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# PROJECT RAND

## STRATEGY IN THE MISSILE AGE

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## ◁ SUMMARY ▷

THERE is an intellectual no-man's land where military and political problems meet. We have no tradition of systematic study in this area, and thus few intensively prepared experts. The military profession has traditionally depreciated the importance of strategy (where politics are important) as compared with tactics. Now we are faced with novel and baffling problems to which we try to adapt certain ready-made strategic ideas inherited from the past. If we examine the origin and development of these ideas, we may be better able to judge whether they actually fit the present and future.

### *Prologue to Air Strategy*

The insights of the past concerning the waging of war have usually been transmitted in encapsulated form, in what have become known as "the principles of war." These principles are usually stated in the form of axioms which are supposed to be unchanging. When examined the "principles" appear to be merely common-sense propositions which give us little useful operational guidance, especially for the wholly new strategic problems now confronting us.

The creators of modern strategic thought were few in number, the greatest being Clausewitz. There is something to be gained from reviewing their basic ideas rather than merely quoting sentences wrested from context. Two ideas stand out in the development of strategic thought over the past hundred years: (1) the exaltation of the offensive principle, which reached its apogee on the eve of World War I; and (2) the idea connecting the waging of wars with the political objectives sought thereby. Excessive dedication to

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the offensive idea is bound to create a bias in the security arrangements of modern nations, so that even measures for the defense of offensive forces will either be slighted or significantly modified away from the most efficient and reasonable pattern. Clausewitz strongly insisted that the waging of war must always have a political object by which it is constantly guided, but this principle was virtually forgotten by the time of World War I. Both these factors—the exaltation of the offensive and the loss of the war aim—had much to do with deciding the character of World War I. Douhet later presented his philosophy of air power as a way of avoiding the futile bloodletting which marked that war.

### *The Heritage of Douhet*

Douhet had a phenomenal success with one branch of the military profession. His emphasis on the independent mission of air power was bound to be congenial to airmen, who indeed had already begun as early as 1917 to think of strategic bombing as dominating war in the future. Douhet was the first to develop a coherent philosophy in which strategic bombing had not merely a dominant but almost an exclusive role. In so doing he developed a number of ideas about how command of the air must be won. These secondary ideas played almost as important a part in air strategy thinking (especially in the United States) as did his basic emphasis on strategic bombing. Douhet's ideas can hardly be said to have been vindicated by World War II, because that war proved that, among other errors, he had enormously exaggerated the damage and thus the strategic consequences to be expected from dropping a given tonnage of bombs. However, the nuclear weapon came along at the

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end of the war to rescue him from this error, and now his philosophy is more ascendant than ever.

### *Strategic Bombing in World War II*

World War II provided us with our only substantial strategic bombing experience to date. Many conclusions have been drawn from it, not all of them warranted. It is worth some study even though we know that the conditions of a future war will be vastly different in the most essential respects. The strategic bombing of Germany accomplished most of its results rather too late in the war to be decisive either in itself or in effectively determining the outcome of the ground war. Strategic bombing, however, contributed to the destruction of the German air force which had a great and direct influence on the ground fighting. When we examine the strategic bombing campaign carefully, we see ways in which it could have been improved enough to make it decisive. The experience with Germany indicates that, with the use of the vastly more powerful nuclear weapons, the effectiveness of strategic bombing can no longer be in doubt. The experience of Japan is extremely interesting, but our conclusions concerning it have to be modified by the knowledge that Japan was virtually a defeated power before our strategic bombing got well under way. In both Germany and Japan important lessons were gained about enemy morale as a primary target.

### *The Advent of Nuclear Weapons*

The coming of the atomic bomb overshadowed in importance every previous military invention of recorded history, including gunpowder, because its effects were not only tactical but basically strategic. The thermonuclear bomb made

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the drastic nature of the change wrought by nuclear weapons completely unequivocal, but it also had specific consequences differentiating it from the earlier kiloton A-bomb. It completely altered previous standards affecting target selection. Also, though the theory of a "broken-backed" surface war following a nuclear exchange persisted for a time, the large thermonuclear weapon made it most unlikely that ground troops would have a significant role to play in an unrestricted war. It has been difficult, even for those who preach the drastic nature of the change in weapons, to picture a situation of total nuclear war.

### *Is There a Defense?*

Before we can consider the changes in national security policy indicated by the new weapons, we have to reach some firm conclusions about the present and future prospects of defense against strategic bombardment with aircraft and missiles armed with nuclear warheads. In doing so, we have to be aware of, and make allowances for, a long-standing bias against defensive measures. Yet we are committed to a defensive posture by the fact that we have rejected "preventive war" as a policy. By doing so we have relinquished any high probability, let alone certainty, that in a showdown it would be we who hit first. Alertness in itself brings no guarantee, nor even high likelihood, of securing the tremendous advantage of the first strike. Warning is the key to the entire defense problem, especially since it is so important to the survival of the retaliatory force. Reliable and unequivocal warning measured in hours or even quarter-hours is worth more than equivocal warning received much earlier. But the fact is we cannot count on either variety and ought not to rely on warning to any sub-

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stantial degree in arranging our defenses. The enemy does not have to mobilize large forces, ground or air, in order to attack us effectively, and therefore we should not expect him to provide us with warning by this means.

It is a common misconception that the problem of defense against manned bombers is practically solved. That problem is no doubt less difficult than defense against the ballistic missile, but it is a formidable one still. The ballistic missile is enormously discouraging to the defense against strategic bombing, not only because it is so difficult to cope with itself but also because it calls further into question the usefulness of costly defenses against the manned bomber. Passive defenses, on the other hand, appreciate in importance as a result of the shift from bombers to missiles. Passive defenses have in general been slighted to a far greater degree than active defenses, yet they promise relatively good returns for any investment, whether in the form of protection for the retaliatory force, which always has top priority, or in the form of civil defense. At best, however, we must expect enormous losses in any general war, especially if the enemy strikes first.

*The Wish for Total Solutions: Preventive War,  
Pre-emptive Attack,  
and Massive Retaliation*

The dismal nature of the defense problem provokes a yearning for solutions which will settle everything in our favor at slight cost. The earliest proposal of this sort in the atomic era was that of *preventive war*; it is now almost defunct but may in the future be revived. It is based on the supposition that total war is inevitable, and that in such a war to hit first is a decisive advantage. The inevitability

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is questionable in view of what can be done to make the advantage of hitting first less decisive or less likely to be free of terrible costs. The moral issue cannot be denied, especially in a democracy, and in any case we have to face the fact that as a nation we are not well equipped to make decisions of this sort. *Pre-emptive war* is less inhibited by moral and political considerations, but it depends on our having excellent intelligence and being highly responsive to it—which again we ought not to count upon. *Massive retaliation* is like preventive war except that it awaits a provocation. The idea of massive retaliation, although not new, was put forward in 1954 as a rejection of the “limited war” type of strategy which Korea represented. However, there are formidable difficulties in trying to defend peripheral areas by this means.

### *The Anatomy of Deterrence*

Deterrence as an aim of diplomacy and strategic policy is historically familiar. However, the kind of deterrence we speak of today has certain novel features, especially the requirement that it absolutely must not fail. Deterrence must thus remain effective although it has no chance to prove its efficacy in practice. Deterrent capability must be distinguished from war-winning capability in certain important respects. The maximum possible deterrence may require a war-winning capability, but much less force may nevertheless possess considerable deterrent value. However, we must remember that the enemy has a very great incentive to secure our destruction. That incentive must be countered in the only way possible, which is to guarantee strong retaliation. The automaticity of retaliation is taken too much for granted. Deterrence involves problems of choice among

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weapons, vehicles, and also targets. Deterrent capabilities are also influenced considerably by the state of civil defense and of armaments limitation and control.

### *Limited War*

The Korean War reminded us that nations may prefer to settle contests of strength in a limited rather than unrestricted manner. Today, limited war involving the major powers requires deliberate restraint by both sides upon gigantically powerful forces which are already mobilized, and at the same time relatively vulnerable at rest. This fact at once distinguishes modern limited war from the historic variety, and also suggests that it may not be easy to guarantee that limited wars will stay limited. The axiom that limited wars are wars fought for limited objectives now tends to be an inversion of the truth, which is that we are willing to limit objectives in order to keep wars limited. This point affects basically such great questions as whether or not we can risk using nuclear weapons in limited wars. There is also the question whether readiness to fight limited wars makes total wars more or less likely. The special case of Europe with respect to limited-versus-total war must also be considered.

### *Strategy Wears a Dollar Sign*

The strategy of general war, which is inevitably determined in peacetime, is expressed largely in choices among weapon systems as well as in quantities bought. In these choices the budget is the major and omnipresent restraint. It is thus an essential part of strategic discourse to determine the factors which influence the size of the national defense budget and which determine choices within the limits set

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by the budget. The "requirements approach," aiming at a specific statement of needs for a minimal satisfactory posture, probably never had real validity, and is by now clearly outdated. It is easy enough to establish the existence of crying needs, but we can never be rich enough to afford all the equipment we could legitimately use for our security, and we must therefore make painful choices in which the major consideration is to get the most security for the dollar. This brings us into the distinctively modern technique of systems analysis, supplemented by operations analysis and war games. However, these valuable techniques cannot guarantee us against making major errors in our security arrangements.

It is not feasible to state the limits of what the economy can reasonably afford for defense, but it is possible to determine whether we can spend appreciably more than we are currently doing without injury to the economy. Investigations suggest that we can, provided the tax structure is adjusted appropriately.

### *Conclusions*

The first and most basic point to be derived from the foregoing analysis is that our rejection of preventive war has committed us to a deterrent strategy, and consequently that we must be willing to pay the price to make it work. This price includes certain modifications of traditional doctrinal bias. We also have to bear in mind that deterrence can fail. The fact that total war is definitely possible makes us revise our approach to limited war; instead of taking limitations for granted we have to recognize the possibly great difficulties in keeping war limited. These considerations underline the necessity for an independent limited war capability. The

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appreciable danger of total war also obliges us to consider the needs of civil defense.

A problem to which we have not given sufficient attention in the past is that of the stability of a situation of mutual deterrence. Emphasis on trying to get in the first blow and other such attitudes result in postures which impair that stability. A strike-first capability is important, but we must be clear about the various kinds of prices we are paying for it. Finally, the swift and tremendous changes in the technology of war and a proper appreciation for the inadequacies of our analytical tools remind us of the basic danger in peacetime of miscalculating the nature of a future war.