'The views expressed are those of the author and do not reflect the official policy or position of the US Air Force, Department of Defense or the US Government.'"

USAFA Harmon Memorial Lecture #8
"Innovation and Reform in Warfare"
Peter Paret, 1966

I

It is a pleasure to be at the Air Force Academy and to be able to talk to you his evening. I should tell you, however, that I am no more than a stand-in for the man who was originally invited to give the 8th Annual Harmon Memorial Lecture: Capt. Basil Liddell Hart. The Academy's invitation meant a great deal to him, and only ill health kept him from coming here. I am glad to say that after a major operation last month he is now convalescing and doing well. I don't know what topic he would have chosen for his talk today. Although Captain Liddell Hart served in the infantry he is free of the narrow traditionalism, that earthbound quality, of which footsoldiers are sometimes accused by members of newer branches of the service. His mind ranges widely. In his long career as soldier and writer, he has done much to help us understand war in general and to show us how military institutions might be better attuned to their tasks of carrying out national policy. As you know, in the 1920's he was one of the pioneers of armored warfare. In the early years of the Nazi Era he provided intellectual leadership to a small number of English politicians and soldiers who strove to modernize British defense policy and the British army. In a series of memoranda written in 1937, he urged among other innovations the formation of fully mechanized divisions, combining "high mobility and concentrated firepower with economy of men," air squadrons providing cover for the mobile forces, changes in the recruitment, education, and promotion of officers to enable young and vigorous men to reach positions of authority, and the establishment of an operational research department in the War Office. He wrote,'

At present, there is no proper military research. Problems are continually being pushed onto officers who are up-to-the-eyes in ordinary work. They ought to be given time to think them out, to explore the data, to collect the data by going round the Army to consult people instead of merely relying on War Office files, and to work out the conclusions unhampered by time restrictions. The way that decisions are reached on questions of organization, tactics, etc., from inadequate knowledge, is farcically unscientific.

His proposals on the whole met with failure; it required the German victories in Poland, France, and the success of the early campaigns in Russia to convince men of their validity. But his failure did not dissuade Liddell Hart from continuing to seek out the realities of war and from speculating on the changes required of military thought and action to meet the new problems of defense in the postwar period.

You will recognize the connection between his work and the subject of this talk. In a sense, Captain Liddell Hart's career, his intellectual victories and his practical defeats, led me to the topic; but it is, of course, one with which we are all concerned: How can men attune their minds as clearly as possible to the constantly changing conditions and demands of war? How do military institutions adjust to new realities, what forces carry innovation forward, and what obstacles stand in its way? And these questions outline only one aspect of the problem.

Military institutions, after all, are not objects isolated in political and social space; they are not only responsive to their surroundings but also responsible to them. They themselves are part of reality; they too create situations to which men must react. Innovation and reform in warfare touch on numerous issues in the military and civilian spheres. We can deal with only a few during the next half hour or

forty minutes. Above all, I want to consider the most important problem of innovation- not the development of new weapons or methods, nor even their general adoption, but their intellectual mastery.

In our discussion I shall first look to the past, particularly to the years of the French Revolution and of Napoleon. This period was in some respects not unlike our own. At the end of the eighteenth century, technological advance combined with economic, social, and political change to create new tactics and to bring about more encompassing operational and strategic possibilities. War became more destructive, more complicated to wage, and more difficult to exploit for the purposes of state policy. It was the task of the French professional soldiers of the day to understand these changes and to integrate them into an effective doctrine. The soldiers defending Europe against revolutionary France faced additional difficulties. They had to recognize the nonmilitary sources that made the French victories possible otherwise their attempts at modernization would have remained superficial- and they had to reform their own armies in a manner that did not overturn the political and social values that they represented.

It is hardly necessary to introduce a word of caution here. Whatever resemblances to the present we may discover in the 1790's and the first fifteen years of the new century, we will not find exact reflections. Every event in the past is unique, as is every incident of our own day. We can learn a great deal from history, but history cannot be treated as a dictionary in which we look up the answers to contemporary problems. It is nothing as grand as that, and few historians would advance such a claim for their discipline. Oddly enough, however, people that are not professionally involved in the study of the past do sometimes invest history, or their view of it, with a kind of universal authority.

An example of this tendency, very much in evidence in recent weeks, is comparing Vietnam to the Czechoslovakia of 1938. Not continuing or intensifying the war against the Vietcong is likened to French and British appeasement of Hitler, with the result promising to be another world war entered by the United States in unnecessarily unfavorable circumstances. It would, however, be difficult to discover a situation that is less like the Czechoslovak crisis than the conflict in Vietnam. Neither in their social conditions and politics nor in their strategic positions can the two areas be compared. And even larger dissimilarities exist between the vital interests, capabilities, and policies of the major protagonists of thirty years ago and of today. The wisdom of American policy in Southeast Asia is not at question here; but those of its supporters who attempt to explain and defend it by recalling the failure of the western democracies in 1938, or who claim to base their decisions on lessons learned from this failure, do their cause less than justice. And what is equally serious, by mixing up two very different episodes, they make it more difficult for the American people to understand the course of action that is advocated. I want to return to this question of communication and education which I consider to be a problem of major importance in present-day defense policy.

My immediate predecessor in this series of lectures, Gordon Craig, whose brilliant delineation of the alliance against Napoleon in 1813 and 1814 many of you will remember, ended his talk with these words:2

It is always dangerous to attempt to draw lessons from history, and there are, in any event, profound differences between the Grand Alliance discussed here and the great peace-time alliance of which we are a part today. Even so, at a time when we hear so much about the crisis of NATO and when so much is written about the difficulties of reforming its command structure or resolving the strategical and political differences of its members, it may be useful to reflect that others have found it possible to live with administrative deficiencies and conflicts of interest and yet to be effective partners…

Appealed to in this modest and cautious manner; the past can assist us in achieving a realistic evaluation of our own situation. And it is in this spirit- willing to recognize resemblances but unwilling

to see them as patterns for our own actions- that I propose we consider the revolution in warfare that occurred at the end of the eighteenth century.

II

The first departures from the conventional that allied officers discovered in the opposing French armies during the early wars of the Revolution were somewhat greater tactical flexibility in the enemy's infantry and artillery and the presence in some units of political idealism or fanaticism, the ideological factor often giving impetus and tenacity to the new tactics. Later, other innovations became apparent: a more mobile supply system, the organization of larger commands such as divisions- permitting better coordination among the several arms of the service-the abolition of social privilege as a determining factor in manpower policy, the introduction of conscription, the replacement of a cautious strategy based on the acquisition and defense of key points and lines of communication by the concentration of force against the main enemy armies.

It would be wrong to assume that these innovations swept the field before them. On the contrary, the French encountered great difficulties and were repeatedly beaten. They were saved only by their vast numerical superiority- by what their opponents described as their hordes of volunteers and conscripts- and by the political fact that the war directly affected their national interests, while it was far from clear whether this was the case with the Allies. Then doctrine, training, and organization became regularized, and a new generation of leaders emerged who understood how to use the new politico-military instrument. Among them, Napoleon is the outstanding figure.

The French were able to effect this revolution in warfare because they could apply the results of decades of military theorizing and experimentation in a changed social and economic environment whose need to defend itself against external and internal enemies tendered it particularly favorable to military innovation. Napoleon was not himself a reformer; with a profound understanding of their potential, he made use of forces that had already been created. Earlier commanders might also have dreamt of strategies that sought the decision in climactic battles. So long as they led armies of expensive mercenaries whose reliability could be assured only by stringent control and care, they could not cut loose from their supply bases. They were compelled to fritter and fragment their troops in the defense of every position and to limit the risk of battle. In the revolutionary and imperial armies, however, much more could be demanded of the soldier. Soldiers now were more expendable, which rendered the risk of battle less onerous.

What differentiated the new wars from their predecessors was not a new weapon, a different tactic, or fresh strategic insights but the integration of these and other factors in the matrix of a new political reality. War, so Clausewitz described the change, was taken out of the hands of the professional soldiers who had dominated it for over a century, and "again became a matter for the people as a whole."3 The passive subject turned into a citizen and patriot. New sources of energy were thus made available to the military institutions of the state.

The decisive importance of this change was recognized by a few of France's opponents. The man who a decade later was to guide the reform of the Prussian army-Scharnhorst-wrote in 1797 that the reasons for the defeat of the Allied powers "must be deeply enmeshed in their internal conditions and in those of the French nation," and he added that he was referring to psychological as well as to traditional military factors.4 How could the new techniques of war be introduced into nonrevolutionary societies, without adopting the political changes that had originally made them possible in France or at least without adopting more than a minimum of these changes? And was comprehensive change really necessary? It required time to isolate these two key questions, to understand, for instance, the connections that existed between the new tactical formations and the economic and political conditions of the soldiers that employed them on the battlefield. At first, even the most progressive-minded officers in the armies of the European monarchies admitted only reluctantly the need for comprehensive change. Who can blame them for their unwillingness to leave their strictly professional

concerns and interest themselves in such matters as social justice or the reform of a state's administrative or political machinery? The great majority were at best willing to admit some slight modifications-the limited opening up of tactical formations, for instance, or the introduction of more humane discipline. Neither they nor their governments would or could move further. Most troublesome to their conservatism were the reasoned suggestions of men who like Scharnhorst were cautiously feeling their way towards the new. Far easier to dispose of' and at the same time maddening in their radicalism, were those enthusiasts who demanded nothing else than total abolition of every traditional and tested method.

Perhaps the most persuasive spokesman of the opponents to reform was the Hanoverian staff officer Friedrich von der Decken, who later distinguished himself under Wellington in Spain. In a book on the military profession and state policy, published in 1800, Decken acknowledged that one of the characteristics of the new citizen-soldier, enthusiasm for the ideology of his government, had proved of great value to the Revolutionary armies.5 If the French, he wrote, had not been defeated in the early 1790's it was because their disorganization and indiscipline had been compensated for by terror and enthusiasm. Lately they had reintroduced the principle of subordination, but patriotic fervor remained a force that their enemies could ignore only at their peril. Soldiers of a nation whose people did not make the concern of the government its own could master this ideological elan only with superior discipline, pride in their unit and in their officers, in short with the timeless values of the professional fighting man. Properly trained and led, the apolitical professional soldier should be able to defeat the armed revolutionary.

But while Decken would not consider proposals that were incompatible with the principles of absolutism, for instance a citizen army, he did recognize the need for change in less critical areas. Indeed, he concluded his book with a discussion of reforms and of the barriers they had to overcome. He wrote,

The first obstacle lies in recognizing the true nature of the defect. Such a close relationship exists among the separate components of the military estate, which in turn is bound up so intimately with the state as a whole, that in order to achieve anything many wheels must be set in motion that often seem far removed from one another.

Personal and professional bias add to the difficulties of diagnosis and subsequently inhibit corrective action. Another major impediment "consists in the dislike of change felt by most men, and their resulting hatred of the individual who suggests change or is charged with bringing it about." There is also the matter of timing:

Change encounters less obstacles shortly before the outbreak of a war that threatens the state with great danger. A danger sensed by all muffles the voice of intrigue, and the innovation appears as a smaller evil that must be accepted to avoid a greater. Conditions are different when a reform is to be instituted in times of peace. Then the government tends to view the defect as insufficiently grave to subject itself to a very painful operation. People are prepared to make some sacrifice to alleviate this or that abuse, but they cannot bring themselves to overturn and change everything.

Finally, some defects are of a kind that cannot be cured. A state may simply lack adequate strength to carry out a desired policy. Other imperfections, for instance, unrealistic national attitudes that influence policy, can be alleviated only little by little.

Decken's observations on the problems of reform are cogent, but no doubt items have occurred to you that he might have discussed more fully or that he failed to treat at all. Among them might be named the conservative nature of all institutions, the difficulty of reaching an objective judgment when one's career is involved, as well as other human and institutional difficulties attached to the decision-

making process, which many of you know at least as well as I do. The timing of a particular reform will not only affect resistance to it but also has something to do with how well it works. Shortly before the fall campaign of 1806, in which Napoleon was to destroy the greater part of the Prussian field forces, Scharnhorst introduced the divisional organization to the army. It was a desirable reform, but it came at the wrong moment, since no one had time to learn how to operate the new system. In the same campaign, Scharnhorst's strategic plans were as advanced as Napoleon's in their recognition of the essential strategic aim, but the Prussian administrative and command structure was far too cumbersome to carry out a scheme that was ideally right. And, finally, we may feel that Decken overlooked a condition that appears to be particularly favorable to military reform: not the time shortly before the outbreak of war, or a revolution, but also the period following on a major defeat. Not only does the shock of failure weaken preconceptions, demonstrate the fallibility of certain traditional methods, but the confidence of the established order in the rightness of its own procedures and personnel may also be weakened, and ideas and institutions are more ready to change. Prussia after the disaster of 1806 is an example of this new willingness to experiment. More recently we have seen similar reactions in Russia after 1917, in Germany after 1918 and again since 1945.

As it happened 150 years ago, men were spared some of the most difficult decisions concerning innovation and reform. Repeated French victories over fifteen years made it sufficiently evident to all that the old forms of military thought and policy could not continue unchanged. At the same time these victories overextended French power and crystallized opposition. After 1807 Napoleon's strength slowly began to ebb. And as the nation changed from a hotbed of revolution to an increasingly conventional and socially stable empire, her techniques lost some of their subversive onus and became easier for conservatives to adopt. Above all, republican fervor could be channeled into the safer trough of patriotism. It became possible to introduce military change without unduly or permanently liberalizing social and political conditions.

In one respect, however, innovation was not compromised. The military leaders and theorists who reached maturity in the Napoleonic Era developed a comprehensive understanding of- and thus control over- the new forms of war. This theoretical achievement capped all other changes that had occurred in equipment, organization, tactics and strategy. Their recognition of the nature of modern conflict was best expressed in Clausewitz's work On War.

War, Clausewitz wrote, is not an isolated area of human activity but rather an extension of policy in different form. War is an expression of political life, shaped by the social, material, and psychological qualities of each generation. It is an act of force, undertaken to bring about changes in the opponent's policy, and in theory its ultimate objective must be the destruction of his will and of his means to resist. Violence has the tendency to escalate. However, the concept of total violence, which provides the necessary point of reference in Clausewitz's analytic process, is modified in reality by political interests, material and psychological strengths, and by the imponderables of life. Politics govern the purpose of fighting, the means employed, the goals to be attained. Together these factors determine the character of each particular war: a nation may fight for its existence, or the political purpose and military goal are limited, with a consequent diminution of the energies mobilized.6

The greatest military achievement of the Revolutionary and Napoleonic period is that it came to understand and master the new aspects of war.

III

In the twentieth century the economic, technical, and social power that can be employed in war has increased enormously. Have we also advanced in our ability to adapt to the new military realities? No one will claim that our political and strategic competence even approaches the excellence and sophistication of our weapons system. Certainly, no war in the eighteenth century or in the Napoleonic Era was so gravely mismanaged as the First World War. None carried out national policy as inefficiently and ineffectively- and this applies to the performance of all participants, with the

exception, perhaps, of the United States and Japan- and none was equally destructive of society and produced as many causes of future conflict. The war was largely fought with attitudes and according to principles that derived from Napoleon's day; but these had been twisted and their meaning perverted with the passage of time. They no longer suited a modern highly industrialized society. Let me give you an example. After the American and French Revolutions the enthusiasm of the citizen-soldier was recognized as an important aid to the military effort. Conscription institutionalized this new energy. Indeed on the European continent universal military service became an effective device for the indoctrination of patriotism and nationalism. This enthusiasm, by 1914, which 100 years earlier had been little more than a means of strengthening the will of the soldier, could no longer be automatically controlled. These feelings had grown into a force- often an uninformed and highly prejudiced force- that now influenced policy and at times interfered with the rational conduct of war. A potential source of strength had gotten out of hand. Much the same dissymmetry between power and the ability to use it characterized other political and technological spheres. The leaders of the warring nations possessed only very imperfect ability to use their military tools, and they no longer fully understood how to relate war to national policy. In fact, by 1914 soldiers knew how to apply force effectively only where there was no counterforce. Twentieth-century armies had proved adequate in colonial wars and in expeditions against underdeveloped societies; they were certainly effective instruments of political control in their own countries. Face to face, as instruments of national policy in major crises, they showed themselves to be defective. The technological complexities produced by the industrial revolution had led to greater emphasis on the technical training of officers and on the mastery of certain administration and organizational problems- for instance mobilization and supply. In these areas, and also in the management of smaller commands- that is, in the operational realm- the armies of the First World War excelled. In the lower reaches- tactics- and in the higher sphere- strategy- they failed. I am not, of course, referring to errors of judgment and execution- these are inevitable in conflict- but to the fundamental failure to understand how military power should be used for the purpose of the state and how the state's politics and policy should be adjusted to the capabilities of the existing military instruments- both one's own and that of the antagonist.

The Second World War did not return to this nadir of incompetence of Western civilization. Nevertheless, inability to handle the tools of modern war continued to be in evidence on all sides. There is no need to mention the gigantic failure of the Axis powers to understand its possibilities and limits. The Allies, too, though not erring as dangerously, fell into numerous traps set by doctrinal rigidity and blindness to the essentially political nature of the conflict. Let me briefly list a few examples, very different in kind and significance, with which you are all familiar: the British insistence on area bombing to destroy the morale of the German civilian population, in which wildly inaccurate scientific arguments served as a cover for the personal opinions, or prejudices, of a few senior officers and civilian experts;7 the refusal of the Army Air Forces until 1944 to provide its B-17s and B-24s with a long-range escort fighter because doctrine held that bombers did not really require such protection; the inability throughout the war in the Pacific to overcome service and personal rivalries sufficiently to establish a single commander for the theater;8 the insistence of American planners in 1942 and 1943 to concentrate against the enemy in Northwest Europe, rather than forcing him to disperse by posing alternative threats and attacking him after his troops were pinned down guarding a dozen threatened fronts.9 This last, incidentally, is an example of the limitations of the so-called "principles of war," a catalogue of commonplaces that since the beginning of the nineteenth century has served generations of soldiers as an excuse not to think matters through for themselves. In Napoleon's time, the principle of concentration of force made operational sense, especially when it was brought about by high mobility, separate advances, and the indirect approach. When in his later years Napoleon tried to apply this same principle to tactics, pressing his infantry into solid, ponderous masses, whose path was to be cleared by a vast accumulation of artillery, the strategic concept

degenerated into a self-defeating tactical absurdity. Its validity in the mid-twentieth century remains at least in doubt.

IV

The Second World War is now rapidly becoming ancient military history. Since Hiroshima, the world's political conditions have changed radically, and military technology has been revolutionized. For this country the period since 1945 has been one of unremitting political and military conflict. Under the pressure of new weapons and new threats a new kind of discipline has developed, that of strategic studies, which attempts to subject policy problems and the qualities of weapons systems to exact analysis in order to reach the best possible decisions regarding force composition, the development of equipment, the way wars might be avoided, or- if necessary- should be fought.

Formal analytic methods as an aid to military decision making were pioneered in England during the Second World War. The scientists and soldiers who developed operational research were concerned primarily with immediate problems involving the use of equipment in operation or about to be put into operation. The organization of antiaircraft defense in southern England and of the convoy system were two of their significant successes. The systems analysis of today is far more speculative, addressed to the future, and thus infinitely more complex. It is concerned with what ought to be done, not simply with how to do it. As one of its practitioners has put it:

“Consider . . . the problem of choosing bombers and missiles to include in the SAC force of the middle sixties. What are the relevant objectives? What do we want SAC to accomplish? Deterrence, of course. But what kind? Deterrence of a surprise attack on the United States, or deterrence of Soviet aggression in the Middle East? These may have very different implications for force composition. How do we measure deterrence in a quantitative manner? And is deterrence the only objective? Obviously not. If possible, we also want a SAC that will strengthen our alliances, that will not trigger an accidental war, and that will fight effective if deterrence fails."10

The complexities of contemporary military problems can be unravelled only with the help of formal analytic methods, and in the last twenty years their application has raised the study of present and future conflicts to new heights. Systems analysis has, for instance, enabled men to formulate and establish the accuracy of such typically twentieth-century propositions as: the worst that the enemy can do to us is not necessarily the best that he can do for himself- a recognition that underlies the concept of deterrence.11

But while systems analysis and the entire body of academic investigation into conflicts and their resolution have been productive, their conclusions are far from definitive; they are incomplete and are only gradually being fitted together into a doctrine that is not tied to a particular political direction in this country but will have a measure of validity for the foreseeable future. And the answers they give are not necessarily correct. Research is affected by value judgments and imprecise knowledge. Above all, the questions we choose and the types of answers we are looking for reflect certain characteristics of our society. In other words, subjective factors are introduced into the process. For instance, the innate American belief is that a better gadget can do wonders, of which the Russian counterpart seems to be an equally self-centered faith in the miraculous power of ideology.

We not only lack adequate knowledge about enemy intentions and capabilities, we are also uncertain about our own policies. This uncertainty affects our nuclear strategy, and it influences the conventional and revolutionary wars we actually have been fighting and are engaged in today. The world is becoming a smaller place, and you are doing your share to make it so. This shrinkage has led to a great increase in American power, but from the point of view of simplicity in international relations, the change has not been all to the good. If our interests and concerns have spread across the globe, so have those of other states. Imperviousness to outside influence and pressure is now a thing of

the past, even for the most powerful of nations. For much of its history the United States has been a country of innovation, whose achievements have profoundly affected men everywhere. But now we may have to learn to react to others more than we have been accustomed to doing in the past. Until there is fuller agreement on this nation's aims and responsibilities in a very rapidly shifting political universe, there will be continued and dangerous uncertainty about the role of war in American International Relations.

Let me end by indicating three further obstacles that block our understanding of contemporary war: an insufficiently educated public; a failure among too many political and military leaders fully to recognize the political nature of war; and the friction between violence and control that is a permanent characteristic of all armed conflict.

Am I naive in thinking that a nation's defense policy is strengthened if the government not only explains to the public what it is trying to do, but also informs it of some of the simpler facts of military life today? Certainly, a gap must always exist between the insights of government and the vague comprehension of the public. No doubt it is possible to govern intelligently even if the people are ill informed. But there is a link between an educated public and educated policy, especially in the long run, and it is one that governments ignore or minimize at their peril. Only three days ago a United States Senator suggested that in this year's elections the voters might favor those candidates who promised to finish with the Vietcong in six months over those that spoke of a war lasting for years. Can this country afford to conduct its foreign relations according to the prejudices and fears of the uninformed?

It is the business of government to be as frank as possible in explaining its policies- in the case of Vietnam, for example, to place less emphasis on free elections, the validity of which at the present stage of Vietnamese political development is rightly doubted, and more on our national interests in Southeast Asia, as the government sees them. Some humbug is inevitable in public affairs- we have indulged in too much of it. And isn't it time for the American public to have a better understanding of war? It is time to recognize, for instance, that not all wars are fought to achieve total military victory, ending with surrender ceremonies and the trial of war criminals; that more than ever sanctuaries, considerations for allies and neutrals, and numerous other restricting factors are compelling realities between which statesmen and soldiers must wend their difficult and dangerous path in search for the best possible political results. Imagine the gain in maturity in public life if there were to develop a genuine comprehension and acceptance of the concept of limited war-not only in the nuclear field but also in the revolutionary wars which we are fighting today and which we are doing all we can to turn into the conventional and more manageable wars of old.

Not only is war fought for a political purpose, which means that the physical punishment of the opponent is not the prime objective, but individual military action must often be guided by political concerns. It is sometimes preferable to forego destruction of men or inanimate targets for the sake of the greater political good, even if this seriously handicaps the fighting forces. War is not a fair contest; and the people who are least subject to fair treatment are the men actually engaged in it.

What makes war such an extremely difficult enterprise to conduct and to understand is that it demands both the most extreme forms of violence that men are capable of, and the coldest, most objective reasoning. War, to be effective, must be measured violence. It was the failure to achieve this union of force and control to anything like the required degree that turned the First World War into such a disaster for its European participants. It was this same failure on the German, Italian, and Japanese side during the Second World War that made the defeat of these countries far more destructive than was necessary. And today the uncertainty about the right proportions of violence and control constitutes one of the most interesting and important features of this country's policy in Vietnam. That there is so much concern on this score may be an indication that we are making progress in understanding modern war.

A useful way of approaching the problem of measured violence historically is to look at wars of coalition, in which powers can rarely act solely according to their own desires. An invariable result is intense mutual criticism among the Allies. You feel that the selfishness and incompetence of your partners prevents you from having your own way. To some extent, at least, you are compelled to control yourself. This process needs to be internalized in all wars. Your critical ally must be transformed into your own critical judgment- you might say, into your military superego.

Our civilization is frequently accused of immaturity because it has not been able to abolish war. But it seems unlikely that severe conflicts of interest between states and alliances will soon disappear, and for some, conflicts and armed action may be the only method of resolution. It is not war that is an indication of our immaturity but the manner in which too often wars have been fought.

What the soldier of today must do is to step outside the very close circle of his duties and seek to understand what he and his country are involved in. Not only the techniques of your profession matter, but also their purposes. You may object that it is unrealistic to expect a serving officer to be concerned with the implications of his work. But isn't that the mark of the true professional? And more than ever today this search for understanding is required of all who are concerned with war. Everyone expects you to have the courage you need to carry out your duties. You have the same right to demand the courage to think and to act from the rest of us, who make up the society that you represent and for which you may have to fight.

1. Basil H. Liddell Hart, Memoirs, London, 1965, 11, 5, 12-13.
2. Gordon A. Craig, Probiems of Coalition Warfare: The Military Alliance Against Napoleon, 1813-1814, USAF Academy, 1965, p.21.
3. Cart V. Clausewitz, On War, Book VIII, chap. iii b.
4. Gerhard v. Scharnhorst, "Entwicklung der aligemeinen Ursachen des Gijicks der Franzosen in dern Revolutionskriege," in Militarische Schriften von Scharnhorst, ed. Colmar v. d. Goltz, Dresden, 1891, p.195. The following paragraphs are based on the third chapter of my book, Yorck and the Era of Prussian Reform.
5. Friedrich v. d. Decken, Betrachtungen i'ber das Verhaitniss des Kriegsstandes zu dem Zwecke der Staaten, Hanover, 1800. Quotations and paraphrases are from pp.220, 281-283, 352-362.
6. Peter Paset, "Clausewitz and the 19th Century," in The Theory and Practice of War, ed. Michael Howard, London, 1965, pp.28-29.
7. The background of the decision has been analyzed by P. M. S. Blackert in "Tizard and the Science of War," reprinted in Studies of War, New York 1962; and by C. P. Snow in Science and Government, Cambridge, 1961.
8. Two previous Harmon Memorial lectures contain penetrating analyses of these episodes. See Louis Morton, Pacific Command: A Study of Interservice Relations, USAF Academy, 1961 and William R. Emerson, Operation Pointblank: A Tale of Bombers and Fighters, USAF Academy, 1962.
9. I am; paraphrasing Michael Howard, "The Liddell Hart Memoirs," in The Royal United Service institution Journal, CXI (February 1966), 58. Professor Howard's review-essay seems to me to contain the best analysis of Liddell Hart's personality and achievement yet to appear in print.
10. Charles J. Hitch, "Analysis for Air Force Decisions," in Analysis for Military Decisions, ed. E. S. Quade, Chicago, 1964, p.19.
11. Thomas C. Schelling, "Assumptions about Enemy Behavior," ibid.. p.199.

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