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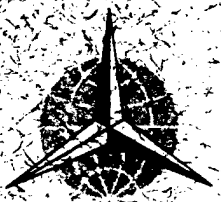
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Problems and Prospects

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**THE RESPONSE TRIGGER
AND ITS ACTIVATION**

Advance Comments by

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*These comments by Dr. Possony were
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THE RESPONSE TRIGGER AND ITS ACTIVATION

The plans we are making today will be executed at a time when the current crop of statesmen no longer will be in action. Hence it is not particularly useful to discuss strategic planning in terms of personalities and evanescent political situations. Geography and technology are more durable foundations for the long-range planning of successful strategy.

Proximity to the Communist threat is the salient geographic feature of continental NATO. The geometric configuration of the continental NATO countries which spells an initial inability of concentrating the full force in the main theater is a second salient feature. For example, the ground forces of Germany and France would not be immediately additive to stop a sudden attack. Disregarding the French units in Germany, the full weight of the Soviet attack would fall first on the German forces and subsequently on the French, Belgian, and Dutch forces. "Forward deployments" may mitigate this danger but cannot fully overcome it. Thus, piecemeal destruction of one army after the other is a hazard that is inscribed on the map of Europe.

If the German front were to hold, all NATO forces could be used simultaneously *in the end*. But this would require that Germany's 12 divisions (together with U.S. and other forward contingents) must be able to withstand a Soviet assault launched by a force two or three times stronger.

Similar considerations apply to the air battle, though in this case echeloning in depth would provide some significant advantages.

The difficulties of this geographic situation are compounded by the destructiveness of nuclear weapons and the technology of fast air delivery and rapid ground advance.

A Soviet attack would be designed to be extremely fast-moving and devastating. It would be launched to achieve surprise which means that the NATO forces may be attacked when they are in a less-than-optimal posture.

Red forces equipped with nuclear weapons could defeat stronger NATO forces to whom nuclear weapons are denied. Even denial during "only" the initial two hours may be all that is needed by the aggressor to achieve decisive victory. In fact, this statement can be much strengthened: denial during the critical few minutes when the warheads of 700-odd Soviet MRBM's are re-entering the atmosphere, may be fatal.

It is not unrealistic to assume that there will be some warning about an impending Soviet attack, but it is hazardous to assume that there *must* be warning and that such warning will be *adequate* and *unambiguous*. There is no need to plan exclusively against the most unmanageable threats and assume that there can be only "zero warning," but it certainly would be quite unrealistic to expect that unambiguous warning will allow us more than a few minutes to ready the parry. It would be entirely impractical to plan on anything but instantaneous defense "response."

In order of magnitude figures, the United States would obtain tactical warning of about 15 minutes at worst and about 20 minutes at best. If the U.S. were struck first, European warning times *could* be somewhat longer. But this is unlikely because Soviet strategy probably will be aiming at simultaneity of European and American warning. If so, European warning times would be on the order of five minutes or one-third of American warning times.

If there were a NATO space warning system, European warning time could be increased to approximately eight minutes: U.S. warning times still would remain about three times longer.

Remember that precise warning times are variables depending on locations of bases, targets, and radars, as well as delivery systems. In Europe the warning times of Turkey, Greece, Norway, Denmark, and Germany are, almost inevitably, far shorter than those of Spain and Portugal, while in the United States the warning time of Seattle would be dependent on whether this city be attacked from the Chukhotsk area or from, say, south of the Urals. The United States benefits from its ability to put warning systems forward into unpopulated and ocean areas. European warning is derived from systems that must be deployed along the iron curtain, and is particularly unsatisfactory against low level air attack, a type of threat which, for reasons of range, is far more difficult to mount against the United States than against Europe. On the other hand, a submarine attack on the United States might nullify our tactical warning advantages but if the mass sortie of hostile submarines were observed near their base of departure, a very comfortable strategic warning could be obtained.

But there is a tactical *first* warning which, if everything is well organized, alerts the whole system; and this first warning is almost unmanageably short for Europe.

Add to this hazard the impact of population density on European security. Add lack of space which hinders deployment and maneuver, and precludes dispersal. Add further the importance of areas that are situated close to the hostile borders.

I doubt that the United States has a real awareness of the European defense problem. I even doubt that the United States is fully aware of the defense problem that exists for the U.S. forces in

Europe. Surely, the public discourses on balances of power (or terror) which conveniently neglect to mention the Soviet MRBM threat, indicate considerable lack of comprehension.

It used to be asserted that the U.S. deterrent was not "credible" because the USSR could effectively attack North America. I submit that the present disintegration of NATO is attributable, at least in part, to the fact that the Soviet threat against America is far smaller than against Europe—assuming the estimates to be correct. Perhaps the riddle of why the Soviets did not—so far—build a larger ICBM force, may be explained by strictly political strategy: the present Soviet posture effectively intimidates Europe and invites a U.S. policy of accommodation.

How can the alliance be defended *in toto* if at the moment of truth, national strategies of *sauve qui peut* might enhance the chances of survival?

For Europe to hold and survive, there must be a capability in Europe to ward off missile attack instantly, effectively oppose air-borne attack within one or two hours, intercept air attack within minutes and up to two or three hours, and stop ground attack within a few short hours. The times for defense against submarine-launched missiles may vary from a few seconds to hours and days.

The implication is that present arrangements according to which nuclear weapons are to be released from Washington can be practical only for *some* types of defense. Unfortunately, the *most important* types of defense, notably missile defense, cannot work unless nuclear response is automatic and immediate. Except in case of a delay in the Soviet attack on Europe, no immediate and effective counteraction is possible if authorization for weapon use must be requested from Washington.

Present trigger arrangements cannot be expected to work even if tactical warning functions are at perfection. They might work if there were strategic warning, and if the authorization were given ahead of time. They must fail if in case of tactical warning only the President is delayed and if the enemy succeeds in interfering with communications.

An unexpected and disturbing implication has been brought out by recent unhappy events. A large-scale attack may be preceded by, or be predicated on, the assassination or, for that matter, the medical incapacitation of the President of the United States. It is conceivable that the President may not have the physical capability of issuing the requisite orders without delay, and yet legally no one may act on his behalf. It would seem as though we are asking a great deal of our allies by insisting that they accept our good faith on complete trust, when at the same time we are neglecting to institute those constitutional and legal changes that are necessary to insure fulfillment of our commitments.

The question is whether there may be solutions through which, while the United States retains control over its nuclear weapons, the Europeans may be acquiring that degree of security to which they are entitled.

Before proceeding, I would like to state that opposition to the "proliferation" of nuclear weapons reminds me of Don Quixote's fight with the windmills. The whole point of Cervantes' story was that Don Quixote was unable to halt technological change.

Since technology always spreads sooner or later, military forces, to be effective, will have to include nuclear weapons ultimately and must be prepared to fight nuclear engagements. Forces without modern arms will be little more than police establishments.

On the other hand, this danger of proliferation is in part chimerical because many of the nations which have the scientists to construct nuclear weapons, lack the necessary funds, while many of those who have the funds, lack the industrial capacity to produce modern delivery systems. Thus, additional nations will have weapons but there will not be a "prolific" spread of nuclear capabilities. There will be less of a "proliferation" than occurred with aircraft, submarine, tanks, and other modern arms. All in all, "proliferation" may be a matter of two dozen nations and probably far less: Presently less than ten nations are able to produce effective modern weapons. And not more than five can build the *whole* set of weapon systems required for all-out conflict.

There is, obviously, no need for the United States to distribute nuclear weapons like so much foreign aid. Nor is it to be overlooked that most of our allies remain woefully uninformed about the strategic, tactical, and organizational correlates of nuclear weaponry—a situation which has allowed the United States to stick far too long to impractical policies but which does not now require undue haste in correction.

Finally, I see no pressing reason why ownership of equipment produced by ourselves should be transferred. The Europeans need nuclear weapons, but, with a few exceptions, they are not ready to pay for them. The Europeans have yet to take adequate steps to pool their resources, and some members of NATO do not devote much attention to the exigencies of modern war.

But I do see a very strong requirement to (1) keep the alliance going by allowing to each member his legitimate share of security; (2) help the allies set up requisite R & D and production facilities or, if it be advisable to keep certain types of facilities within the Western Hemisphere, sell to them, at cost price, the weapons they

do need for their defense; (3) abstain from interfering with, and blocking allied efforts in modern weaponry; and (4) forego the making of unilateral decisions in key defense problems.

There is not too much disagreement that the nuclear problem is the root cause of the various factors causing the gradual disintegration of NATO. This does not mean that each European army now wants or needs nuclear weapons of its own. But forces that are not properly armed cannot defend themselves; moreover, a disarmed Europe does not add to U.S. strength. Since an alliance is supposed to strengthen all partners, obviously, NATO is becoming increasingly useless.

It is quite true that the national interest of the United States demands the protection of Europe from Communist conquest. Under present arrangements we have to perform this job virtually unaided, granted that the overseas bases are a prerequisite for doing the job at all. Given a monopoly of power, it creates only trouble and paralysis if the monopolist "concerts" or "coordinates" his policies with those he is protecting or, in fact, commanding; and so long as he remains the monopolist, he carries all the significant expenses—though by no means all the risks.

The policy of nuclear "monopoly" (within the free world) can be but a transitional policy; or else we shall help world peace better by dissolving NATO and inviting the Europeans to provide for their own defense.

The proper solution, of course, is to keep and revitalize NATO. President Kennedy, who was anything but friendly toward modern arms, stated on May 17, 1961, that we "must make certain . . . nuclear weapons will continue to be available for the defense of the entire treaty area"; control of these weapons must be such that

"the needs of all NATO countries" will be met. This is the correct approach.

The nuclear problem has numerous ramifications. I suggest, however, that the so-called "trigger" problem is the central issue within the nuclear complex. Once the trigger problem has been disposed of satisfactorily, other solutions will come more easily. Therefore, I want to devote the rest of this paper to the "trigger."

The Trigger Problem

If NATO were to embark on offensive war, there would be ample time to make that decision jointly. The same is true if a single NATO member were deciding to resort to war: that government would have enough time to make its decision and transmit the orders, and presumably it also would have the opportunity to consult its allies. Therefore, the so-called "trigger" problem arises only within the framework of a defensive or a "second strike" strategy against sudden and rapid aggression. In this case, the task is to take immediate counteractions through which the sequence of the enemy offensive can be disturbed and friendly forces, blood, and treasure be protected.

This requires that enemy missiles and aircraft be shot down as soon as they penetrate into friendly space, and notably that nuclear attacks against storage sites, troop concentrations, and ships be neutralized.

The second requirement is that as soon as the warning whistle sounds, aircraft load their weapons and take off. A little reflection shows that even if the weapons were loaded already, many aircraft will lack time to get off the ground before the runways are under attack. Naturally, those aircraft which are kept on airborne alert

and which, by definition, will be sent aloft before there is explicit warning, must carry the nuclear weapons on board. Similarly, for ships that leave port *in extremis* or are at sea.

Upon warning—and this is the third requirement—ground forces will deploy to battle positions. Thus, they too must be furnished immediately with the nuclear components of their combat weapons.

All this is commonplace. For example, the whole agitation about such questions as "fail-safe" arose precisely because U.S. alert bombers carry the bomb on their flights. Instant readiness, therefore, is a clear-cut defense requirement but this statement is true not only with respect to American forces. It is just as true in Europe.

I propose that a solution be sought along the following lines:

As a fundamental step forward, NATO builds up a joint warning system, including space capabilities, a NATO-wide data-handling system, and a net of intelligence situation rooms that are attached to each major decision maker and are interconnected in such a way that each change will be automatically registered in each room. Given adequate warning times, the allies consult through a NATO-wide net of Presidential hot lines and make joint decisions, including those designed to persuade the aggressor to desist.

In the absence of early warning and in the face of an unfolding "bolt from the blue" attack, smooth and dependable cooperation is brought about in the following manner:

1. The principle is accepted that upon invasion of friendly airspace and territory, all invading weapons and forces will be opposed automatically with suitable weapons, the explosions to occur on *our* side of the border. This princi-

ple applies to anti-missile and anti-aircraft weapons, ground mines, and short-range tactical weapons.

2. The immediate response weapons are of such yields that they would be unsatisfactory for attack on enemy ground targets across the border. They should be clean. Whenever possible, delivery means should be of such ranges and should incorporate such other control features, that offensive utilization would not be feasible.
3. These weapons should be constantly guarded and in some instances be operated by American troops. There should be daily or, if anyone insists, even hourly, checks on whether the nuclear components remain in place. The system could be similar to that used by night watchmen recording their rounds. The warheads themselves could be tied to an electronic system that would report whenever the components are being handled.
4. To guard the weapon designs whenever this is required, the nuclear components should be handled by U.S. personnel only.
5. On multiple-seat aircraft, the weapon should be under the control of an American officer. Single-seat loaded aircraft would be flown by Americans.
6. A serious difficulty would arise with respect to long-range missiles. It is to be presumed that NATO missile sites would be among the primary

targets of sudden aggression. Hence, unless the friendly missiles be launched immediately, the sites would be hit and a portion of the NATO missile force would be destroyed before it was used. On the other hand, if the missile force were committed automatically, the ability to control the response would be lost. This difficulty may be reduced through mobility, i.e., Europe-based missiles should not be in fixed sites but should be airborne and ship-borne, and perhaps, truck or railroad-borne. This does not exclude fixed sites in all those locations where the sites actually can be hardened economically to withstand the impact caused by a given combination of yield and accuracy. (In other words: future sites must be hardened far beyond present standards. Furthermore, there is an urgent need for long-endurance aircraft with highly accurate air-to-ground missiles.)

7. It is agreed that a limited number of suspect radar tracks and other indicators, or limited border violations, need not lead to automatic response, on the grounds that there may be an inadvertent mistake or a false signal. However, if there are agreed-upon indicators of serious attack, and these indicators reach a certain quantitative level, the defense will be ordered into action immediately. Let me repeat: hostile targets initially would be destroyed within friendly space.
8. Given evidence of an all-out attack—that is, the number of incoming weapons exceeds a certain

limit—the retaliatory force is ordered into action, notably the long-range missiles that are in fixed installations. (Obviously, many of the long-range missile sites should be to the rear to allow maximum time for decision-making and launch. A few should be forward to draw fire and render the "warning" unequivocal.)

9. To insure timely and comprehensive response, radar signals, impact reports, and other indicators should be piped into an electronic command-control-communications system, fed into computers and be tallied against previously made response decisions that were programmed into the computers at an earlier time. *The computers would determine the nature of the attack and, according to NATO-wide agreements made beforehand, issue specific response "go" signals into the command channels; simultaneously, the pertinent nuclear weapons would be "unlocked" for detonation, mounting, and deployment.*
10. Response decisions could be graduated according to the weight of attack, as well as according to other criteria.
11. Arrangements should exist to allow the "override" by the President of pre-programmed decisions.
12. Arrangements might be made to prevent the computers from issuing response "go" decisions in all those cases where recorded events depart markedly from anticipated situations.

13. After the pre-programmed response decisions, "live decisions" could be made with respect to retaliatory and counter-offensive operations.
14. Pre-programmed decisions could be made in case the President of the United States is unable to issue his orders or communicate his "live" decisions. In Washington, as well as in other NATO capitals, in the absence of the principal decision-maker, a presidential deputy must be readily available to the system and should be kept at a secret command post that is relatively safe from attack. (This sort of arrangement is routine in the Fire Department but remains to be organized at the summits of strategic leadership.)
15. The computers and related CCC systems must be highly secure and "invulnerable," and should be several times duplicative.

Is this gadgetry to solve a political problem? To parry any combined missile-air-ground attack with any degree of success, the defender requires an elaborate system consisting of radars and other sensors, CCC, data handling, and computers. Given the facts of modern technology, such a system is mandatory. Indeed, systems of this type are being built or are in existence. Hence, the "gadgetry" is, or will become, part of national and international life.

The change that is proposed here is not that certain decisions be pre-programmed; pre-programming is by no means a novelty, on the contrary, it is becoming part of human existence.

Nor is it, concept-wise, a real novelty that the President's decisions be pre-programmed. It stands to reason that the particu-

lars of foreseeable response decisions were thought out and programmed beforehand: this is the nature of a warplan. In an emergency not much can be done to change existing plans, except to hold up execution of the war plan or make a fast choice between alternate plans. *The novelty therefore is only that the "go" signal and the choice of plan are pre-programmed.*

Pre-programming of responses can be accomplished with considerable effectiveness. Actually, the computers have a greater capability than human brains of handling a mass of confusing data rapidly. Therefore, they are better able to decide than the President, the Secretary of Defense, and the Joint Chiefs, which war plan fits the real situation best. Pre-programming offers the best insurance we can devise against over and "under-reactions" to concrete military challenges,

Although not all situations are predictable, those specific threats which pose immediate dangers to survival are predictable within adequate tolerances. At present, in effect, immediate response actions must be planned largely against air and missile attack. (Response to surface attack can be more deliberate.) In the future, the set of immediate response actions must be extended to include threats from space. It can be stipulated that response orders be issued when there are more than, say, three tracks that appear directed at specified positions. Responses could also be planned against single tracks directed at such targets as Washington, London, Paris, and Bonn. However, these types of "minimum situations" are less important than responses that are pre-programmed against hundreds of tracks.

Such pre-programming (with the possibility of override) is entirely in our own U.S. survival interest. This nation cannot afford for the President, for whatever reason, to be delayed in making a

decision whose precise timing could make all the difference in the world. Nor can we afford for our forces in Europe to be destroyed because we denied to them the authority to wage on optimal defense. Furthermore, given the enormous strain under which a President would labor in a "clear warning" situation, and the probability that he himself would be a target for physical or psychological attack, it would be preferable to make the vital or fatal response decision under conditions which allow rational deliberation.

It would be a far better decision than one made in panic.

Knowledge on the part of the enemy that response decisions have been pre-programmed would strengthen deterrence of aggression, render less attractive a possible recourse to assassination or psychological pressure on the President of the United States, and preclude a number of conceivable radical methods of attack. Thus, the U.S., in its own self-interest, needs the pre-programming of military response decisions.

In turn, the pre-programming of defensive responses would allow the solidification of the NATO alliance. The main powers could, at leisure, debate the precise circumstances under which automatic nuclear defense would or would not be resorted to. The United States would be able to determine with precision what sort of enemy attack our allies want to have repelled, and with what means. Mutual agreements could then be hammered out, even to a point where different responses are pre-programmed with different nations. Under this procedure, all participants would assume mutual obligations, and pre-programmed arrangements would be considered as binding on all governments that did agree. It is NATO policy even now that agreed-upon decisions can be changed only through the concurrence of all, just as it is NATO policy to have the Council develop "guidelines" for the employment of military power.

There could be different types of commitments, some of them to be binding until formally renegotiated, others subject to limited modifications during an emergency. There could be mechanisms to allow final consultation between the main capitals and special buttons to record confirmation or cancellation. The methodology and the decisions must be refined constantly by re-evaluating enemy attack strategies and friendly defensive measures and by changing pre-programmed decisions as new technologies and situations arise.

It could be provided that the arrangement be reviewed after each major change of government.

Another refinement would be to have the President confirm specifically—and electronically—his pre-programmed decisions daily after the regular intelligence briefing; to put a "button" at his disposal whenever during the day a development induces him to suspend any pre-programmed decision; and to have such hold action communicated instantly to the leading allies.

Once instant death is precluded through immediate response arrangements, subsequent decisions can be made more leisurely and also more safely, including the last minute attempts to stop the war that seems to have begun.

Political agreement, practically everybody stresses this, is the key to an effective NATO strategy. But it seems to be rather difficult to obtain such agreement. Apparently, the methodology of seeking consensus remains that of traditional diplomacy, with a few "standing groups" thrown in. I presume that, as a technique, diplomacy is adequate to achieve agreement about trade policies and about such military matters as a decision to defend a certain piece of real estate. I am reasonably certain, however, that bureaucratic diplomacy, even if it were practiced by soldiers and not by military

amateurs, is not suited to bring about effective planning of response actions.

A great deal of strategic disagreement is derived from the fact that the various nations operate on only partially convergent intelligence data and often on highly divergent intelligence estimates. The primary decision-makers usually are not aware of the nature and causes of these intelligence differences. For that matter, only a few of them devote much time to this whole complex of questions, or even realize the crucial importance of intelligence (in lieu of snap judgments). I suggest that intelligence divergence is among the main causes of our strategic troubles. With present arrangements, ineffectiveness of the alliance is almost inevitable.

It is all too easy to reject a plea for a novel approach as "utopianism." I consider it eminently practical to establish compatible situation rooms in the White House and Elysées of the main allies. I believe that once a month, or once a week, on closed TV circuits, the principal decision-makers, supported by the art of simultaneous translation, are capable of participating in systematic intelligence discussions. I think it is feasible to rotate intelligence briefings among the main members of the alliance. I am convinced that it would be useful to identify divergence in the interpretations and estimates. I am sure that the nature of the threat, in most of its aspects, is subject to objective determination, and I would presume that these intelligence sessions could be used, for example, through presentation of simulated war games, to illustrate the nature and effectiveness of agreed-upon responses.

These debates would be informal sessions and there would be no decisions unless a formal procedure were invoked. The principal decision-makers would discuss their variances and they might exchange ideas. They could educate each other in their respective

strategic problems. *They would be communicating*—in this age of communication, leaders of state still remain isolated from one another.

I do not know whether this sort of methodology would culminate in a meeting of the minds. Since one and the same set of facts may lend itself to different courses of action, divergence may continue. But if NATO is ever to arrive at effective response actions and if there is to be mutual confidence, some such system is necessary. Once there is a common "data base" and mutual comprehension, there exists a better chance of agreement on the essential points and of preserving confidence should there be disagreement on minor points.

It is attractive to think that electronics could partially replace bureaucratic "channels" and "layers" and involve the heads of state in the realistic and concrete aspects of the problems about which, all too often, they are given but hazy information. Perhaps the method might be applicable to areas other than strategy. Has it not yet dawned on us that a yearly or bi-annual face-to-face meeting with a crowded agenda is *not* an adequate method of communication and is not likely to result in "rapport"?

This is not the place to argue with those who would contend that such a joint intelligence and warning effort at the NATO summit would not be feasible for assorted reasons of security. I do not deny that serious security problems are involved, but I believe that those would be soluble. It is more difficult to get the heads of state to agree on a standardized procedure, or even to indulge in frequent bilateral or multilateral telephone conversations.

An equally important point is that the findings of intelligence, including estimates about the severity and timing of the threat, are not matters that, in democracies, should be kept classified. For

NATO to work effectively, popular consensus is needed—and many voters in all the member countries do not even know NATO exists, let alone what it is good for. To achieve this consensus, the best information must be made available, just as it now recognized that for virtually all civilian activities statistical information is indispensable. (Stalin used to classify census data: sometimes we are almost as silly.) The fact is that the United States does release some basic estimates through DoD testimony before Congress. So why not do a really good job and persuade our allies to participate in this undertaking? We cannot preserve an open society when the most important type of information is needlessly kept secret.

We do live in an age of political and strategic interdependence; but if this interdependence is to become a reality that transcends hidebound traditions, sonorous phrases, and inspired speeches, we must use new techniques and technologies, and must apply those when there still is time. More than ever, war must be won (or better still, averted) by the decisions that are made in peace.