FOURTEEN ☆ MISSILE IN SEARCH OF A MISSION

Why does the Navy need TOMAHAWK? It is the most cost-effective way of maximizing our fleet's capabilities to deter war, or force its earliest termination on terms favorable to the United States, if deterrence fails. In essence, TOMAHAWK will conserve valuable resources and save lives.

—Rear Admiral Stephen Hostettler, 1984[1]

It's always better to have bigger bullets, holding everything else constant.

—J. F. Lehman, U.S. Secretary of the Navy, 1984[2]

More than just another weapon system in America's nuclear arsenal, the cruise missile changes the capabilities of U.S. forces in ways that are new and fraught with hazard. With deployment of the sea-launched Tomahawk cruise missile,* the number of ships in the Pacific Fleet which can launch a nuclear land-attack strike will increase from five in 1984 to about fifty by 1990, perhaps raising the potential for nuclear war by the same ratio.

This escalation in nuclear firepower began in June 1984, when Sturgeon- and Los Angeles-class nuclear submarines in the Pacific were

* A cruise missile is categorized by three characteristics: how it is launched (by sea, air, or land); what kind of warhead it carries (nuclear or conventional); and what its target is (anti-ship or land-attack).

armed with the sea-launched version of the Tomahawk.*[5] To test the political acceptability of the cruise build-up, the U.S. sent the *Tunny*, a Sturgeon-class submarine known to be Tomahawk-capable, to Japan as part of a 7th Fleet visit. In response, five thousand people filled a park facing the naval base at Yokosuka to protest at the Tomahawk deployment.[6]

Origins of the Cruise Missile

Deployment of the cruise missile in the Pacific was the result of superpower politics, rather than the usual U.S. domestic pressures in weapons procurement – intra-service rivalry, Congressional porkbarrel politics, and competition among defense contractors.[7] Indeed, a 1984 Congressional study reveals that the military services, each with their own plans for new weapons, were far from enamoured with the new missile:

> The services opposed cruise missiles for a variety of specific reasons, the common thread of which was fear that the cruise missile would threaten and/or compete for scarce funds and weapons systems they preferred. The Air Force was concerned that development of a long-range air-launched cruise missile (ALCM) would undermine its rationale for a new manned penetrating bomber (the B-1); the Navy feared that SLCMs [Sea-Launched Cruise Missile] would compete with big aircraft carriers, since they could be placed on any ship and be used against targets at sea or on land; and the Army worried that ground-launched cruise missiles (GLCMs) would compete with artillery on the battlefield and with the other services' existing "tactical" and "strategic" weaponry, thus draining resources from desired improvements in conventional forces.[8]

Furthermore, deployment of the cruise missile in Western Europe and the Pacific was not, as is sometimes claimed, an answer to Soviet

* This was the nuclear, sea-launched, land-attack version of Tomahawk. The sea-launched, conventionally armed anti-ship version appeared on four Pacific Fleet vessels a year earlier.[3] Currently there are no ground- or air-launched cruise missiles in the Pacific. However, armed with air-launched cruise missiles, B-52s from SAC's Fairchild Air Force Base in the state of Washington can fly quickly to the Soviet Far East to supplement the B-52Gs from Guam, which are armed with nuclear gravity bombs.[4]

deployment of either intermediate ballistic or cruise missiles. Rather, the cruise missile grew out of political maneuvering between the U.S., the Soviet Union, and Western Europe.

The initial development contracts sprang from Henry Kissinger's need for another bargaining chip in arms control negotiations in 1972.[9] Later in the decade, right-wing American strategists undermined the Strategic Arms Limitation Talks (SALT II) by skillfully exploiting West European fears about the reliability of the Atlantic alliance. The West European leadership argued that the U.S. was "giving away" a weapon – the cruise missile – that the Europeans wanted. As a *quid pro quo* for support for the SALT Treaty, the U.S. provided the ground-launched cruise missile to the Europeans. Additionally, the air-launched cruise found an advocate in Jimmy Carter, who used it to beat back an Air Force campaign to fund the B-1 bomber. The U.S. military was thus armed with cruise missiles, unsure of exactly what to do with them.

Cruising with the Cruise

The cruise missile is a pilotless, self-guiding jet bomber. The version currently deployed in the Pacific, the sea-launched Tomahawk, comes in three models – nuclear-armed for land attack, conventionally armed for land-attack, and conventionally armed for anti-ship strikes.

The missile flight begins with launch, followed by a relatively high cruise towards the target, and finally a low altitude search and attack phase (see Figure 14.1). While nuclear Tomahawks are relatively fast compared to aircraft, they still take two to three hours to cover their maximum range – a long time in a nuclear war. Ballistic missiles, by comparison, require only thirty minutes to travel 12,000 km – about twenty times as fast as the cruise. Since conventional warheads are so heavy, the non-nuclear Tomahawk can cover only half the distance of its nuclear sibling.

Tomahawk missiles are very "smart". The land-attack models use inertial guidance systems to pilot them to a pre-designated stretch of coast. There, the downward-looking altimeter radar measures the terrain contours, and checks it with the 10 km-wide landfall terrain contour map stored in its memory. If it has strayed, the computer corrects the course to the next checkpoint, perhaps 200 km away.[10] To conceal

its approach from air defense radars with high terrain, it zig-zags towards the target. As it reaches home, the computer compares digital video pictures of the target with its computer-stored image to provide last-minute guidance, theoretically delivering the missile to within an average 91 m of the target.[11]

The Tomahawk is hard to detect, presenting only one-thousandth of the radar signature of the B-52.[12] Depending on the missile's altitude, radars do not notice the Tomahawk until it is 15–50 km or one to four minutes away.[13] The nuclear firepower and accuracy of the Tomahawk equals that predicted for each warhead on the Trident II ballistic missile.[14] Like the Tridents, nuclear cruise missiles can "kill" hard targets with a high probability of accuracy.

Unlike in Western Europe, there has been little demand for cruise missiles by Pacific elites. Indeed, their deployment may encounter stiff resistance in some Pacific nations. In Japan, for example, deployment of the ground-launched cruise would be illegal under the peace constitution. Indeed, Pacific Command is aware that even deployment out-of-sight at sea is embroiling it in political controversy.[15] Since the ship-based Tomahawk obviates the need for ground deployment, it is unlikely that land-based models will appear in the Pacific in the foreseeable future.*

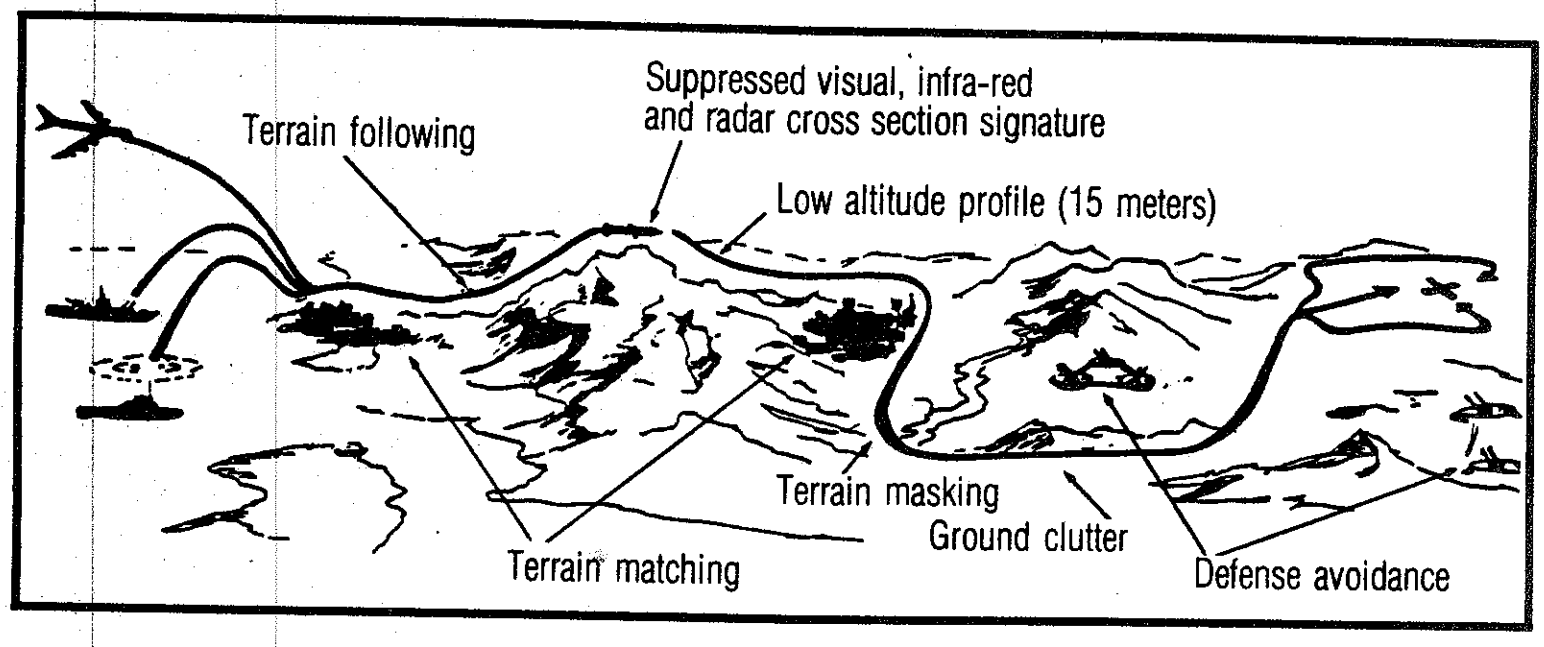
Slick 'ems

Sea-launched cruise missiles, or Tomahawks, are known in the Navy as "Slick'ems" (SLCMs). Both the conventionally armed anti-ship SLCM (destined for surface ships) and the nuclear land-attack SLCM (mostly for submarines at first) are already at sea. The conventional land-attack SLCM is still under development.[18]

Unlike air-launched cruise missiles (ALCMs), the Slick'ems are not coordinated by the Pentagon's Single Integrated Operational Plan for fighting nuclear war. Instead, the Navy will set up a ground station for command and targeting analysis, most likely at its Intelligence Center, Pacific, in Hawaii. The Center will generate cassette tapes of pre-deter-

* However, a communications base for the mobile ground-launched missiles is reportedly under consideration at an unannounced site;[16] and the military initiated a study of the possibility of basing ground-launched cruise missiles in south Korea.[17]

Figure 14.1:
Tomahawk Land-attack Flight Path



mined missions by integrating data on terrain, air defense, and missile capabilities. In the event of war, CINCPAC will communicate only the mission selection code and time of attack. The operators will then plug in the cassettes and the computers will take over.*[22]

The U.S. military boasts that "No other weapon in the world today can fly at the distance demonstrated by Tomahawk and strike targets with their degree of accuracy." [23] Nonetheless, the U.S. is already developing new air-launched "stealth" Tomahawks with radar signatures the size of a sea gull flying at 800 km per hour. Already capable of hitting "hard" targets with a high degree of accuracy, the improved Tomahawk could also have an extended range of 4,000–5,000 km.[24]

Strategic Rationale

Since the missile's origins were political, its military role and rationale remained obscure until the services were forced to integrate the Tomahawk into their forces. As the political debate raged, the nuclear Tomahawk lurched from being a "desirable augmentation of capability, a unique potential for unambiguous, controlled single-weapon response and invulnerable reserve force," (1976) to a crucial part of the "strategic reserve force" (1984). In between, it disappeared for a while as the military claimed that "There is no strategic submarine-launched cruise missile planned" (1978).[25] The contradictory statements indicate that the nuclear Tomahawk is – despite its technical virtues – actually an aimless missile, blundering into the Pacific without a mission.

Nonetheless, the U.S. military has concocted a number of rationales for Tomahawk deployment. The Tomahawk, for example, is supposed to deter a second strike Soviet attack on U.S. cities. In other words, they deter a Soviet first-strike using its land-based ballistic missiles by ensuring the destruction of its remaining second-strike forces.[26] Ignoring the reality of Soviet strategy, this rationale is based on President Reagan's

* ALCMS flown in the Pacific will use a similar system incorporated into the Offensive Avionics System of the B-52 computer.[19] The Navy is also developing equipment for rapid retargeting and rapid strike planning, suggesting that the launch delay caused by aligning inertial guidance gyroscopes to the ship's location and landfall coordinates may still be a problem.[20] The NAVSTAR navigation satellites will probably solve this problem in the late 1980s.[21]

concept of a "window of vulnerability." Under this theory, the Soviets are supposed to launch a disarming first strike against U.S. land-based missiles and then hold its cities hostage until the United States capitulates.

Numerous strategic analysts of the left and right, however, have criticized this nightmare scenario as implausible. It is simply not possible for the Soviet Union to achieve such a well-coordinated first strike – scoring the simultaneous destruction of U.S. missile silos, bombers and submarine bases. The problem of timing is pointed out by military analysts Sverre Lodgaard and Frank Blackaby:

> [T]he Soviet Union would have to use different weapon systems to attack the bombers and the ICBMs. To attack the bombers, they would have to use the system which arrives promptly – submarine-launched missiles from submarines close offshore. However, these missiles are not accurate enough to destroy U.S. ICBMs [which have] a 30-minute flight time. If the Soviet Union tried a simultaneous *launch* of submarine-launched ballistic missiles (SLBMs) and ICBMs, the detonation of the SLBM warheads would precede the arrival of the Soviet ICBMs by 15 minutes – and U.S. ICBMs could be launched before they were destroyed . . . If on the other hand the Soviet Union fired its missiles in such a way that the SLBMs and ICBMs would *arrive* together, the early warning of the firing of the Soviet ICBMs would give time for the bombers to take off before they were destroyed.[27]

The notion that Tomahawks would be useful in fighting protracted nuclear wars also flies in the face of a simple reality – protracted, "limited" nuclear wars are simply not possible. The sudden collapse of command and control capabilities would force a rapid escalation to total nuclear war.[28] Even if such a war were possible, Tomahawk attacks – intended to demonstrate the war's limited nature – would quickly generate all-out war. Since the cruise flies both low and fast, Soviet air defense teams along the missile's route would report the overflight of the same missile many times before the Tomahawk would arrive at its target. Not *knowing* exactly how many missiles are attacking, the Soviets would almost certainly perceive an all-out attack.[29] Instead of a controlled climb up the ladder of nuclear escalation, the U.S. would soon plunge over the nuclear precipice.*

* Another red herring is that cruise missiles are intended to blunt a Soviet offensive against Japan. The Soviets, however, do not have the necessary amphibious forces and air cover to attack Japan successfully.

The idea that the purpose of Tomahawks is not to *deter* but to *launch* a disarming or preemptive first strike against the Soviet nuclear arsenal in the Far East is equally erroneous.[30] Tomahawk missiles are simply too slow for first-strike attacks. Only covertly deployed attack submarines would be close enough to launch Tomahawks that could hit Soviet first-strike command centers, communications, missile targets, or submarine pens. Such use would make a tiny contribution to a first strike, and would expose the location of valuable submarines while diverting them from their primary, anti-submarine warfare mission. Even this marginal contribution to a first strike, therefore, seems militarily illogical, although not unfeasible.[31]

A variation of this theme is that Tomahawks may fly in low and slow through the nuclear war environment to deliver the tail end of a first strike.[32] It is an incredible notion, however, that a cruise missile can pick its way around firestorms, absorb radiation, pass over massive modifications of the terrain on which its navigation relies, survive the electromagnetic pulse effects of an all-out nuclear first-strike – and arrive unscathed to demolish its target.

Another first-strike claim for Tomahawk is that it frees a large fraction of the Trident and land-based ballistic missiles from second-strike duty. These larger missiles can then participate in a first-strike, carrying a maximum load of warheads to destroy the Soviet Union.[33] This is probably the most serious of the Tomahawk's destabilizing effects, but it also requires that the vast, dispersed U.S. nuclear-capable fleet be located within striking distance of coastal entry points of the guidance systems, an unlikely notion.*

Strategic Thrust: Distributed Offense

All these rationales divert attention from what the services are really doing with cruise missiles. Forced by the White House and Congress to accept the cruise missile, the services have adapted them to their existing strategic plans. For the Navy, this means using Tomahawk to

* Some analysts have claimed that conventional land-attack cruise missiles are potentially important for suppressing shore defenses preceding an amphibious intervention in the Third World.[34] Given the cost – one million dollars per 400 kg of high explosive – this is not a likely role for the cruise missile.

defend the darling of the surface fleet, the aircraft carrier. For the Air Force, cruise missiles keep Soviet air defenses constantly off-balance, unable to predict whether the versatile B-52 bombers are carrying cruise missiles, short-range attack missiles, or gravity bombs.

While the Navy deployed the Tomahawk in the Pacific without an operational concept of how to use it in combat,[35] it now contends that the missile has ushered in a new type of naval warfare, dubbed *distributed offense*. The nuclear land-attack Tomahawk enables the Navy to deflect any Soviet attempt to launch a saturation missile assault on an aircraft carrier. Furthermore, to stop a nuclear land attack, the Soviets must now target dozens of ships instead of just the aircraft carriers (see Appendix A11). Attack submarines are far harder to trace than an aircraft carrier, the electronic emanations of which make it a convenient target. Sinking this new, dispersed nuclear-armed fleet far surpasses Soviet capability.[36]

The anti-ship Tomahawk also allows the U.S. fleet to take pot shots at Soviet surface ships even when they are in home waters under land-based air cover. Furthermore, the anti-ship Tomahawk would be useful if the U.S.-Soviet regattas in the Sea of Japan turned into a shoot-out.[37] Deployment of the Tomahawk in the Pacific adds a flexible, unpredictable offensive weapon to the U.S. arsenal, which, in the event of war, will accelerate escalation to total war.

Going for the Jugular

The conventional land-attack Tomahawk is particularly destabilizing because its use may precede a U.S. carrier attack on either north Korea or the Soviet Far East. Under current plans for its use in warfare, the U.S. Navy would bottle up the Soviet fleet in port and then destroy it in a protracted, *conventional* war, or a "limited" theater *nuclear* war. The conventional land-attack Tomahawk is supposed to disable Soviet air defenses and airfields so that U.S. carriers can fight their way close enough to launch their aircraft against targets in the Soviet Far East. The command and control required by the Soviet fleet for anti-carrier strikes would also be hit by Tomahawk.

Navy Secretary John Lehman promotes this concept at every opportunity. In 1984, Lehman testified that the Navy plans to rollback the Soviet submarines in the Sea of Okhotsk and off Petropavlosk to allow

U.S. carrier task groups to approach striking distance from the Soviet mainland.[38] He showed an astonished Congressional Committee a graphic presentation of combined carrier strike aircraft and Tomahawk missile attacks on the U.S.S.R. (see Figure 14.2). He explicitly referred to Navy war games using this tactic to catch the Soviet Backfire bombers "on the ground." [39] Backing up Lehman was Chief of Naval Operations Admiral James Watkins who noted that the Far East is the Soviets' geographic area "most vulnerable to attack." [40] "We understand their weaknesses," noted the Admiral. "We know what they are. We go for the jugular on those weaknesses." [41]

One Senator responded skeptically to the Lehman strategy. Senator Sam Nunn declared that "the very tactics you are describing will lower the nuclear threshold and make it much more likely that that nuclear threshold will be crossed." Added the Senator, a "huge, lucrative target" such as an attack aircraft carrier, will "pose such a threat to them [the Soviets] that I think it will be almost irresistible." [42] Indeed, Pacific Command may order American warships protecting the aircraft carriers to fire their Tomahawk missiles at the outset of war in the expectation that they will be disabled by Soviet anti-carrier forces.[43]

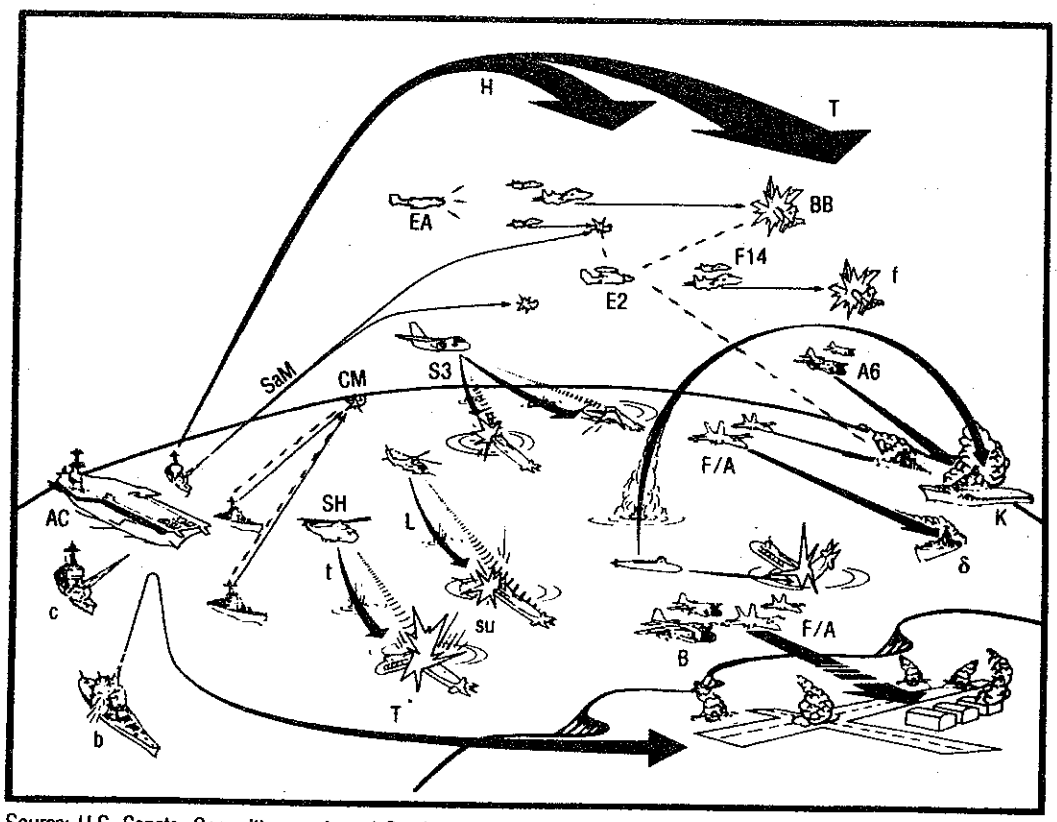
Another problem with the Navy's cruise missile doctrine is that the Soviets would have no way to determine if the incoming Tomahawks are nuclear or conventional until they explode. This uncertainty provides a strong incentive for the Soviets to fire a pre-emptive first strike. Far from playing a role in deterrence, the Tomahawks may help to trigger a nuclear war.

Since the Tomahawk has no other military rationale, this carrier-related mission *is* the main strategic thrust of its deployment in the Pacific. Vice-Admiral Ralph Weymouth (Ret.), former Director of Navy Program Planning at the Pentagon, was on target in 1984 when he said, "I don't see how the long-range Tomahawk with a nuclear warhead is going to be part of deterrence. It's going to be part of war-fighting." [44]

Floating Political Time Bomb

Deployment of the ground-launched cruise missiles in Europe nearly destroyed the political unity of NATO. SLCMs were initially viewed as being less visible, less constrained by collective control, and less likely

Figure 14.2:
Aircraft Carrier and Tomahawk Attack on Soviet Union



Source: U.S. Senate, Committee on Armed Services, *Department of Defense Authorization for Appropriations for Fiscal Year 1985*, Part 8, Washington, D.C., 1985, p. 3858.

H	Harpoon Anti-ship Missile	K	Kiev
T	Tomahawk Cruise Missile	δ	Destroyer
BB	Backfire Bomber	B	A-6 and F/A-18 Strike Bombers
F14	F14s	su	Submarines
EA	EA-6B Jammers	L	LAMPS Helicopter Torpedoes
SaM	Surface-Air Missiles	t	Torpedoes
CM	Cruise Missile	SH	SH-3 Helicopter
S3	S3 Anti-Submarine Torpedoes	b	battleship
E2	E2 Early Warning and Surveillance	A6	A-6
f	Fighters	F/A	F/A-18
c	Cruiser	AC	Aircraft Carrier

to evoke political opposition.[45] In the Pacific, however, Tomahawk deployment may severely strain U.S. alliances. On March 1, 1985 the anniversary of the Bikini H-bomb explosion, peace organizers in Honolulu announced a Pan-Pacific Campaign Against Sea-Launched Cruise Missiles.

According to Campaign Coordinator Nelson Foster, ten warships in the U.S. Pacific Fleet carried nuclear Tomahawks in February 1985. Using the Navy's data, Foster concludes that: "Eight attack submarines, one destroyer, and one battleship are already nuclear Tomahawk-armed. By December 1986, this will increase to fourteen vessels, carrying a total of up to 216 nuclear-armed Tomahawks directed at land targets in the Far East and Asia. By 1990, the total number of nuclear Tomahawks deployed in the Pacific could reach 400." (See Appendix A11.)[46]

According to Colonel Ralph Cossa, former executive assistant to the Commander-in-Chief Pacific, Tomahawk deployment is the "biggest potential problem in Pacific Command."[47] In a similar vein Naval analyst R. Hibbs argues that "if every U.S. warship becomes a potential nuclear weapons platform, future visits to friendly ports will become complex and contentious issues."[48]

U.S. Making clear U.S. expectations, Secretary of State George Shultz declared in 1985: "It is not enough for allies to agree that when war starts they will come to each other's aid . . . Allies must work together to ensure that we have the capability to fight and win such a war[.]" [3]

While joint exercises and ship visits have long cemented U.S. ties with Pacific allies, their pace and scale have jumped under the "new militarism" of the 1980s. Navy Secretary John Lehman boasted to Congress in 1985 that the Navy is "at a higher OPTEMPO [operating tempo] than we were at the height of the Vietnam War." Indeed, Lehman added that the global fleet "was spending more time at sea than it had even averaged in the Second World War." [4]

The intensification of war preparations, including increased military assistance to "frontline states", has enhanced the military dimension of U.S. relations with its Pacific allies. By exposing allies to the risk of nuclear war or nuclear accidents, it has also fuelled popular, and to a lesser extent, governmental protest throughout the region, particularly in Japan, Australia, New Zealand, some South Pacific islands and the Philippines.* Unsurprisingly, these protests often focus on the Navy, the most visible of American forces, and call for the closure of ports to nuclear-armed or nuclear-powered warships. Aimed at reducing the danger of nuclear war by "denuclearizing" the alliance, the Pacific movement challenges the entire alliance system which supports U.S. military strategy in the region and which, in turn, rests squarely on nuclear weapons.

Intimate Relations

Erected in the 1950s, the Pacific alliance structure† is composed of a

* And in the mid-1970s, in Thailand.

† U.S. security relations in the Pacific include three types of "alliances". These are: formal alliance, which is defined by treaty and often involves mutual commitment of troops or combined military commands; semiformal alliance, which is defined by bilateral agreements or unilateral statements of intent, supported by defense cooperation and military sales; and informal alliance, which entails U.S. military and economic assistance, and sometimes an executive branch assertion of U.S. "interest" in the security of the informal ally. Most of the U.S. alliances in the Pacific are formal, including ties with Japan, Australia, New Zealand, south Korea and the Philippines. The current trend, however, is toward more flexible, informal ties, especially in the Indian Ocean.[5]

series of mostly bilateral treaties which fan out across the Pacific (see Figure 15.1). These treaties entangle the U.S. and its allies in a web of commitments and dependencies. Japan, the most important ally in the Pacific, is bound to the U.S. via the Mutual Security Treaty (1951; revised formally in 1960, and informally in 1978). Alliance with Japan is the linchpin of U.S. strategy in Northeast Asia, closely linked to that with south Korea (1954). Australia and New Zealand are junior partners in the South Pacific (ANZUS, 1952), while treaties with the Philippines (1952) and other ASEAN nations, (the Manila Pact, 1955),* tie the U.S. to Southeast Asia.

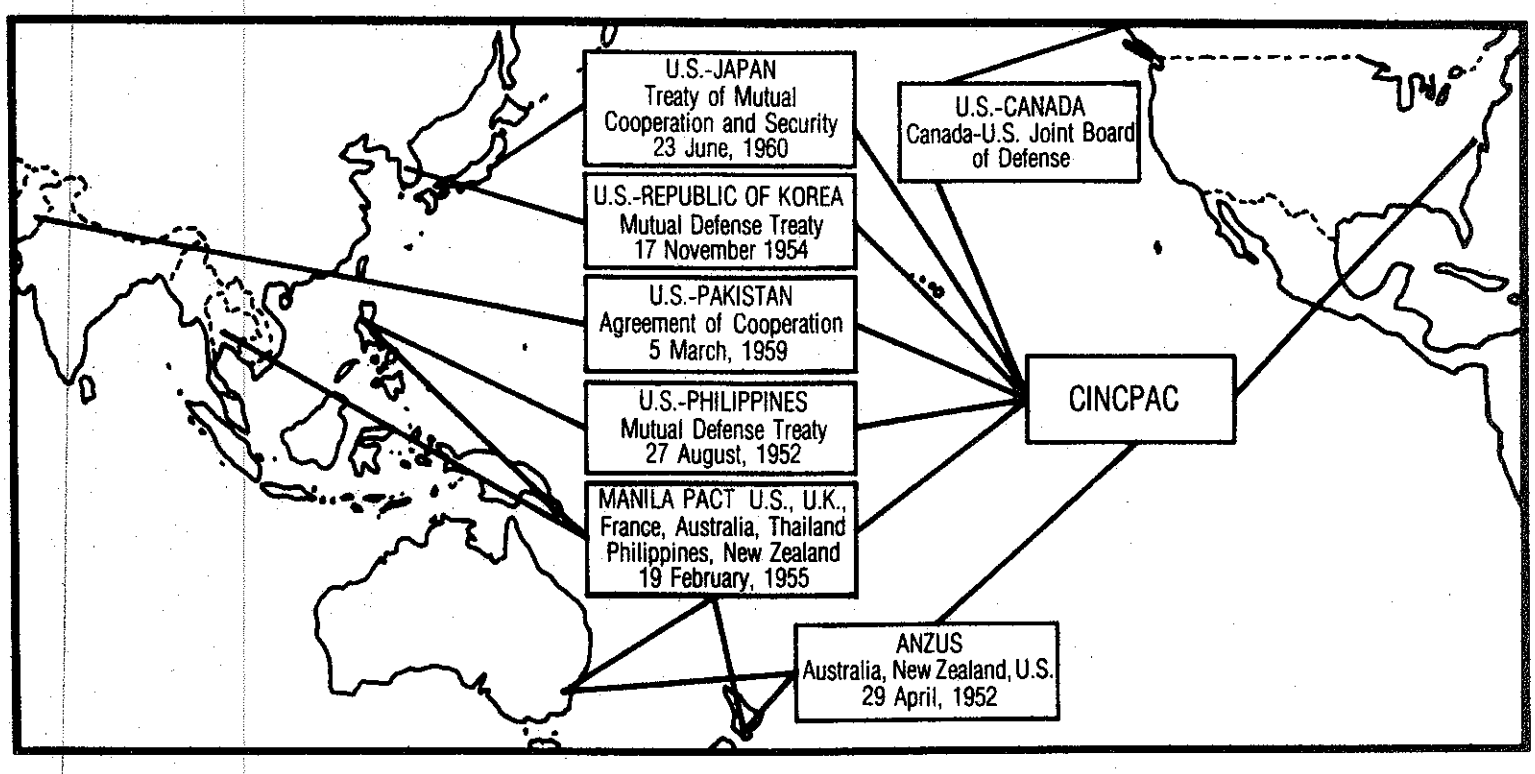
Western allies also support the Pacific system. Canada plays an important role in the North Central and Northeast Pacific. Alliance with the U.K.-facilitated U.S. occupation of Diego Garcia in the Indian Ocean, while ties with France provide the U.S. with access to military facilities on the French island colonies of the South Pacific.

In addition to formal treaties, the Pacific alliance system includes informal ties with many Pacific islands, most notably with Fiji, and with China. The newfound friendship with China, in which U.S. anti-Soviet strategy plays a crucial role, reflects the region's turbulence and fluidity. The metamorphosis of America's primary Pacific enemy into a friend colored all U.S. relationships in the region and ruptured the formal U.S. alliance with Taiwan. When relations were normalized with the People's Republic of China in January 1979, the U.S. broke off diplomatic relations with the Taipei regime and terminated the U.S.–Republic of China Mutual Defense Treaty (1954).[7]

The clearest evidence of alliance with the U.S. is military assistance, which includes arms transfers and military training. Often justified as necessary to an ally's peace and security, military assistance lightens the U.S. military burden by arming and training allies to act as local or regional gendarmes. Because allies often become dependent on U.S. aid to contain domestic insurgencies, military assistance enhances their support for American global and regional objectives.[8]

* The Manila Pact, also known as the Southeast Asia Collective Defense Treaty, is still technically in force although not operational. It includes Australia, France, Great Britain, New Zealand, Pakistan, the Philippines, Thailand, and the United States. The Pact established the Southeast Asia Treaty Organization (SEATO), which was formally dissolved in 1977 at the request of the Asian members.[6]

Figure 15.1:
The Pacific Alliance System



In (fiscal year) 1984, the U.S. supplied nearly half a billion dollars in military assistance to its Pacific allies. Credits through the Foreign Military Sales Financing Program – grants or loans to purchase U.S. weapons – accounted for nearly 85 per cent of the total. South Korea got the lion's share, followed by Thailand and the Philippines. After declining during the Carter years, military assistance to these "front-line" states has been on the rise since 1981 (see Table 15.1).*

In addition to military aid, the U.S. also arms its allies via Foreign Military Sales Agreements. Approved by the State Department, these agreements entitle allies to purchase arms from the U.S. government arsenal on a pay-as-you-go basis. In 1984, Pacific allies purchased over a billion dollars worth of U.S. arms through this program. While no subsidy is involved, such purchases nonetheless enhance technological – and thus political – dependence on the U.S. As the Vice President of Lockheed Aerospace explained: "When you buy an airplane, . . . you also buy a political partner." [9]

To bolster its partnerships in Asia–Pacific, the U.S. competes vigorously for the arms trade with the Soviet Union, as well as with Western Europe.† Marketed in close assistance with the Military Assistance Advisory Groups,‡ the U.S. won nearly 40 per cent of the region's in-the-pipeline arms sales agreements between 1980 and 1983, compared to 25 per cent for the Soviet Union and 15 per cent for Western Europe. The entire communist bloc won a meager 28 per cent, compared with the West's 72 per cent.[10]

The value of arms actually delivered reflects the fulfillment of past sales agreements, plus current levels of arms subsidy or aid. Between 1980 and 1983, the U.S. delivered weapons to Asia–Pacific worth $4.4

* Levels of military assistance to the Philippines proposed by the Defense Department were pared or held up by Congressional concern over human rights and the incompetence of Ferdinand Marcos before his fall in 1986.

† Primarily France, United Kingdom, West Germany, and Italy.

‡ The MAAGs were first set up in the early 1950s in an arc stretching from Japan to Pakistan as part of the security assistance arrangement spearheaded by John Foster Dulles. The MAAGs evolved into Joint U.S. Military Advisory Groups (JUSMAGs) and today five of these (in south Korea, the Philippines, Thailand, Malaysia, and Indonesia) provide training and advice to the host nations, as well as guiding arms suppliers and consumers toward each other.

Table 15.1:
U.S. Military Assistance to Allies in East Asia/Pacific, FY 1976–1984 (millions current $US)

	1976	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*
Indonesia	44.8	39.4	56.4	35.9	33.3	32.4	41.3	27.3	47.3
South Korea	319.6	154.6	276.6	237.8	252.0	162.6	167.4	187.7	231.8
Malaysia	17.3	36.3	17.1	8.0	7.3	10.3	10.5	4.7	10.9
Philippines	37.0	36.4	36.5	32.2	76.7	75.6	51.9	52.0	51.8
Singapore	—	—	—	—	—	—	0.05	0.05	0.06
Thailand	54.9	47.0	37.8	32.3	48.4	54.5	76.2	78.6	95.7

Note: Levels of aid in real terms (adjusted for inflation) declined in the 1970s. The trend was reversed in 1981 for Indonesia, in 1982 for south Korea, and in 1980 for Thailand. See "Rivalry and Reconstruction: Security Implications of Pacific Economic Dynamism," (mimeo) Nautilus Pacific Research, April 1986.

Includes Foreign Military Sales Financing Program, Military Assistance Program, and International Military Education and Training Program. Australia, Japan, and New Zealand do not receive direct military assistance. Taiwan has not received military assistance since 1978.

Source: Department of Defense Security Assistance Agency, *Foreign Military Sales, Foreign Military Construction Sales and Military Assistance Facts*, September 30, 1984.

billion, up from $2.6 billion between 1976 and 1979.*[12] The U.S. share equalled that of the Soviets, each taking about 35 per cent of the total. If the allies of both blocs are added in, however, the West emerges as the dominant supplier, with 61 per cent of the total.[13]

Armed to the teeth with U.S. weapons, the military establishments of Pacific allies are carefully cultivated by CINCPAC. To promote cohesion among the allies, the Army's Expanded Relations Program has held an annual Pacific Armies Management Seminar since 1978 to establish a "working relationship" with mid-level officers who will be the future leaders in their countries.[14] According to General Eugene Forrester, head of the first seminar, the greatest advantage of the gathering – aside from displaying the latest U.S. weaponry and striving for regional "interoperability" between equipment and practice – is creating a "reservoir of people who know one another."[15] Backing up the seminar is military education and training: in 1984, the U.S. spent $9 million on such training for Pacific Command allies, up from $4.6 million in 1981.

Besides military aid, trade, and training, the Pacific alliance system is kept shipshape by joint military exercises and visits by U.S. warships. Involving hundreds of thousands of U.S. and allied forces, the exercises are a clear signal that the U.S. intends, as Secretary of Defense Caspar Weinberger emphasized in 1984, "to remain a Pacific power."[16]

Shoulder to Shoulder

To maximize U.S. military visibility and to prepare for active combat, U.S. forces in the Pacific spend most of their time practicing for war.† Exercises intimidate adversaries, keep the military machinery well-oiled, and remind U.S. allies that the American military is their senior

* There are also purely commercial (non-FMS) arms transfers. Data for these shipments, however, are unreliable and difficult to obtain. Commercial sales account for only a small fraction of the total.[11]

† There were nearly 100 exercises in 1984: 18 in south Korea; 17 in Japan; 28 in Southeast Asia; 8 in Australia and New Zealand, 2 in the Indian Ocean; 18 in the mid-and-east Pacific (including Hawaii); and 2 "other" (JCS and command post exercises), totalling 93 exercises.[17]

partner. According to the Commander-in-Chief of the Pacific (CINCPAC), the exercises aim to:

a. Enhance joint readiness and combined force interoperability.
b. Exercise, test, and evaluate certain aspects of war plans.
c. Fulfill international defense agreements and obligations.
d. Demonstrate U.S. capability and resolve.
e. Enhance collective defense and coalition strategy.
f. Assist in the exercise of allied and friendly nation forces.
g. Develop, test, and evaluate joint tactics, techniques, and procedures.[18]

"The value of these exercises cannot be overemphasized," exclaimed former CINCPAC Admiral W. Crowe in February 1984.[19] As the goals demonstrate, exercises aim to impress allies as much as the Soviet Union. Even the names of the exercises – *Welcome Guest*, *Team Spirit*, *Forward Thrust* – are selected carefully. Exercises are to be named, instructed CINCPAC in 1983, so that they do not "convey connotations offensive to our allies or other Free World nations", nor "express a degree of bellicosity inconsistent with traditional American ideals and current foreign policy." [20]

CINCPAC-sponsored exercises fall into at least eight categories covering every aspect of war preparation: land, naval, marine, aerial, command and control, counterinsurgency, crisis, battle, diplomatic, and nuclear war.

Every U.S. ally in the Pacific participates in joint exercises on land. The annual *Team Spirit* exercise in Korea, however, tops them all as the "free world's largest exercise." [21] A practice run for a war against north Korea, the exercise has swelled dramatically since it was initiated in 1976. Involving a "tidal wave" of 188,000 U.S. and south Korean Navy, Air Force, and Army forces, *Team Spirit '83* was more than four times larger than in 1976* and included thirty-one Navy surface warships, among them two aircraft carriers. At the climax of the exercise, 30,000 sailors and Marines stormed the shore and crossed frozen rice fields while U.S. and Soviet naval units shadow-boxed offshore. In the naval activity surrounding *Team Spirit '84*, a U.S. aircraft carrier and a Soviet attack submarine collided by mistake. Comprising a whopping 207,000 forces, *Team Spirit '84* aimed, according to CINCPAC's office, to

* *Team Spirit '76* involved 46,000 forces.

"demonstrate the President of the United States's pledge to strengthen U.S. forces in Korea." [22]

The Navy's version of all-out allied mobilization is the Rim-of-the-Pacific exercise, or RIMPAC. Begun in 1971, RIMPAC is held every two years at the Hawaiian island of Kaho'olawe, San Diego and Pearl Harbor and involves Australia, Canada, New Zealand, and the U.S. Reflecting American and internal pressure to remilitarize, Japan joined the exercise for the first time in 1980.*

Like *Team Spirit*, RIMPAC is growing. The May 1984 exercise was the largest to date and assembled 80 ships and submarines and 250 aircraft, manned by 50,000 sailors and Marines from the five nations.[23] As part of the exercise, the forces bomb the island of Kaho'olawe for target practice. Since the island is filled with important archaelogical sites, the bombing has sparked stiff opposition by native Hawaiians and generated international controversy.

The Marines have their own show in the Pacific. Marine exercises usually commence from San Diego in California, staging via Pearl Harbor. In 1983 they stormed the beaches in exercises in Oman (*Jade Tiger*), Australia (*Valiant Usher*), Philippines (*Tangent Flash*), and Okinawa (*Valiant Blitz*), as well as south Korea (*Team Spirit*).† Reflecting the strategic importance and growing domestic turmoil of the Philippines, the 1983 *Tangent Flash* exercise was the largest to date. The Philippines houses Subic Bay Naval Base, the Seventh Fleet's primary support and logistics base for operations in the Indian Ocean. To counter popular dissatisfaction with the U.S.-backed government, civic action projects such as installing water works and providing medical care were major features of the exercise.[24]

Not to be outdone, the Pacific Air Force (PACAF) participates in about fifty readiness and command post exercises each year. Because the West Pacific, unlike Europe, offers an uncongested and unregulated airspace, Air Force commanders claim it is the best place to train for air combat. According to *Aviation Week and Space Technology*, "several joint-use, Pacific-area ranges have been developed, complete with electronic

* Although Japan's Navy had previously participated in bilateral exercises in Hawaii, this was the first time Japan's military participated in *multilateral* exercises.

† The Marines also practiced joining their prepositioned equipment at Diego Garcia in *Stratmobex*.

warfare and simulated surface-to-air threats guarding realistic tactical targets representing enemy airfields, truck convoys, tanks and anti-aircraft artillery emplacements." [25]

PACAF stresses multinational air exercises.[26] *Cope Thunder*, held seven times a year at Clark Air Force Base in the Philippines, brings together Australian, New Zealand and Philippine aircraft for a fortnight of bombing of mock targets, including evasion of Soviet-style SA-7 surface-to-air missiles.[27] A similar range is now active in south Korea for the *Cope Strike* U.S.–south Korean joint bombing exercises.[28] The U.S. also operates a gunnery and bombing range known as Nightmare at Chorwon, only 20 km from the Demilitarized Zone.[29]

Pacific Command tries to keep its command and control organization primed for war. *Beach Crest*, a typical command and control exercise held in Japan in 1984, involved eight hundred U.S. Marines, Air Force personnel, and Japanese Self Defense Forces who played a joint command post exercise on maps of Japan. These exercises are politically delicate in Japan due to the unconstitutional nature of the Japan Self Defense Force. This problem, according to a U.S. military analyst, challenges the U.S. to create U.S.–Japanese coordinated command and control "while not creating the perception among the Japanese of a collective defense arrangement." [30]

A sixth type of exercise tests counterinsurgency forces in Pacific Command. In the 1960s, such exercises included *Forward Thrust* on Taiwan, which practiced Chinese Nationalist attack on the mainland, and *Jungle Drum* in Thailand, which trained SEATO* forces for action against Thai insurgents.[31] In October 1982, Australian and Japanese forces participated in *Thermal Gale*, a U.S.-sponsored special warfare excercise in Hawaii which prepared allies for U.S.-led regional interventions.[32]

A step closer to superpower war are the "crisis" exercises. In the largest joint maneuvers since World War II, the U.S. and Japan conducted naval exercises in the Sea of Japan shortly after KAL 007 was shot down in 1983. The exercise involved 150 Japanese ships, and

* Southeast Asia Treaty Organization.

30,000 Japanese military personnel along with two U.S. aircraft carriers and escorts. Planned long before the tragedy, the exercise nonetheless exacerbated Soviet tension. In what the U.S. press described as "highly provocative" maneuvers,[33] the forces practiced blockading the Tsugaru and Tsushima Straits against Soviet ships leaving their headquarters at Vladivostok. Signalling the upgrade of Japan's military posture, the exercise was important symbolically. As an American journalist observed: "Never has Japan thrown itself so wholeheartedly into military exercises with the U.S. so close to U.S. territory." [34]

A related "battle" exercise in 1983 was *Fleetex*, a north Pacific "armada" of three aircraft carriers and forty-one escorts plus land-based naval and Air Force planes from Guam, Adak, Japan, and the U.S. West Coast. Held back-to-back with *Team Spirit* in 1983, *Fleetex* reasserted U.S. presence in the northwest Pacific up to a few hundred kilometres off the Soviet Far East – less than twenty minutes flight time for carrier strike aircraft. This exercise in the Soviet Union's backyard was aimed, as Commander of the Pacific Fleet Admiral Foley put it, at "taunting the Soviet Pacific Fleet." [35]

Because these exercises usually elicit Soviet response such as mock Backfire nuclear bomber attacks,[36] the U.S. Navy is able to monitor the latest Soviet tactics. As Admiral Watkins, Chief of Naval Operations, testified in 1984, "We are shoulder to shoulder with them in all dimensions – air, surface, subsurface – all the time, as we have been for twenty years." Added the Admiral, the exercises allow the U.S. Navy to "see how tall they [the Soviets] are; certainly not ten feet, but there are a lot of them about six feet tall." [37]

Apart from demonstrating "resolve" to the Soviet Union, Pacific Command exercises are timed to influence the domestic political affairs of U.S. allies. Exercises with New Zealand, for example, were designed to strengthen the hand of the conservative National Party government until it lost power in 1984.[38] Stage-managed by U.S. Ambassador Monroe Browne, these exercises involved timing the arrival of U.S. warships to highlight the Labor Party's anti-nuclear stance, thereby undercutting Labor's support with the pro-American electorate. This strategem backfired, however, by fuelling Labor Party opposition to nuclear alliance with the U.S. Much to the chagrin of Pacific Command, the Labor Party ended up in government in July 1984. *Triad*, an October 1984 exercise of U.S. Air Force planes with the New Zealand Air Force, only worsened the situation.[39]

Nuclear War Games

Unlike in U.S.-led conventional exercises, allies participate only indirectly in U.S. war nuclear exercises in the Pacific. Begun in 1979, the annual *Global Shield* exercise is perhaps the most important. Run by the Strategic Air Command, this exercise involves a global alert, simulated escalation of the Cold War, and finally a mock nuclear attack on the Soviet Union. The B-52s in Guam disperse to pre-selected bases supported by ground teams, and fly sorties over practice targets. To add to the realism of the *Global Shield* exercise in 1979, the Air Force fired two Minutemen missiles over the Pacific Missile Range.

B-52s which are transiting or overflying foreign territory at this time – as in Australia in 1981 – may be involved in *Global Shield*. SAC-related communications and intelligence bases in the territory of Pacific allies would certainly be active in the exercise.[40] While little is known about exercises of nuclear ballistic missile submarines, Trident missiles are probably fired from submarines as a nuclear war exercise.

Pacific Command also plays nuclear war games. Unlike the exercises, which mobilize forces and materiel, war games require participants merely to play-act their parts. Aimed at flexing the ability of Pacific forces to "think on their feet" – to make decisions under various wartime conditions and scenarios – players are given a script by CINCPAC setting out the conditions and rules of the game. In one game, a "Nuclear Radiation Casualty Play", the script states that the crews of aircraft "who meet or exceed a dose of 400 rad [of radiation] during the course of a flight, will be declared dead." The manual notes laconically that this "will also cause the loss of the aircraft."[41] Another game culminates with Nuclear Detonation Scenario 16, a nuclear attack which pulverizes a U.S. base. The players are instructed to assume that "All facilities are destroyed or damaged and beyond repair. All personnel are dead or dying. All exercise participants should simulate loss of communications and refuse to accept any further exercise traffic."[42]

Warship Visits

Pacific Fleet warships typically make an annual training cruise throughout the Pacific and Indian Oceans. Engaging in exercises with allies along the way, the cruises make port visits, often giving little public warning or explanation. Behind these visits lies more than "goodwill"

in the host port and rest and recreation for crews. Before and after a warship visits a port, it is invariably "exercising" for war or pursuing a strategic goal of U.S. foreign policy, such as "showing the flag" in a trouble spot. But the warship visit is itself a diplomatic intervention, signalling U.S. friendship and military support for particular allies or even particular political groups within allied nations.*

According to CINCPAC, port visits aim to:

a. Protect U.S. interests and support U.S. policies in foreign countries.
b. Assist U.S. representatives abroad in the discharge of their responsibilities.
c. Obtain logistic support.
d. Liberty and recreation.
e. Area familiarization.[43]

In 1983, U.S. warships in the Pacific Fleet spent about 20 per cent of their forward-deployed time in ports, mostly in Hawaii, Japan, and the Philippines†. Up by 20 per cent from 1976,‡ the overwhelming number of the visits – 91 per cent excluding Hawaii – were to Pacific ports, while Indian Ocean visits accounted for the rest. (See Appendix A8.)

The number and type of warships§ to visit a particular country or region reflect two political considerations: its current importance in U.S. foreign policy, and the temperature of its relations with the U.S. Classified as routine, informal, and formal, all visits must be approved by CINCPAC, who reviews them for "unusual politico-military considerations."[44] Such considerations are evident in the three major shifts in the regional distribution of warship visits between 1976 and 1983. In response to the build-up at Diego Garcia and the Carter Doctrine, ship-days‖ in Indian Ocean ports increased from 4 to 611 between 1976 and

* While often less visible, U.S. aircraft also engage in jet-set diplomacy, especially the versatile Airborne Warning and Control Aircraft (AWAC) now stationed at Okinawa.

† Followed by Hong Kong, south Korea, Guam, Australia, Diego Garcia, Singapore, Thailand, and Bahrain.

‡ There were 5,728 ship-days in 1976; this increased to 6,936 in 1981 and fell to 6,879 in 1983.

§ Aircraft carriers, surface carrier escorts, attack submarines, or amphibious vessels.

‖ Ship-days in port are not the same as numbers of port visits, as many ships may visit and accumulate the same time as one ship. Cross-country analysis, however, shows that the two indexes largely move together, although only forward port ship-days are considered here.

1983, peaking at 860 in 1980. In Taiwan they fell to zero after 1980 due to the U.S. embrace of China. And in Australia, ship-days increased from 17 in 1976, when a newly elected conservative government revived ship visits, to 310 in 1982.[45]

Social and Political Effects

Ship and air visits are a two-edged sword for the U.S. A viable symbol of U.S. power, visits encourage pro-U.S. political forces in an allied country, or intimidate those with cold feet. On the other hand, the visits fuel opposition to the U.S. by a diverse coalition: anti-nuclear or disarmament forces; opponents of U.S. allies; and/or those adversely affected by local health, social, and economic effects of the visits. While New Zealand's ban on all warship visits is the most explosive action taken to date, major protests have erupted in Japan, Australia, Fiji, Hawaii, and San Francisco. The newly independent island republic of Vanuatu even passed a Constitutional amendment making itself a nuclear-free zone.

Warships create problems for port communities whether they are homeported, as in Japan, Hawaii, and the U.S. West Coast, or are merely "visiting" as in most Pacific Command ports. Direct risks include exposure to radiological accidents or even accidental detonation of nuclear weapons, as well as the possibility of becoming a Soviet nuclear target. Moreover, with an average visit involving the sudden influx of up to 10,000 sailors and officers for two to five days, the social and economic fallout can be severe.

While warship visits stimulate some economic sectors such as rental housing, recreation, prostitution, and drug-running, they generally undermine the local economy. In typical boomtown fashion, warship visits generate price inflation in local food and housing markets by introducing an abrupt increase in demand. Locked into union contracts or employer agreements, local workers must then spend a larger part of their income on basics, such as food. The visits may also draw in skilled or unskilled labor from around the country, bypassing the local workforce and even displacing it if newly arrived laborers stay on during the "bust" period after the warship leaves. The boom-bust cycle, in short, makes economic development unstable.

Furthermore, with the structure of the economy skewed toward

satisfying the particular demands of U.S. sailors, the economic and social needs of local people may go unsatisfied. Host governments often invest substantially to make their ports more attractive to the Navy, without examining economic alternatives such as job creation and community programs. Naval monopoly over port-rights may even block commercial development of the port resource, as is starkly evident at Subic Bay in the Philippines.

The social effects of ship visits and homeporting are also invidious. Prostitution, to take the most glaring example, proliferates everywhere the U.S. Navy sails or makes its home. The entire economy of the city of Olongapo, which surrounds the Subic Bay Naval Base, for example, is based on prostitution. While women are the primary providers of sexual services, child prostitution is also rampant and even a few men are involved.[46] Distorting the social and economic life of Asian-Pacific societies, prostitution also affects the social fabric of the U.S. by engendering sexist and racist attitudes in American sailors.

The sailor at sea dreams of the "kinky and oriental" sex awaiting in Asian port visits – at Pattaya in Thailand, at Subic Bay in the Philippines, at Hong Kong or south Korea, or at Okinawa, where Filipinas are imported by entrepreneurs for sex with sailors. The military's official *Stars and Stripes*, for example, advertises the sexual delights of *kisaeng* (prostitute) parties in south Korea:

> The ultimate experience is a *kisaeng* party. Picture having three or four of the loveliest creatures God ever created hovering around you, singing, dancing, feeding you, washing what they feed you down with rice wine or beer, all saying at once, "You are the greatest." This is the Orient you heard about and came to find . . . but probably haven't, yet . . . Japanese tourists – who are mostly male – say the intriguing thing about a *kisaeng* party is that the guest never has to use his hands. That's true . . . but there's more. The royal treatment really can't be described adequately. Give it a try. It's a memorable experience.[47]

While Asian ports are particularly well known in the Navy as prostitution centers, Australian ports are becoming increasingly popular as well. Reuters reported in 1984 that the Australian government officially requested that U.S. sailors desist from "lusting after" Australian schoolgirls.[48] The protest was prompted by publicity surrounding *Perth Good Times*, a magazine circulated by U.S. sailors. The controversial issue read:

All day long secretaries, shop assistants and lady shoppers cute enough to make your head bend, parade up and down the mall . . . Most of them are on business, but when the Americans are in town lots of schoolgirls and other girls hang around in anticipation.[49]

While prostitution in Australian ports is on the rise, women are also increasingly visible in protests against the ship visits. In October 1984, four women in two dinghies battled high pressure hoses to paint "No Death Ships" on the hull of the visiting U.S. destroyer *Cushing*.[50]

Nuclear Leviathans

One of the most controversial aspects of U.S. warships is the potential health hazard from their nuclear reactors and weapons. In 1983, over a third of the visits to Pacific forward ports were by nuclear-powered vessels, mostly attack submarines.[51] While routine U.S. policy is to deny the possibility of nuclear reactor accidents, the fact remains that many nuclear warships *have* experienced mishaps.[52]

Such accidents may pose significant hazards to port communities. To alleviate popular concern, CINCPAC is prepared to extend radiological assistance and even accept liability for nuclear accidents in foreign ports.* Nonetheless, port cities or national authorities in Japan, Australia, New Zealand, Fiji, Vanuatu, Belau, Mauritius, the Seychelles and even Hawaii have at various times all found the risks imposed by warship nuclear reactors to be unacceptable. Since many U.S. aircraft carriers, cruisers, and submarines are nuclear-powered, these protests raise major obstacles to U.S. port visits.

Even more sensitive than reactors are the nuclear weapons carried by U.S. warships. While CINCPAC's routine policy is "to neither confirm nor deny the presence of nuclear weapons or components on board any ship, station or aircraft," even if the weapon system has "been properly identified as having nuclear capability," virtually *all* classes of U.S. warships visiting forward ports have units which are

* The U.S. 1974 Public Law 93-513 states that "it is the policy of the United States that it will pay claims or judgements for bodily injury, death or damage to or loss of real or personal property proven to have resulted from a nuclear incident involving the nuclear reactor of a United States warship."

certified* to carry particular nuclear weapons.[53] Any Pacific Fleet vessel of a class so certified may actually carry those nuclear weapons into port.[54]

A U.S. Navy manual describes the handling of nuclear weapons at sea as "one of the most hazardous of all shipboard operations." According to the Navy, such handling "contains all the dangers found in conventional ammunition transfer plus the grave consequence of accidental loss or contamination." [55] The risk of accident is even greater in congested ports, especially for nuclear submarines, which are more vulnerable to collisions in port than at sea. While ships at sea can simply sail away from any radiological mess they may produce, the immobile, dense populations near ports are directly vulnerable to radiological hazards. In the long run, of course, radiological contamination of the seas could pose hazards far afield through the food chain.

"Worst Case" Accidents

Most U.S. allies are aware of the risks of *reactor* accidents. Only a few defense officials in each country know, however, about the risks of nuclear *weapon* accidents. American officials downplay the risks and consequences of such accidents. They claim that the probability of accidents involving the release of fission products approaches zero. Nonetheless, major accidents involving nuclear weapons have occurred. The best-known involved the crash of two B-52 bombers, one in Palomares, Spain, in 1966 and the other in Thule, Greenland, in 1968, which caused severe plutonium contamination within the local communities. Another accident, this one in 1960 at McGuire Air Force Base in New Jersey, involved a nuclear missile which caught fire and melted after a helium bottle aboard the missile exploded. The fire burned for forty-five minutes, spreading plutonium over an "undetermined number of acres." [56]

These and more recent accidents involving nuclear weapons on land, in the air, and in the sea[57] prompted the Pentagon to initiate a series of

* A "certified" vessel is one which has qualified to carry nuclear weapons by meeting rigid training requirements and by passing a Nuclear Weapons Acceptance Inspection.

accident exercises.* Codenamed *Nuwax*, the exercises are currently guided by the Defense Nuclear Agency's *Nuclear Weapon Accident Response Procedures Manual*, which distills U.S. military thinking on the subject. Released to the authors under the Freedom of Information Act, the *Manual* reveals a different attitude towards the hazard of nuclear accidents than that expressed overseas. According to the *Manual*, there is a "very real possibility of radioactive contamination at the accident scene, and extending many miles downwind."[58] Other documents reveal that the U.S. military held week-long *Nuwax* exercises in 1979 (Nevada test site), 1981 (Nevada test site), and 1983 (Virginia). These exercises involved 700–1,000 personnel whose mission was to recover mock nuclear weapons damaged by impact, fire, and high explosive detonations. To enhance the "realism" of the exercises, radioactive radium 223 was sprinkled in the area to simulate weapons-grade plutonium.

The exercises revealed that the response to nuclear accidents is problematic, due in part to the lack of interest and inexperience of U.S. officials responsible for the operations.[59] Additionally, *Nuwax* uncovered defects in response capability which appear to be inherent in the nuclear events themselves. These deficiencies include unreliable communications capability, grossly delayed warning messages, and undefined levels of acceptable radiation exposure and site restoration levels, termed a "monumental problem" in the official report.[60]

Difficult enough under test conditions within the U.S., these problems would be compounded in a nuclear weapon accident overseas. U.S. plans for such an event call for rushing rapidly deployable satellite and sideband radio communication units to the site, probably from the Naval Communications Station in the Philippines, where a mobile unit stands on alert for such contingencies.† [62] According to a high-level

* Another factor motivating the exercises was the dispersion of experienced U.S. officials into other military and non-military careers in the 1960s. The example of the U.K., which started nuclear weapons accident exercises in 1976, also inspired Pentagon officials to take up the issue actively.

† This Pacific Fleet unit is called an Ashore Mobile Contingency Communications system and provides HF radio, teletype and voice circuits, UHF satellite secure voice circuits. It is transported in a C-130 aircraft or a CH-53 helicopter.[61]

Pentagon official involved in accident response, Pacific Command's nuclear accident teams "are really hot on this." Navy Nuclear Accident Response Crisis Actions Teams (CATs) are "all over the place," he adds, at overseas bases and travelling aboard warships in the Pacific.[63] CINCPAC's Nuclear Safety/Security Branch, known as Office J322 has "primary cognizance of nuclear weapons accidents/significant incidents and nuclear reactor accidents in USPACOM [Pacific Command]." [64]

While *Nuwax* exercises responded to U.S.-based accidents, the official report for *Nuwax-81* specifically addressed the problems of overseas nuclear weapon accidents. "Extensive consultation with the Department of State and local U.S. embassies," states the report, "is required to coordinate U.S. efforts overseas." Noting that *mutual* training is "essential", the report adds that "U.S. and host capabilities need to be *blended* for a coherent plan and a capable response force." The report recommends joint exercises and the development of overseas versions of the *Response Manual* tailored to each country.[65]

"Blending", however, has a rather specific meaning in a Pacific "host" nation. Since the U.S. military is determined to defend its nuclear secrets, it insists that only U.S. personnel cleared for "Critical Nuclear Weapon Design Information" will have access to the damaged weapons themselves.* [67] As the "shape, form, or outline" of nuclear weapon components may also reveal these secrets, the site must be "protected" against visual access and overhead photography.[68] And because "unfriendly elements" or "enemy or dissident elements" may listen in to site radio communications, thereby obtaining classified "compilations of individually unclassified material", the *Manual* instructs the use of equipment which scrambles voice into unrecognizable garble "to defeat this threat." [69]

Even in an accident, the U.S. may stick to its "neither-confirm-nor-deny" policy about the presence of nuclear weapons. Indeed, U.S. officials may even purposely issue *false* public information to divert attention away from the shipment of damaged nuclear components – a practice for which the participants in the 1983 *Nuwax* exercise were criticized.[70]

Requirements to keep accident sites off-limits to all except U.S. per-

* These conditions apply in domestic nuclear accidents, and it is logical to assume that they will be applied even more stringently in overseas accidents. Such has also been the historical experience.[66]

sonnel imply that host nations will be obliged to relinquish sovereignty over the site for the duration. To add insult to injury, the U.S. will probably call on host nation security forces to guard the site. In the 1981 *Nuwax* exercises, several demonstrators at the site broke through the security cordon and, as the report put it, "It was simulated that one demonstrator was shot." [71]

The Pentagon has already drafted soothing but bizarre press statements for release in the event of nuclear weapon accidents. "Contingency Release Number 3, When Public is Probably in Danger," instructs residents that:

> The most appropriate initial action is to remain calm and inside homes or office buildings. Turn off fans, air conditioners, and forced air heating units. Drink and eat only canned or packaged food that have been inside. Trained monitoring teams wearing special protective clothing and equipment will be moving through the area to determine the extent of any possible contamination. The dress of these teams should not be interpreted as indicating any special risk to those indoors.[72]

Current response planning for nuclear accidents bases its worst case scenario on the most dangerous, factual accidents.* The *Manual* also refers to the contamination problems arising from nuclear fission products such as strontium 90 and iodine 131 which would be produced in either a sub-critical or full-scale nuclear chain reaction.† [74] While U.S. officials insist that such events are highly unlikely, their statements are meaningless since it is impossible to predict either the origin or the precise sequence of events in a real accident.‡

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* Defined in the *Manual* as "off a military installation with a spread of contamination, difficult weapon recovery problems, public involvement, extensive logistic support requirements, the need for extensive deployed communications support, and site restoration problems." [73] This scenario is the same as occurred in the 1966 and 1968 accidents.

† A sub-critical event occurs when a chain reaction begins in a mass of fissionable metal, but blows itself apart, thereby halting the reaction and scattering radioactive material. A chain reaction occurs when the chain reaction becomes self-sustaining, generating a full-scale nuclear explosion.

‡ In "host nations", the following events seem likely to generate accident conditions: "cross-decking" nuclear weapons between ships near or in ports, for example, between

All that can be said is that the likelihood of nuclear weapon accidents may decline with improved designs, may increase as thousands of new weapons are deployed, and probably increases in times of rising international tension as the frequency of weapons handling increases. It can be said with certainty that accidents which exceeded the worst nightmares of U.S. nuclear planners have already occurred, and U.S. officials take them seriously enough to create a response capability in the U.S. and the Pacific, albeit one that is seriously flawed.

Kiwi Disease

While concerns about health and safety run deep throughout the Pacific, the fundamental objection to U.S. Navy warship visits is opposition to the growing militarism in the Pacific and to the use of nuclear weapons as a means of war. The 1984 election of a New Zealand government opposed to visits of nuclear-powered or nuclear-armed warships – dubbed the "Kiwi Disease" in Washington – is but the latest in a long history of hot/cold welcomes to U.S. warships from Pacific allies. In an era of high-speed nuclear-powered ships and long-range nuclear weapons, New Zealand's stance is *militarily* irrelevant – unless the Soviets or the U.S. decided to invade Antarctica. New Zealand is not at the crossroads to any conceivable war, unless the U.S. loses access to the direct route through Southeast Asia to the Indian Ocean and is obliged to sail south of Australia.

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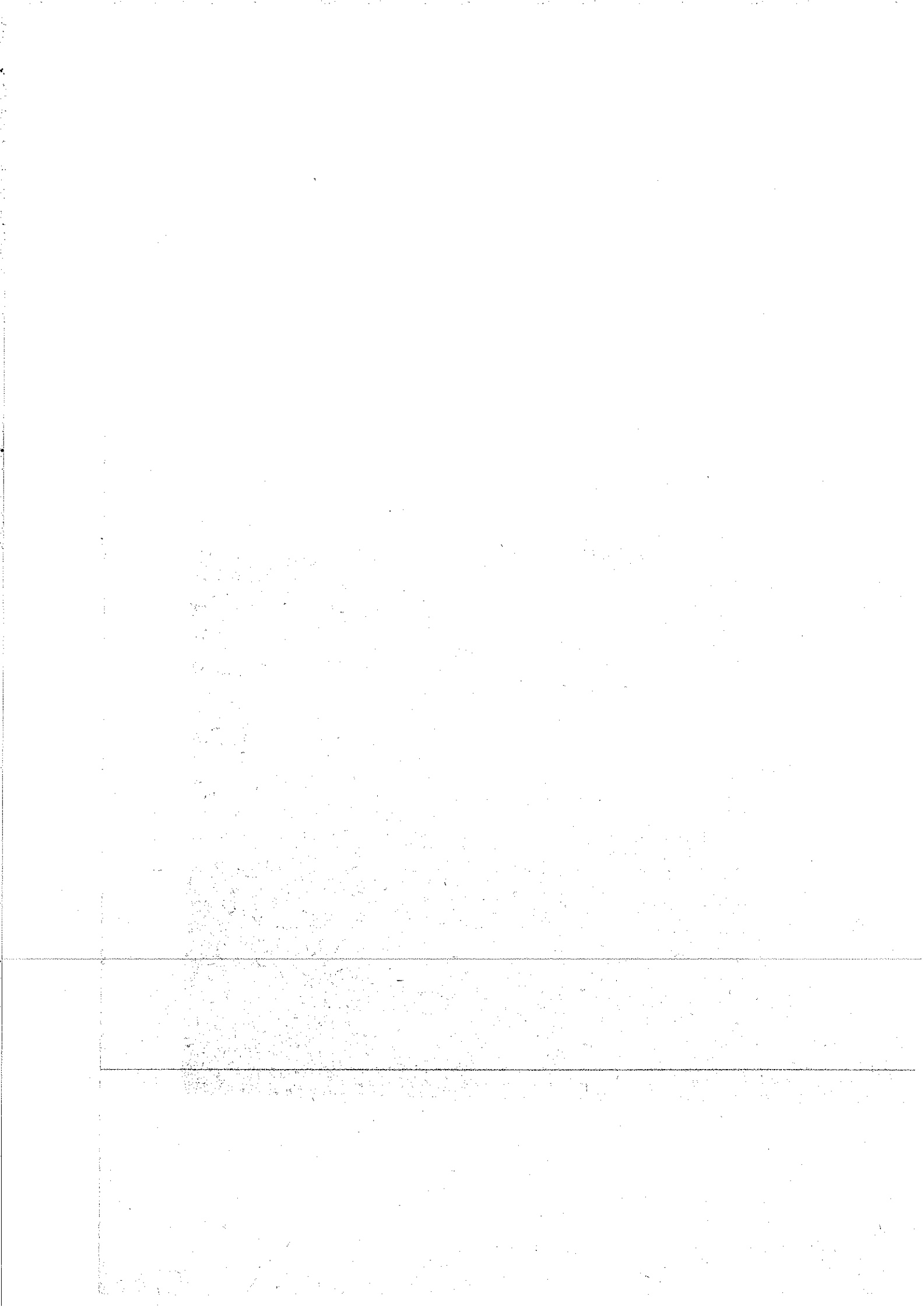
aircraft carriers; helicopter airlift between storage depot and port or airfield; the "bouncing missile" syndrome, in which a missile/bomb or its warhead is dropped by mistake; and an aircraft shipping nuclear weapons back to U.S. repair depots or dispersing just before a nuclear war. The U.S. Navy reports that 381 naval-nuclear accidents and incidents occurred between 1965 and 1977 on all types of vessels, especially involving anti-submarine and air-defense nuclear rockets. A Pacific Fleet instruction in November 1981 notes another route to a nuclear accident: "Detonation of high explosive components of a nuclear weapon, in addition to exposing personnel to blast, thermal, and toxic gas effects, may spread radioactive material, thereby contaminating casualties and the incident/accident area." Each nuclear-armed vessel has established a nuclear casualty medical team to respond to such events. "Human remains," it orders, "which after decontamination show considerable contamination, will be wrapped and sealed in sheet polyethylene and stored in a properly labeled human remains case" – that is, a coffin.[75]

Although New Zealand's decision is of no military significance, it threatens U.S. forward deployment and collective security strategy. U.S. strategists ask themselves: "Is New Zealand the first in a line of dominoes that, once toppled, could confine the U.S. Pacific Fleet to a corridor between Pearl Harbor and Guam?" [76] The U.S. has not hesitated to reject New Zealand's stance as incompatible with its alliance with the U.S. "The United States," emphasized a State Department official, "attaches critical importance to the opportunity to use Australian and New Zealand ports that provide ready access to the South Pacific and Indian Ocean." [77] CINCPAC took an especially hard line against New Zealand, calling the New Zealand decision "an unprecedented move". "As the theater commander," he cabled U.S. Defense Secretary Caspar Weinberger, "it is difficult to see how my forces could seriously and realistically cooperate with the New Zealand military under those conditions." [78]

Beyond concern that military maneuverability may be curtailed, the U.S. is worried about the unravelling of the alliance system upon which its strategic power pivots. "Unless we hold our allies' feet to the fire over ship visits and nuclear deployments," a senior Administration official insisted, "one will run away and then the next." [79]



Vladivostok, homeport of the Soviet Pacific fleet, 1985
(TASS)

SIXTEEN ☆
THE SOVIET "THREAT"

There is good reason to believe that we normally overestimate Communist capabilities in almost every respect. That statement I base on my own experience in war. In general in the intelligence field they tend to err on the safe side . . . I think we are in a dangerous position vis-à-vis the Communists in that respect [overestimating Soviet capabilities] today, because there has been an almost hysterical assumption of great capabilities on the part of the Communists, some of which, in my opinion, actually do not exist.

—Admiral Arthur Radford, Chair,
U.S. Joint Chiefs of Staff, 1956[1]

In the Pacific as in all other areas of the world, our greatest threat remains the Soviet Union.

—Admiral William Crowe,
Commander-in-Chief Pacific, 1985[2]

Few Americans have ever met a Soviet citizen. Almost none have ever fought against a Soviet soldier – the last U.S.–Soviet combat was in 1919–1921 when the Marines intervened at Vladivostok. Indeed, the superpowers were allies, not enemies, in World War II, the last major war involving both U.S. and Soviet soldiers.* Yet the image of an in-

* Soviet and U.S. pilots did meet in head-on aerial combat a few times in the Korean War, but this was not publicized at the time.

nately diabolical Soviet Union is deeply engrained in American popular culture.

While President Reagan's proclamations about the "evil empire" might stem from politicking or sheer ignorance,* U.S. diplomats deliberately beat the drum of the Soviet threat at home and abroad. Secretary of State George Shultz's remarks to the 1984 ANZUS (Australia, New Zealand, U.S.) conference are typical: "Soviet naval activity in the Pacific, supported by the growing Soviet air and naval presences on the Pacific Rim, continues to increase, probing for weak or vulnerable areas into which it can expand." [4] Strong on ideology and weak on evidence, such rhetoric aims to bind Pacific allies more tightly to the U.S.

A dispassionate evaluation of the "correlation of forces" – the U.S.–Soviet strategic balance – in the Far East reveals a different picture. Far from its purported invincibility, the Soviet military machine in the Pacific is homebound and vulnerable. Vastly inferior to the U.S. in every dimension, the Soviets rely for their defense on their huge, home-based nuclear arsenal. Ironically, it is precisely Soviet weakness rather than strength which increases the risk of nuclear war in the Pacific.

Unnatural Acts

Pentagon intellectuals view the world through a peculiar prism, the geopolitical outlook. According to Reagan administration strategist Colin Gray, "the world, reduced to its power-related essentials, consists of a Heartland superpower [the Soviet Union] that is locked in a permanent struggle with the offshore, insular continental superpower, the United States, for effective control of the Rimlands and the marginal seas of the World-Island (the dual continent of Eurasia–Africa) that sweep in a great arc from Norway's North Cape to South Korea and Japan." [5]

Any relevance of this theory was swept away long ago by China's defection from the Soviet bloc as well as the rise of non-aligned movements. Nonetheless, U.S. military analysts still sport geopolitical lenses. In June 1984, for example, General Bernard Trainor of the Marines told American midshipmen at the Naval War College: "We

* For example, Reagan claimed that the Soviet Navy "is aimed at intercepting the some sixteen choke points [of maritime trade] in the world." [3]

have a legitimate right, a legitimate interest to operate on the seas of the world and touch the continents of the world . . . That's our lifeblood, our economic blood. This is not true for the Soviet Union." The General added, "But the Soviet Union is doing an unnatural act, it is leaping the barriers, it is going into our turf." War with the Soviets, he concluded, is therefore "inevitable." [6]

Status Quo

Via forward deployment, the U.S. has delivered the threat of U.S. attack to the very doorstep of the Soviet Far East. To assess the superpower military balance, it is therefore necessary to take into account forces which are "homebased" within the Soviet Union. For analytical symmetry, we might also examine U.S. forces in the Western United States. But the situation is not symmetrical: the Soviets do not and cannot project conventional military power eastwards against the U.S. mainland. The West Coast-based U.S. forces, therefore, bear on the "Pacific" balance only as back-up forces in a U.S. attack on the Soviets. The military *status quo*, in short, is premised on the assumption that it is legitimate for the U.S. to defend itself by attacking the Soviets from foreign forward positions in the Pacific, and not vice versa.*

The major military mission of Soviet forces in the Far East is to deter China from opening a second front in the event of war with the U.S.† The Soviets keep fifty-three divisions of ground troops in the Transbaikal and Far East military districts, fifty of which are deployed along the Soviet and Mongolian borders with China (see Appendix E).‡ [9] In a global superpower war including China, these forces would try to wrest Manchuria from China to block a U.S. attack on Mongolia and Central Russia over the north China plain.[10]

* U.S. forces in Alaska are relevant, however.

† Soviet forces were first deployed to counter the threat of a war with China. In light of the U.S.–China alliance, the current mission of Soviet forces arrayed against China is *primarily* to avoid war on the China front in the case of war with the U.S., and secondarily, to deter a war with China alone. In this secondary mission, military analysts agree that Chinese forces are no match for the Soviets.[7]

‡ Eighteen of these are motorized rifle divisions, and only two are tank divisions, which are more typical in Eastern Europe.[8]

To defend the Far East from coastal attack, the Soviets have erected a "hedgehog" defense. Because Soviet MiG fighter planes are "short-legged", fighter interceptors flying from fourteen coastal airfields can reach out to a combat radius of only 390 km (see Map 16.1). The fighters' short range means that the spines on the hedgehog are quite short.[11]

Some 100 SA-4 and SA-6 surface-to-air missiles along Sakhalin and Kamchatka defend valuable Soviet Far Eastern military and urban-industrial targets. These missiles can hit targets up to 24 km altitude and out to a range of 70 km.[12] Although a system of coastal, over-the-horizon, and long-range radar ostensibly warns of incoming threats, the KAL 007 incident in September 1983 revealed that the Soviet hedgehog in the Far East has many bare patches. Most of the interceptors failed to find the plane as it blundered through porous Soviet airspace. According to a Soviet official, not the least of their problems was the fact that "it took us too long to sober up the pilots enough to get them to take off."[13] The airliner flew through highly defended Soviet airspace for more than two hours before it was shot down south of Sakhalin Island.[14]

CINCPAC refers often to the "menacing" number of Soviet military aircraft in the Far East – over 1,600 fighter and interceptor aircraft and 435 bombers in the region in 1983 (see Appendix E). The bulk of these planes, however, are capable only of territorial defense of the Soviet Union, and are stationed primarily along the Soviet–China border. Furthermore, many of the models in the Soviet Air Force are obsolete.[15] According to former Secretary General of the Japanese military's Joint Chiefs of Staff, Naotoshi Sakonjo: "It is . . . doubtful whether they have the capacity to conduct air-to-air fighting or mount air-to-air ground assaults following flights across the sea. Even if they had the capacity to perform such missions, they naturally would have to be accompanied by AWACs [Airborne Warning and Control aircraft]. But the Soviet AWACs . . . lag far behind their American counterparts."[16]

Red Flag Afloat

Besides airpower, the Soviet Union's strategic posture in the Far East depends on its Pacific Fleet. In 1983, American intelligence counted 84 general purpose surface vessels, 122 submarines, and 12 amphibious

vessels in the Soviet Pacific Fleet (see Appendix E). The Fleet is broken into two parts, each based primarily in a distinct maritime theater.* The 5th Fleet, based at and controlled from Vladivostok, covers the Seas of Japan and Okhotsk out to the defensive barrier of the Kurile Islands. The second, the Soviet 7th Fleet, is controlled from Petropavlovsk (see Map 16.1)[18] and covers the oceanic approaches to the Kuriles, the Kamchatka Peninsula, and the Bering Strait route to the Arctic sea lanes.[19]

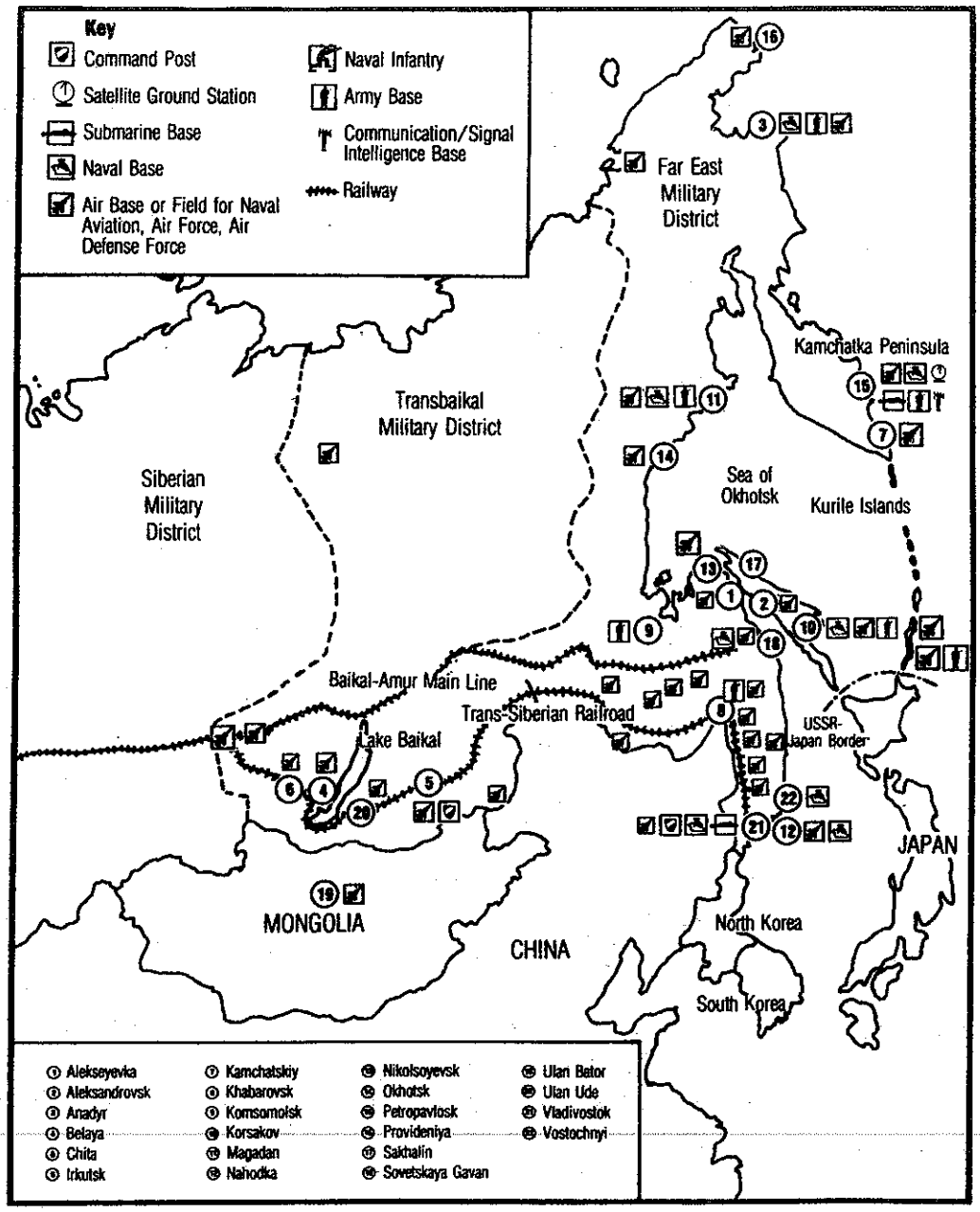
American naval propagandists consistently point to the Soviet threat to U.S. and allied "sea lanes of communication" (SLOCs). U.S. Secretary of the Navy John Lehman, for example, argued in April 1984 that: "A primary Soviet objective is naval interdiction of the lifelines connecting the United States, its allies, and the West's sources of vital fuel and minerals – 95 per cent of which move by sea." [20]

Yet in their private writings, key supporters of maritime supremacy tell a different story. According to naval analyst Bing West, SLOC interdiction has the lowest priority on the Soviet Pacific Fleet's wartime hitlist (see Table 16.1). Since the Soviets will be so busy fending off the U.S. fleet in the Pacific, an attempt to interdict U.S. and allied commerce and supply lines would divert Soviet forces from more important missions – protecting the Soviet mainland and its nuclear forces. The U.S. itself rates this "threat" so low that it has turned protection of northwest Pacific SLOCs over to the Japanese Maritime Defense Force, even though the U.S. Pacific Commander believes the Japanese Force to be currently incapable of achieving this goal.[21]

Writing in 1977, Paul Nitze, former U.S. Secretary of the Navy and key strategist in the Reagan administration, concluded that Soviet submarines and aircraft are not "cause for serious speculation that the Pacific sea lanes could be severed for any extended period by Soviet naval activities." [22] Informed Japanese analysts such as Admiral Naotoshi Sakonjo concur. "It is totally inconceivable," stated the Admiral in December 1982, "that the Soviet Union's major surface ships will move into the Pacific and attack Japanese and American warships or cargo ships or sea lanes." [23]

* Naval analyst Norman Polmar states – without documentation – that these fleets were divided in 1947 and reunited in 1958.[17]

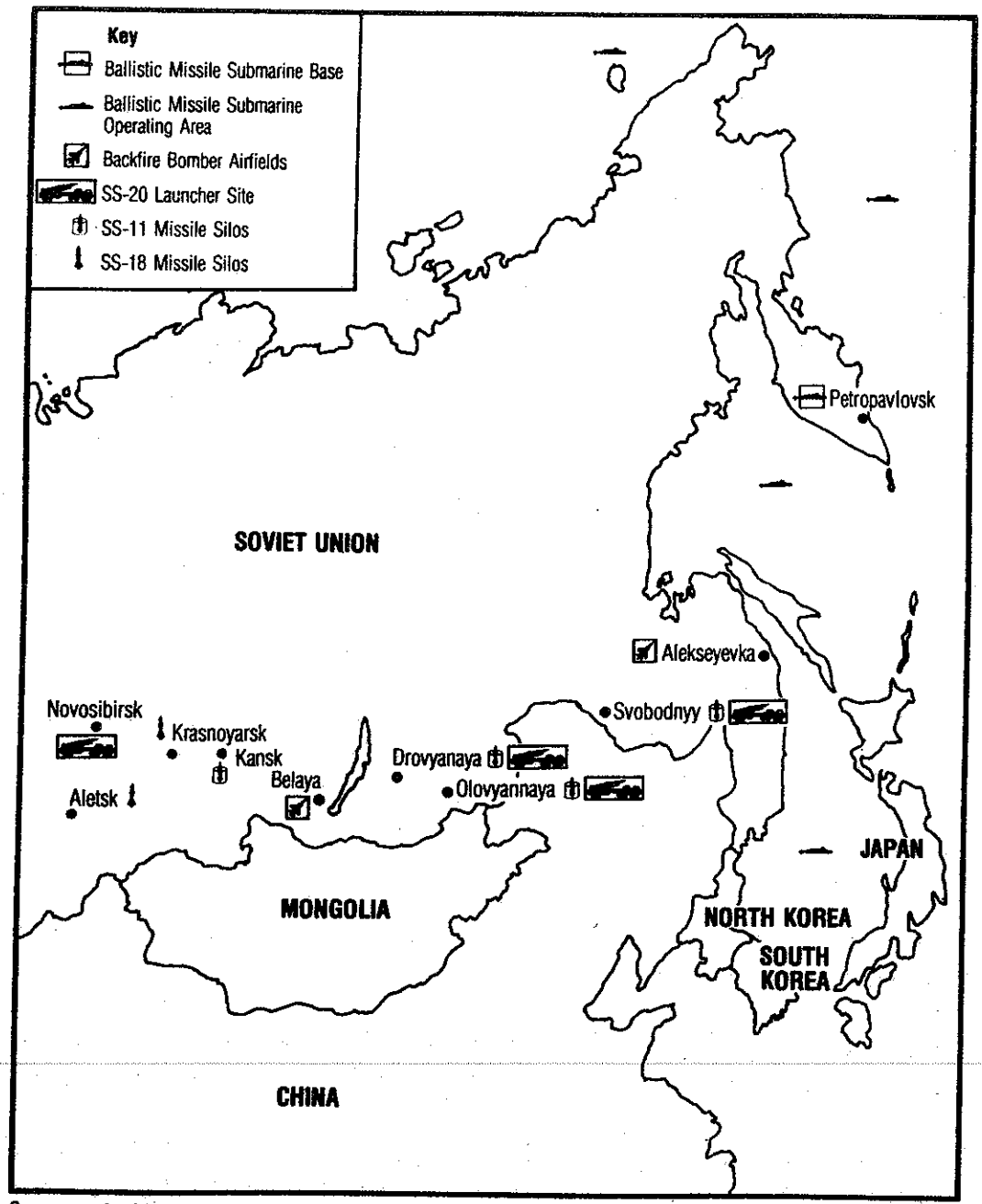
Map 16.1:
Soviet Military Bases in the Far East



Note: Army bases are not shown. U.S. 1984 estimates showed 2 Divisions on Sakhalin, 1 Division at Petropavlosvk, 19 Divisions in region of Vladivistok to Komsomolsk, 4 Divisions in Mongolia, 9 Divisions in the Southwestern Transbaikal, and 5 Divisions in the Siberia Military District. Exact sites often unknown in sources.

Sources: W. Feeney, "The Pacific Basing System and U.S. Security," in edited, W. Tow and W. Feeney, *U.S. Foreign Policy and Asian-Pacific Security, A Transregional Approach*, Westview, Colorado, 1982, p. 193; U.S. Department of Defense, *Soviet Military Power*, U.S. GPO, Washington, D.C., 1985, p. 26; W. Simons, "Command and Control in the Pacific," *Journal of Defense and Diplomacy*, Volume 3, no. 1, January 1985, p. 20. Anon, "Soviet Far East Bases," *Jane's Defence Weekly*, April 14, 1984, pp. 560-562.

Map 16.2:
Soviet Long-range Siberian/Far Eastern Nuclear Sites



Source: as for Map 16.1; Office of Public Affairs, CINCPAC, Hawaii; Anon "Soviet Far East Bases," *Jane's Defense Weekly*, April 14, 1984, pp. 561-62.

Slamming the Back Door

The mission of the Soviet Navy in the Pacific is fundamentally different from that of the U.S. Navy. U.S. forces are designed to occupy, threaten, or attack foreign lands and control the open oceans, a strategy termed "offensive defense." Soviet forces are primarily devoted to a "defensive defense" of the Soviet Far East. Soviet Pacific strategy revolves around facing the "American threat." The highest priority is to deny U.S. aircraft carriers access to coastal waters, and protect Soviet nuclear submarines from U.S. attack.*

Aside from its ballistic missile-firing submarines, the most important Soviet naval forces in the Pacific are the anti-submarine warfare units. Deployed in 1979 and 1984, the two much-vaunted Soviet Kiev-class aircraft carriers assigned to this mission bring to mind the huge 80,000-tonne American carriers. In fact, Soviet "aircraft carriers" are actually 34,000-tonne anti-submarine warfare cruisers, capable only of launching helicopters and short-range vertical take-off fighters. These fighters aim to protect the cruiser itself and to attack U.S. anti-submarine warfare aircraft over Soviet coastal waters.[24]

The capabilities of the Kiev cruisers and aircraft are so limited that American navalists are contemptuous of them.[25] Indeed, after the *Kiev* floundered its way through the Indian and Pacific Oceans, it limped into Vladivostok in June 1979 and was laid up for repairs for fourteen months.[26] In a 1983 naval exercise, a U.S. carrier managed to surprise and overwhelm a U.S. cruiser which simulated the capabilities of the Kiev-class ship.[27] According to Ralph Cossa, former Executive Assistant to CINCPAC: "The Kiev is obviously no match for a Carl Vinson carrier." [28]

While U.S. carriers range in the open Pacific, the Soviet anti-submarine cruisers stay close to Soviet waters because they can operate only under land-based air cover. In a war, the cruisers and their escorts would rely on land-based aircraft to try to ward off U.S. attack subs from destroying Soviet nuclear submarines near the Soviet coast. They may also help the nuclear submarines to "break out" of a U.S. siege into

* The Soviet Pacific Fleet is largely irrelevant in a war with China on mainland Asia, the Soviet's second major strategic headache in the Far East. Minor Soviet amphibious flanking actions would not have much impact on a ground war and cutting off U.S. supply runs to China would risk drawing U.S. firepower into the war.

open ocean. Limited by range, size, and number, Soviet anti-submarine forces in the Pacific, according to American military analysts, are hardly adequate to counter U.S. submarine forces in the Seas of Japan and Okhotsk, let alone in the Pacific.[29]

The Soviets plan to launch a much bigger carrier in the early 1990s. This new class, however, is decades behind American naval technology. Given the low performance of Soviet carrier aircraft, the new carrier will be vulnerable to land-based missile attack if it were used to intimidate a Third World country in the American style.[30] Today's American carriers are superior to future Soviet carriers in every critical dimension of warfare, most importantly, in carrier-borne long-range anti-submarine warfare and aerial early warning aircraft to defend the carrier.[31] Since the Soviets also lack substantial long-range amphibious land-attack forces, the new carrier is simply not comparable to its U.S. counterpart.[32]

The new carrier's central mission will probably be to ward off attacks by U.S. aircraft carriers against the Soviet Far East and its coastal fleets.[33] Before the U.S. put new long-range Polaris missiles aboard its submarines, U.S. 7th Fleet aircraft carriers were the main Pacific-based nuclear threat to the Soviet Far East. To counter the U.S. carriers, the Soviets built dozens of cheap diesel-powered submarines armed with conventional and nuclear-tipped anti-ship cruise missiles. The current Soviet tactic is to surround the U.S. carrier task group with cruise missile submarines and surface vessels, and then launch a simultaneous "saturation" strike to overwhelm the carrier's defenses.

This tactic severely strains Soviet centralized command and control resources. More importantly, it is rigid and inflexible. To achieve saturation, the 360° attack must be timed precisely. American naval analyst Norman Friedman explains: "Anything which upsets the timing destroys the concentration [of missiles] and permits the [U.S.] battlefleet to survive the attack and reply effectively."[34] U.S. F-14 fighters have demonstrated in mock attacks that they can shoot down 85 per cent of U.S. cruise missiles, which are even harder to detect than those of the Soviets.[35] In theory the surviving missiles can be decoyed away from the carrier with chaff radar reflectors, or shot down at close range.[36]

Since their capability to attack U.S. carriers is already limited, the Soviets will require a Herculean effort to simply maintain the *status quo* against new U.S. deployments. By 1990, U.S. deployment of Toma-

Table 16.1:
Missions of the Soviet Pacific Fleet

Mission[a]	*Tasks*	*Forces*
Strategic Offense	1. SLBM Launch	SSBN, SSB
	2. SSBN Protection	SSN, CVSG
Defense of the Homeland[b]	1. Anti-Submarine Warfare	SSN, SNA, CG, DDG, DD, SOSS
	2. Anti-Carrier Warfare	SSGN, SSG, SNA, SOSS
	3. Anti-Amphibious Warfare	SS, SNA, Coastal Defense Forces
	4. Protection of SLOC	GP Surface Defense Forces
	5. Interdiction of SLOC	SS, GP Surface Forces
	6. Defensive Mining	Mining Forces
Support of Land Forces	1. Amphibious Assault	SNI, Amphibious, Merchant
	2. Blockade	GP Surface Forces, Mining Forces
Presence	1. Peacetime employment of selected forces with minor regard to mix.	
	2. Presence forces available for interposition if political or military interests demonstrate need.	
	3. Gorshkov's "instrument of state policy overseas".	

Notes: a. Listed in priority order.
b. Tasks listed in order of priority if concurrent accomplishment infeasible.

Table 16.1: (cont)

Key: SLBM = Sea-launched Ballistic Missile; SSBN = Ballistic Missile Nuclear Submarine; SSB = Ballistic Missile Submarine; SSN = Nuclear Attack Submarine; CVSG = Anti-Submarine Warfare and Guided Missile Carrier Task Group; SNI = Soviet Naval Infantry; SNA = Soviet Naval Aviation; CG = Guided Missile Cruiser; DDG = Guided Missile Destroyer; DD = Destroyer; SOSS = Soviet Ocean Surveillance System; SSGN = Guided Missile Nuclear Submarine; SSG = Guided Missile Submarine; SS = Diesel-powered Attack Submarine; SLOC = Sea Lanes of Communication; GP = General Purpose Surface Forces.
Source: F. West *et al.*, "Toward the Year 1985: The Relationship Between U.S. Policy and Naval Forces in the Pacific", Appendix C, in Institute for Foreign Policy Analysis, *Environments for U.S. Naval Strategy in the Pacific Ocean–Indian Ocean Area, 1985–1995* (mimeo), Conference Report for Center for Advanced Research, U.S. Naval War College, Cambridge, Massachusetts, June 1977, p. 369.

hawk cruise missiles will multiply Soviet targets in an anti-carrier attack tenfold (see Chapter 14). Simply tracking all these American warships may well defeat Soviet efforts to credibly deter U.S. naval offensives in the Northwest Pacific.* Furthermore, Soviet cruise missiles are so cumbersome that they cannot be reloaded at sea on most vessels. The Soviet Fleet in the Pacific will therefore disarm itself the first time it employs the tactic.[38]

Supporting the Soviet Pacific fleet are land-based fighters and bombers, including forty naval Backfire bombers.†[39] A high-performance attack aircraft, the Backfire carries one or two anti-ship missiles armed with a nuclear or conventional warhead. With an unrefuelled combat radius of 5,400 km, Backfires can strike at U.S. carriers as far away as the Philippines or Hawaii.[40] But the Backfire lacks self-defense weapons and can be countered by U.S. carrier-launched F-14 aircraft at a range well beyond the Backfire's anti-ship missiles. American naval analysts conclude that all forty of the naval Backfires in the Far East would have to attack together to overwhelm and disable even one carrier operating close to the Soviet Union.[41]

The Soviet Union also maintains 8,000 naval infantry or Marines in the Far East, primarily to defend the Kurile Islands or to counter a U.S. or Japanese blockade of the Straits into the Sea of Japan.[42] The notion that these and other Soviet Far Eastern forces threaten Japan or the United States with a land invasion is sheer fantasy. As Japan's Research Institute for Peace and Security noted in 1981, the Soviet's weak sealift, relatively few naval infantry, and air inferiority preclude an offensive operation against Japan.[43] Indeed, the most likely "forward" use of Soviet Marines is to extricate Soviet advisors from fluid political situations like Somalia in 1977, or to counter U.S. Marine attacks on the Soviet Union itself.

Overall, it is difficult to disagree with U.S. naval analyst Bing West, who concludes that the Soviet Pacific Fleet's "overwhelming emphasis is on defense." In dense military jargon, West advised that in the Pacific, "The Soviet Navy is not projected to enjoy an excess of forces in terms

* As defense analyst Seymour Deitchman notes, Soviet cruise missiles rely upon long-range, subsonic Bear turboprop aircraft for targeting and guidance. Vulnerable to U.S. attack, these aircraft are yet another weak link in the Soviet cruise missile saturation attack strategy.[37]

† Based at Belaya west of Lake Baikal since 1978, and Alekseyevka since 1980.

of requirements which would enable it to perform adequately any but its primary mission of homeland defense." [44]

Far East Nervous System

Like Pacific Command, the Soviet military in the Far East is animated by an electronic nervous system which enables commanders to make decisions, communicate with forces, and receive intelligence from the field. CINCPAC's counterpart in the Far East is a Marshal of the Soviet Army, who operates from Chita.* [46] Although we can glean only an impression of the Soviet command and control system from public sources, it appears even more centralized, bureaucratic, and rigid than that of Pacific Command. In general, concludes the U.S. Defense Nuclear Agency, "the impression is gained that the whole [C^3I] system depends on everything going just as prescribed, that the loss of a communication link or a command echelon would be more than disruptive, perhaps even catastrophic." [47]

Like the U.S. system, the Soviet Far Eastern Command system magnifies errors. Undoubtedly jittery since the KAL 007 overflight, the Soviet Far East Army Command in Vladivostok overreacted in August 1984 when President Reagan joked that he had outlawed Russia and "we begin bombing in five minutes." Vladivostok issued an alert stating that the two superpowers were in a "state of war." In response, U.S. and Japanese forces went onto high alert until the Soviet order was rescinded.[48]

In the Soviet Far East, the Soviets have erected some 500–600 tactical early warning and control radars. Due to the high latitudes, most Soviet satellites seeking communications or intelligence rotate in a near polar or Molniya orbit.† These satellites are especially crucial for long-haul and secure communications with Moscow.[50] In the Far East itself, Soviet communication networks are both ground and air-based, multiple and redundant, and are not designed to endure nuclear war.[51] Aircraft and naval forces rely mostly on high frequency radio communication. Only one communications and intelligence land-based facility is forward-

* Forces operating outside the two Far Eastern maritime theaters, for example, in the Indian Ocean, are likely to be commanded direct from Moscow.[45]

† The main satellite ground station in the Far East is located at Petropavlovsk.[49]

based in the Pacific, reportedly a high frequency direction-finding station in Vietnam.[52]

The Soviet Fleet also provides intelligence and communications, fielding tattle-tale vessels which trail U.S. carriers, spyships which sit off U.S. bases such as Guam, and fishing trawlers which gather intelligence wherever the tuna swim. Long-range turboprop maritime reconnaissance aircraft supplement ocean reconnaissance satellites in peacetime.[53]

Achilles Heel

There are many weak points in the Soviet Pacific's defense system. Their biggest problem is having to cross the 15,000 km southern supply route from the Mediterranean through the Indian Ocean and Southeast Asia to the Far East. This west–east sea route is the equivalent of the Panama Canal, except that the Soviet Far East is more dependent on maritime supply and more vulnerable to the effects of interdiction than either coast of the U.S.

The Far East regional distribution system is undeveloped,[54] and there is no high-volume, overland east-west transport system across the Soviet Union. While unclassified figures are incomplete, U.S. naval analysts estimate that the Far East is 80–90 per cent dependent on sealift for cargo imports from the Soviet industrial West and from foreign suppliers. To free themselves from dependence on imports of strategic minerals and raw materials,* the Soviets launched a massive development program in the Far East. Sea transport is undoubtedly still the most efficient link between the resources and consumers in the Far East and the factories of the Soviet West.

* We estimate that the supply of Far Eastern regional imports by sealift is five times greater than imports by the overland railroad, which could conceivably supply 2,000 tonnes of war materiel per day in an eastward direction.[55] The major war materiel stocks in the Far East of about 2.2 million tonnes are kept inland in the Komsomolsk region. They are shipped to the coast by rail and river.[56] The Soviet Pacific Fleet underway would use about 7,000–14,000 tonnes of fuel oil each day.[57] Coastal fuel oil storage is not publicly known, but once it was exhausted, daily usage would exceed rail and river resupply from the inland stocks – if the inland stocks, railroad, and river barges survived the outbreak of war. Soviet aircraft also guzzle gas, but even less is known publicly about Soviet jet fuel stocks in the Far East.

While such development may have improved the Soviet economy, it has weakened its strategic position. Economic autarchy does not matter in peace and sealift is vulnerable in war. The Soviet cargo fleet (including jointly owned foreign shipping firms), for example, is the biggest single user of the Suez Canal, which would be vulnerable to supply interruptions in war. Much of the Soviet naval effort, particularly beyond the coast of the Far East, aims to protect cargo ships. U.S. Naval analyst James Westwood underscores the point in his analysis of the Soviet Indian Ocean Squadron in the Gulf of Aden:

> Most observers see this as being aimed at harming Western shipping. Few discern it as being aimed at protecting Soviet shipping. Nevertheless, over more than a dozen years, the composition of the Soviet Indian Ocean naval squadron signifies its primary mission. It is consistently composed of ships and aircraft primarily suitable for reconnaissance, surveillance, logistical support, and anti-surface warfare; in short, the naval functions necessary to protect shipping from interference by a hostile navy. This distinction is important because of other possible uses of a forward-deployed naval squadron, but for which its ships and aircraft, in this case, are not suited. These have not been the types and numbers of ships and aircraft useful for attacking Western shipping, antisubmarine warfare, or coercive naval "diplomacy" but, rather, those suited for the mission stated by Yuri Valikenov, Soviet representative to the Seychelles, "to secure our own maritime areas." [58]

Even within the Far East, the U.S. Navy has long recognized that transport to facilities is undeveloped. One Navy analyst concluded in 1956 that "the entire position of the Russians in the eastern Arctic is dependent upon control of the sea lanes along the maritime coast of Far Eastern USSR." He added that unless the Soviets controlled sea lanes in the Pacific, they "not only cannot think realistically of offensive military thrusts in the Far East, they cannot even be certain of being able to supply their own outlying areas." [59]

Admiral Noel Gayler, former Pacific Commander, admitted that "A special case arises in the logistic resupply of the Soviet Far East. Much tonnage traverses the Indian Ocean, and a limited amount crosses the Northern sea route." He hastened to add, however, that "this is not a vital interest for the Soviet Union, in the same sense as sea communications are to the alliance." [60] But the Admiral's comments ignored the Soviet dependence on sealift to supply its armed forces in the event of

war. There is simply no denying that sealift is vulnerable – and vital – to the Soviet Far East. As Admiral James Watkins testified in 1984: "Kamchatka is a difficult peninsula. They have no railroads to it. They have to re-supply it by air. It is a very important spot for them, and they are as naked as a jaybird there, and they know it." [61]

The world's "great landpower", in other words, is possibly more dependent on sealift in the Far East than the U.S. and most of its allies. As one U.S. naval analyst told us, the U.S. can simply cut the Soviet Union in half. Since Soviet war materials stockpiled in the Far East are relatively small, the U.S. has only to provoke the Soviet Air Force and Navy into using up its fuel and then blockade resupply. In such conditions, the Soviet armed forces in the Far East might collapse in less than thirty days.

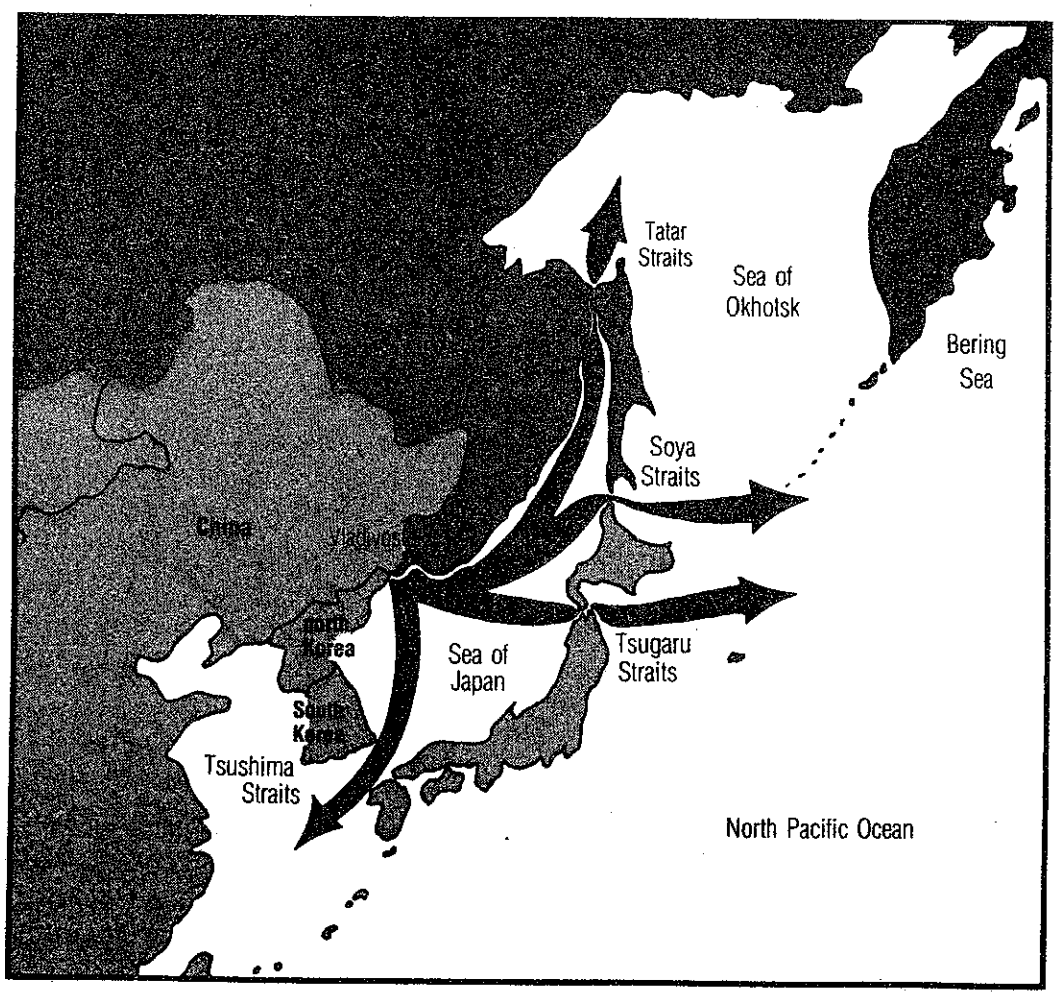
Pacific Command is assuredly aware of this acute Soviet weakness. Indeed, in 1978 the Intelligence Center-Pacific produced a report, *Soviet Far East Logistics*, although it refuses to divulge any of the contents. The U.S. Navy does not like talking about Soviet dependence on sea transport and its vulnerability to a simple blockade, lest it undermine the rationale for a strategy based on ever more sophisticated, high-technology weapon systems.

Bottled Up

Before they can even put to sea in the Pacific, the Soviets must overcome a host of geographical obstacles. Their Far Eastern ports and airfields are fogbound or battered by storms over the summer, and icebound and frozen in the winter. Worst of all, the Soviets lack direct access to the Pacific Ocean from Vladivostok and the Sea of Japan (see Map 16.3). American strategist Anthony Cordesman describes this Achilles heel:

> The Pacific fleet is concentrated at Vladivostok, on the Sea of Japan, and Petropavlovsk, in the northwest Pacific Ocean. Forces at Vladivostok have access to the Sea of Japan, which icebreakers can keep open in the winter, but to reach the Pacific Ocean they must pass through one of five straits close to Japan and South Korea – the widest of these is 110 miles wide, and these are waters readily accessible to U.S.-allied forces. Although the fleet at Petropavlovsk has easy

Map 16.3:
Key Choke Points of the Soviet Pacific Fleet



access to the Pacific Ocean, Petropavlovsk is located on the Kamchatka Peninsula, which is remote from the Soviet heartland and not easily resupplied. Thus, the Soviet navy would have difficulty in maintaining operations out of Petropavlovsk unless major sea lines of resupply could be sustained.[62]

The choke points are also highly susceptible to sonar and aerial monitoring* and to U.S. mining technology.[64] If the Soviet Fleet tried to enter the Pacific to wage war, it would have to get past what one analyst calls a "surly lynch mob" of U.S. forces waiting to pounce.[65] Indeed, the Soviets may have to mine the straits and blockade them to keep *out* the U.S. Pacific Fleet![66]

The Correlation of Forces

As an enemy, the Soviet Far East forces have always disappointed the U.S. military. Difficult to provoke into combat and huddling in their homeports 95 per cent of the time, the Soviet Far Eastern forces have never faced the ultimate test of power – war with the U.S. In spite of Soviet bravado about the world "correlation of forces" turning against the U.S., there is little doubt about who would win.

The "true" military balance is a difficult ratio to pin down. Soviet and U.S. forces differ in number and type, and have very different military missions. Moreover, U.S. and Soviet strategic intentions and requirements differ fundamentally. Numerical comparisons are, therefore, meaningless and often misleading in assessing "true" power ratios. Comparisons are more meaningful when made in terms of countervailing forces: submarines *versus* anti-submarine forces, bombers *versus* air defenses, etc.[67] In the 1980s, however, weapon systems rely on immense support infrastructure – such as communications and logistics – which are as important as weapons systems in determining military power balances.

The U.S. Navy appears almost schizophrenic in its public assessments of relative strength, alternately strutting its might and bemoaning its impotence. Testifying before the Senate in 1984, Secretary of the Navy

* From SOSUS and rapidly deployable sonar buoys; C-130, B-52, and P-3C aircraft and submarines.[63]

John Lehman exclaimed: "I believe that our margin of [maritime] superiority disappeared at some point in the seventies. Not until we have achieved our force structure and readiness increases by the end of the decade will we regain it." [68]

Yet Lehman himself has pointed to America's forty-year lead in aircraft carrier technology.[69] As for anti-submarine forces, the Soviets not only lack the territory and the technology for long-range underwater hydrophone nets to snare U.S. nuclear submarines, but U.S. attack submarines are far superior to Soviet models. As Pentagon Anti-Submarine Warfare specialist Gerald Cann explains: "The position our submarine force has enjoyed for the last twenty years is that they were able to detect the other guy so far away that if we were to engage him and actually shoot, there is a high probability that he never would have known what was happening until the torpedo hit him." [70]

The schizophrenia may stem from the changing political objectives which underlie particular military assessments. After extolling the virtues of the U.S. Navy before Congress in 1984, Admiral Watkins, Chief of Naval Operations, was asked about Lehman's insistence that the Navy was inferior to the Soviets. Watkins replied: "In comparing our major warfare areas versus the missions required in the execution of the Navy's maritime strategy, I would say our strengths . . . would include *all* major naval warfare areas." [71] The U.S. Navy, in other words, is simply superior to the Soviet fleet. Only two years before, Watkins – then Pacific Fleet Commander – played the dubious numbers game of "net assessment" when he reported to Congress that while the U.S. would win a head-on naval confrontation with the Soviet Fleet in the Pacific, the outcome is only a "toss-up" when respective readiness and logistical capabilities were factored in.[72] The Admiral then followed through with a predictable pitch for funds: "I cannot yet assure you of victory in the Pacific against our most likely opponent. I need several more battle groups to assure victory and clearly establish Pacific maritime superiority." [73] The Admiral's plea recalls a warning by Peter Karsten, author of a classic study of the U.S. naval aristocracy: "We must always be suspicious of men in blue double-breasted suits with gold on their sleeves who want us to buy them big boats and things that go bang to save us all from evil." [74]

In introspective moments, the U.S. Navy acknowledges its own self-confidence. In an official *Naval Operational Planning* manual, for example, the Navy provided its officers with a model calculation for

planning a campaign strategy. The example in the current manual* – a protracted, global war with the U.S.S.R. with "limited" use of nuclear weapons, a favorite nightmare of naval strategists – is described in detail:

> GREEN [Soviet Union] and WHITE [U.S.] have been at war for eighteen months. GREEN, an Asiatic–European coalition, has occupied the entire mainland of Asia and has overrun Europe, excluding France, Portugal, Spain, and Great Britain. Africa, the Middle East, and Pacific Islands of strategic importance are still held or controlled by WHITE. At present both sides are executing major efforts in France and at the Turkish–European border . . . During the first month of war, WHITE Aleutian Island and Alaskan bases were destroyed by nuclear attack. Kodiak Island, with the only remaining major WHITE naval base in the Alaskan area, was left undamaged. Efforts in other areas have prevented WHITE from rebuilding the destroyed advanced bases. GREEN has occupied [the Alaskan island of] Attu without opposition but has not exploited this acquisition. Until now WHITE has considered GREEN occupation of Attu to be of minor significance . . . Recent intelligence indicates that GREEN plans to establish advanced air and naval bases on Attu Island. It has been reliably reported that GREEN is assembling advanced base construction units in the Petropavlovsk area for this purpose. It is believed that these units will be transported to Attu by a strongly protected convoy . . .[75]

The manual calculates that the U.S. Pacific Fleet, operating only from Kodiak Island in the Aleutians and the U.S. mainland, is still able to mount an effective counterattack with an aircraft carrier group supported by attack submarines. The sample calculation shows that the U.S. battlegroup can be supplied in the North Pacific for three months. Despite the great distance and proximity to the U.S.S.R., the Navy estimates that it can prevent the GREEN (Soviet) forces from operating – even close to their own coastal waters. Even *without forward bases*, the Navy projects that it can suppress Soviet land-based air cover for naval forces at Komandorski Island and the Kamchatka Peninsula, halt the hypothetical Soviet expedition to reinforce Attu Island as an advance base, and take Attu Island back for itself![76] (See Table 16.2.)

Overall, it is difficult to disagree with defense analyst Anthony Cordesman that "There is no doubt that the West must falter as a result

* The manual was issued in 1978 and is still current in 1985.

of its own contradictions if the Soviet Navy is to overcome the p·esent obstacles to launching any successful conflict against the United States." [77]

Allied Power

The relative weakness of the Soviet Union becomes stark when the naval and air forces of allies are added to the superpower lineup in the Pacific. In a 1978 comparison, Barry Blechman and Robert Berman demonstrate that the U.S. and its East Asian allies: (1) outnumber the Soviet Pacific Fleet and its single ally in East Asia (north Korea) by a 5:1 ratio; (2) displace nearly twice as many tonnes; and (3) outgun the Soviet bloc in virtually every naval armament.* [79] In air capabilities as well, the U.S. clearly outguns the Soviet Union. In addition to its own impressive airpower in the West Pacific, the U.S. can also call on its allies. Japan alone can scramble more tactical air power, especially F-15s, than all the U.S. fighters in Japan, Korea, and the Philippines combined.† [81]

The one deficiency of the U.S. in the Pacific is landpower – the ground troops needed for a land war. While the U.S. cannot hope to match the Soviet Union in landpower, the alliance with China has

* Adding Australian, New Zealand, and Southeast Asian navies on the U.S. side and those of Vietnam on the Soviet side to the comparison cited only further favors the U.S. All those ratios would worsen dramatically for the Soviets if the U.S. blockaded the Straits out of the Sea of Japan.[78]

† It is ironic that the U.S. analysts often cite the arrival in 1976 of a defecting Soviet Foxbat MiG-25 high-speed fighter aircraft at a Japanese airfield without interception as evidence of Soviet offensive capabilities. Aside from the fact that the pilot was *fleeing* from the Soviet Union, hardly a terrifying image, they fail to mention that the Foxbat, the *enfant terrible* of the Soviet Air Force, had nearly crashed from fuel shortage. U.S. research on the plane revealed that the Pentagon had overestimated its combat radius sevenfold, that its engines melted at high speed, that it lacked low-altitude, look-down radar, and high-altitude missiles, and that it was crudely constructed from what a U.S. Air Force General called "ancient" technology. Like the Kiev "aircraft carrier", the *bête noire* of the Soviet Air Force turned out to be much less fearsome than depicted. As a U.S. Congressperson concluded: "No U.S. F-15 or F-16 pilot need fear the Foxbat unless he is asleep, radically out-numbered, or an utter boob." [80]

Table 16.2:
U.S./Soviet Comparative Strength in "Sample Operation Problem": Protracted Nuclear War in Pacific

A. Strength Factors

WHITE (U.S.)	GREEN (Soviet Union)
1. Freedom of action afforded by carrier mobility and mobile support.	1. Superiority in number of ships and firepower.
2. Numerical air superiority in the objective area.	2. Adequate shore-based logistic support.
3. Ability to move to areas of favorable weather for conduct of air operations.	3. Can move towards Attu under protection of advancing weather front.
4. Surprise in timing of air strikes.	4. Submarine superiority.
5. Numerical superiority in all-weather aircraft.	
6. Superiority in missile anti-aircraft defense.	

B. Weakness Factors

1. The greatest distance of the objective area from supporting bases makes operation dependent upon underway replenishment.	1. Lack of continuous air defense aircraft over convoys and covering force.
2. Limited air reconnaissance capability in the Kamchatka area.	2. Reliance on Komandorski based aircraft for defense of Attu area.

Table 16.2: (cont)

	3. Lack of carriers.

Notes: Assumes U.S. lost forward bases in Northeast Asia. A current comparison would add superiority of Tomahawk cruise missiles to overwhelm air defenses to U.S. side.
Source: Chief of Naval Operations, "Sample Solution of an Operation Problem", *Naval Operational Planning*, NWP 11 (Rev. C), Appendix F, Washington, D.C., 1978.

largely rectified the imbalance. The U.S. embrace of China, however, has distressed some of America's Southeast Asian allies. Ultimately the U.S.–Sino marriage of convenience may end in divorce over disagreements on Taiwan, Korea, and South Asia.[82] Nonetheless, the U.S. seems confident that the Chinese will remain antagonistic to the Soviets.[83] While Soviet ground forces are better armed and organized than the Chinese, a Sino–Soviet war could embroil the Soviets in an endless landwar. The U.S., as Pentagon analysts put it, is like a lamb sitting in a tree watching two lions tear each other apart.

What strategic value the Soviet Union gains from its East Asian allies, north Korea and Vietnam, is a matter for debate – and public posturing – within Pacific Command. Even its former Commander, Admiral Crowe, cannot seem to make up his mind. While he claimed in November 1983 that "North Korea is a relatively independent entity," [84] he referred to it three months later as Moscow's "surrogate." [85] In an interview in 1984, he claimed that north Korea is an unreliable and ungrateful Soviet "ally", but added that Kim Il Sung is "a very independent type – and consequently very dangerous, because he's so independent and uncontrollable." [86]

In addition to a paucity of reliable allies in the Pacific, the Soviets have no economic influence.[87] The U.S. is a major trading partner of ten states that collectively account for almost 90 per cent of the Asian GNP. The Soviet Union, by contrast, accounted for a much smaller fraction of Asia's trade.* While the Soviets receive the bulk of Vietnamese and north Korean foreign trade, their major trading partner in Asia, Japan, has tilted economically toward their enemy, China.[89]

The U.S. and its allied elites in the Pacific often claim that alignment with the West is required for protection from the Soviets. Soviet economic and military weakness, however, betrays the claim. Indeed, if Pacific states could muster the strength to resist alignment with the U.S., they would be more than capable of resisting the symmetric pressure from a militarily and economically weaker Soviet Union.

* The U.S. accounted for between 5 and 24 per cent of the imports of fourteen Asian countries in 1979, and 3–36 per cent of the same countries' exports. The Soviets accounted for 0–6 per cent of the imports and 0–11 per cent of the exports of the same countries.[88]

Base Race?

Although the Soviet Union cannot directly "threaten" the Pacific, it does not follow that it is always a "good neighbor." The Soviet Union deploys forces in the Pacific, the character of which reflects competing domestic foreign policy lines as well as service interests.[90]

Like the U.S. Navy, the Soviet Navy seeks foreign bases and access to forward ports. To demonstrate Soviet power, its fleet conducts war games in the Pacific and Indian Oceans. Former Pacific Commander Admiral Crowe has argued that this forward naval deployment is a Soviet strategy of substituting military power and intimidation for political and economic influence.[91] As Ralph Cossa, his former Executive Assistant, argues: "It is not so much what they can do in wartime, but the peacetime impact of these aircraft and vessels" which worries the U.S.[92]

Probably the most important bases under Soviet control are those on the disputed Kurile Islands just north of Japan. Acquired as booty from World War II, the islands enable the Soviets to control the area north of the Kuriles Strait into the Pacific. Since the beginning of the new Cold War in 1978, the Soviets have refurbished airfields, deployed forty MiG fighters, and stationed naval infantry in the Kuriles. In light of the U.S. offensive in the Northwest Pacific, this forward deployment appears to be permanent.[93]

Another key aspect of Soviet forward deployment is its access to naval, air, and communication facilities in Vietnam. Through these bases, the Soviet Union can open a southern front from Vietnam against China, and protect the supply route via the Indian Ocean. Since 1978, the Soviets have maintained an impressive arsenal in Vietnam: a signals intelligence station; military aircraft at Da Nang and Cam Ranh Bay;[94] up to twenty submarine and surface warships and a floating dry dock; and two squadrons of MiG fighters at Kep Air Base north of Hanoi.[95]

The Soviets also rotate long-range bombers through Vietnam.* But as Lieutenant-Colonel Ralph Cossa admits, "We are still talking about a handful of aircraft, a dozen TU-16s." While the bombers *could* mine Southeast Asian waters, so *could* American bombers.† Given the mutual

* No Backfire bombers have flown to Vietnam as of mid-1985.[96]

† U.S. B-52s have even practiced such mining.

need of both superpowers for transit between the Pacific and Indian Oceans, *why* either superpower would conduct this operation remains obscure. As Cossa notes of the Soviet aircraft in Vietnam, "Once a protracted war starts, they are vulnerable." [97] They represent only a very marginal *military* threat to either U.S. or Chinese forces in the region.

Soviet forces in Vietnam are vulnerable to the U.S. Navy's 7th Fleet and to airpower from Guam, Okinawa, and the Philippines, as well as to the powerful Southern Chinese coastal navy.[98] While they appear to be entrenched in Vietnam, the Soviets' forward position may be as tenuous as their access to Egypt or Somalia turned out to be.* If Sino-Soviet tensions ease, the Soviets may rethink spending a billion dollars a year to maintain a second front of limited military value. While the China–Vietnam antagonism is complex, the Chinese might soften their anti-Vietnam stance to encourage Vietnam to evict the Soviets. The independent Vietnamese, anxious to cultivate better relations with ASEAN states and China, might well oblige. The Soviets would then find themselves unceremoniously deported from Vietnam like a guest worker with an expired visa.[100]

Access to Vietnamese bases drains as well as amplifies Soviet military power. Each year, the access reportedly costs the Soviet Union about one billion dollars in economic and military aid to Vietnam – nearly as much as they provided in ten years of the Vietnam War. Added to this is the political cost of alienating other Southeast Asian states.

In addition to Vietnam, the Soviets also attempted to rent a "fishing" base on Addu Atoll in the Maldive Islands in 1979. Only 570 km from the U.S. base at Diego Garcia, Addu Atoll sports a 2,500 m British-built airfield. Failing in this maneuver, Soviet warships in the Indian Ocean spend a good deal of time anchored at mid-ocean buoys to conserve fuel,† and occasionally visit neutral or accessible ports in India, Ethiopia, and South Yemen. The Commander-in-Chief of the Soviet Navy, Admiral Gorshkov, likes to explain to his party comrades that visiting Soviet warships "are clearly and convincingly spreading the ideas of the

* After two decades of Soviet support and presence in Egypt, Sadat summarily expelled the Soviets from all facilities in 1972.[99]

† Carefully listed by U.S. intelligence statistics as Soviet active shipdays in the Indian Ocean.

Leninist peace-loving policy of the Communist Party and the Soviet government through many countries of the world." [101] Most Third World elites, however, probably look upon the visiting rust-buckets with skepticism, and are well aware that they are ill suited for combat.[102]

Although the Soviet Pacific Fleet operates at a much lower tempo than the U.S. Navy, it nonetheless conducts exercises. The most memorable, the global *Okean* exercise, was held in 1975 and involved four Soviet anti-submarine and anti-carrier task forces in the Pacific, as well as similar activity in the Indian Ocean.[103] It has also engaged in coercive naval diplomacy with the Chinese Navy in the Pacific, most importantly when the Soviet Pacific Fleet sent twenty surface warships and some submarines off the Chinese coast in 1978–79 to warn China to limit its invasion of Vietnam.[104] That the Chinese might have provoked the Soviets into attacking seems unlikely – but the prospect of the two premier Communist navies sinking each other can hardly have frightened the U.S. 7th Fleet or its allies.

American military analysts have carefully analyzed Soviet naval forward activity for evidence of the aggressive intent ascribed to them by navalists such as Admiral Crowe and Navy Secretary Lehman. They concluded that the Soviet Fleet has not and cannot project power similar to U.S. interventions in Korea and Indochina. The Soviet Fleet has never been used to support a Third World ally's offensive warfare or to prop up a beleaguered ally. Rear Admiral John Butts, director of Naval Intelligence, has stated that "[T]he Soviet Navy still lacks the extensive logistics chain necessary to support and supply the equipment requirement for sustained, distant operations." [105] The Soviet Navy is irrelevant,[106] even in Afghanistan where the Soviets have trapped themselves in a Vietnam-like quagmire.[107]

While a navy is the main force for an aspiring superpower, army and air forces are also tools of coercive diplomacy and occupation. The Soviets have used conventional ground forces to repel Chinese challenges to their borders. During the 1970s, the Soviets airlifted Cuban troops to support allies in Angola and Ethiopia. Nonetheless, the Soviets have been sparing in their use of combat personnel outside of areas immediately adjacent to their borders.* [110]

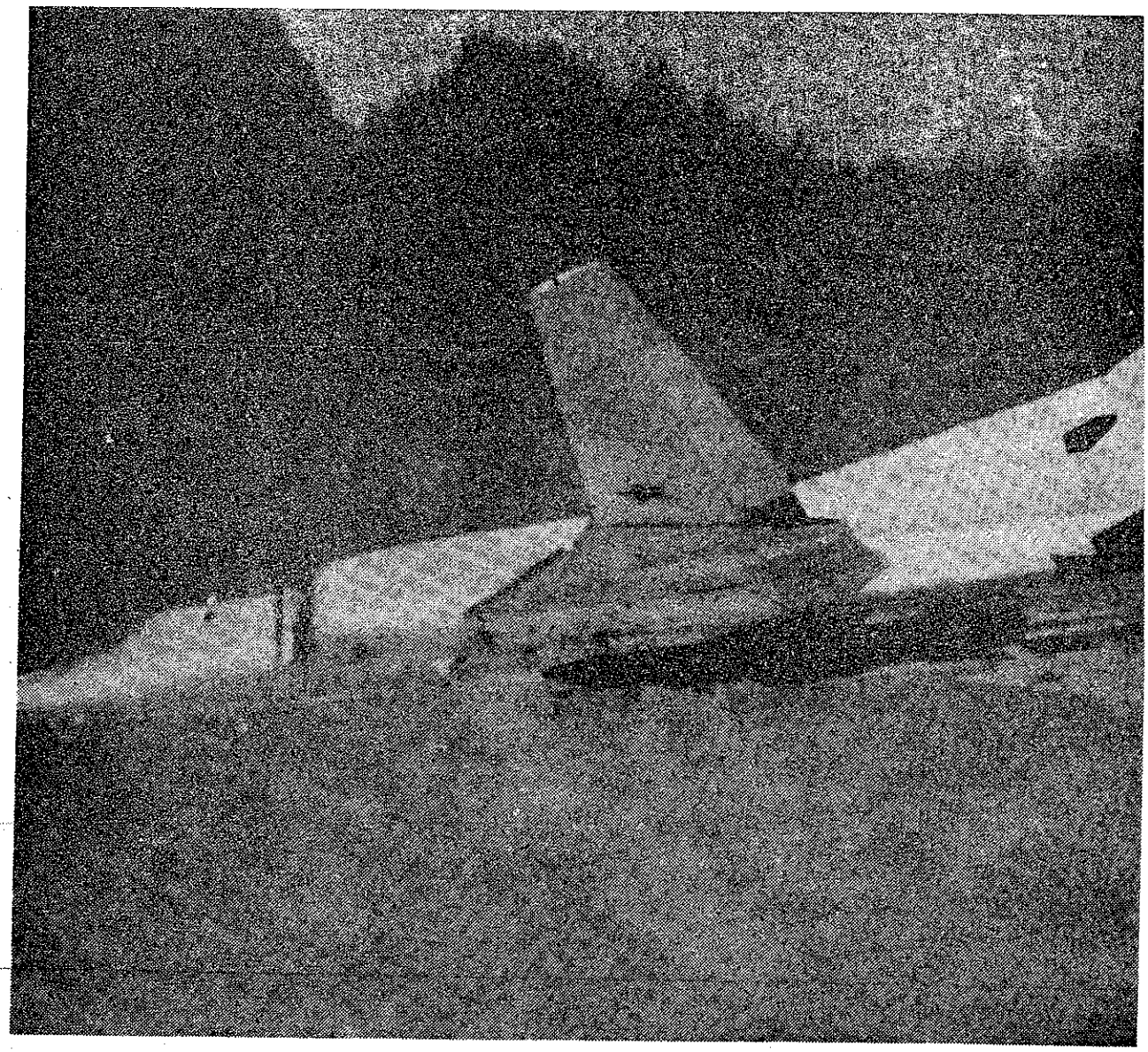
* Besides its role in Eastern Europe, direct Soviet military involvement has been limited to its role in advising or manning air defenses in Korea, Manchuria, Vietnam, Egypt, Sudan,

territories. The prospect of such an alliance must be truly a nightmare for the Soviets.[122]

Thus encircled, the Soviets must find the Far East more of a defensive liability than an offensive asset. Beset by enemies on every side, the Soviets may even *prefer* a forward-deployed U.S. military – and a subordinate Japan and south Korea – to the threat of an independent, remilitarized Japan and unified Korea on its border.

What the Soviet Union probably cannot accept however, is a U.S. military poised to strike from forward bases in the Pacific. It is this *imbalance* of power among the superpowers in the Asia–Pacific region that contains the seeds of nuclear war and the true "threat" to the region.

Soviet Backfire bomber with missile
(Pentagon)



SEVENTEEN ☆ "SOCIALIST BOMB"

We will never be the first to let such weapons fly. I will still have time to respond. There will be no more United States. But we will still get it in the neck.

—President Leonid Brezhnev, 1978[1]

Use of nuclear weapons against insignificant secondary objectives contradicts the very nature of this weapon. The selection of targets should be approached with special care and nuclear weapons should not be thrown around like hand grenades.

—A. Sidorenko, 1970[2]

Inferior to the United States in conventional weapons, as well as economically and politically, the Soviet Union relies on nuclear weapons as the ultimate guarantor of its territorial integrity. Despite its relatively primitive nuclear technology, its geographical disadvantages,* and its vulnerable, land-based nuclear forces, the Soviet Union can annihilate the U.S. in any conceivable nuclear war. By calling on the simple, massive destructive *power* of its nuclear weapons, the Soviets can negate the greater accuracy and flexibility of the U.S. nuclear arsenal. Unequal in other dimensions of power, the two superpowers have nonetheless reached a nuclear standoff – a terrifying stalemate called "parity."

Largely in response to American nuclear deployment, the Soviet

* Such as lack of warm-water ports with direct oceanic egress for missile submarines.

Union deploys an enormous nuclear arsenal in the Far East and the Pacific, which it uses primarily but not *solely* for defensive purposes. Like the U.S., and more recently China, the Soviets bear a heavy responsibility for the risks that nuclear weapons impose upon the region.

Nuclear Sledgehammer

Confronted with forward-deployed U.S. nuclear bombs and ballistic missiles, the Soviet Union has fortified its Far Eastern region with an array of nuclear weapons. Like a mighty club, this arsenal is ready to slam down on U.S. forces in the Pacific, as well as to bludgeon China.

Like the U.S., the Soviet Union's nuclear capability is based on ballistic and cruise missiles. Normally, the Soviets keep these nuclear weapons (see Table 17.1) forward-deployed in the Pacific aboard submarines and surface warships.* Two Yankee-class submarines, carrying SS-N-6 ballistic missiles with a firing range of 3,000 km, are normally sailing in the Pacific. One is stationed off the U.S. West Coast, ready to fire away at coastal cities. A second is normally *en route* to or from this station and the Soviet Far East bases, but beyond the range where it can hit the U.S. (see Map 10.2).† [4] Twelve Delta-class submarines, which carry SS-N-8 ballistic missiles capable of hitting the U.S. from 9,000 km, stay in port or venture into the Japan or Okhotsk Seas.‡ In a nuclear war, the Soviet Fleet may try to "break out" some of its Yankee and Delta submarines past U.S. anti-submarine barriers into the mid-Pacific.

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* We estimate that in "peacetime", the Soviets deploy in the Pacific about 115 submarine-launched ballistic missiles, 50–60 nuclear-tipped cruise missiles, and 240-odd assorted anti-submarine warfare depth charges and rockets, surface-to-air missiles, and anti-ship cruise missiles, totalling about 400 routinely forward-deployed nuclear weapons.[3]

† Of course, the Yankees are within range of Alaska and U.S. bases in the northwest Pacific as they sail to or from the East Pacific station.

‡ Before 1966, Soviet ballistic-missile submarines were mostly withheld from forward deployment. They were utilized instead as a reserve force in a nuclear war to be fought with land-based missiles by the Soviet Strategic Rocket Force (SRF). After 1966, the ballistic-missile submarines were mostly held in port as insurance against a U.S. preemptive attack on the SRF, and to reduce the risk that U.S. anti-submarine capabilities could preempt the submarines as well.[5]

In addition to the Delta and Yankee submarines, about nine old Golf II- and Hotel II-class ballistic submarines are sailing in the Pacific.* Given the short range (1,200 km) of their SS-N-5 ballistic missiles, these submarines are probably dedicated to attacking "theater" targets. Rarely sent far beyond the Seas of Japan and Okhotsk,[6] they are apparently prone to engine failure. In September 1984, for example, a stricken Golf II submarine was sighted belching smoke 200 km north of Japan, and had to be towed to Vladivostok.[7] Apparently, such incidents are not uncommon. Journalist David Kaplan has reported that the U.S. Navy maintains a classified file called "Submarine Accidents: A Continuing Problem for the Soviet Navy."[8]

In addition to ballistic missile submarines, the Soviet Union also deploys a fleet of ninety-odd diesel-powered subs which fire anti-ship nuclear cruise missiles and torpedoes. This "mosquito fleet" was developed in the 1960s, when an increase in the range of naval planes put American aircraft carriers beyond the reach of Soviet land-based and air-delivered ballistic missiles.†[9] In a war, the mosquito fleet would try to surround a U.S. aircraft carrier and launch a simultaneous 360° strike with the cruise missiles, which have a range up to 570 km.

At any given time, there may be one or two of these Soviet attack submarines prowling the Pacific, several more in the Indian Ocean, and up to seven each in the South China, Japan, and Okhotsk Seas.[10] Like their ballistic-missile counterparts, the Soviet cruise missile submarines seem to have a penchant for self-destruction at sea. In June 1983, for example, a nuclear-powered Charlie submarine sank with its crew of ninety off the Kamchatka Peninsula.[11]

The Soviet Union also sports a surface fleet, which packs a smaller nuclear punch than the submarines. Surface ships carry a small number of nuclear-armed cruise missiles, and an unknown number of nuclear anti-submarine depth bombs and torpedoes. Until October 1984, when the new SS-NX-21 cruise missile with a 2,500 km range was reportedly

* These are the names given by Western intelligence for the Soviet classes of weapons.

† For economic and political reasons, Soviet Premier Nikita Khruschev blocked the development of a big surface fleet in the 1950s to counter U.S. aircraft carriers ready to launch offshore nuclear attacks. Khruschev opted instead for a strategy based on air-delivered nuclear bombs and land-based ballistic missiles against U.S. aircraft carriers.

deployed, all Soviet surface- and submarine-launched nuclear cruise missiles were aimed at naval ships rather than land targets.[12]

Composed of small, lightly protected, and generally expendable warships which lack staying power, the Soviet Pacific Fleet relies on nuclear weapons to compensate for its shortcomings. Like his American counterparts, Admiral Gorshkov, head of the Soviet Navy, has repeatedly said that the "struggle for the first salvo" will determine the outcome of a superpower war at sea.[13] In an all-out nuclear attack, the forward-deployed nuclear fleet will be reinforced by land-based ballistic missiles, long distance bombers, and additional nuclear-armed ships.

The Soviets also forward-deploy a relatively minimal infrastructure for nuclear war operations in the Pacific. Deployed on ships and reconnaissance aircraft, Soviet C^3I* systems for nuclear war rely heavily on satellites for targeting and communications.[14] It is highly doubtful, however, that the Soviet Union can conduct a naval nuclear war without inadvertently destroying its own naval communications and intelligence systems, especially if the battle is at relatively close quarters.†[15]

Another aspect of Soviet forward deployment is the use of the Pacific as a missile test range. The Soviets mostly test-fire missiles into a target site in the Kamchatka Peninsula, but on occasion, they aim them to splash down in the Pacific. The impact points since the late 1970s lie in an arc reaching from Wake Island to the Alaskan Peninsula.‡ In December 1984, for example, the Soviet Union announced two week-long exclusion zones in the central Pacific Ocean for a test of a multiple warhead missile. One zone was 190 km across, centered about 500 km northeast of Midway Island, with a similar zone centered about 500 km southeast from Midway.[18]

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* Command/control and communications/intelligence.

† Due to the side effects of airburst nuclear weapons on fragile antennae and the destruction caused by electromagnetic pulses.

‡ The Soviets declared 3 ballistic missile test exclusion zones (in which more than one test may be conducted) in the Pacific Ocean in 1977, 3 in 1978, 5 in 1981, 3 in 1982, 4 in 1984, and 1 up to June 1985.[16] The U.S. currently launches about 20 long-range missile tests into the Pacific per year[17] (see Chapter 13).

Rocket Rattling

Most of the Soviet nuclear arsenal aimed at the Pacific is kept at home in the warheads of intermediate-range ballistic missiles. SS-4 ballistic missiles with a 2 megaton warhead were first installed along the Sino–Soviet border in 1966, and were originally aimed at China (see Map 16.2).[19] Indeed, the only known Soviet nuclear threat against a Third World state occurred in a Sino–Soviet border confrontation in 1969. A Soviet broadcast on March 8, 1969 reported that: "The rocket troops showed at the important exercises just completed that the formidable weapons entrusted to them by the motherland for defense of the Far Eastern frontiers are in strong, reliable hands. Let any provocateurs remember this."*[21] To add weight to the threats, the Soviets deployed early models of the new SS-11 missiles along the China border in 1969,[22] and reinforced and replaced them with more sophisticated, variable-range SS-11s in 1972.[23] The SS-11 initially carried a 1 megaton warhead, which it could deliver over 11,000 km with twice the accuracy of the old SS-4s.†

While these Soviet nuclear threats may have tempered Chinese border provocations, they also drove China to develop nuclear weapons, and prompted China's de facto alliance with the U.S. and Japan.[26] The use of the nuclear threat in the Far East eventually proved extremely counter-productive – a lesson not lost on the Kremlin.[27]

SS-20: "A Real Dog of a Missile"

In 1978, the Soviet Union upgraded its nuclear arsenal in the Far East with new mobile SS-20 missiles. Transported on giant trucks, the SS-20s are less vulnerable to attack than the old SS-11s and are propelled by

* Unlike U.S. nuclear threats,[20] this Soviet rhetoric was not accompanied by an observable state of increased alert or mobilization of actual delivery vehicles. The Soviet Strategic Rocket Forces (SRF) were created in 1959 as the premier nuclear fighting force. The SRF commander takes precedence over the other military services. SRF commands the long- and medium-range nuclear missiles in the Far East.

† SS-11 missiles were supplemented by a small training contingent of SS-14/15 missiles each of which could lob a 1 megaton warhead up to 7,600 km.[24] The SS-11s replaced seventy SS-4 and SS-5 missiles dismantled at this time.[25]

Table 17.1: Soviet Nuclear Weapons

Type	*Range (km) Delivery System*	*Launch Platform*
Missiles		
SS-11, Mod 1,3[a]	8,800–10,500[a]	Fixed Silo
SS-20[a]	4,800	Mobile Ground
SLBM[b]	1,400–8,300[a]	Submarines
Anti-ship Cruise[c]	111–555[a]	Warships
Anti-ship Cruise[d]	250–1,000[a]	Bombers
Land-attack Cruise[e]	3,000	Warships
SAM (land-launched)[f]	34–280[a]	Ground
SAM (naval)[g]	23–67[a]	Warships
SCUD B/C	290–370	Mobile Ground
SCALEBOARD SS-12	900	Mobile Ground
SSC-1	450	Ground
Bombs		
Short-range gravity[a]	300–1,900[a]	Bombers[h]
Long-range gravity[a]	5,500–8,300[a]	Bombers[j]
Battlefield		
152, 240, 253 mm shells	18–30[a]	Mobile Ground
FROG 7/SS-21[k]	120–450	Mobile Ground
Anti-submarine Warfare		
Depth bombs	n/a	Bombers, helis
SS-N-15[l]	37–48	Submarines
SUW-N-1[m]	30	Warships
533mm Torpedoes	16	Submarines

Notes: n/a = not applicable. Not all these nuclear weapons have been confirmed as present as in Soviet Far East, especially the battlefield missiles. a. Range covers least and greatest across all delivery systems where more than one in a weapon category. b. Submarine-launched ballistic missiles, SS-N-5/6/8/17/18/20. c. SS-N-3A-B-C, 7, 9, 12, 22. d. AS-2, 3, 4, 5, 6, 11, 15 fired from Backfire, Bear, Bison bombers e. S-N-21 f. SA-1, 2, 5, 10, range is slant miles g. SA-N- 1, 2, 3, 6, 7 h. Fencers, Fitters, Fishbeds i. Estimated j. Backfires, Badgers, Blinders, Beagles, Bears, Mails, Bisons k. Artillery rocket l. Submarine-launched rocket m. Anti-submarine rocket

Sources: W. Arkin and J. Sands, "The Soviet Nuclear Stockpile," *Arms Control today*, volume 14, no 5, June 1984, p. 4; W. Arkin *et al*, "Nuclear Weapons," in *SIPRI Yearbook 1985*, Taylor and Francis, London, 1985, pp. 56–64; R. Berman and J. Baker, *Soviet Strategic Forces*, Brookings Institution, Washington DC, 1982, pp. 102–105; General Dynamics, *The World's Missile Systems*, Pomona, California, 1982; N. Polmar, *Guide to the Soviet Navy*, Naval Institute Press, Annapolis, Maryland, 1983, pp. 348–369; J. Collins, *U.S.-Soviet Military Balance, 1980- 1985*, Pergamon-Brasseys, New Jersey, 1985, pp. 171–199.

solid fuel, which is more reliable than liquid fuel. The SS-20 can carry up to three highly accurate warheads.* Unlike the "triplet" warheads of the late-model SS-11, which could only straddle a single target "shotgun-style", the SS-20 warheads can be aimed independently at up to three targets.[29]

The U.S. credits the SS-20 with an accuracy† of 750 m and a range of 7,500 km when it carries one 50 kiloton warhead. With three 600 kiloton warheads, the attributed range drops to 5,700 km – still sufficient to hit U.S. bases as far south as the Philippines.[30] The SS-20's solid propellants, however, tend to burn unevenly, and the missile is probably much less accurate than generally asserted.[31] Indeed, one U.S. Air Force officer called the SS-20 "a real dog of a missile", adding that "it was just no good." [32]

Technical problems aside, the SS-20s provide more accuracy and flexibility and less vulnerability than the SS-11s. But their deployment apparently took place as part of a "routine nuclear modernization." [33] At U.S. insistence, the 1972 Strategic Arms Limitation Treaty placed no limits on U.S. forward-deployed short- or medium-range nuclear weapons in Europe or the Far East, such as land-based F-111 bombers, aircraft carriers, or cruise missiles.[34] By the same token, SALT I did not constrain the Soviets from deploying the home-based, medium-range SS-20.[35]

In 1979, however, the SS-20 became embroiled in political conflicts between the U.S., Western Europe, and U.S.S.R. over the terms of SALT II. Fearful that U.S.–Soviet arms limitation agreements might leave them weakened *politically*, the West Europeans maneuvered to obtain fresh U.S. commitments to deploy Pershing and cruise missiles by pointing to the Soviet "build-up" of SS-20s.[36] While their primary concern was SS-20 deployment in Europe, the Western allies also pointed to the Asian-based SS-20s which, though clearly aimed at China, could be moved west via the Trans-Siberian Railway and aimed at Europe.[37]

In 1980, the Commander-in-Chief Pacific fuelled the debate when he

* The SS-20 can also be reloaded in principle, but as the intense heat from the launch of one missile probably precludes reloading for several hours, in wartime it is practically a single-shot launcher.[28]

† That is, a Circular Error Probable or radius around the target point within which 50 per cent of the warheads will fall, in this case, 750 m.

won permission to publicize the previously classified Asian SS-20 deployment.[38] CINCPAC used the new information to fan Japanese fears that the Soviets were building-up in the Far East as a response to SALT II. Although the SS-20s added little to the old "threat" posed by the SS-11s, for domestic political reasons Japan's resurgent right-wing politicians were only too willing to be frightened. In July 1985, Japanese officials argued that "It would be unfair for the United States to reach settlement [on SS-20s] in Europe without doing anything about those in Asia. European SS-20s are mobile and easily transportable and are a threat to us." [39]

The Soviet Union, in turn, appears to have launched a more rapid Far East build-up aimed at splitting Japan from its NATO allies. In 1983, for example, the Soviets claimed that the SS-20s were a countermeasure to *U.S.* (not Chinese) nuclear forces, and told Japanese officials that there was "nothing to fear if it avoided entanglement in United States military strategy." [40] By early 1985, 163 SS-20 launchers[41] were positioned at two sites in Western Mongolia, and at two sites on the Mongolian border east of Lake Baikal* – ready to strike a broad arc encompassing China, the Aleutians, and Southeast Asia.[44]

Nuclear Shadows

Although the U.S. has consistently led the arms race,† it is clear that the Soviet leadership, like its American counterpart, has long exceeded the force required for "minimum deterrence"‡ and has used its nuclear arsenal to assert "Great Power" status.

* According to the Stockholm International Peace Research Institute, the SS-20s were based near Novosibirsk, Drovyanaya, and Olovyannaya.[42] A new site is reportedly being prepared in April 1985.[43]

† The U.S. developed and used nuclear weapons in World War II in part to contain Soviet power in the Far East; quickly encircled the U.S.S.R. with bomber bases; deployed medium-range ballistic cruise missiles and bombers on the shores of the U.S.S.R. while blocking equivalent deployments by the U.S.S.R. in Cuba; deployed more intercontinental ballistic missiles in the 1960s than could be justified militarily, and then placed multiple warheads on those missiles well before the U.S.S.R.; erected a global anti-submarine capability;[45] and has recently shifted the nuclear arms race to space.

‡ "Minimum deterrence" is the notion that a ceiling may be set on the nuclear arsenal equal to the minimum number necessary to credibly threaten nuclear retaliation to a first

Just as the U.S. arsenal is justified as vital for the protection of democracy against "totalitarianism", the Soviet nuclear force is characterized as necessary to protect socialism by containing U.S. imperialism. "At the present time," Soviet analysts argue, "the *principal* means for restraining imperialist aggressors *in all regions* of the world is the ability of the U.S.S.R. to deliver nuclear missile weapons to any point on the earth's surface." [46]

In the same vein, Western analyst Fred Halliday argues that Soviet nuclear parity "reduced the ability of the USA to intervene in and manage the third world, and to contain social revolution there." [47] Other than noting that Soviet "parity" coincided with its support for Third World revolutions, however, Halliday does not demonstrate how this effect works or even that it exists.

Yet Soviet nuclear weapons *have* clearly affected U.S. behavior in the Third World. As political scientist Robert Jervis emphasized, "The United States and the Soviet Union may engage in fierce rhetorical battles and even use force in such peripheral areas as Africa and Asia, *but there are sharp limits to how far they can push each other.*" [48] What *are* these limits and how have Soviet nuclear weapons imposed them?

The "socialist bomb" casts a shadow over three distinct zones: the U.S. and its key military allies-in-arms; the few Soviet allies in the Third World which host Soviet combat forces; and the rest of the Third World, which has no formal or tacit military alliance with either superpower. The shadow falls darkest on the home territories of the U.S., China, France, and Britain. Well before it reached the U.S. itself, the shadow fell over U.S. allies in Europe and the Far East, playing on their fears and motivating them to restrain the U.S. from actions which might escalate into nuclear war. This shadow has deterred any attack – conventional or nuclear – on the Soviet Union and its East European allies. By opting for a maximal deterrent and "rattling rockets" in the 1950s and early 1960s, however, the Soviets also prompted Western Europe and Japan to cling closely to the U.S. in military pacts – a counterproductive result for the U.S.S.R. In the same way, the brand-

strike. It is usually estimated at a couple of submarine loads or 200–400 warheads, that is, about 1–2 per cent of current stockpiles. Anything above that is argued to be militarily superfluous, merely "bouncing the rubble." Alternatively, such a "maximum deterrent" may aim to maximize the psychological component of deterrence by increasing the uncertainty as to the intentions and rationality of the possessor of the arsenal.

ishing of nuclear weapons against China in 1969 successfully forced the Chinese to moderate their behavior along the border, but hastened the development of the Chinese Bomb and moves toward the U.S.

By aiming nuclear shadows to protect their Third World military allies (the second zone), the Soviets have also attempted to act as a Great Power – with mixed results. During the Korean War, the Soviets successfully deterred U.S. nuclear attack on China, primarily by alarming U.S. allies in Europe. Soviet threats could not stop Eisenhower from directly threatening China in 1954 and 1958 with nuclear attack, forcing the Chinese to back down from their attempt to reassert their sovereignty over Taiwan. The Soviets' unwillingness to confront Eisenhower in 1958 forced a wedge in the Sino-Soviet alliance (see Chapter 3).

The best-known case of direct Soviet use of nuclear weapons in the Third World was in Cuba during the missile crisis in 1962. Obviously, the U.S. was not deterred by the home-based Soviet nuclear arsenal from launching the Bay of Pigs invasion in 1961.* The following year, the Soviets tried to gain political and military advantage by deploying nuclear missiles in Cuba,[49] ostensibly to defend their ally.† The move ended in a fiasco, with Moscow backing down in the face of overwhelming U.S. local military superiority and nuclear threats. Ironically, although their Great Power image was tarnished, the Soviets underscored their commitment to defend Cuba, which has not since suffered a direct U.S. military intervention.‡

The Soviets cast another nuclear shadow at the Third World in 1973, this time in the Middle East. At the height of the Arab–Israeli War, the Soviets sent a ship carrying radioactive materials to Egypt, and threatened to intervene militarily to stop Israel from dismembering the

* A CIA-led attempt to roll back the Cuban socialist revolution by arming and transporting Cuban exiles back to Cuba. The invasion collapsed quickly, and, for President Kennedy, ignominiously.

† Even at the height of the crisis, Khruschev reportedly limited the extent of Soviet defensive retaliation for a U.S. invasion to a nuclear attack on the U.S. base at Guantanamo – in Cuba![50]

‡ There have been many clandestine U.S. maneuvers against Cuba, including a stream of attempts to assassinate President Fidel Castro. Nonetheless, the nuclear scare made it virtually impossible for American hawks to gain Congressional or public approval for a military adventure.

Egyptian 3rd Army.*[53] In response, U.S. nuclear forces went onto high alert on October 24, as the U.S. counteracted with its own nuclear threat. Although the Soviets backed down from unilateral intervention, their actions are likely to have prevailed upon the U.S. to force Israel to allow a retreat by the 3rd Army. The fear that a clash of their forces could spiral into nuclear war motivated both sides to seek a satisfactory "local" settlement. The events in 1973, however, are the only case in which the Soviets could be said to have *directly* accrued political gains in the Third World from their nuclear weapons.

The "socialist bomb" casts only a dim shadow over the third zone, the countries of the Third World which are not militarily allied with either superpower. Undeniably, the U.S.S.R. supported Third World revolutions before it achieved nuclear parity. Even after the Soviets obtained nuclear parity, the U.S. intervened repeatedly in the Third World, and has not hesitated to blackmail Third World adversaries with nuclear threats. Nor was the success or failure of the numerous U.S. interventions affected by the "socialist bomb." [54]

Nonetheless, the shadow in this zone still has an important effect. The U.S. is largely already "self-deterred" from using nuclear weapons in the Third World by the inherent difficulty of bringing nuclear weapons to bear. But the political fallout at home and abroad in response to taking even the slightest risk of triggering global nuclear war has deterred the U.S. command from seriously considering using nuclear weapons in this zone ever since the shadow of the "socialist bomb" undeniably reached the U.S.†

The Soviet "style" of extending nuclear deterrence evidently differs from that of the U.S. First, Soviet nuclear deterrence of U.S. interventions in the vast bulk of the Third World is quite weak, much more so than in the few Third World states allied militarily to the U.S.S.R. This ineffectiveness may account for why – apart from lack of opportunity – the Soviets rarely deploy combat troops outside of Europe and the U.S.S.R. Second, as long as the U.S. confines itself to conventional weapons and avoids Soviet combat troops, it can intervene with

* There is no evidence that the U.S.S.R. alerted its nuclear forces during this period.[51] U.S. intelligence analysts speculated that the radioactive emanations may have been from nuclear warheads for SCUD air defense missiles.[52]

† Not to mention the impact on Third World allies frightened by the prospect of a nuclear version of the "we had to destroy them to save them" syndrome.

impunity in the Third World, at least with respect to fears of the "socialist bomb." Third, despite its difficulties, the U.S.S.R.'s maximum nuclear deterrent has contributed to its Great Power status in the eyes of its own and American allies. Even the greatest power on earth and the least powerful national liberation movement must bring the Soviet nuclear arsenal into its military and political calculations – even if only to discount it. Finally, the coupling of U.S. and Soviet actions in the Third World to the central balance of terror has made it less likely that the U.S. will actually use nuclear weapons in the Third World.

Conversely, the existence of nuclear parity has *not* encouraged Soviet interventions in the Third World. As defense analyst Karl F. Spielmann concluded in a 1979 report to the Pentagon, the U.S.S.R. has been militarily circumspect:

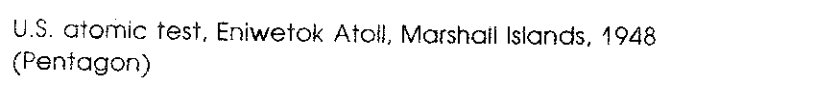
- The record does not support the idea that the Soviets have become more inclined to exhibit expansionist or risky behavior as their strategic nuclear standing *vis-à-vis* the United States has improved.
- The record does not support the idea that the Soviets have become more inclined to use the military instrument, as opposed to other means, to further their foreign policy objectives.
- The record does not indicate that in discrete incidents in which the military instrument was used for political purposes, the *strategic balance factor mattered as much as the local balance of forces* (and perceptions of that local balance).[55]

Over the Edge

When it comes to the likelihood of nuclear war, however, Soviet caution is little cause for optimism. Soviet conventional forces in the Pacific cannot match those of the U.S. and its allies, the "local balance" referred to by Spielmann. Faced with likely defeat in a protracted conventional war, the Soviets have adopted a highly escalatory nuclear doctrine which substitutes risk for capability.[56] When the Kremlin judges that all-out nuclear war is imminent, they may let fly a massive nuclear attack, raining the SS-20s and SS-11s onto U.S. forward-deployed nuclear weapons at the same time as the long-range missiles head over-the-pole to the U.S. Then the slower medium- and long-range bombers equipped with nuclear depth charges, bombs, and anti-ship cruise missiles would swarm over the Pacific from the Far East to attack remaining U.S. and allied forces.

Four additional considerations may push the Kremlin over the edge if it faces the possibility of a U.S. nuclear attack. First, the highly centralized Soviet command system will probably unravel quickly if attacked. Second, its long-range communications networks would collapse quickly if attacked by even a small salvo of American nuclear weapons, disconnecting commanders from their nuclear arsenals and constraining Soviet capacity to retaliate. Third, Soviet early warning radars and satellites cannot differentiate between a "limited" nuclear attack aimed only at Soviet command posts and missile silos, and an all-out nuclear attack.[57] Fourth, the bulk of their nuclear launchers and warheads are land-based, immobile, and vulnerable to nuclear attack.

Faced with these first-strike incentives, the Soviets may elect to cross the nuclear Rubicon first in a vain attempt to limit the damage to the U.S.S.R. from a U.S. first-strike. There is no doubt that the long shadow cast by the "socialist bomb" would then become a total, permanent eclipse.



U.S. atomic test, Eniwetok Atoll, Marshall Islands, 1948
(Pentagon)

EIGHTEEN ☆ STATES OF TERROR

The worst-case scenarios of hundreds of millions dead and widespread destruction would be an unprecedented global calamity, but not necessarily the end of history . . . [One] of the most important continuities of the nuclear era is that wars can still be fought, terminated, and survived. Some countries will win a nuclear conflict and others will lose, and it is even possible that some nuclear wars may ultimately have positive results (as World War II did). Reconstruction will begin, life will continue, and most survivors will not envy the dead.

—Herman Kahn, 1983[1]

The destruction [by nuclear war] of hundreds of millions of people, the genetic deformation of future generations, the destruction of cities and industry, transport, communications, agriculture, and the educational system, the outbreak of famine and epidemics, the rise of a savage and uncontrollable hatred of scientists and 'intellectuals' on the part of civilization's surviving victims, rampant superstition, ferocious nationalism, and the destruction of the material and informational basis of civilization – all of this would throw humanity centuries back, to the age of barbarism, and bring it to the brink of self- destruction.

—Andrei Sakharov, inventor of the Soviet H-bomb, 1967[2]

Enmeshed in superpower politics, the Pacific is suspended in a state of perpetual nuclear terror. Living in the shadow of the nuclear bomb, the peoples of the Pacific – indeed, the world – have escaped nuclear holocaust since Hiroshima because of a paradox, recognized even by

nuclear advocates: the coercive power of nuclear weapons is unlimited and unusable at the same time. The paradox became apparent as early as the 1950s, when the East-West blocs were frozen into place. Political scientist John Herz warned in 1959:

> There is, or will be, unlimited might, the capability to inflict absolute destruction, which will go hand in hand with absolute impotence; that is, the impossibility of defense against the same infliction on the part of others; complete lack of "security" within the most accomplished, the most powerful "security" systems ever devised; disappearance of the protective function of the state, or the bloc, despite all its might and power.[3]

Nuclear weapons wreak such *absolute* destruction that their use would eliminate any possibility of settling a war with limited "defeat" for one side. Nor can nuclear weapons discriminate between civilians and military personnel, eliminating the option of maintaining a "frontline" away from the mass of humanity.

Practically useless in waging war, nuclear weapons invert the traditional relationship between weaponry and strategy. In the past, military hardware was developed to actually wage war. In the nuclear age, it is not the actual but the *threatened* use of weapons that is central to superpower strategy. Furthermore, both superpowers explain their ever-expanding nuclear arsenals in defensive rather than offensive terms.

Because there is no effective defense against nuclear attack, deterrence has become the main strategic goal of nuclear powers. A primitive practice, *deterrence* involves precluding an adversary's attack or other action by either threatening unacceptable *punishment* or *denying* political or territorial gains.

Nuclear deterrence works both through punishment and denial by aiming weapons at an adversary's mind and body. It can be thought of as a situation in which two powerful enemies are stalemated. Imagine two big people standing on a steep slope which ends at the edge of a cliff above a deep pit. The two are tied to each other by a taut rope that cannot be undone. One can easily push the other down the slope and over the precipice. But the victim will immediately drag the aggressor into the abyss as well, plunging both to certain death.

"Peace" based on a nuclear threat is a ceaseless psychological assault on the mind of the enemy. While the military capabilities underlying

nuclear deterrence can be measured in various ways, the "real" balance of terror is inherently ambiguous. Intangible factors – perceptions of intention and political will – are fundamental in defining it. Together, intention and capability create the essential effect of deterrence: intimidation. It is fear of the incalculable costs and potentially uncontrollable risks associated with nuclear war that is the core of nuclear deterrence. As the distilled expression of intent to annihilate rather than to negotiate an end to a conflict, nuclear weapons are the instruments of those who would destroy civilization to save it.

Since 1945, the Pacific has been caught up in this deadly game of threat and counter-threat. To understand what the masters of war hope to achieve with nuclear weapons, we must enter the arcane and changing world of nuclear strategy. In so doing, we discover that the impossibility of defending against the destructive power of nuclear weapons undermines the credibility of mutual nuclear deterrence.*

Nuclear Monopoly and Superiority

The world's first nuclear strategy was based on the absolute nuclear superiority of the United States. The U.S. enjoyed a four-year monopoly of nuclear weapons until 1949, when the Soviet Union conducted its first nuclear explosion. Remarkably, the U.S. proved ill-equipped to exploit its supremacy, partly because military traditionalists were unable to adjust to the new era.[4] Strategists could not devise a credible means of threatening the Soviet Union in Europe. As President Truman told U.S. Army Secretary Royall in the midst of the Berlin Crisis, "You have got to understand that this isn't a military weapon. It is used to wipe out women and children and unarmed people, and not for military purposes . . . You have got to understand that I have got to think about the effect of such a thing on international relations. This is no time to be juggling an atom bomb around."[5] The U.S. briefly flaunted its nuclear weapons in the 1948 Berlin Crisis, but found the Soviets were not susceptible to nuclear diplomacy.[6]

America's global nuclear supremacy faded fast after 1949. In response, the U.S. redesigned its defense posture, focusing its nuclear

* Mutual nuclear deterrence exists when more than one state is able to threaten a nuclear attack.

arsenal on those areas where it was still supreme rather than directly confronting the Soviets. Because the Soviets could not yet launch an intercontinental nuclear attack,[7] the U.S. could use nuclear threats to secure peripheral interests without fear of reprisal against U.S. cities.[8] Indeed, the Korean War was the first, though not the last, "hot war" in which the U.S. threatened first-use of nuclear weapons. With near-absolute military reliance on nuclear weapons in Asia, Eisenhower declared flatly that the U.S. would *have* to use nuclear weapons because of "the way our forces are organized in that area." [9] Few realized at the time that Eisenhower meant just what he said (see Chapter 3).

Unable or unwilling to emulate the U.S. long-range bombers, the U.S.S.R. concentrated its countervailing nuclear threat on U.S. allies in Europe and Asia. This allowed the U.S.S.R. to exploit political divisions within U.S. security alliances. At the same time, the Soviets erected a massive territorial air defense system against U.S. bombers.[10] Khrushchev also employed strategic bluff, for example, flying the same bombers past assembled foreigners many times at an air show in 1958 to great effect.[11]

MAD: Mutual Assured Destruction

The Soviets launched the world's first successful satellite, *Sputnik*, in 1957, heralding a "race for space." The rocket which launched *Sputnik* was also pregnant with meaning, announcing that the U.S. was vulnerable to Soviet nuclear attack.[12] Soviet retaliatory capability forced changes in U.S. nuclear doctrine. While the precise evolution of the new doctrine is complex, the basic ideas had settled into place by 1963.[13] Finally called Mutual Assured Destruction and quickly dubbed "MAD", it was formally defined by two proponents as the ability to:

> Deter a deliberate attack upon the United States or its allies by maintaining at all times a clear and unmistakable ability to inflict an unacceptable degree of damage upon any aggressor, or combination of aggressors – even after absorbing a surprise first strike.[14]

Interpreted to mean the threat of a devastating attack on the Soviet urban population and economy, MAD was adopted as the official U.S.

policy in the 1960s. Since existing arsenals were capable of massive destruction, pursuit of more powerful nuclear weapons became meaningless. And since the destruction was inevitable once nuclear war began, slow, inaccurate warheads were judged as effective as fast, accurate weapons. Indeed, advanced weapons might encourage a preemptive attack* rather than dampen conflict in a crisis. The important thing, the MADvocates argued, was to make the nuclear weapons invulnerable to attack, thus ensuring the capability to retaliate and contributing to "crisis" stability.

MAD has been likened to an ancient institution, the exchange of hostages to keep the peace. The obvious difference is that the whole of society is kept hostage without having to leave home. To the extent that this is irrevocable, MAD as a doctrine reflects the dismal, terrifying reality which underlies the global balance of terror and is not simply an ideological lubricant of the arms race.

In the mid-1960s, the golden days of MAD, the Polaris missile-firing submarines hidden in the vast Pacific Ocean, and B-52 bombers capable of rapid dispersion from Guam bases, closely matched the MAD criteria. After the hair-raising experiences in Taiwan, Berlin, and Cuba, communications and intelligence capabilities were also upgraded to reduce the risk that control errors might trigger an inadvertent nuclear war.[15]

Whatever stability MAD imparted either to the arms race or to crisis decision-making, however, was quickly undermined by a variety of factors – service rivalries, technological momentum, the paradoxes of nuclear deterrence, and superpower rivalry. The chastening experience of the Cuban Missile Crisis in 1961 showed that leaders were not, as the MAD doctrine assumed, interested solely in ensuring national survival; they would also risk global nuclear war to protect secondary interests.†

* Preemption refers to striking first when one believes the opponent is about to draw, in an effort to reduce the damage from what is judged to be an imminent attack.

† Openly referring to nuclear war in 1961, President John F. Kennedy obliged the Soviet Union to back down on a demand for East German control of West Berlin; in 1962 he threatened nuclear war against the Soviet Union if it did not remove nuclear-capable missiles stationed in Cuba.

Arms Racing

The credibility of MAD and "mutual restraint" was rapidly undermined by American and Soviet development and deployment of multiple warhead missiles (multiple independently targeted re-entry vehicles or MIRV*). Vulnerable to being destroyed in their own immobile silos by a pre-emptive first-strike, these powerful missiles are useless for retaliation. They must be used in a first-strike, if they are to be used at all. Even as MADvocates articulated the doctrine of stable nuclear deterrence, the Air Force was pursuing MIRV to target Soviet missile silos and to reassert its pre-eminence among U.S. nuclear forces.[17] The Soviet command similarly sought to exploit MIRVed missiles to catch up with the U.S. warhead lead, although their testing and deployment lagged behind the U.S. by five years.†[18]

As rhetoric, the MAD doctrine allayed the public's fears of nuclear war. But MAD could not resolve the paradox inherent in nuclear weapons, viz., that their destructive power makes them useless as tools for warfighting. Just as the military ignored MAD and reached for nuclear weapons with first-strike capability in the 1960s and 1970s, so civilian strategists adopted the option of "flexible response" – attacks only on Soviet nuclear weapons rather than cities. This would allow the U.S. to respond to inadvertent attack or a relatively minor provocation with less than all-out retaliation. To the U.S.S.R., however, the option

* A ballistic missile is composed of the booster rocket which flings the "bus" on the tip of the missile into a ballistic trajectory. Inside the "bus" ride re-entry vehicles, each of which contains a nuclear warhead. Missiles with MIRVs work by releasing the re-entry vehicles separately at different points in the post-boost stage of the ballistic arc, climbing to about 1,000 km before falling back to earth. Each re-entry vehicle then plummets toward its target from a separate angle, making defense well-nigh impossible. A MIRVed *missile* can thus attack more than one target with one or more warheads per target over an area of 160 km by 480 km, called a "footprint." [16] The crucial new capability of a MIRVed land-based *arsenal* is that only a small fraction of the MIRVed, highly accurate missiles are needed – on paper – to destroy most of the other side's MIRVed land-based missiles.

† The U.S. deployed MIRVed missiles in 1970, the Soviet Union in 1975.

of a highly accurate "limited" nuclear attack on its arsenal was indistinguishable from a U.S. preemptive first-strike capability. Furthermore, population centers would be targeted anyway because of their proximity to urban-industrial and military targets.[19] Raymond Garthoff, a senior figure in the Kennedy administration, emphasizes that it was the U.S. that initiated the missile build-up in 1961, after U.S. intelligence analysts discovered that the "missile gap" was in favor of the U.S., not the U.S.S.R. The Soviets had already joined the race when the Cuban missile fiasco virtually compelled them to embark on a relentless missile program to preserve the security of the Soviet bloc.[20]

As the arms race escalated, the U.S. recognized the need for some restraints and in 1969, Nixon and Kissinger initiated talks with the Soviet leadership which eventually produced the Strategic Arms Limitation Treaty. Nonetheless, they were loath to concede the advantages of perceived nuclear superiority. Ignoring their arms control advisors, Nixon and Kissinger excluded MIRV from arms control talks in order to exploit immediate political gains from the perceptions of U.S. technological prowess.[21] Consequently, the U.S. deployed the MIRVed Poseidon and Minuteman missiles in 1970. Three years later, before the Soviets had even deployed MIRVs, Admiral Thomas Moorer, Chair of Nixon's Joint Chiefs of Staff, justified the U.S. escalation by declaring that "the mere *appearance* of Soviet strategic superiority could have a debilitating effect on our foreign policy and our negotiating posture . . . *even if that superiority would have no practical effect on the outcome of an all-out nuclear exchange.*" [22]

Whether the Soviets were merely pacing the U.S. by deploying MIRVed missiles, or seeking an ill-defined "superiority" as U.S. hawks claimed, will never be known. Just as in the Pentagon, there are those in the Kremlin who pursue political advantage by taking a military hardline. But there is no evidence that Soviet political leaders believed then that they could fight and win a nuclear war against the U.S.[23] It is more likely that they suffered from a strategic inferiority complex and sought nuclear parity with the U.S. to boost their political standing with the rest of the world. As Kennedy's advisors stated in 1962, the Soviets expected their nuclear forces to strengthen "their ability to influence the course of events in all areas of the world" and to demonstrate their "great power prerogatives."[24]

NUTS: Back to the Brink

Pressures for better bombs and the collapse of detente led the U.S. to abandon the MAD philosophy in the 1970s. Instead of deploying nuclear weapons for a "sudden death" holocaust, the Pentagon now openly embraces the notion that nuclear weapons can be used to fight – and win – a protracted nuclear war. These ideas and their proponents are called Nuclear Use Theories or Theorists (NUTS).[25] If a nuclear war can be stopped short of all-out retaliation, argue the NUTS, victory – as against mere survival as in MAD – may be possible. A belief in the possibility of "victory" is the foundation for planning to fight protracted nuclear wars. Colin Gray, one of Reagan's key Nuclear Use Theorists, puts the case bluntly: "If there is no theory of political victory in the U.S. SIOP [Single Integrated Operational Plan for nuclear war], then there can be little justification for nuclear planning at all." [26]

The NUTS made their initial advance when the Nixon doctrine was declared in 1969. Recognizing that absolute nuclear superiority was unobtainable, Nixon declared that the U.S. would build up its regional naval and air power. This build-up, as well as increased military reliance on allies, would also bolster the effectiveness of U.S. military interventions. Nixon announced in 1970 that the U.S. would also use nuclear weapons in Europe and Asia if threatened by a nuclear power.[27] Defense Secretary Melvin Laird emphasized that nuclear forces enabled the U.S. to "contribute significantly to deterrence of Chinese nuclear attacks or conventional attacks on our Asian allies." [28]

While backing off from massive retaliation, Nixon still sought a "sufficiency" of nuclear weapons, which he defined as a credible retaliatory nuclear force *plus* enough weapons "to prevent us or our allies from being coerced."[29] The Soviets also loaded their nuclear arsenal with more land-based nuclear launchers than were then needed simply to retaliate.[30] To offset the U.S. MIRVed ballistic missiles, the Soviets proliferated and hardened their silos, and rushed missiles onto less vulnerable submarines. These Soviet moves, however, could not be characterized as striving for a first-strike capability. Why invest in inaccurate submarine missiles, harden silos, and abandon anti-ballistic missile defenses (as they did in response to the U.S. initiative build-up) if a preemptive strike was in the works? Nonetheless, the Soviets never publicly embraced or advocated MAD.

This doctrinal ambivalence was probably due to the influence of Kremlin hardliners, eager to strengthen the Soviet arsenal. It may also be a conscious strategy to force the U.S. away from the nuclear brink by encouraging fear of a Soviet preemptive strike, whatever the composition and capability of their arsenal. In response to the build-up of Soviet MIRVed missiles in the 1970s, American NUTS publicized a nightmare scenario in which the U.S.S.R. launches an unprovoked attack on the U.S. In their view, the Soviets would either immobilize the U.S. nuclear command, or destroy U.S. missile silos and bomber bases. The Soviet commanders could then sit cool in their bunkers, holding U.S. cities hostage until American leaders capitulated. The NUTS argued that new capabilities to fight a nuclear war were needed to deter this worst case, replacing MAD's threat to retaliate with irrational and immoral total war.

Under the Schlesinger Doctrine in 1974, the NUTS' perspective became U.S. defense policy. Defense Secretary James Schlesinger announced that, in addition to urban and industrial centers, U.S. warplans now targeted Soviet political and military commanders, offensive nuclear weapons, military targets, and the economic assets most valuable in "recovering" from nuclear war.[31] President Carter's *Directive 59* and Reagan's *Defense Guidance* refined this strategy still further, providing the national command with "major nuclear attack options", "selective nuclear options", "limited nuclear options", and "regional nuclear options." Each option is further subdivided into combinations of command and control posts, populations, countries, etc., to be hit in a nuclear war.[32] The big, MIRVed, and highly accurate MX and the Trident missiles were the perfect weapons for the NUTS' strategy, and development accelerated as doctrine and employment policy converged.

Now the basis for U.S. strategic plans,[33] the NUTS scenario imagines that nuclear war will begin with a period of rising tensions which culminates in a nuclear war by stages – "initial exchange; crisis periods; conventional phase; additional exchanges",[34] followed eventually by negotiation and war termination.[35] Central to the strategy's execution, according to U.S. nuclear warplanners, is upgraded command/control, and communications/intelligence systems which will survive and function in the midst of nuclear war. According to Donald Latham, Pentagon official in charge of the nuclear communications upgrade:

> The enduring systems we are developing to support the follow-on phases of a

conflict must survive the initial attack and the follow-on attacks, with the sustained effects of nuclear detonations and radioactive fallout.[36]

According to Latham, the aim is "to bring the hostilities to a rapid termination *on terms favorable to the United States.*"[37] In addition to "victory", the system is intended for "subsequent support of force reconstitution and recovery operations after a nuclear attack",[38] that is, to fight the next war after World War III!

As a possible theater of regional or limited nuclear war, the Pacific plays an important role in the NUTS strategy. Korea is one site for potential "horizontal escalation" in the case of superpower combat in Europe or the Middle East. Alternatively, the U.S. Pacific Fleet might engage in a nuclear shoot-out at sea, or conduct its "Vladivostok strike". To back up negotiations, B-52, Trident, and sea-launched cruise missiles would be held as a reserve force. Attack on the Pacific's command/control or intelligence sites would be extremely provocative since both superpowers' regional commands (Honolulu and Chita/Vladivostok) are close to large urban populations. "Victory" for NUTS in the Pacific might mean "trading" nuclear blows on Guam and Okinawa for Vladivostok and Belaya, or south Korea for Vietnam.

The Pacific Missile Range is also the testing ground for the Strategic Defense Initiative,* the NUTS' most extreme attempt to squirm out of the vicegrip of MAD's logic. Announced by President Reagan in 1983,[39] the initiative was quickly dubbed Star Wars. Reagan promised that Soviet nuclear weapons would be rendered "impotent and obsolete" by constructing a leakproof "astrodome" defense over cities to shoot down incoming ballistic missiles with rays of energy or high-velocity projectiles. Common sense, detailed analysis, and the first tests quickly demonstrated that the astrodome could never cope with a downpour of nuclear missiles.[40] Anti-missile weapons will require error-free computer programs – programs that will stretch to 10 million lines of code – prepared in advance to respond to an attack in a few minutes. Indeed, on the first test of a Star Wars laser's capacity to hit the Space Shuttle from atop a Hawaiian volcano, the Star Warriors fed the wrong altitude into the computer, resulting in failure.[41] The astrodome defense will more likely be used to defend missile silos and bomber bases against a drizzle of Soviet missiles fired in retaliation for a U.S. first-strike.

* Anti-missile systems are tested at Meck Island in Kwajalein.

The Star Warriors, however, welcome the prospect of a new arena of technological competition dominated by the U.S. As the ultimate repudiation of MAD, strategic analysts such as Lockheed Corporation's Maxwell Hunter, trumpet that "We're talking about tearing up the basic deterrence strategy we've had for twenty years."[42]

Quick to recognize these implications, high level Soviet analysts emphasized that the U.S.S.R. can overwhelm it with counter-measures. But, they add, it invites both sides to preempt – the U.S. to avoid losing its space-based anti-missile systems; and the Soviets to protect their retaliatory forces if the U.S. deploys the shield in the 1990s. Meanwhile, it virtually precludes Soviet agreements to limit new offensive nuclear weapons. Even before the first components of the shield have been designed, let alone assembled and tested, the Star Warriors have gutted the possibility of arms control.

The Credibility Gap

While MAD failed to stabilize the arms race, the NUTS posture represents no escape from MAD's military, political, and moral dilemmas.

Despite the best efforts of communications architects, command and control remain the glass jaw of both superpowers. MAD required only that commands to fire nuclear weapons arrive in time for retaliation. NUTS requires that command and control survive nuclear strikes on both sides to permit negotiation and restrain nuclear forces mobilized for attack. Such communications capability simply does not exist.[43] Moreover, even if the hardware worked, commands will go awry because of incorrect interpretation or organizational "pathologies".[44]

To achieve nuclear deterrence, MAD required only that missiles were reliable and accurate enough to commit mass murder. NUTS requires missiles that can discriminate between military targets or population centres and economic assets. Not even modern missiles can reduce "collateral damage" so precisely, making it impossible to judge in advance whether either side would perceive the nuclear blows as "limited".*

* The U.S. Office of Technology Assessment estimated that a U.S. strike against Soviet missile silos would kill between 4 million and 28 million people immediately, and a Soviet

The NUTS' strategy is not only technically unfeasible, but also lacks any *political* theory as to how a nuclear war, once started, could be constrained from turning into an all-out, global nuclear exchange. NUTS requires, in short, that both sides observe restraints, that the conduct of nuclear war be the subject of conventions. But the Soviets have already declared that they think NUTS is absurd. In 1981 Marshal Ustinov, Soviet Minister for Defense, declared:

> Could anyone in his right mind speak seriously of limited nuclear war? It should be quite clear that the aggressor's actions will instantly and inevitably trigger a devastating counterstrike by the other side. None but completely irresponsible people could maintain that a nuclear war may be made to follow rules adopted beforehand with nuclear missiles exploding in a "gentlemanly manner" over strictly designated targets and sparing the population.[46]

Some American hawks interpret this rhetoric as the crafty Soviets playing on Western fears, rather than a realistic Soviet appraisal of the feasibility of limited nuclear war. In marked contrast, a Rand Corporation report told the Pentagon in 1977: "There has been no discernible effort [by the U.S.S.R.] to explore the advantages of flexible-options strategies. Based on what is visible to the outside observer, Soviet crisis decision-makers would appear intellectually unprepared for real-time improvisation of intra-war restraint." In short, the only Soviet response to any level of nuclear attack would be massive retaliation.[47]

Moreover, Soviet war exercises, such as those held in the Far East in 1980, reveal that their nuclear forces are far from well trained and highly disciplined, as required for "limited" nuclear warfighting. Most of the forces trained half-heartedly or not at all. The training which did occur was routine and unrealistic.[48] According to Stephen Meyer, author of a definitive paper on Soviet nuclear warplans, the Soviets do not have any measures to control escalation or to observe tacit limits in nuclear war.[49] "The only true firebreak recognized by Soviet military

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attack on U.S. missile silos only would kill between 1 million and 20 million people. Most of those killed would be civilians. The impact of "counterforce" targeting on collateral damage was found to be "no greater than the difference made by other variables, such as the size of the weapons used, the proportion of surface bursts used, and the weather."[45]

doctrine – if one is recognized at all," concludes Meyer, "is the conventional-to-nuclear firebreak."[50]

Even if Soviet intentions and capabilities for limited nuclear war-fighting, by a heroic leap of the imagination, catch up with the NUTS, there is no *political* rationale for halting a nuclear war. The notion that a halt could be negotiated successfully under nuclear fire is naive. After all, if fear of nuclear annihilation had not deterred an initial use of nuclear weapons, why should it prompt a cease-fire under the duress of nuclear attack?[51]

NUTS, in short, is no more credible than MAD. Examined closely, it dissolves into the mire of MAD's contradictions. But there is one important difference – the NUTS justify new nuclear weapons which seriously destabilize the balance of terror at the nuclear brink.

Beyond the Brink: First Strike

Faced with the credibility gaps in the MAD and NUTS approaches to nuclear war and fearing surprise attack by these gigantic arsenals, both sides are preparing for the worst. As a result, the finger on the nuclear hair trigger is getting itchy. A U.S. nuclear war planner at the Strategic Air Command told journalist Daniel Ford in 1985:

> You compare going first with not going at all. If you're going to get into a nuclear war, that's bigtime. When you go, go. Do it. Finish the job. Launching under attack just means that you've missed the moment."[52]

At the nuclear brink, the worst-case calculus of decision-making may cause one or both sides to attempt to preempt the other. This could happen if resort to nuclear attack is considered the *least bad* of many bad alternatives, that is, when the risks or potential losses of *not* fighting are believed to be greater than those incurred from the other side's retaliation to a preemptive first-strike. At the brink of such a decision, any indications that the other side is about to preempt are inordinately destabilizing. All that is left to avert a nuclear war at the brink is trust, which will be sorely tried by the time both superpowers are fully mobilized. As General John Vessey put it in 1984: "first-strike is not technology; first strike is a state of mind." The General insisted that the Soviet Union "knows that we don't have that."[53] It is doubtful that the nuclear

commanders on either side will view a potential first-strike capability so blithely on the eve of nuclear war.

The new MIRVed missiles in the continental U.S. and the Pacific add up – at least on paper – to a U.S. first-strike capability in the 1990s. To a lesser extent, Soviet missiles will also be capable of carrying out a pre-emptive first-strike.* At the brink, the most destabilizing are the immobile MIRVed missiles in land-based silos and bombers, and nuclear submarines in port. Like sitting ducks, they almost beg preemption because each missile can theoretically destroy more than one opposing missile because of its multiple warheads. Each Soviet SS-18, for example, carries ten warheads. A single SS-18 can clobber up to ten MX missiles carrying fifty to a hundred warheads. Nuclear warplanners, therefore, can easily fall into a "use 'em or lose 'em" syndrome. Since they can be much more effective if they are fired first, MIRVed missiles increase the perceived risks of *not* firing first. As in the old cowboy showdown, the fastest draw and sharpest shot win. But in a nuclear shoot-out, the whole town blows up.

First-Strike Fears – and Fantasies

While U.S. and Soviet offensive capability against land-based targets will be roughly equal by the early 1990s, the Soviets will not be able to retaliate as effectively against U.S. nuclear forces. A source of great Soviet anxiety, this asymmetry arises primarily because the U.S. has shifted over half of its nuclear warheads to relatively invulnerable

* There are about 2,100 "time-urgent", "hard" targets in the Soviet nuclear forces vulnerable to ballistic missile attack: 700 command and control posts, and 1,400 ICBM silos.[54] With 1,000 warheads on 100 planned MX missiles, 1,800 warheads on 600 modernized Minuteman III missiles, and 2,100 warheads on Trident I/II missiles which will be deployed on 11 Ohio submarines by 1990, the U.S. can allocate two warheads to each of the 2,100 targets, and "keep the change." [55] Operational tests show that Trident I missiles have a better-than-expected accuracy, about the same as modernized Minuteman III missiles, placing them in the first-strike arsenal.[56] The Soviets' 3,929 highly accurate land-based SS-17/18/19 missile warheads in 1982 also exceed the force required – on paper – to destroy each of the 1,500–2,000 U.S. "time-urgent", land-based nuclear offensive targets with two warheads each (at least 300–400 U.S. command and control targets, and the 1,200 missile silos, bomber bases, and submarine sites).[57]

submarine-based Trident missiles in the Pacific. It is also based on the Soviet's inability to coordinate an attack on U.S. missile silos and bomber bases without tipping off the U.S. early warning system - a constraint under which the U.S. does not labor.

Soviet apprehension is heightened further by U.S. anti-submarine capabilities such as the SOSUS sites and P3C Orion airfields in the Pacific (see Chapter 11), which contribute to the feasibility of a U.S. first-strike. Moreover, communications sites in the Pacific have been "hardened" against nuclear attack, allowing the U.S. to regroup its forces to crush Soviet retaliation.* Along with nuclear weapon storage sites such as Guam, communications bases in Alaska, Micronesia, the Philippines and Australia would be heavily barraged early in a Soviet attack. U.S. facilities in the Pacific, in short, could support a preemptive first-strike led by U.S.-based missiles and backed by submarines and short-range, forward-deployed nuclear forces. In contrast, the Soviets have little anti-submarine capability or nuclear command/communications presence in the Pacific, and their overseas, land-based intelligence is sparse. Soviet submarine-launched ballistic missiles are too inaccurate for a first-strike and their home-based, long-range bombers are too few and too slow to affect the outcome. Even if the Soviet Union is aiming to build an intercontinental first-strike capability, its Pacific-based forces contribute little to that end.

Undoubtedly, there are powerful groups in the United States and the Soviet Union who believe that preparing for preemptive first-strike is the only credible stance in a world of highly accurate, silo-buster missiles†. Not surprisingly, the services which tend the vulnerable, land-

* The most important of these sites in Pacific Command are the early warning radars (in the Aleutians) and satellite launch radars (in the Philippines, Guam, and Kwajalein); early warning satellite ground stations (most crucially, Nurrungar and Pine Gap in Australia); CINCPAC's command posts (on Oahu Island in Hawaii); ground stations for real-time photographic and electronic intelligence satellites for damage assessment (especially Pine Gap in Australia); and communications stations for transmitting nuclear Emergency Action Messages (especially NW Cape in Australia, Guam, and Japan).

† The recent release of a top-level report to President Kennedy in 1962 shows that first-strike has long been considered a serious option. The report advised Kennedy that Soviet pressures against U.S. interests short of nuclear attack "could, at worst, leave open to us the *unpalatable choice of a first strike* or swallowing our losses in a series of confrontations at local pressure points around the periphery of the Soviet bloc." [58]

based missiles – the U.S. Air Force and the Soviet Strategic Rocket Forces – are the most predisposed to a first-strike mentality.[59] Whether Soviet nuclear warplanners are convinced that their missiles are reliable and accurate in a nuclear war is unknown. But the Pentagon, as one senior U.S. official has testified, has "fairly high confidence" in the operational accuracy of U.S. missiles fired at the U.S.S.R. over the North Pole.[60]

This conviction, however, is based on faulty logic. Because each new missile is tested only a few times and in "unreal" circumstances, the results have little statistical significance. As U.S. physicist Richard Garwin notes:

> Every time you fire a new model missile over the same range or the same missile over a slightly different range, the bias [unaccounted for factors degrading accuracy] changes. Sometimes it is greater, sometimes it is smaller, but it never has been calculated before. So you have to go back to readjusting the gyros and so on, to try and eliminate the novel bias. But if we were firing operationally [that is, in a nuclear war], both we and the Russians would be firing over a new range in an untried direction – north . . . They might feel sure that they have eliminated the bias. But they can never be absolutely certain. We certainly cannot be . . .[61]

In other words, missiles in a nuclear war will not be fired in the neat, orderly paper calculations of first-strike feasibility, but in the real world of chaos, fear, and confusion – all compounded by contract mismanagement, faulty parts, slipshod maintenance, bureaucratic cover-ups, and accidents.* Schlesinger emphasized in 1974 that U.S. and Soviet counterforce capability "goes to the dogs very quickly" with *any* degradation in the operational accuracy attributed to Soviet missiles by U.S intelligence estimates – themselves controversial.†[64] The mental

* In 1985, for example, the Pentagon discovered that the electronic microchips which were installed in many U.S. weapon systems and which are crucial to the guidance systems and accuracy of the systems were not properly tested.[62]

† Physicist Kostas Tsipis has shown that a reasonable estimate of such degradation for an attack by two nuclear warheads on a missile silo falls from 86 per cent probability of destruction with zero bias, 100 per cent launch reliability, no mutual destruction of exploding warheads, and no surprises in silo hardness to between 31 and 45 per cent probability of destruction when unfavorable variations in these basic parameters are

cost-benefit analyses which inform military deliberations of the feasibility of a nuclear first-strike would have little relationship to an actual nuclear war.

Global Balance of Terror

Should push come to shove, the superpowers have built enormous nuclear arsenals for nuclear attack. By 1983, the U.S. and the U.S.S.R. had stock-piled about 18,500 *long-range* air, land, and sea-based nuclear warheads. Capable of intercontinental targeting, these long-range U.S. and Soviet arsenals are structured in different ways. The Soviet Union emphasizes its land-based missiles, which constitute about half of its total long-range launchers and 65 per cent of its long-range warheads. The U.S. relies more on submarine-launched ballistic missiles than the Soviet Union, which reflects its easy ocean access and relatively superior submarine and anti-submarine technology.*

Both sides dramatically built up their nuclear stockpiles in the 1970s. The U.S. deployed the Minuteman III, Poseidon C-3, and Trident C-4 missiles, each of which carries MIRVs. Between 1970 and 1980, total deployed U.S. long-range warheads jumped from 4,000 to 10,000. The Soviets also built up their arsenal, replacing old missiles with new SS-17,

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assumed, a plausible bad (not worst) case. Tsipis concludes that "To achieve a 90 per cent kill probability [on U.S. silos] a Soviet two-[warheads]on-one [silo] must be performed with perfectly reliable missiles that experience zero bias, no fratricide and no unfavorable variation in any of the four important attack parameters [missile accuracy (CEP), target hardness yield, and missile launch reliability]." [63]

* U.S. land-based missiles carry 22 per cent of its long-range warheads and half of its long-range launchers. U.S. submarines carry 51 per cent of its long-range warheads, versus 32 per cent for the Soviets. Fifty to sixty per cent of U.S. submarine-based warheads are routinely at-sea versus the Soviet at-sea rate of 15–30 per cent at any time. The designs of long-range bombers on both sides are twenty to twenty-five years old, but the U.S. has reconstructed and modernized its B-52 bombers, which carry 27 per cent of its long-range warheads (versus 3 per cent on the Soviet Bear and Bison bombers). The B-52s are also kept on a high state of alert. None of the Soviet planes are on alert. The Soviets emphasize air defenses more than the U.S., in part because of the immediate proximity of U.S. forward-deployed forces, and in part because the U.S. military concluded that Soviet bombers were a relatively insignificant component of the Soviet nuclear threat to the U.S.[65]

-18, and -19 land-based missiles with multiple warheads, along with the SS-N-18 submarine-launched missile. The number of Soviet long-range warheads leapt from 1,800 to 6,000 between 1970 and 1980.[66] By the mid-1980s the two arsenals contained about 13,000 megatons of nuclear explosive power (including short-, medium-, and long-range nuclear weapons), equal to about a million Hiroshima-sized bombs.* As Senator Symington noted over a decade ago, "We are sort of loaded, you might say, when it comes to nuclear weapons."[69]

In an all-out nuclear war, the two superpowers would explode a large fraction of their arsenals in the Pacific. Exactly how much depends on the characteristics of the war. By calculating how many warheads *could* be delivered in a hypothetical two-day all-out war, we estimate that in all, about 5,200 U.S. and Soviet nuclear weapons would release about 1,100 megatons of nuclear explosive in the region, or the equivalent of 87,000 Hiroshima-sized bombs.† With only about 10 per cent of the nuclear firepower in their arsenals, in short, the superpowers would totally destroy the Far East and the Pacific.‡

With this immense firepower, the Pentagon has assuredly targeted every major Soviet military site in the region in its Single Integrated Operational Plan (SIOP) for global nuclear war. These probably add up

* A sophisticated measure of the capacity of the most accurate nuclear warheads in each arsenal to destroy the others' offensive missiles is Counter Military Potential (CMP). In the early 1980s, the U.S. had about the same promptly deliverable CMP in its nuclear arsenal as the U.S.S.R., and twice the total (prompt and slow) deliverable CMP.[67] This index takes into account the relative contributions of yield and accuracy of the warhead to its destructiveness to the target, and is most sensitive to the accuracy. Readers should be alert that such measures are "slippery" and easily manipulated by incompetent or partisan analysts."[68]

† The 5,220 estimate being 2,400 warheads and 435 megatons from the U.S. arsenal, and 2,800 warheads and 656 megatons from the Soviet arsenal.

‡ The Soviet and U.S. arsenals are not the only nuclear weapons in the region. China now has about 225–300 nuclear weapons, including at least four 12,000 km-range intercontinental ballistic missiles which can hit all of Asia, Europe, and the Soviet Union. China test-fired one of its ICBMs into the mid-Pacific near Fiji in May 1980, and tested a 1,000 km range submarine-launched ballistic missile into the Pacific in 1982.[70] France also maintains a stockpile of nuclear weapons for testing at Moruroa Atoll in the Southeast Pacific and the French Air Force and Navy are nuclear-armed.[71] But the Chinese and French arsenals in the Pacific are tiny relative to those of the superpowers.

to 200–300 targets. Even if two warheads are delivered to each of these targets to allow for the possibility that U.S. warheads destroy each other, no more than about 500 warheads delivered by land-attack delivery systems will destroy every human artifact in Siberia and the Far East.* Yet we found that in an all-out war the U.S. could deliver over 1,600 nuclear warheads onto these targets.†

By the same token, it would take no more than 200–400 Soviet nuclear warheads to destroy all the U.S. forward bases in Pacific Command, versus the 900-odd warheads that could be used.‡

As if this degree of overkill were not enough already, we estimate that both arsenals aimed at the Pacific will increase by 50–60 per cent by the year 1990 – the result of activating stockpiled nuclear weapons, and of deploying new classes of weapons such as cruise missiles and submarine-launched ballistic missiles.

"The Battle of Perceived Capabilities"

In spite of the certainty of mutual devastation and the uncertainties which would crowd the mind of a commander bent on a first strike,§

* In reality, fewer warheads would be needed because many targets are co-located and will be destroyed by one warhead.

† After subtracting 800-odd naval warheads used in the scenario at sea against Soviet warships from the U.S. total of 2,400 warheads.

‡ After subtracting the 1,900 air defense and anti-warship nuclear warheads in the scenario from the Soviet total of 2,800.

§ These uncertainties include: *Adversary's Response*: Will target of pre-emptive strike launch-under-warning; only launch-under-attack; predelegate authority to the military, including "theater" commanders; retaliate against attacker's military or urban/industrial assets? *Attacker's Weapon System Uncertainties*: Will missile be available when activated and perform with test accuracy and anticipated warhead yield, reliably, at the set height, at the rate planned at launch and over targets, and will necessary command/control and communications/intelligence support survive? *Target-end Effectiveness*: How susceptible to nuclear blast and radiation are the missile silos and the missiles therein, how precisely are targets located, how vulnerable is the target's command and control system, how will blast and accuracy be affected by local geology, topography, weather, and mutual destruction of incoming warheads, etc?[72]

the U.S. and the U.S.S.R. have proceeded frantically to build big silo-busting missiles like the MX and SS-18. Originally justifying the build-up by drawing hair-raising but untenable scenarios of Soviet pre-emptive attack, sophisticated hawks on the American side are now rationalizing the first-strike components of their arsenal. The new claim is that by further increasing the uncertainties faced by a preemptively minded Soviet strategist, the new U.S. silo-busters *reduce the risk* of nuclear war by making the nuclear brink *more dangerous*![73]

The loquacious Herman Kahn candidly spelt out this circuitous logic just before he died in 1983. *If* "both sides have a significant first-strike advantage" as well as a "sufficient" second-strike capability, and *if* both sides would rather fire first if nuclear war appears "inevitable", *then*, claimed Kahn, the threat of pre-emption "is enough to deter extreme crisis, without being very destabilizing in ordinary crises." Kahn conceded that this strategy works "by making nuclear war marginally more likely in a serious crisis." But, he argues, it thereby "makes all forms of war – including nuclear war – less likely." [74]

Kahn's judgement is purely subjective, and few observers who have ever sat in the cockpit of the nuclear war machine agree with him. But he is on the mark when he states openly that the mutual build-up increases the risk that both sides may push themselves over the brink. Increasing the incentive to preempt is like putting lead in the pockets of our two people tied together on the slope. The heavier the lead, the more likely they are to slip as they make their way along the edge. If the lead is heavy enough, the momentum of a slip may sweep both the climbers willynilly over the brink to certain death. If rational, runs Kahn's argument, they will keep away from the brink altogether.

What stakes possibly could be worth increasing the likelihood that control over the nuclear arsenals would be lost – even before a nuclear war begins? Here the hawks move back into the realm of psycho-politics. It is the "battle of perceived capabilities", as the U.S. Committee on the Present Danger put it in 1978, that comprises the crucial stakes in the first-strike race. The Committee, instigator of the onslaught against detente and arms control which swept Reagan into power, argued: "The horrors of nuclear war may continue to deter its actual occurrence. But the political effects of such a shift [to nuclear parity], and its effects on the feasibility of conventional war or proxy war, is [sic] very great." [75]

The hawks are particularly worried that the Soviets might impress

U.S. allies or neutral states simply by deploying more launchers than the U.S.* Edward Luttwak, for example, argues in a report to the Pentagon: "Objective reality, whatever that may be, is simply irrelevant [to deterrence]: only the subjective phenomena of perception and value-judgement count." Luttwak even calls for a "cosmetic approach" to enhance "the images of power" that the launchers and missiles generate.[77]

The problem with American first-strike and nuclear-use theorists, apparently, is that they suffer from a deep-seated superiority complex. The complex is rooted in their frustration at the inability of the U.S. to translate nuclear "superiority" into decisive political advantage.† Even Henry Kissinger, the high priest of coercive diplomacy in Vietnam and a reformed nuclear-use theorist from the 1950s, exclaimed in 1974:

> What in the name of God is strategic superiority? What is the significance of it, politically, militarily, operationally, at these levels of numbers? What do you do with it?[78]

Whether a misguided NUT, a lunatic first-strike enthusiast, or a rabid MADvocate steers the world into a nuclear maelstrom is unimportant. Each is quite capable of starting a nuclear war. Despite the carefully crafted doctrines, intentions, and estimates, such a war will certainly burn out of control, destroying all in its path.

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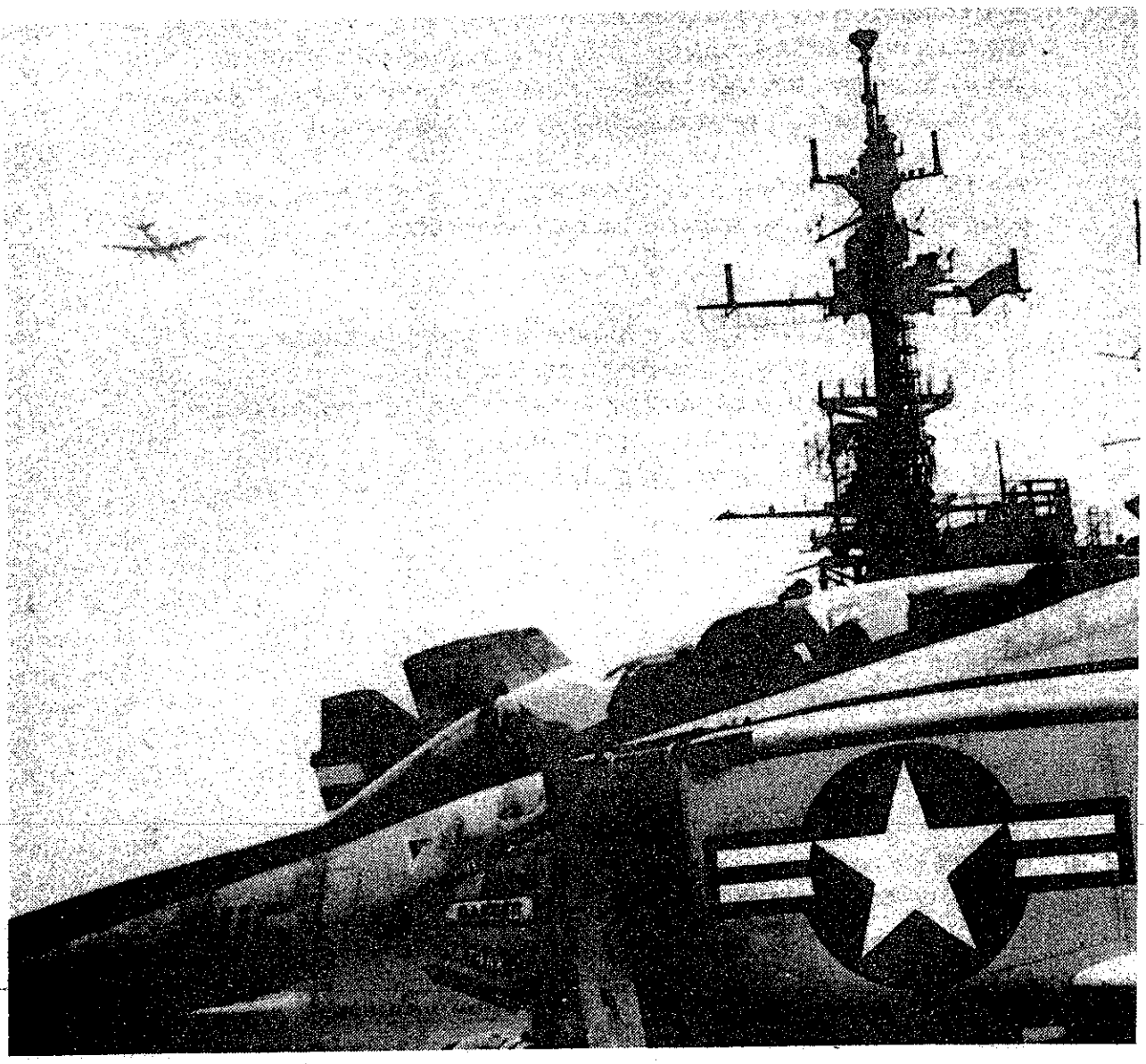
* Ironically, hawks like Arnold Horelick argued the reverse in the 1960s: *despite* U.S. numerical and qualitative nuclear superiority, the Soviets could gain political parity or even advantage from an inferior force because perceptions of this force are subjective![76]

† As evidenced by the debate over the MX, which descended to strident demands in Congress for "big" missiles, when the Pentagon was quite happy with the small version.

Soviet Bear bomber flies over U.S.S. *Midway* during North Pacific *Fleetex* exercise, 1983
(Pentagon)



NINETEEN ☆ NUCLEAR EPITAPH?

[Brinksmanship] means exploiting the danger that somebody may inadvertently go over the brink, dragging the other with him.

—Thomas Schelling, 1966[1]

The superpowers have devoted many years and billions of dollars to preparing for war. Having anticipated war, they are likely to end up eventually fighting a war.

The build-up of nuclear and conventional deployments in the Pacific since the end of World War II has been matched by bellicose foreign policies. Both superpowers, especially the United States, have intervened massively in Asia – in Korea, in Vietnam, in Afghanistan. Given the fluid and volatile character of social and political change in many Asian countries, the superpowers will intervene again – if their policies remain unchanged. Indeed, it is possible that the U.S. could undertake multiple interventions in East and South Asia on the periphery of the Soviet Union. These engagements would dramatically over-extend American forces – and prompt severe Soviet anxiety.

In such a context, pressures to escalate to nuclear attack could mount from many directions – another military challenge to the U.S. in Asia, domestic political pressure, provocative actions by either superpower, bureaucratic loss of control over nuclear forces, deception, breakdown of superpower communication, and in the final, fatal moments, pride, fear, anger, and hatred of an apparently diabolical enemy. It is likely that hostile blocs heavily burdened with nuclear arms will eventually

U.S. military advisors direct the fire of the hard-pressed Pakistani army, and try to distribute war materials supplied by China.* Alarmed by a Soviet airlift of arms and munitions to India, the U.S. also stations warships off the Indian coastline. The ships track and occasionally scrape their Soviet counterparts. But so far, each superpower is saving its gunpowder for the proxy battles on land.

December, 1990: Manila, Philippines

An even bigger challenge to the U.S. comes a month later in the Philippines.

Attempts at economic reform by the Aquino government fell far short of the demands of the New People's Army and the country has seen two years of violent revolution. By December 1990, the communist insurgents hold the initiative. Only Manila and a few big cities are controlled by the government.

In late December, U.S. Marines are airlifted from Okinawa in order to secure Clark Air Field in Central Luzon and the mountains behind the Subic Bay Naval Base. The Pentagon justifies the intervention as necessary to "evacuate" Americans from Manila and to "secure American interests." U.S. counterinsurgency teams on high-speed patrol boats direct Filipino forces to stop guerrilla movement between islands, operations reminiscent of riverine and delta deployments in Vietnam two decades earlier.

Assassination and Street Battles

Morning, March 5, 1991: Seoul, south Korea

By March 1991, the U.S. is engaged heavily in Pakistan and the Philippines, where Marines patrol the countryside around U.S. bases at Subic Bay and Angeles City. In south Korea, 3,000 km from Manila, American GIs guard the increasingly tense Demilitarized Zone which divides Korea.

Since 1980, when the Korean CIA killed President Park, the U.S. has backed General Chun Doo Hwan. An inflexible military dictator, Chun has clamped the lid on Korean dissent.

* As occurred in 1971 during the Bangladesh war.[8]

On the morning of March 5th, however, a junior officer clutching a hand grenade throws himself at the Korean strongman. Pamphlets in the slain assassin's pocket proclaim that Chun "stole" another four years of the Presidency by refusing to stand down in 1988 as he had promised.

Chun Doo Hwan, the "butcher of Kwangju" in 1980, is dead. Joyful demonstrations turn into street battles across south Korea, as the military clashes with the democratic opposition and its supporters.

8 am, March 19: Seoul

Shortly after Chun's assassination, the American Commander in south Korea, General Michael "Iron Bar" Stigwitz, recognizes the authority of a new military strongman from a faction alienated from Chun. As supreme commander of south Korean forces, General Stigwitz releases the south Korean army at the new dictator's request to repress the strife. But after two weeks, thousands of fresh rebels replace those killed or imprisoned. Whole provinces openly revolt, and key provincial cities evict the Korean military and set up Peoples' Councils.*

The south Korean military, the Commander's main military force, is disintegrating before his eyes. The 40,000-strong U.S. force is obliged to stay on the DMZ and around U.S. bases. They can provide advice, support, and arms, but there are too few to fight the insurgents as well as guard the American sector of the DMZ.

Other U.S. troops in Asia are already over-extended. To supply more American troops would require military conscription in the U.S. – a move which not only would take too much time but is also domestically unpopular. The south Korean military is wracked by internal struggles between senior political and military figures. The U.S. is unable to pin its hopes on any contender for south Korean leadership. Meanwhile, the morale of the south Korean troops dissolves.

To deter north Korean meddling in this deteriorating situation, General Stigwitz orders a series of F-16 fighter planes to scramble along the DMZ and to skirt north Korean borders. He believes that a little tension on the DMZ may also deflect some of the anger of riotous students and striking workers onto the north. Sonic booms crack windows in Seoul as an SR-71 Blackbird spyplane flying as fast as a bullet streaks above the DMZ, photographing north Korean war preparations. The south Kor-

* As happened in Kwangju following the death of President Park Chung Hee in 1980.

still intact in Seoul, the General's remaining political and military control in the south may collapse completely at any moment. He ponders briefly and telephones Washington to request pre-delegated authority to use a "limited" package of nuclear weapons if required to hold his position. He is instructed not to use the weapons under any circumstance without prior approval from Washington. This move, however, releases the safety catch from the the hair trigger in south Korea.

2 pm, March 19: Seoul

Within three hours, Stigwitz decides that the time has come to either apply American firepower offensively or disengage. Believing that neither the Soviets nor the Chinese will intervene if the U.S. demonstrates sufficient "resolve", he prefers force to retreat. He also knows that his chances of moving up the Army's promotion ladder are negligible if he becomes the field commander responsible for finally "losing" Korea.

On the telephone to the President, he poses stark options: "The Korean military is falling apart.* I control only the areas immediately occupied by my troops. Unless you can reinforce me massively, we have to attack with nuclear weapons or evacuate immediately. I could try to evacuate our nuclear weapons by helicopter, and fight to the coastline to get out of Korea. The revolt in the south is sustained by infiltrators and supplies from the north," he says, his voice nearly cracking under the strain. "I can regain control here, but only by going to the source. I could block a north Korean invasion with our atomic mines and a few Tomahawks in the valleys north of the De-militarized Zone."

Choosing his words carefully, he poses his request. "My judgement is that we have to preempt the north. If we don't, we will have to evacuate our troops and nuclear weapons to keep them from falling into the hands of the enemy. Mr. President, evacuation means abandoning Korea. I may not be able to evacuate safely at this time anyway."

* As occurred in the twilight hours of the south Vietnamese military in 1975, and the Iranian military in 1978.[12]

A Parking Lot

Midnight, March 19: Washington, D.C.

With American troops now engaged on three fronts, President Herter and his staff are weary and mentally ill equipped for the late-night bad news from the Commander in Korea.* Herter and his advisors are also alarmed at the inability of U.S. troops to contain the revolt in the south. The possibility that north Korea might make dramatic political and military gains is the last straw. Some of the President's staff are receptive to the idea of finally solving the "north Korean problem".

"We have to deal with north Korea," states a senior diplomat from the State Department's Korea desk, "as if we are negotiating with Genghis Khan. Maybe they will finally understand we mean business if we convert Pyongyang into a parking lot."†

Most of all, by decisively defeating a recalcitrant Third World power the State Department's strategists seek to avoid the international and domestic political consequences of "losing" Korea. "Even the appearance of capitulation," reads their final recommendation, "will effectively destroy the image of invincibility and prestige enjoyed by our country."‡

The Air Force and Navy Secretaries bring in aides to brief the President and his security advisors on the capabilities. An acrimonious debate emerges as to whether gravity nuclear bombs delivered by the Air Force's F-16s are better than the Navy's sea-launched Tomahawk cruise missiles in hitting north Korean targets dug into granite mountains.

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* Nuclear analyst D. Frei reviews stress-induced effects on the individual decision-maker. These effects include increases in dogmatic rigidity, stereotyping, ethnocentric bifurcation, group conformity, denial, pretense, abstraction, perceptual distortion, misperceptions, selective perception to match misperceptions, anxiety, and fatigue; degradation in work efficiency, analytical and creative thinking; resort to habitual solutions; tunnel vision; over- simplification; projections of hostility; and apathy, withdrawal, and/or impulsiveness.[13]

† As stated to the authors by a senior State Department official in 1980. "Parking lot" is a Pentagon term commonly used when discussing north Korea after a U.S. nuclear attack.

‡ The U.S. Congressional Investigation Committee into the impact of the successful north Korean arrest of the U.S.S. *Pueblo* in 1968 used those words.[14]

After listening in silence, the President dismisses the service representatives and gathers his advisors to make a decision.

"Our worst case," states the Defense Secretary, "is the possibility that the Chinese or Soviets will counterattack in south Korea. The Soviets are encouraging the north to attack us in the south to tie us down there. But the Chinese are telling the north that they are on their own, which presents us with a tempting nuclear target with a valuable demonstration effect on the Soviets.* We do not believe that the Chinese or the Soviets will escalate to thermonuclear war over a two-bit state like north Korea."

The President sums up: "If we back down now, the whole balance of power, ambiguous enough before this show began, will slip from perceived parity to definite Soviet superiority. I will not go down in history," he says, thumping the table, "as the President who lost Korea!"†

He approves a nuclear strike of twenty atomic mines and ten Tomahawk nuclear cruise missiles, specifying the targets and time frame of the attack. This package is considered large enough to force north Korean capitulation, but small enough to avoid Soviet intervention. No warning is to be given to the north Koreans, the Soviets, the Chinese, or other Pacific or European allies, although an explanatory message is to be sent to China, the Soviets, and the allies as the attack is executed. He orders that the enabling codes for arming the nuclear weapons be issued to their respective commanders.

At the end of the discussion, the Chief of Naval Operations suggests, almost as an afterthought, that the Navy send two U.S. aircraft carrier battlegroups toward the Kamchatka Peninsula.

"The Soviets will have to worry a lot more about looking east at

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* These words, slightly rewritten, are those of former Undersecretary of Defense Francis West in his 1977 study of U.S. strategy in the Pacific. That the Chinese would abandon their alliance commitments to north Korea to exploit the anti-Soviet effects of a U.S. nuclear attack on north Korea is a fantastic notion – but one that evidently exists in the minds of some senior American officials today.[15]

† Political analyst Richard Lebow concluded from his study of twenty-six international crises "that the most common external catalyst of brinksmanship was the perception that decisive action was required to prevent a significant adverse shift in the strategic or political balance of power."[16]

our carriers," says the Navy Chief, "rather than south toward Korea and Japan."*

The President approves the Navy's request.

The military and political leaders in Washington and Seoul see the nuclear attack as the knock-out blow to north Korea – the settling of scores stretching back to 1950. They also view it as a decisive demonstration of U.S. power to the Soviet Union, whose arms supplies are seen as encouraging north Korean mobilization at the DMZ. Furthermore, they believe that an ignominious and disorderly retreat from Korea would destroy American morale in the Philippines and Pakistan, and embolden the Soviets in Europe.

To indicate the gravity of the Korean situation, all U.S. nuclear forces are placed on a state of high alert, Defense Condition 2. After forty-six years – years of preparing and posturing – the U.S. reaches for nuclear weapons again. To maximize surprise and accuracy, the American Commander is authorized to conduct the attack exactly at dawn Korean time the next morning, March 20th. The Captain of the Tomahawk-armed battleship *New Jersey* is alerted via Hawaii through the Navy command chain.

Evening, March 19: Seoul

Red ribbons of tracer shells drape the Demilitarized Zone as American and north Korean troops exchange fire in the dark. A north Korean counter-bluff is in full swing to divert American attention and to reduce the pressure on the southern rebels. In the south, street battles and hand-to-hand fighting ensue in downtown Seoul as military units vying for power skirmish with each other. Popular opponents are mounting an all-out drive with captured weapons to gain control of the government.

Dawn, March 20: south Korea

At 6.15 am, an elite south Korean Army fighting unit defects to the rebels. Clandestinely, they surround the American–south Korean joint command post at Yong San in Seoul. At 6.20 am, they attack the main gate to divert attention from a hole blown in the concrete wall around the post. Entering the compound, they blast the vital radio antenna and

* Based on Chief of Naval Operations Admiral James Watkins's words in 1983. He also noted that the 1983 *Fleetex* exercise was a dry-run of a similar maneuver.[17]

communication cable junction box with anti-tank rockets. Then they concentrate their fire on the command post, trapping the personnel inside.*

The rebel offensive of the night before culminates when the rebels overrun and occupy the Presidential Palace and the American Embassy in Seoul. Remnants of south Korean forces scatter or surrender to the rebels. A U.S. field commander sends a message to Guam and Japan describing the havoc. The message arrives garbled.† Shortly after, the rebels attack communication relay stations on the Korean south coast.

Alerted that something is terribly wrong in Korea, the President orders that the nuclear attacks be halted. The message stops the battleship from delivering its Tomahawk warheads onto rear-based north Korean command and control posts. But events are moving too fast in Korea. U.S. forces proceed with preparations at the DMZ, unaware that the President is trying to pull back from the nuclear brink.

6.30 am, March 20: DMZ, south Korea

As scattered gunshots and roaring crowds surge through Seoul, a special U.S. Marine unit arrives at the DMZ in the greying light. Flown in two days earlier from Okinawa, the unit jumps down from trucks and places twenty atomic mines in special tunnels stretching 100 m under the DMZ itself. They quickly punch in the electronic enabling codes which arm the weapons and retreat.

As they re-emerge from the tunnel, they discover that rebels have knocked out a communication relay post and that they cannot contact Seoul or Washington. They desperately seek radio contact with a naval unit, but find that the latest Army and Navy "secure" radios are in-

* In February 1978, elements of the Iranian military defected to the rebels at Doshen Tappeh Air Base, handing over arms. Shortly afterward, Iran's military high command declared that it would no longer defend the Shah.[18] The attack described above is based on a composite of Vietnamese attacks on the U.S. Embassy and the U.S. command at Tan Son Nhut Air Base in Saigon in the 1968 Tet offensive.[19] Communications and command posts were attacked at many beleaguered U.S. positions in the Tet offensive.[20]

† As did two out of three urgent messages sent to Guam by participants in the *Team Spirit* exercise, 1982.[21]

compatible.* By the time they make contact via a commandeered Marine radio, it is too late to stop the explosions at the DMZ.

At 6.50 am, the mines explode. Huge fountains of dirt and snow spurt into the atmosphere. The explosions swallow whole villages, lifting the valley floors which appear to hover before crashing back into deep craters hundreds of meters across. No tanks or troops can cross these craters.

News of the nuclear attack spreads quickly in the south. American troops aim merely to hold the bases, which store their remaining atomic weapons, and a few stretches of the DMZ.

8 am, March 20: Sea of Japan

Offshore, American and Soviet warships dodge each other in foul weather. The flagship of the Soviet Pacific fleet, the *Kiev*, keeps itself in full view in the Sea of Japan between the north Korean coastline and the U.S. fleet.†

Amidst huge street demonstrations in the U.S. against – and in some cases for – the nuclear attack in Korea, the House Republican leader asserts on the CBS evening news that the Soviets are "seeking to chal-

* Admiral Nagler, director of Command of Control for the U.S. Chief of Naval Operations, complained in 1982 that the four services had not agreed to implement a command message system even though agreement was reached in 1978 to set up the Tri-service Anti-Jam Airborne Voice/Data Communications System. In 1982, U.S. Navy Secretary John Lehman stated, "We can talk to other nations' navies better than we can to our own Air Force." [22] In the Grenada invasion in 1983, Army radios were found to be incompatible with the Navy's. An Army officer borrowed a Marine's radio but could not follow Navy codes and procedures. A desperate paratrooper finally used his telephone credit card to call back to the U.S. to try to get the Army to communicate with ships off Grenada.[23] When President Reagan tried to order the Pentagon to hijack the Egyptian aircraft carrying three Palestinian "ship-jackers" in 1985, he discovered that the secure radios aboard Air Force One were incompatible with those at the Pentagon. Reagan used an open radio-telephone to issue the go-ahead, which was promptly intercepted by a ham radio operator. "Astounding," one shaken Pentagon official said.[24]

† As in the May 1967 Soviet Pacific Fleet deployments prompted by Soviet sensitivity to U.S. naval operations close to its territory.[25] Soviet and U.S. destroyers then collided twice in the Sea of Japan, damaging both vessels.[26] In June 1985, the U.S.–U.S.S.R. talks to refine implementation of their 1972 Agreement on the Prevention of Incidents On and Over the High Seas collapsed.[27]

lenge the U.S.". Adds the Congressman, "This unprovoked Soviet harassment of our ships forces us to show the Soviets that the United States cannot be pushed around like some third-rate power."

He demands that President Herter give American naval commanders the authority to fire on Soviet vessels.* He does not know that the President has already issued orders to American commanders, standard since the naval intervention off Lebanon in 1983, "to challenge potential aggressors and to defend themselves as required in case of attack." †

American anti-submarine warfare vessels and planes hug close to the American fleet near the northern coast of Korea. The American sonar operators are tracking so many north Korean, Soviet, and American submarines around the American and Soviet fleet that they cannot distinguish the type and nationality of all the submarines at the same time.

The computer on a U.S. PC3 plane beeps a warning that a hostile, diesel-powered submarine has slipped behind an American aircraft carrier. Assuming the worst – a hostile north Korean adversary‡ – the commander of the task group orders a cruiser and carrier-based helicopters to destroy the submarine.

The hull of a diesel-powered Soviet attack submarine crumples from the impact of an air-launched torpedo, killing the crew instantly. Soviet sonars register an underwater attack in the vicinity of the last known position of their submarine. The news is relayed to Vladivostok, Chita, and then Moscow.

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* Gerald R. Ford, then a member of the U.S. House of Representatives and later President, made such a demand on May 11, 1967 in response to the U.S.–U.S.S.R. warship collisions.[28]

† Admiral James Watkins testified in 1984 that "We learned a most important lesson about rules of engagement in Lebanon, and that was, get aggressive . . . [We announce] that in this region, around American ships, we have these rules, and to stand clear, to come up on guard frequency, talk to us, don't come charging at us from 2,000 feet and 5 miles away and expect not to get a bunch of tracers shot across your bow. And if you come much closer than that, you are going to be brought down." [29]

‡ North Korea has at least thirteen submarines, which are deemed by naval experts to be a potent threat in their coastal operating areas.[30]

8.15 am, March 20: Sea of Japan

Over a hundred Soviet fighter aircraft are flying above the fleets, tiny specks on an ocean flecked with whitecaps far below.* They are not alone, however; each is accompanied by U.S. or Japanese fighter aircraft guided to the Soviets by a U.S. AWAC Airborne Warning and Control plane.

One group of Soviet MiG jets flying alongside a U.S. RC-135 spyplane breaks off abruptly and heads for Vladivostok. Their American escorts stay close to the RC-135. Having detected the nuclear explosions in Korea, the Soviets recall their planes. The AWAC lies between them and the coast. As the RC-135 reports the disengagement, the crew of the AWAC report an alarming development. Twenty Soviet Backfire bombers are heading for the *Carl Vinson* off the Korean coast. Shocked by the nuclear attack in Korea and the loss of a submarine, the Soviet Command has settled on a show of force.

The Commander of the *Carl Vinson* has no way to determine if the Backfires are engaging in mock attacks to warn the Americans to keep their distance, or if the strike is for real. He orders all his fighter aircraft to pull back into a cordon around the carrier as the Backfires close in at 950 km per hour from the north.

The U.S. Commander then orders his F-14s to challenge the Backfires. But the Soviet pilots ignore the radio calls and tracer bullets fired in front of them and keep approaching the carrier. When the Backfires are 400 km from the *Carl Vinson* – the maximum range of the A-6 missiles which the bombers carry – the nearby RC-135 intelligence plane registers a Soviet satellite radio transmission giving the latest location of the aircraft carrier.

The message is the signal for the Backfires to undertake the evasive maneuver which precedes an attack. The U.S. Commander interprets the satellite message as a signal for the American fighter planes to fire their Sidewinder and Phoenix missiles or lose their targets.† He trans-

* As occurred in early December 1984 when "An unusually heavy reaction involving at least a hundred Soviet jet fighters, bombers, and reconnaissance planes as well as surface vessels" was seen when elements of the U.S.S. *Carl Vinson* battlegroup approached within 80 km of Vladivostok.[31]

† Based on the scenario for similar events in the Atlantic as sketched by U.S. Navy analyst William O'Neil. In 1983, Backfire bombers began to fly simulated strikes against U.S. carriers in the Western Pacific.[32]

mits the fire order and all ten of the Backfire bombers are shot down, plummeting into the ocean. These events drastically escalate Soviet involvement in the war raging on the Peninsula, and now, over the Sea of Japan.

The Saturation Strike

9 am, March 20: Vladivostok, Soviet Union

Two hours have passed since the nuclear mines exploded in north Korea and one hour since the smoke cleared from the air battle. So far, the superpowers have only tussled briefly in aerial and naval skirmishes in the Sea of Japan. But U.S. naval efforts in the North Pacific to distract the Soviets from intervening in Korea have evoked the Soviets' worst fear: that the U.S. attack in Korea was a diversionary tactic, the precursor of an attack on the Soviet Union itself. The locus of the war shifts from Korea to the North Pacific, where both superpowers are sucked into a whirlpool of events beyond their control.

The worried Commander of the Soviet Pacific Fleet in Vladivostok, Sergei Borshkov, scans the latest intelligence brief on events in Korea and the Sea of Japan. Already American jets have shot down his Backfires. One of his submarines is not communicating, presumed lost to an American depth bomb. Now, two U.S. aircraft carrier task forces are heading for Petropavlosk, the Soviets' main ballistic missile-firing submarine base in the Far East.

Borshkov reads that Soviet hydrophones have picked up U.S. attack submarines entering the Sea of Okhotsk. They may already be tailing Soviet ballistic missile submarines there, not to mention around the Aleutians and Petropavlosk. This tactic fits what he knows to be the U.S. Navy's likely first move in a superpower war.* Borshkov is also worried that the bulk of the ballistic missile submarines in his command are in port, vulnerable to U.S. ballistic missile attack. He has already withdrawn the bulk of his submarine and anti-submarine forces from the Sea of Japan into the heavily defended Sea of Okhotsk. He anxiously awaits approval to send his long-range missile-firing submarines at

* In 1985, U.S. Navy Secretary John Lehman revealed that once a superpower *conventional* war begins in Europe, the U.S. Navy would attack Soviet sea-based missile submarines "in the first five minutes of war." [33]

Petropavlosk into the Pacific. This step, he knows, entails being ready to attack American anti-submarine forces.

A telex from the regional commander at Chita authorizes Borshkov to proceed, and adds that he is to use the minimum force necessary to protect his ballistic missile submarines from falling prey to American forces. If necessary, he may attack U.S. aircraft carriers and submarines in the Sea of Okhotsk or obstructing passage into the Pacific. Borshkov issues the orders for his commanders to execute the plan. They are to attack U.S. warships as soon as they approach within striking distance of Soviet ballistic missile-firing submarines.

10 am, March 20: North Pacific

Carrying 100 strike aircraft, the U.S. carriers *Enterprise* and *Midway* are closing in rapidly on the Soviet coastline. The carriers are now only 1,600 km away from Petropavlosk, well within striking distance of the Soviet mainland. The escort vessels carry long-range Tomahawk missiles and guidance maps stored in computer cassettes to direct the missiles to their targets. Apparently headed for Sakhalin, U.S. F-16s based in Japan also appear on Soviet radar screens. Beyond Sakhalin lies Alekseyevka, where the remaining Soviet Backfire bombers are based.

U.S. anti-submarine vessels and aircraft are moving rapidly into the Seas of Japan and Okhotsk and the North Pacific. In Vladivostok, Commander Borshkov knows from his radar, aircraft, and sonar that his submarines in the North Pacific are vulnerable to U.S. attack. He fears that a U.S. naval "rollback" of Soviet anti-carrier submarines is the first step before the U.S. attacks Soviet ballistic missile-firing submarines and the Soviet Union itself.* After consulting again with Moscow, Borshkov orders an all-out, saturation attack against U.S. anti-submarine and carrier forces in the vicinity of the Sea of Okhotsk and Petropavlosk.

* U.S. Chief of Naval Operations Admiral James Watkins explained to a skeptical Senate committee in 1984: "We essentially do sequential operations to roll back the enemy's defenses. We know how to do that. We know when to make our moves up into those regions. We have to know how effective the SSN [U.S. nuclear attack submarine] surge would be against the Soviet bastion force around the SSBNs [Soviet ballistic missile-firing submarines]. It is very critical to force them back up in there . . . In the Northwest Pacific, our feeling is that at the very front end of conflict, if we are swift enough on our feet, we

10.15 am, March 20: North Pacific
Soviet submarines and Backfire bombers immediately launch cruise missiles at the aircraft carriers and their escorts. Bombers and surface vessels drop nuclear depth charges aimed at U.S. attack submarines. To make up for poor coordination and U.S. electronic counter-measures, Soviet *Golf* submarines fire ballistic missiles at the last known location of the carriers. Many of these missiles kill only fish and whales, but enough explode near the *Enterprise* to knock out its fragile communications equipment and landing equipment. Sonars all over the Pacific are "blued out" by the booming sound waves.

The *Midway* steams on toward Petropavlosk. Under the rules for engagement issued that morning, he was authorized in advance to respond immediately to attack on aircraft carriers. The new rules did not specify if his response could extend to the Soviet Union itself.*

The *Midway*'s commander believes that his F-15 aircraft must disable the airfields at Petropavlosk to protect against further attack.

Knots of War

8.30 pm, March 19: Washington, D.C.
Surrounded by his advisors, the President listens to the careful translation of Soviet Premier Dmitri Stoltov's voice over the newly activated voice Hot Line. The Soviet leader recalls the 1962 Cuban Missile Crisis, a human generation and two generations of weaponry before.

"If you have not lost your self-control," says Stoltov, "and sensibly conceive what this might lead to, then, Mr. President, you and I ought

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would move rapidly into an attack on Alekseyevka, and we think we could get away with it, because we know what the real Soviet capability is . . . [The 1983 *Fleetex*] exercise last year was one of the best exercises that we have run with the Air Force. We had 30 F-15s, AWACs and KC-10 tankers, working together with three battle groups. The *Enterprise* battle group was returning from WESTPAC. We brought the *Midway* out of Japan. We were deploying *Coral Sea* to the Western Pacific. We rendezvoused [sic] up here [indicating on map, near Aleutians] and we tested our ability with the Air Force to coordinate strikes at Petropavlosk or Alekseyevka."[34]

* One of the tacit rules of superpower interaction in the Navy's perception is that a Soviet attack on a U.S. aircraft carrier will be answered by a U.S. attack on the Soviet homeland.[35]

not to pull the ends of the rope in which you have tied the knots of war. Because the more the two of us pull, the tighter the knot will be tied. And a moment may come when the knot will be tied so tight that not even he who tied it will have the strength to untie it. Then it will be necessary to cut the knot. What that would mean is not for me to explain to you."*

Glancing at his assembled subordinates, President Herter concentrates on the telephone loudspeaker.

"Your navy sank our submarine two hours ago," the slow translation of Premier Stoltov's voice continues, "and is now attacking our aircraft. We have stopped them for the moment, but still your forces advance against the Soviet homeland. What do you hope to achieve by this incredible action? We are ready to untie the knot. But first, you must heel your dogs of war. All we can hear is their barking and growling on our borders."

"Well," says Herter to his advisors, flicking the mute switch on the telephone, "what do I say? Tell him to put a leash on the north Koreans? And what the hell is this talk of attacking their submarines and homeland?"

After a moment's reflection, he picks up the telephone and speaks.

"Mr. Premier, we will answer your questions. We want to know why you ordered your Backfires to attack our ships. I agree we should talk. We have to find the time to talk."

"Fine," replies the translated voice of Premier Stoltov. "I trust what I hear on this telephone. I have to. But remember, I have to trust what I see and hear even more. We will talk again in a few minutes."

The President hangs up looking relieved.

A dishevelled Admiral bursts into the room, sweating profusely. Out of breath, he waves a sheet of paper at the group around the President. Finally, he addresses the President with a cracking voice.

"Sir, the *Enterprise* has been disabled with a nuclear attack. The *Midway* is proceeding to counter the attack on the *Enterprise*. The Soviets are attacking our ships in Europe with conventional weapons."

Herter is stunned. Few in the room know that the Navy routinely conducts aggressive anti-submarine operations to protect aircraft car-

*Based on the text of Khruschev's warning to Kennedy in 1962 over the Cuba crisis.[36]

riers.* While operations in and around Korea are directed from Washington, D.C., the naval activity in the Pacific is controlled by the Commander, U.S. Pacific Fleet. The President and top brass in Washington approved the carrier operations off the Kamchatka Peninsula. But they were too absorbed in events on the Korean Peninsula to enquire into all aspects of the maneuver. Instead of deterring the Soviets from intervening in Korea, the cumulative effects of U.S. strategy – the nuclear attack in Korea, the attacks on the Soviet Backfires and submarine, the anti-submarine hunt in operating areas of Soviet ballistic missile submarines, and the carriers closing on Petropavlosk – have evoked Soviet retaliation from an unexpected quarter.

Another message arrives with the Secretary of Defense, who reads: "The latest intelligence reports that Soviet submarines are being escorted to sea by anti-submarine surface warships. Nuclear warheads are being transferred from storage to theater delivery systems, including bombers. Intercontinental ballistic missiles appear to be on increasing levels of alert, indicated by fuelling operations."

The eyes of all the advisors are glued onto the Secretary of Defense. Glaring at them, he faces his boss.

"Mr. President," he declares, "this looks like the moment we've all been waiting for."

Flushing with anger, the apprehensive President exclaims, "The Soviets are playing games with us. It takes two to tie – and to untie – knots."

Instead of reassuring the President, Premier Stoltov's words now alarm him so much that he predelegates authority to use nuclear weapons to the NATO Commander. He also orders the commander to prepare to reply in kind to Soviet naval attacks. Under this *Operation Plan*, the U.S. envisages an attack to "liberate" East Germany and Czechoslovakia.†

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* As occurred in the 1962 Cuban missile crisis, when Naval anti-submarine operations were by far the strongest *military* signal sent to the Soviets. Despite Kennedy's preoccupation with control over the disposition of U.S. forces, the aggressive anti-submarine operations such as depth charge attacks designed to force Soviet submarines to surface totally escaped the attention of the U.S. National Command.[37]

† This section is based on *Oplan 100-6*, a U.S. European Command plan leaked to the media in 1980. It recognized that "all of NATO may not elect to participate in these operations", but expected that Britain would stick with the U.S., even if the U.S. launched a pre-emptive nuclear strike on Eastern Europe.[38]

Beijing Provoked, Europe Afraid

10.45 am, March 20: Beijing, People's Republic of China
The American nuclear attack on north Korea aimed to deter invasion of the south and to warn off the Soviets. While the American leaders expected criticism, they believed that China and other U.S. allies would have no option but to concur in this display of American resolve. Only as the attack was launched had the State Department advised Beijing by telex of the U.S. action in Korea.

Messages are sent to other U.S. allies after the nuclear attack – without even a pretense at consultation. The pace of events on the Peninsula precluded sharing decisions with the allies, whom the Pentagon perceives as weak-kneed and vacillating. The Command in Washington assumed that the allies could not afford to jump ship – they would have no choice but to acquiesce.

But rather than watching approvingly or helplessly, the Chinese leadership decides to intervene massively to express disapproval of the U.S. attack. By this action, the Chinese seek to avoid being hit by Soviet nuclear missiles in the case of a superpower nuclear war. Ten years of Sino-American military cooperation fade against this distancing imperative. China's preoccupation with its own big-power status in the rest of the third world reinforces the decision to support their military ally in Korea. China does not yet know that the rebels have already won in the south, despite the devastation inflicted along the DMZ. They pour troops into north Korea to deter further American attack.

2 am, March 20: Europe
Events are also moving fast in Europe. At the same time as the attack is launched in the North Pacific, Soviet bombers flying through the night fire missiles at two U.S. cruisers tracking Soviet nuclear missile submarines off the far north of the Soviet Union in the Barents Sea. One cruiser is crippled, the other explodes and sinks.* Unlike in the Pacific attack, conventionally armed warheads are used in Europe.

* This scenario is based on the Pentagon's *Ivy League* war game played by the whole U.S. command structure in March 1982. In *Ivy League*, the war starts with attacks on U.S. forces in Korea, Europe, and Southwest Africa, and crosses the nuclear threshold in Europe when a Soviet bomber attacks an American patrol ship with nuclear weapons. The Pentagon's war game also ends in general nuclear war.[39]

No major battles have broken out on the European continent as yet, as nervous commanders stare at each other down the nightvision telescopic sights of their weapons, waiting for World War III to erupt over the Berlin Wall.

Bitter Fruit

9 pm, March 19: Washington, D.C.
A group of bleary-eyed national security operatives assemble in the White House. The Secretary of Defense scans a Chinese communique demanding a halt to superpower confrontation in the Peninsula.

"Should the imperialist aggressor superpowers dare to embark on any more nuclear war adventures," he reads, "they are bound to taste the bitter fruit of their own making, and receive even more punishment."*

"What the hell does that mean?" rasps the Chairman of the Joint Chiefs of Staff. "Those Chinese bastards – they've double-crossed us after all we've done for them! They're siding with north Korea! Mr. President," he declares tersely, "we have to take them all out. Who knows where the Chinese missiles are aimed. The State Department's responsible for this mess! The Soviets have threatened Japan and attacked our submarines and aircraft carriers with nuclear weapons. Their bombers are dispersing. Their submarines are leaving port. They sank one of our cruisers and tried to put a submarine under our carrier off the Korean coast. And it looks like they might have hit our command post in Korea, although the Korean rebels claim they did it. If they didn't do it, the Soviets are behaving as if they think that we think that they did. Our best intelligence is that they are preparing for all-out nuclear attack. To limit our damage, we've got to lauch our MX, Minuteman III, and Trident I missiles. If we wait, somewhere between four and five thousand warheads will hit us. The Chinese could add another one or two hundred warheads. An attack like that would completely destroy us. But if we attack now, they might manage to fire back only a fraction of the 200–400 warheads which may survive our attack. That gives us a chance. We have no choice but to launch an immediate

* Based on an official Chinese statement to the U.S. over the *Pueblo* event in 1968.[40]

preemptive attack. We have to assume that the Chinese are in volved and take them out, too. This is the united opinion of the Joint Chiefs," he concludes.

The President looks up like a trapped animal.

"What are our chances," he asks, "of executing a successful strike against the Soviet Union and China?"

The Chairman replies, "If we go all out, we have just enough warheads to take out most of their political and military command posts and ICBM silos, most of their bombers and all of their submarines in port. We'll have to use the Pershing in Europe and the cruise missiles in our submarines for some of the urgent coastal targets. The biggest risk is their ICBMs and submarines," he says. "The longer we wait, the more likely it is that we will hit empty silos, and the less likely it is that we can kill all their submarines. The bombers we can handle. We have to move *now* to get their ICBMS and subs. All of them."

"What about a limited nuclear attack?" asks Herter.

"A limited nuclear strike at this stage," replies the Chairman, "would be the worst of all worlds. The Soviets or the Chinese might respond to our limited strike by launching an all-out preemptive strike against us, leaving us sitting ducks. They may reply in kind by trying to disable our command and control, which we can't risk. Or they might attack our bases in Japan or Europe and wait for our allies to jump ship.* Furthermore, ordering a limited strike may build a momentum toward all-out attack in our own forces which we couldn't stop even if we wanted to. We recommend everything or nothing, but not in-between."

The President's National Security Advisor speaks up.

"It's too risky," he asserts. "Mr. President, you are about to start World War III. We have to start negotiating with the Russians – *now*. If even a few Soviet warheads hit the U.S., we're finished."

The Chairman of the Joint Chiefs leans over the desk, blocking the Advisor's eye contact with the President.

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* As American strategic analyst Morton Halperin wrote in 1963, "The first time that any of these limits [on superpower action against each other] are breached or if there is some other unprecedented action . . . there will be heightened danger of explosion into central war precisely because neither side can be certain that the war can be brought to a halt without the essential use of strategic nuclear forces. How serious this is will depend on the degree to which both sides are conscious of the danger of preemption."[41]

"Mr. President," he says, "we are losing precious seconds. You have a terrible choice. You can protect your people and limit the damage as far as possible. To do that, we have to attack now. Or you can wait, and absorb the full strike from the Russians which is surely coming. We are certain that they will attack any minute now. There is no other choice."

Herter asks the Secretary of State for his position.

"I agree with the Advisor that negotiations are called for in principle. But while we may wait, the Soviets may not. And if we wait, we'll lose the military and political advantage which we have at the moment. Congress will vote to back down and appease the Soviets, the press will support the peace-wimps out there – they may even invade the White House. Very soon, we'll have to deal with our allies. The West German Chancellor is leaving for Moscow in a few minutes, and the Japanese and British Prime Ministers are about to arrive here. Mr. President, we are losing our room to maneuver. This is what the Kremlin wants. They know that the allies are our soft spot. We cannot negotiate with the Soviets now. It's too late. If we prolong the agony and are indecisive, our allies will jump ship. We have only one choice – to proceed."

With that, he clasps his hands and, slumping glassy-eyed in his chair, he withdraws from the discussion.[42]

9.30 pm, March 19: Washington, D.C.

The President deliberately picks up the Hot Line telephone and speaks into it slowly.

"Mr. Premier, we wish to negotiate. But first, in response to your attack on our forces, we are obliged to launch our B-52s and my alternate aerial command post as a precautionary measure only. The Vice President will board that plane."

The perspiring National Security Advisor looks relieved. The President is evidently riding out the storm. He will risk trusting the Soviet Premier.

As Herter pauses, another messenger arrives breathlessly, obliging the President to cover the telephone with his hand.

"The Russians have launched two new satellites over the Pacific," he blurts out. "The Pacific Barrier radar says they're for assessing the damage to the United States during and after a nuclear attack. We also have signals intelligence that a Soviet intelligence trawler reported that CINCPAC's airborne command post is flying out of Hawaii . . ."

"What?!" thunders the President, his hand over the telephor e. "Who in the hell ordered them to take off?" he demands.

"Why, the Commander-in-Chief of the Pacific, sir, after the nuclear attack in Korea, sir," he stammers.* "And that's not all, sir." He hands a telex to the Chairman of the Joint Chiefs, who reads:

"This is an *Oprep-3 Pinnacle Nucflash* from U.S.S. *Picksville* in the Sea of Japan as of 0308 Zulu time. At 0305 Zulu time, the U.S.S. *Picksville* inadvertently launched a Tomahawk nuclear-capable but conventionally armed missile. The missile is capable of reaching the Soviet mainland and is pointed in the direction of Alekseyevka Backfire Base. Missile whereabouts unknown. Recovery of missile not possible. Commander's estimate: no human error, computer malfunction. Last *Oprep-3* Report this incident."†

Alarmed, the Secretary of Defense yelps hysterically, "This means war with the Soviet Union."‡

The crisis managers stare at the Defense Secretary, perplexed at his outburst. The civilian Advisor slumps into his chair. The Chairman of the Joint Chiefs stands up ramrod straight and declares:

"Mr. President, negotiations won't work. The Russians won't believe you now. We have to act!"

The President's face pales. A single bead of sweat rolls down his face toward his chin. He stares at the telephone and appeals to the Secretary

* The confusion due to poor coordination between multiple unified and specified command nuclear war organization is based on events in 1980 when a Pacific Command Nuclear Airborne Command Post took off *after* an attack triggered by a computer chip was declared a false alarm by NORAD.[43]

† Based on a message format for an operational report given in CINCPAC's 1983 Nuclear, Biological, Chemical Warning and Reporting System. *Pinnacle Nucflash* is a codeword to report on an event which has the risk of initiating nuclear war with the Soviet Union or China. Zulu time is Greenwich Mean Time. *Oprep* is military code for operational report.[44]

‡ As Defense Secretary Robert McNamara reportedly screeched when, at the height of the Cuban missile crisis, word came that a U.S. U-2 spyplane from Alaska had "strayed" over Soviet airspace at the Chukotski Peninsula. Soviet MiGs scrambled to intercept it, and U.S. fighters took off to escort it. The U-2 escaped with no shots fired.[45]

of Defense for a suggestion. They step aside for a private discussion.* The President can be seen listening to the Secretary of Defense intently.

Finally, they return to the table. "We are boxed into a corner," says Herter. "The only way out is to fight. We will confuse and attack the Soviets and the Chinese at the same time." The President picks up the Hot Line telephone: "Mr. Premier," he says, "the mobilization of our forces mentioned in my previous message was the result of a false alarm, and they are being recalled. I repeat, we wish to negotiate immediately. Please stand by."

He switches the telephone to mute, turns, and orders the Secretary of Defense: "Send a message to the Chinese asking them to explain their telex." The civilian Advisor perks up.

"But," adds the President, "first send an Emergency Action Message to all forces to implement immediately the strategic attack option outlined earlier by the Chairman. He will attend to the details."†

It is 10 pm, March 19th, in Washington, D.C.

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* Some Presidents, like Jimmy Carter, take an active interest in nuclear affairs; others, like Reagan, are passive and rely on advisors to prompt decisions. According to a senior Reagan advisor in 1985, President Reagan in a nuclear war command exercise "acted like an automaton, like part of the set instead of the main actor. Reagan was saying things like 'What do I do now? Do I push this button?' He was not very probing. Some fresh-faced colonel says something – 'Mr. President, you have to do such-and-such in seven minutes' – and there are no questions from Reagan."[46]

† Journalist Robert Scheer reports the following exchange in 1980 with Presidential candidate Ronald Reagan: "SCHEER: The last time I talked to you, you said no President of the United States should rule out the possibility of a preemptive nuclear strike . . . Now in serving notice on a confrontation down the road – would that include the possibility of a preemptive nuclear strike by the United States? REAGAN: What I'm saying is that the United States should never put itself in a position, as it has many times, of guaranteeing to an enemy or a potential enemy what it won't do . . . Suppose you're the President, and suppose you have on unassailable authority that as of a certain hour the enemy is going to launch those missiles at your country, you mean to tell me that a President should sit there and let that happen without saying to the other country, I've found out what you're planning to do and I'm going to . . ."[47]

The End Begins

9.05 pm, March 19: Kansas, U.S.A.
Deep underground in a silo in Kansas, two officers peer at the telex containing the launch codes in fear and disbelief. Then they turn their launch keys together. All across the United States, missiles hurtle towards the Soviet Union. One of them is bound for Chita, the Far Eastern Soviet command post. The missile carries a hand-painted message: "Gift of the People of the United States."

4.07 pm, March 20: North Central Pacific
The captain of an Ohio submarine in the Pacific launches half his Trident missiles in twelve minutes after a short, near-mutinous debate among the officers responsible for assessing the veracity of the order received by low-frequency radio. The missiles fan out to deliver a hail of eighty warheads in an arc between Vladivostok and Petropavlosk. The submarine hovers motionless, waiting orders to fire the remaining missiles.

12.15 pm, March 20: Chita, U.S.S.R.
In Chita, the Soviet Far Eastern commander glances at the telex printout. The Intelligence collection ship sitting off Hawaii has advised that the Pacific Command nuclear command aircraft has taken off, as have the B-52s in Guam. On top of the Backfires and the submarine, this is very bad news.

An aide pushes another incoming telex from Moscow across his desk. The telex instructs him to place all Far Eastern forces on the highest alert, to target Chinese as well as U.S. nuclear targets, to prepare for nuclear attack, and to await further orders. He issues the appropriate orders and sits at his desk. He gazes at the sunlit snow framed by the window and waits.

12.45 pm, March 20: Guam
The sailor chipping at rust aboard a marine landing vessel off Guam hears the drone of B-52s lumbering onto the runway for takeoff. Even in the midst of crisis, his orders are to chip rust, not to watch B-52s landing and taking off from Guam, so he keeps his head down.

A few seconds later, a brilliant flash of light half-blinds the sailor. He swears, but quickly recovers his training to count the Flash-to-Bang time for the SS-20 missile warheads which had just exploded above Guam.* With Flash-to-Bang time he can calculate his distance from Ground Zero. The cruiser shudders from the shock wave after twenty seconds, and the sailor knows he is no more than 7 km from Ground Zero and has probably received a fatal dose of invisible radiation.

Looking toward Guam, he watches the roiling mushroom cloud shoot skywards. He also observes a giant wave advancing toward the ship. There is nowhere to run. All he can do is watch. His eyes are fixed on the albatrosses circling overhead. Their feathers are smoking from the radiant heat of the explosion, and then they burst into flames. The smoking, twisting, and blinded birds cartwheel into the ocean.†

12.48 pm, March 20: Tokyo, Japan

A Japanese woman, walking home from her factory at lunchtime, freezes with fear: she knows what the flash from the horizon over Tokyo means – she saw it before at Hiroshima as a small child. Millions are dying in the one megaton explosion aimed at crippling U.S. nuclear war communications and intelligence in the Far East.‡ Huge liquid natural gas tankfarms feed the twisting firestorm ignited by the nuclear explosions.

4.20 pm, March 19: Oahu

A native Hawaiian farmer on the north side of Oahu carefully tills the soil around taro plants in a mountain valley recently wrested from a speculative developer. The mountainside on which he stands trembles from the surface burst of a nuclear explosion over Pearl Harbor, on the

* This training for Flash-to-Bang time estimation is described in CINCPAC's script for a nuclear wargame which instructs players to calmly "Determine the azimuth from True North from the installation to the NUDET [nuclear detonation]. From the graph . . . Distance from Ground Zero versus Flash-to-Bang time, determine the flash-to-bang time and prepare the sighting script using the azimuth and time calculated."[48]

† A former U.S. Navy lieutenant observed albatrosses catching fire and crashing into the Pacific during a U.S. atmospheric nuclear test near Christmas Island in the Pacific.[49]

‡ Mizoe Shogo, a Japanese physicist, has estimated that one such explosion would kill 5 million people.[50]

other side of the range. Pieces of moss-covered volcanic cinder topple off the cliffs along the skyline ridge as a mushroom cloud shoots into the sky.

In CINCPAC's Airborne Command Post, 300 km to the north, the telex officer reads an incoming message: "This is reporting activity at Echo Victor Whiskey with actual immediate NUDET report. Field Three, Wheeler Air Force Base 1930 hours airburst. Acknowledge? Out."*

Engrossed in sending fire orders to nuclear forces across the Pacific, the Airborne Command Post does not reply. The operator in Hawaii keeps on repeating the message hoping that someone responsible will hear it.

12.45 pm, March 20: Beijing

Hurrying to class, a university student bends down to gather books and papers which have been scattered from her overflowing bag. A sudden flash of light brighter than the midday sun prompts her to look up. It is the fireball of a Soviet SS-20 missile warhead. She stares directly into the flash of a second nuclear explosion from an incoming American Titan missile warhead, and sees no more.

12.55 pm, March 20: Western Australia

At the Northwest Cape station in Australia, an American officer working at the VLF transmitter building notices unusually heavy traffic on the telex monitoring the relay of messages to U.S. ballistic missile submarines. A few seconds later, three SS-11 missile nuclear warheads explode in a triangular pattern 3,000 m above the base, blinding residents at Exmouth 20 km away. The 900 kilotons of blast and radiation flatten the 387 m Tower Zero antenna array, wrecking the rest of the facility.[52] A few minutes later, warheads from another missile engulf the Early Warning satellite ground station at Nurrungar, 480 km northwest of Adelaide, and Pine Gap, 20 km southwest of Alice Springs.

At Darwin, 2500 km north, fifty demonstrators are hoarse from yelling at two B-52 bombers, idling at the end of the runway ready to take

* Based on reporting format for a hypothetical attack on Wheeler in CINCPAC's Nuclear, Biological, Chemical Warning and Reporting System. Translated, the message means that the observer is reporting an actual atmospheric nuclear detonation over Wheeler Air Force Base in Hawaii.[51]

off. The B-52 pilots hope to survive the first salvo of a nuclear war because they believe the Soviets will not waste warheads on Darwin.*

As the demonstrators break through the police cordon onto the runway and throw sticks and rocks at the mammoth planes, the airbase is enveloped by three nuclear explosions bursting 1,000 m above. Taking no chances, the Soviet have fired an SS-11 missile at Darwin. The B-52 crews, the demonstrators, the police and most of Darwin are vaporized, incinerated, and pulverized into the atmosphere.

All around the world, cities and peoples are blasted by one or more nuclear warheads and enveloped by radioactive mists. Of the survivors in contaminated areas, most are dying of radiation sickness in hours or days. As irradiated or safe areas have no visible boundaries, all survivors are stricken with the fear of their certain death.

The few rescue parties flung together cannot enter any of the targeted cities. The dead lie unburied and the wounded uncared for in contaminated areas where certain death lurks for days and years. Millions of refugees rush from the cities in panic, creating new hazards to life in their flight on the congested highways.†

Painful death and destruction as people and the land upon which they depend is burned, vaporized, cratered and contaminated – this is the harvest reaped from decades of planning nuclear war in the Pacific. The scene is repeated wherever the superpowers can spare a warhead to preempt a nuclear attack. The climatological and biological effects are severe even where no nuclear swords fall on the population. Smoke from the burning cities cools the upper atmosphere, and a dark pall falls over the North Pacific. Within a few weeks, the cold northern airmasses are spilling south over the equator, and summer in the south, already radioactive from the war, changes abruptly to winter. Extreme cold and

* The 1973 global alert centered on the dispersal of B-52 bombers from Guam,[53] as have Global Shield exercises since 1979.

† The preceding two paragraphs are based word for word on a 1946 report to the Joint Chiefs of Staff on the social and psychological impacts of nuclear attack, written after the Operation Crossroads nuclear tests.[54]

radioactive gloom grip both hemispheres. The end of the world has begun.*

The Power of Protest

How plausible – and probable – is this hypothetical chain of events which ended in global nuclear war? The conjuncture of complex, fluid, and volatile political situations and hair-trigger, genocidal arsenals already exists, especially in the Pacific.

Missing in this projection of current trends into the near future, however, is the constraining influence of opposition by European and Pacific allies, as well as popular protest in the U.S. and abroad. There were many junctures in this hypothetical nuclear war when the war could have been averted by popular protests and allied dissension. Crucial turning points in the stream of events were the initial intervention in Pakistan, the subsequent occupation of a large section of Luzon Island in the Philippines, and the escalation of civil war in south Korea to a north–south war. If U.S. nuclear weapons had been removed from Korea – as demanded by south Korean opposition forces today – and if the U.S. naval build-up had been halted, the spiral to nuclear war in the scenario could well have been avoided.

Since political control over the nuclear arsenal will collapse rapidly in the radioactive fog of nuclear war, the earlier that these protests are mounted, the more likely they are to be effective. It is quite unlikely that popular protest or allied *démarches* would have much impact on the superpowers' decisions by the time both sides were fully mobilized and trading nuclear blows. The time to avert the nuclear peril in the Pacific is now, not when a nuclear war is upon us.

* Based on the nuclear winter theories first developed in 1983.[55] Like warplanners, we have adopted the worst-case end of the spectrum of possible outcomes predicted by the nuclear winter studies. The possibility, however small, of such a catastrophic event must be considered in evaluating the risk of nuclear war. In 1985, the Pentagon accepted the scientific bases of the theory, although it rejected its implications for dismantling nuclear weapons and nuclear war doctrine.[56]