without much prospect of reinforcement or relief, would these isolated units be able to adequately function at all?

Regarding the net's resiliency, Unterseher responded that each infantry battalion would be quite flexible within its own sector (averaging 144 sq kilometers in the forward portion of the web). Under artillery attack, they would have recourse to numerous underground shelters. And support would be provided by both infantry in adjacent sectors and by spider elements which could, if necessary, completely extricate embattled infantry units. As for the ability of net units to function under stress, he said

they would be more successful than current NATO forces in carrying out their assigned missions. In part, their superior capabilities derive from their operating within a fixed and familiar zone, and fighting from a variety of prepared positions.

Looking at the mobile element, one participant contended that its reduced logistics "tail" would impair its mobility, and thus render the entire defense vulnerable to massed attacks along one or two corridors. This criticism, Unterseher argued, ignores one of the model's key elements: the system of decentralized supply depots overseen by the net infantry. This system would facilitate quick response by the spider elements operating within the web while still limiting their cross-border offensive capability. He also reminded the workshop that FRG territorial forces already furnish substantial logistical support to NATO's mechanized units.

Implications for Arms Control

In his presentation Unterseher warned that unless conventional arms reductions in Europe are combined with defensive restructuring, they could actually undermine rather than improve stability by increasing both sides' vulnerability to surprise attack. Posen agreed, but judged that any significant shift toward an SAS-type alternative is not now feasible. Instead, a step-by-step process of bilateral reductions and restructuring might work. As a first-step, the two sides could reduce the density of their ground forces but retain some "shallow strike" offensive capability. This would increase stability and create the basis for more significant modifications later. With both sides proceeding in this way, Western fears about adopting a nonoffensive defense might gradually dissipate.

Randall Forsberg expressed concern that efforts to restructure military forces unilaterally would complicate the negotiation of bilateral arms control measures. Nevertheless, a process of reciprocal unilateral steps might be easier to initiate than bilateral reductions because it would not hinge on negotiating an intrusive verification regime. But Unterseher thought that even with unilateral initiatives, "transparency" is essential. Before either side would reciprocate moves by the other, their nature and extent would have to be clear.

In response Forsberg suggested that verification problems might bedevil all efforts to effect dramatic reductions or restructuring in the near future. In the short term, she said, the only negotiable measure might be an offensive-weapon withdrawal zone. Several workshop participants concurred. But Unterseher countered that such a zone could actually decrease stability because its borders would constitute "trip wires." If, in a crisis, either side sent some of its forces into the zone, the move might be viewed by the other side as a casus belli.

In concluding, Unterseher declared that the SAS model is very "arms control friendly." Although it does not require bilateral arms reductions, it would mitigate their possibly destabilizing side-effects. As for implementing the SAS model step-by-step, Unterseher insisted that the model's unique value depends crucially on the overall balance and interaction of its components. Disrupting this balance -- for instance, by combining the net with today's large offense-oriented operational reserves and deep-strike systems -- would produce a force structure more destabilizing than the current one. Nevertheless, he acknowledged that any reduction in NATO and WTO offensive capabilities would signal progress.

Appendix 1. IDDS-RAND Workshop Participants

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Appendix 2. The SAS Approach to Air and Coastal Defense

[When the SAS first began designing its "spider and web" nonprovocative defense model, it confined itself to the land defense of the inter-German border and to the West German role. Perturbed by NATO's continuing heavy reliance on theater nuclear weapons and disillusioned by the failure of arms control efforts to enhance security in central Europe, the SAS advocated unilateral restructuring by the frontline FRG army.

While the original emphases have been maintained to some degree, the late-1988 version of the SAS model embodies the group's response to changing circumstances and to criticism of the earlier version. The revised model incorporates (1) an integrated air defense component, (2) a scheme for closer Danish-West German cooperation to improve Western defense of the Baltic coasts and exits, and (3) a plan for distributing responsibilities and integrating the contributions of NATO members.

The following is an edited excerpt from **Spider and Web: The Case for a Pragmatic Defense Alternative** by Lutz Unterseher (SAS, Bonn: 1988).]

Air Defense Component

A future air defense of NATO's frontline in central Europe should comprise the following elements:

** Surface-to-air missile deployments at a string of clustered positions all along the border and at several rear-area sites. The latter would help protect the military infrastructure as well as air bases earmarked to receive transatlantic reserves in the event of war. The dimensions of the system would be roughly the same as now. NATO would continuously modernize it -- not only technologically, but also through such measures as hardening, dispersal, and improved camouflaging of firing and sensor positions in order to make them less tempting targets. Because this ground-based air defense system would have to be integrated with the anti-air component of the West German infantry network, its personnel would be drawn primarily from the West German Luftwaffe (air force).

** A force of 400 to 500 air defense fighters that would cover the spaces between the ground-based missile clusters, thus providing flexible force concentration within a static defense network (again the spider-web approach). These aircraft, derived from existing models, should possess STOL capability and rely on a mobile base infrastructure, including makeshift runways (such as stretches of roads) and flying club airfields. If NATO abandons its current huge air bases, it would take a major step toward a low-target profile and, consequently, enhanced

stability on the central front.

To compensate for the disproportionately large FRG ground force contributions, the other NATO states should furnish a much increased percentage of the alliance's air forces.

** As an optional element, a certain number of close-air-support aircraft to flexibly and directly back up the forward defending forces on the ground. For example, 200 to 300 such planes -- either highly agile propjets or aircraft with VTOL capability -- could operate from unprepared fields in central Europe. Such an air defense would require no fighter bombers whatsoever for deep penetration attacks.

Naval Defense Component

A future naval defense of the Baltic coasts and exits should be closely integrated with the West's land defenses and comprise the following elements:

** Roughly 20 coastal defense batteries composed of antiship missile launchers on light armored carriers, which move randomly among dispersed, hardened, and well camouflaged emplacements.

** A continually upgraded contingent of mine warfare vessels comparable in size to the current one and having a good capacity to lay semi-intelligent minefields in straits and vital coastal areas.

** Thirty to 40 medium helicopters, based at dispersed heliports, and 40-50 fast patrol boats armed with anti-ship missiles. These would make possible flexible defensive concentration.

For reasonable endurance this defense would demand only limited personnel reserves from the coastal regions and decentralized, robust logistics with spare parts, fuel, and -- most importantly -- ample missile stocks. Such a naval defense would require no fighter bombers for bombarding the opponent's coast and no submarines for attacking the Baltic lanes of communication.

The improved protection of the Baltic coasts and exits clearly requires closer Danish-West German cooperation than currently exists. In light of the heavy demands on the FRG both in this role and in direct defense of the front line, the traditional blue-water navies of the Netherlands, the UK, and the United States should take over much more responsibility for performing the alliance's sea control missions.