

DE GAULLE'S FORCE DE DISSUASION

- ▶ How It Came About . . .
- ▶ What It Is . . .
- ▶ What It Means . . .

By Richard Clayton Peet

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Head-on view of the Mirage IV, built by Dassault and designed to carry France's sixty-kiloton atomic bomb. In addition, the French are developing a standoff missile.

"All my life, I have thought of France in a certain way. . . . My mind assures me that France is not really herself unless she is in the front rank; that only vast enterprises are capable of counterbalancing the ferments of disintegration inherent in her people; that our country, as it is, surrounded by the others, as they are, must aim high and hold itself straight, on pain of mortal danger. In short, to my mind, France cannot be France without greatness."

WITH these words, General Charles de Gaulle led off the first volume of his war memoirs, *The Call to Honor*. As well as any others, they explain his single-minded determination to thrust France back into a position of leadership in the world.

The latest manifestation of that determination became a reality a short time ago. From Paris came word that first elements of France's *Force de Dissuasion* had become operational. While it will be some time before the force is molded into an effective retaliatory instrument, there can be no doubt that France is well on its way toward joining the United States, Russia, and Great Britain as an atomic power of consequence.

This development is viewed on our side of the Atlantic with a mixture of fear, scorn, and suspicion—fear that a fourth power now has its finger on the atomic trigger; scorn over the puniness of the French force in comparison with our own; and suspicion over de Gaulle's motives and intentions in perfecting it. Our main reaction has been to dismiss the whole business as the aberration of a prideful and conceited old man.

But the *Force de Dissuasion* is no aberration. It represents something more than conceit and something less than pride. Viewed in perspective, it turns out to be a carefully thought-out answer to French strategic imperatives in the 1960s and '70s. General de Gaulle appears to have grasped the fundamental fact that, as McGeorge Bundy has observed, "The problem of defense in the nuclear age is as much psychological as military."

The chief architect of the *Force de Dissuasion* is retired Air Force General Pierre Gallois. A brilliant intellectual, Gallois for a decade has campaigned tirelessly for the creation of a national deterrent. His book, *The Balance of Terror—Strategy for the Nuclear Age*, sets forth why he believes such a retaliatory capability is essential for France. One may disagree with his conclusions, but it is difficult to dispute the logic and subtlety of his thesis.

Gallois divides the time since the end of World War II into three distinct periods. The first extends from 1945 to 1953. From the end of the war until the explosion of the first Russian A-bomb, in September

1949, the United States enjoyed an atomic monopoly. And from then until the first Russian H-bomb test in August 1953, the US held an almost overwhelming nuclear advantage. Unfortunately, of its own accord, it "neutralized the advantages its scientific achievements had won for it." A combination of "ideology, moral constraint, formalism, pusillanimity, even real terror, paralyzed" the effective utilization of its advantage. America chose not "to pursue a roll-back policy—which was, nevertheless, the Soviet policy, despite their evident military inferiority." For a time, the US even abandoned its efforts to maintain the *status quo* in Europe. It so hedged its nuclear monopoly with moral and psychological constraints that the Soviets "realized that if the new, all-powerful arsenal was ever to be brandished—or even used—it would only be to defend objectives that were absolutely vital."

Gallois believes that during this period both sides were, in a sense, dupes of the atom—"the Soviets, in their ignorance, not fearing it; and the Americans not realizing the advantage their monopoly might have given them." Thus it was that, during these years of uncontested atomic supremacy, "the West lost the control it had had, or the influence it directly or indirectly wielded over nearly a billion human beings." Gallois prophesies that "history will judge severely [our] incomprehension and cowardice."

The second period commenced with the Russian development of a deliverable thermonuclear device in 1953-1954. Our loss of monopoly complicated but did not really alter the strategic picture, however, for by that time we had recognized the Soviet imperialistic thrust, had met it in Korea, and had organized to resist it in Europe. NATO had been established under an American nuclear umbrella. Since US territory was still invulnerable to Soviet offensive capability and our instruments of reprisal remained beyond Russian reach, the *status quo*, in Europe at least, was maintainable.

Russian entry into the nuclear club, Gallois asserts, made future Korean-type engagements impossible. Due to the danger of escalation, localized conflicts of this sort were "excluded from the list of possible confrontations. . . . To pursue a strategy of territorial expansion or political annexation, other methods must be employed—less brutal, more subtle, and in no case likely to lead to classical warfare."

In 1957, a third technological factor, the development by the USSR of the ICBM with an H-bomb warhead, radically altered the equilibrium between the two great powers. For the first time, US territory became vulnerable to direct nuclear attack. Gallois believes that this development created a balance of terror which imposed "if not universal peace, at least the integrity of the Great Powers and, to a certain degree, respect for their respective vital interests."

Thus was born the diplomacy of thermonuclear dissuasion.

In the world of yesterday, Gallois declares, "One began a campaign once a fly-swatter landed on the nose of the French Consul in Algiers." But when two nations are armed with atomic weapons, confrontations become a deadly business. The consequences of a major nuclear exchange are out of all proportion to

any possible advantages of victory for either side. "If nations were ever to resort to [such] weapons, the stake of the conflict would automatically become a capital one." Peace, then, depends upon the capacity to wage nuclear war.

Dissuading an adversary from resorting to force is not a new approach to relations among nations. In 1934, speaking in the House of Commons, Winston Churchill outlined its essentials: "Pending some new discovery," he said, "the only direct measure of defense upon a great scale is the certainty of being able to inflict simultaneously upon the enemy as great damage as he can inflict upon ourselves." Dissuasion failed in those days because an evaluation of risks by the initiator of a conflict was seldom out of proportion to the stakes of the dispute. But risks are high, the penalties immediate, and recourse to force unattractive where nuclear weapons are concerned.

This is not the case, however, in confrontations between a possessor and a nonpossessor of these devices. The former can always impose his will on the latter unless he is dissuaded from doing so by another atomic power. But can any nation guarantee another against thermonuclear blackmail? Since the possible penalties are so severe, Gallois does not think so. No aggressor would take seriously threats of intervention on behalf of a protégé. Under the circumstances, a national nuclear capability becomes essential for all leading states, France in particular. This has become the official French position. It was reflected by General de Gaulle in his April 17 press conference:

As long as the ambitions of the Soviets and the nature of their regime hold over the free world . . . the threat of a terrible conflict, France is in danger of destruction and invasion, with no certitude that her American allies, themselves directly exposed to death, would find themselves able to protect her from them.

For France to deprive herself of the means capable of dissuading the adversary from a possible attack while she is able to have them, would be to attract the lightning after having thrown away the lightning rod. Also, this would mean that she would confide herself for her defense, and, therefore, for her existence, and in the end for her policy, to a foreign, and, for that matter, an uncertain protectorate.

No! We deserve better than that.

There are, of course, other factors prompting France's entry into the nuclear business. Foremost among them is her desire to sit once again at the councils of the mighty. Moreover, entry into the atomic club will materially assist France to realize her long nurtured ambition of organizing Europe under French hegemony. With Germany prohibited from possessing an atomic arsenal and Britain excluded from the Common Market while she has one, the stage is set for France to play the leading role on a resurgent Continent.

"The President of the Republic," writes French pundit Raymond Aron, "has never hidden the nostalgia which he feels for a Europe capable of defending itself by itself and therefore playing an independent role on

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the world scene. . . . At least he has always preferred and always will prefer a Europe which could arbitrate world conflicts to a Europe reduced to being nothing but a partner in the Atlantic pair."

On the negative side, de Gaulle bitterly resents the *de facto* exclusion of France from a role in Western decision-making since World War II. The Anglo-American partners have proceeded, more often than not, without consultation or advice from their Continental ally. This attitude was understandable when France lay prostrate. But it hardly reflects the realities of today. Yet the attitude continues. If anything it has grown worse. Even Britain's voice has been muted in recent years. "American strategic policy," wrote Alastair Buchan not long ago, is being "evolved with less consultation . . . than at any other time in the history of the Alliance."

The General has forcefully set about redressing the balance. American dominance is no longer tolerable to him. Europe, he maintains, must assume responsibility for its own destiny.

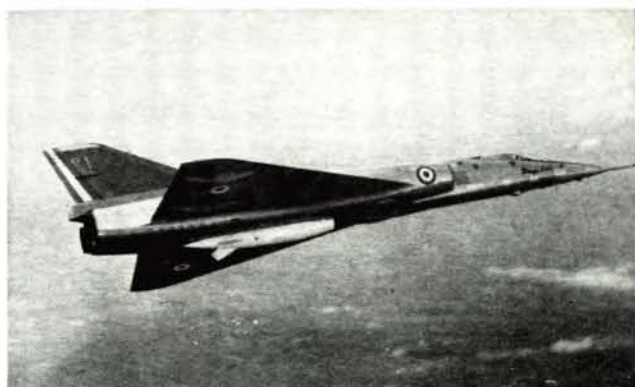
To de Gaulle, the overriding reality in today's world is the nuclear one. Atomic power, not ideology or intentions, has enabled the United States and Russia to dominate events. *A fortiori*, if France is to play a leading role, she must have an atomic capability of her own. To paraphrase Clemenceau, nuclear weapons are far too important to be left exclusively in the hands of foreigners.

Unduly all of the foregoing is yet another factor of compelling importance. The research, development, and production of the instruments of dissuasion is a tremendous animator of technology. In today's world, if a nation is to ascend to the front rank, she cannot afford to fall behind in the technology race. Nor does France intend to. Indeed, it has been unkindly suggested that if the threat of Soviet aggression which impels construction of the *Force de Dissuasion* did not exist, de Gaulle would have to invent it.

On this side of the Atlantic, we have generally viewed with alarm this manifestation of nuclear nationalism. Our fears are grounded upon reasons likely to appeal to Americans but hardly to Frenchmen. They fall into four separate categories.

- The first relates to the dangers of proliferation. We have long nurtured an almost pathological aversion to the spread of nuclear weapons. To us, it seems essential that the nuclear club be closed to new members. The how of accomplishing this has escaped us, however. To date there has been no instance of a nation which possessed the intellectual and material means of developing such a capability refraining voluntarily from doing so. If anything, the trend is the other way. In the view of the French Foreign Minister, Couve de Murville: "It is normal and it is inevitable that all major countries progressively come to possess atomic armaments." President de Gaulle has wryly suggested that "in politics and in strategy, as in the economy, monopoly quite naturally appears to the person who holds it as the best possible system."

- Our next bogeyman is the fear that possession of a small atomic force might make France trigger-



Star performer of de Gaulle's *Force de Dissuasion* is the Dassault Mirage IV, a tandem two-seat supersonic bomber of delta-wing design and capable of Mach 2.2. The prototype, a scaled-up Mirage III, first flew June 17, 1959.

happy; that it might tempt her to nuclear adventurism. The French point out that the major menace to freedom has been, and will continue to be, Soviet, not French. General Paul Stehlin, former chief of the French Air Force, writing in *Foreign Affairs*, has condemned out of hand those Americans who seem to "place more faith in the ability of the Russians to control their tremendous stockpiles of offensive weapons than they do in my country's capacity to use with wisdom and moderation the modest armaments it is working so hard to develop for purely deterrent purposes."

- The third US concern, and it would appear a more valid one, is the reluctance to have more than one finger on the West's atomic trigger. Since this country will remain, even if a French force is built, the essential guarantor of peace, direction of the nuclear power of the western world should, it is asserted, remain exclusively in our hands. Walter Lippmann has drawn the analogy of a fast-moving car on a twisting mountain road. "Only one man can sit at the wheel. . . . While the other passengers may not wholly like him . . . or . . . think he is a very good driver, it is still safer for all concerned than if there were two or three drivers trying to grab the steering wheel at the same time."

To this, Raymond Aron retorts that it "is expecting a lot" for European countries "to have complete faith in the driver." After all, "What do they know of [his] intentions?"

The United States assumption that only it is capable of exercising prudent leadership in an atomic world has become a bone in the throat of the French. "If 'nuclear wisdom' comes with the possession of nuclear weapons," chides General Stehlin, "the Europeans are ready to let grace descend upon them."

In this context, General Stehlin volunteers a jibe or two at the US-proposed multilateral nuclear force. "This system," he declares, "does not strike me as either rational or wise since it . . . would require the unanimous consent of all members." This would likely "paralyze the force." Such an arrangement hardly squares with a one-man-at-the-wheel philosophy. Instead of reinforcing our leadership position, such programs, due to lack of realism, tend to erode it. They

raise questions as to this country's qualifications to lead and its true intentions. "Without in the least doubting the good faith of the United States—which would be manifestly unjust" writes General Stehlin, "many of us in that part of the old world which has not been engulfed by the Soviet tide wonder how much trust the Russians place in the American promises of commitment for, in the last analysis, that is the angle from which the problem of deterrence must be viewed."

● Last of the US reservations relates to the size of the *Force de Frappe*. Puny by SAC standards, it is presumed over here that the French force will be unlikely to deter anyone. But this notion fails to take into account the limited purpose for which the force was created and the strategy governing its use. Additionally, it ignores our own actions and experience of recent years.

To begin with, it must be clearly understood that the *Force de Dissuasion* is not intended, nor could it be used, as an instrument of aggression. Size *does* preclude that. But size does *not* preclude self-defense



Another member of the French Air Force is the Etendard IV, also built by Dassault. It is a single-seat supersonic interceptor and ground-support aircraft built originally to French AF requirements but ordered instead by the Navy for service aboard new French aircraft carriers.



The Mirage IIIA, strikingly similar to the Mirage IV strategic bomber, is a single-seat supersonic fighter designed for high-altitude interception as well as tactical, all-weather support. Like the Mirage IV, it flies at Mach 2.

even against the Soviet colossus. The French rationale is based upon the made-in-America concept of "the old equalizer." Stated in modern terms: God made big nations and God made little nations, but Dr. Teller made them all the same size again. Put another way, so long as the size of a thermonuclear force is proportional to the value of the stake it is defending, it can dissuade a potential aggressor. Thus, while the USSR might be willing to lose twenty million of its population and a third of its industrial complex to annihilate the United States, it would hardly be willing to pay such a penalty for the dispatch of France. From this stems a corollary principle, that the lesser the prize, the smaller the dissuasive force needed to defend it. This is the philosophic underpinning of the small force approach.

An additional supportive factor is the avowed counter-city strategy of the *Force de Frappe*. The French dismiss counterforce as wholly unsuited to their purposes. Even if they knew the location of Russian launching sites, they see little advantage in attempting to delineate military from civilian targets. The purpose of dissuasion is to convince an aggressor that no prize is worth the penalty. The more dread the reprisal, the more certain that dissuasion will succeed. And so the French strategy is openly and avowedly anti-city. Its targets are Moscow, Leningrad, and other centers of population in the USSR. De Gaulle has repeatedly underlined this with warnings that "the French atomic force . . . will have the somber and terrible capability of destroying in a few seconds millions and millions of men. This fact," he believes, "cannot fail to have at least some bearing on the intents of any possible aggressor." Considered in this light, even a small force, if viable, will have a tremendous dissuasive effect insofar as French vital interests are concerned. And even in the unlikely event an aggressor were willing to absorb a French reprisal, he would still be faced with the very real danger that his adventure might incur American intervention.

The logic of proportionality seems to elude American policy-makers, even though the present equilibrium between the US and Russia is based upon a substantial disparity of nuclear means. Moreover, less than two years ago this country allegedly went to the brink of nuclear war over a small Soviet missile force in Cuba. And currently we are touting a multilateral Polaris surface fleet which would not be much larger but certainly more cumbersome and vulnerable than its nationally controlled French counterpart.

Before leaving proportionality, a fascinating hypothesis advanced by Gallois is worth thinking about. "If, for instance, in November 1956," he writes, "the Hungarian government had possessed the means to inflict only three 'Hiroshimas' on the USSR, it is probable that the fear of such a retaliation would have imposed negotiation and a new *modus vivendi* between Budapest and Moscow, and that neither repression nor occupation would have occurred." Considering our own reaction in the Cuban missile crisis, his surmise seems reasonable.

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A small nuclear force can pack a tremendous dissuasive wallop. All this proves, of course, is that thermo-nuclear terrorism can be a two-edged sword. If the victim possesses the means to execute the criminal concurrently with the crime, the chances are the crime will never be committed.

The strategy of dissuasion, like cost/effectiveness, can be mathematically formulated. Credibility may be postulated as the product of the value of the military means employed times the will of the threatened power to resist. If either factor turns out to be zero, the dissuasive effect of the force will likewise be zero.

On the element of will to react, de Gaulle scores high. Doubts, where they exist, relate solely to the adequacy of the dissuasive force. One detractor has unkindly suggested that "the French have de gall but not de weapons to make dissuasion work." To be sure, the *Force de Frappe* will have its limitations (as does SAC). But, presently and as planned, it shapes up as an impressive retaliatory instrument.

The nuclear part of it has been in the works for quite some time. French scientists have been in the forefront of the atomic-energy field from the beginning. Indeed, many fundamental contributions, such as the discovery of radioactivity by Becquerel, and its isolation into elements by the Curies, were made by Frenchmen. The Perrins, de Broglies, Joliot-Curies, to name but a few, significantly expanded the world's atomic horizons. World War II, unfortunately, interrupted their labors, but research was commenced again in 1945 with the establishment of the *Commissariat a l'Energie Atomique* (CEA—French Atomic Energy Commission) by General de Gaulle, then President of the Provisional Government. At first, the Agency directed its attentions to prospecting for nuclear ores, setting up laboratories, and training scientists, engineers, and technicians. It was not until 1955 that a program for the development of atomic energy for military purposes was launched.

In February 1960, France exploded her first atomic device over the Sahara. Three more atmospheric tests followed. After 1961, she conducted a series of underground tests. These led to the development, testing, and production of a deliverable plutonium bomb of around sixty kilotons. This weapon will be the mainstay of the *Force de Dissuasion* until such

time as the infinitely more powerful fusion bomb becomes available. That will not be for several years, however.

Many critics question whether, in the meantime, the relatively small power of the French weapon can deter anyone. Sixty kilotons, they say, will not be likely to impress the Russians who have managed to produce a 100-megaton monster of their own. The French are mindful of the disparity but not overly disturbed by it. Since theirs is an anti-city device, it need not possess the bang to destroy targets such as hardened missile sites. Three times as powerful as the bomb which annihilated Hiroshima, the French bomb's destructive force is ample to inspire terror and respect, to make an aggressor stop and think.

The problem will be one of short duration, in any event. Toward the end of the decade, more powerful fission bombs will become available. And by 1970, deliverable fusion weapons should be ready. Development of the latter has been delayed due to the requirement of enriched uranium as the explosive element. Because she was unable to secure a supply from the United States, France has been forced to provide her own. A gas-diffusion plant is under construction at Pierrelatte. It is scheduled to commence production in 1967. By then most of the preliminary work on an H-bomb should be completed. Tests will likely commence soon thereafter at the French nuclear site in the Pacific.

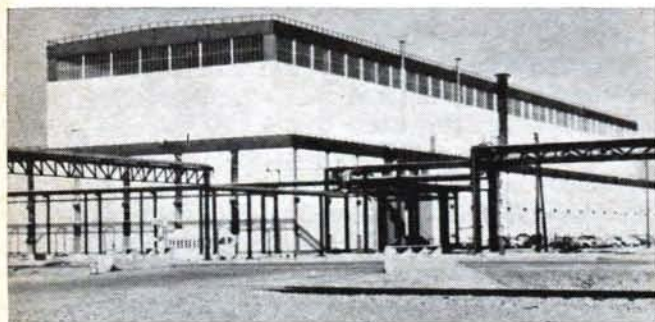
One of the major difficulties in developing nuclear weapons is shrinking them down to deliverable size. We were plagued with this problem. No doubt the French are too. But there can be little doubt that they will succeed eventually. Whether these thermonuclear weapons will constitute the explosive half of a credible deterrent, however, depends upon the availability of effective delivery systems. In this sphere the French have pursued a bold policy which is already paying off handsomely.

The first-generation strike force is built around the Mirage IVA bomber. This aircraft was conceived in 1957—prior, it should be noted, to General de Gaulle's return to power. It was specifically designed as a strategic bomber by Générale Aéronautique Marcel Dassault, although it evolved directly out of the successful development by Dassault of a Mach 2 interceptor, the Mirage III.

The bomber is a straightforward scale-up of the fighter, about one and a half times its size. The configuration of the two is essentially the same. This approach was decided upon as the fastest and most expeditious way of producing a strategic bomber.

Powered by two SNECMA Atar 9K afterburning turbojet engines, producing 15,000 pounds of thrust apiece, top speed of the Mirage IVA is Mach 2.2. Its profile includes a high-altitude cruise for much of its mission at Mach 1.7. Wing span is 38 feet 10 inches; length, 77 feet; height, 18 feet 3 inches. Its crew of two sits in tandem beneath a largely metal canopy, designed to withstand kinetic heating effects at high speeds.

The Mirage IVA utilizes the most advanced con-



France now has a deliverable atomic bomb of sixty kilotons, about three times the size of the Hiroshima bomb. But to secure an H-bomb, and unable to procure enriched uranium from the US, France has had to set up her own gas-diffusion plant at Pierrelatte. Here's one building.



Mirage IVA takes off. The IV is powered by twin Atar 9C turbojets, each rated at more than 14,000 pounds of thrust. A "Super Mirage IV" is said to be in the works.

struction techniques. Machine-tapered skin constitutes ninety-five percent of its structural weight. At 66,000 pounds, it is one of the smallest and cheapest strategic bombers anywhere.

Principal drawback of the aircraft is its limited range. Despite the fact that it uses even its tail fin to carry fuel, its officially stated operational radius with internal stores is only 1,000 miles. This makes it a virtually one-way, one-strike retaliatory weapon, since it could not hope to reach any Russian target and return again to base. But, if ever the balloon went up, there would probably be no French base to return to anyway.

The addition of two 550-gallon wing tanks has improved the Mirage IVA's range somewhat. Procurement of twelve KC-135F tanker-transport will alleviate matters still further. In-flight refueling will not only extend range but will also permit the maintenance of a twenty-four-hour airborne alert.

An initial batch of fifty Mirage IVAs is on order. Of this number, twelve aircraft will remain on airborne alert at all times. Another twelve will remain on the ground on four-minute alert. A third group of twelve will be on forty-five-minute standby status. It is expected that the remaining fourteen aircraft will be in for normal overhauls.

The first units of the *Force de Dissuasion* are already operational with the *Armée de l'Air* (French Air Force). New elements of four are forming as aircraft are delivered to the *Commandement des Forces Aériennes Stratégiques* (Strategic Air Command). They are being phased into service at the rate of about two a month. All fifty should be operational by the end of 1965. The force is under the command of General Philippe Maurin.

The Mirage IVA is an extremely versatile aircraft. It can take off from a 6,000-foot dirt strip hardened by a new chemical spray. While problems have been encountered with heating and vibration at extremely high speeds and at low altitudes, these are expected to be overcome in the months ahead. This should facilitate a low-level, high-speed dash under the enemy radar screen.

The *Force de Dissuasion* will be widely dispersed at secret fields throughout France. Aircraft will be

housed individually in air-conditioned, concrete hangar-shelters located at the ends of runways. These structures are designed to withstand all but direct nuclear hits.

Development of navigation, ECM, and bombing techniques is well along. Concerning the latter, the present French bomb is of a streamlined shape and is carried in the belly with part of it projecting below the fuselage. It has three stabilizing fins 120 degrees apart. Its configuration will allow it to be launched at some distance from its target. Until recently, there had been talk of developing the AS-2 Gamma air-to-ground standoff missile. With a range of 178 miles, the Gamma would have enabled the Mirage IVA to attack targets without having to penetrate close-in defenses. This capability would have extended the operational life of the aircraft considerably. Informed sources indicated recently, however, that plans for the missile have been abandoned.

But the same sources confirm that a Super Mirage IV bomber is in the works. It is said to be powered either by two SNECMA TF-106 or two Pratt & Whitney TF30 turbofan engines, the same ones programmed for the TFX. These should measurably increase range and over-all performance. An improved low-level capability will likely be built into the aircraft also. Twelve of the Super versions are on order.

The first generation of the *Force de Dissuasion* will be backed up by 150 Mirage IIIE strike fighters armed with nuclear weapons and a further seventy-five similarly equipped Etendard IVM carrier-based aircraft.

Succeeding generations will further improve the force. By 1967, the second generation should be operational. It will consist of an unannounced number of surface-to-surface ballistic missiles. They will be solid fueled with a range in the neighborhood of 1,300 miles. Plans call for their deployment to widely dispersed hardened underground sites.

In its third generation, the *Force de Dissuasion* will go to the sea. Three to five nuclear-powered submarines are to be built. Each will carry sixteen sea-to-land Polaris-type ballistic missiles armed with thermonuclear warheads. Individual submarines will join the fleet at two-year intervals from 1968 onward. They will be operational as an effective force around 1973.

This then is the *Force de Dissuasion*. While no SAC, it is certainly a force to be reckoned with—one likely to cast a formidable nuclear shadow across Europe and the world in the years ahead.—END



The author, Richard C. Peet, is a lawyer who has held professional positions on both Capitol Hill and in the executive branch of government. He has devoted considerable time to study and writing on defense matters. A graduate of Tulane University, he is a former Reserve officer in the Air Force. His byline last appeared in this magazine in January 1964, with his article on RAF Bomber Command.