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**NAVAL WAR COLLEGE
REVIEW**

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ECONOMIC POTENTIAL FOR WAR

A lecture delivered
at the Naval War College
on 1 October 1956 by
Professor Robert E. Kuenne

1. *Introduction.* Almost 100 years ago, the London *Economist* wrote of what might be called the "theory of national external strategy":

"Now, though nations must never perpetrate wrong, it by no means follows that they are bound or would be wise or right in all cases to interfere to prevent its perpetration. Each case must stand on its own merits. We are not charged with the general police of the universe. We cannot undertake knight-errantry throughout the whole world. We may interpose to protect our immediate friends, or special allies, or close connections, those to whom we are bound by affection, those to whom we are linked by interest — without entailing upon ourselves the obligation to defend also the distant and the unrelated. We may properly enough take up arms to resent one wrong or to beat back one encroachment, yet with equal propriety decline to punish analagous wrongs elsewhere, or to repel all similar encroachments.

"We must do what we can — what most concerns us — what lies within our special power, our close cognizance, our easy reach. It is no accurate or cogent logic that would constrain us, because we have protected the weak and baffled the robber in Europe and at home, to pursue the same course at the antipodes and in another hemisphere. To do so would

be simply out of our power and beyond our scope. It is a policy which we could not carry out, and which therefore we should not be wise and are not called upon to undertake. In many cases we should not be able to pronounce a certain and authoritative judgment, and in many more we should not be able to enforce our sentence, or to enforce it without doing more harm than good. To announce that we disclaim the vocation of righting all wrongs and punishing all crimes all over the world, may possibly be an encouragement to the wrongdoer — but it is an encouragement which we cannot help affording.” *1

In this theory of external strategy referred to earlier, the principle phrased so eloquently by the *Economist* might be called “The Theorem of the Negation of the Grand Mission Principle in External Strategy.” Great stress should be placed upon this theorem as the very foundation of foreign policy, for the failure to acknowledge its validity is a sure sign of immaturity: one of the more important characteristics of growing up, for individuals and nations, is the recognition of limitations upon our ability to act which inhere in ourselves and in situations. A good case could be made for requiring those of our statesmen concerned primarily with the shaping of our foreign policy to repeat daily the prayer urged by Alcoholics Anonymous upon its members:

“Give me this day the serenity to accept those things which cannot be changed; the courage to alter those things which can; and the wisdom to know the difference.”

Foreign policy and strategy, like politics, is the Art of the Possible.

The surest indication that the Grand Mission Principle is associated with callowness in the design of foreign policy is

*1 *The Economist*, June 14, 1856, as quoted in the June 16, 1956 issue, p. 1082.

gained from the fact that the very birth of the recognition of American responsibility in the peacetime world trailed clouds of such misconceived glory. The enunciation of the Truman Doctrine on March 12, 1947 is becoming a bench-mark date for this assumption of responsibility, and a close reading of the President's message to Congress reveals a broader principle than a mere need to aid Greece and Turkey:

" . . . We shall not realize our objectives, however, unless we are willing to help free peoples to maintain their free institutions and their national integrity against aggressive movements that seek to impose on them totalitarian regimes . . .

"I believe that it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures.

"I believe that we must assist free peoples to work out their own destinies in their own way. I believe that our help should be primarily through economic and financial aid which is essential to economic stability and orderly political processes.

"The world is not static, and the status quo is not sacred. But we cannot allow changes in the status quo in violation of the charter of the United Nations by such methods as coercion or by such subterfuge as political infiltration. In helping free and independent nations to maintain their freedom, the United States will be giving effect to the principles of the charter of the United Nations." *2

After discounting these statements for the evident need to sugar-coat a novel program for spending money to get a conservative Congress to approve it, and for the desire to appear not by-

*2 *New York Times*, March 13, 1947, p. 2.

passing the United Nations, this series of statements comes perilously close to the Grand Mission Principle of foreign policy. Between 1947 and the present we have become much more sophisticated: indeed, the rapidity with which the United States, once emerged from its isolationist shell, assumed its global responsibilities and began to place them in proper perspective, is probably unequaled in history. Indeed we have advanced so far in a mere sixteen years that we find the extreme right wing of the Republican Party, still anchored firmly in the Middle West, attacking its own party's administration of foreign policy not because we are too deeply committed in Asia but because we are not committed deeply enough. So, great has been the change since the Great Debate of 1938-41. Still, I think a good case could be made for the hypothesis that we Americans still tend to define our objectives on ambitions, overly-principled lines: liberation of the satellites, the roll-back of Communist ideology, the world safe for Democracy, unconditional surrender, aid to nations fighting the Communist menace wherever located, and so forth are examples of such policies. On the other hand, a frank containment policy became an election issue on grounds that it was not a positive or ambitious enough program, and the dissatisfaction arising from fighting the Korean War for limited (if perhaps imperfectly understood) objectives is close enough to us to be vivid illustrations.

It is not an accident, I think, that the eloquent statement negating the Grand Mission Principle appeared in a journal whose title reveals a good deal of its content: it is, in short, the application of the kernel of nineteenth century economic reasoning to the designing of strategy. Though the statement is a century old, if we substitute a few words it seems surprisingly modern, and its message is still a valuable one. The ends of national strategy are limitless, the means are limited; therefore, we must meet a fundamental constraint upon our actions in the foreign policy sphere. We must allocate scarce means to the achievement of cer-

tain ends following some method of rational choice: we have, in short, an *economic problem*.

Human nature being what it is, a second theorem in the theory of external strategy can be subscribed to by the same administration that accepts the Grand Mission outlook. We might term this the Tender Flower Economy theorem: that is, that the economy available for the design and implementation of foreign policy is so fragile and subject to shocks to its confidence that ambitious foreign policy might seriously interfere with the national economic existence. And it is not at all beyond the realm of possibility that the same men who seek to avoid the pedestrian restrictions of a mere containment policy in order to develop a dynamic new foreign policy, subscribe to some variant of the Tender Flower theorem.

Both of these theorems stress negative constraints upon the strategist. Our interests lie in only one small sector of the foreign policy sphere — that marked by armed conflict. What specific problems arise in this restricted sphere of external strategy when we apply both the Negation of the Grand Mission theorem and the Tender Flower theorem to the waging of war? What determines the extent and number of military actions the nation can support? What are the interferences with and demands upon a national economy when war comes, and what elements determine the potential of an economy to wage war? To these questions we now turn.

2. *The Economic Need to Limit Objectives.* Although the major portion of this lecture will deal with the economic potential available for waging a war with given objectives, let me comment briefly upon the need to allow the scarce resources of an economy to dictate the objectives of foreign policy and of war itself. The fundamental problem of the existence of scarce means available to a society to achieve its goals, among which external strategy's objectives are merely a sub-set, immediately imposes the necessity of choice among objectives upon that society. If that

society is a rational one, some criterion for choosing among the ends that can be obtained, with these limited resources, will be adopted which is consistent with the goal of the society's maximizing its well-being.

Let us apply this reasoning specifically to the use of military means to attain national objectives. The two most recent experiences in the minds of Americans before Korea with the use of military might to obtain national objectives were those of World Wars I and II, whose most impressive characteristic was the total nature of the objectives to be attained and the means used to obtain them. Before 1950, then, the concept of war in terms of the objectives to be reached by it and the means to be consumed in reaching those objectives, tended to be something of an absolute phenomenon: either a state of war existed with all the terrible carnage and consumption of resources it involved, or it did not exist; either the decision was made to overthrow certain major national powers in the struggle to change the balance, or it was not made. Once the stumble was made over the brink, the plunge to the bottom of the abyss was inevitable.

I would propose, then, that before Korea, the objectives which war was the proper means of achieving were conceived of as of near-infinite importance — threatening attacks upon the national existence, for example — in order to justify the total effort conceived of as necessary to support that war.

The Korean War found the United States unprepared to fight a war whose objectives were much more restricted than those of World Wars I and II. The traditional attitude that "there is no substitute for victory" clouded the thinking of policy-maker, military man, and man-in-the-street and produced a history of blunder, ill-defined objectives, and vituperation. The attitude that war itself carries within itself its own military objectives whose objective achievement was that glowing prize "victory" helped to lead to a careless neglect of the true objectives of the war. Was it to restore the armistice line? To overthrow the North Korean

puppet government and replace it? To unite North and South Korea? One has the impression that the question was never decided, and in good part, because the historic approach to war as a total phenomenon veiled the need to consider it.

But the lesson should now be learned. Objectives can be achieved along a continuum of importance to the nation. To attain objectives requires a drain upon the economic potential, among other resources. These two considerations lead to conclusions which can be stated in terms of specifics in Korea in something like these terms:

1. The national objective of resisting the invasion of South Korea and pushing the invaders back to the 38th parallel possessed a given weight in terms of the welfare of this nation;
2. The national objective of forcibly reuniting the nation had another weight in the strategic scheme of things;
3. Both of these objectives had specified costs in terms of resources;
4. These national objectives were merely two alternatives in a whole range of national objectives whose existence and relative weights had to be kept in mind.
5. The decision to adopt objective 1 should have been made only if the importance of the national objective was such that the prospective resources committed to its attainment would have provided no greater benefit if used elsewhere; specifically, it should not have been taken in the spirit of a Grand Mission approach to national strategy on these grounds, as very well might have been done;

6. If the prospective costs of reuniting Korea were too great in terms of the welfare resulting from that reunion to our own nation, the objective should have been rejected;
7. Once stalemate had been reached militarily, the costs of achieving the Yalu by military defeat of the Chinese should have been coldly calculated against the importance of such a national objective. If such costs, plus the prospect in the probability of touching off total war, bore no reasonable relationship to the importance of the objective, we should have disengaged our efforts and achieved the more limited but rational objective. Specifically, the argument that "we are in this thing and we have got to finish it" should receive short shrift.

These are the conclusions that follow from the adoption of the viewpoint of the economist acting to use war potential in an optimum fashion to achieve national objectives while at the same time keeping this war potential in the broader framework of national efforts. They spring from the outlook which allows the objectives of war to vary from total to limited, and to calculate costs coolly and rationally. Moreover, it implies the ability to break off a war in the event it becomes too costly in terms of its objectives, and to accept the rational use of limited victory and the necessity for stalemate or even limited defeat in the use of armed force.

3. *The Role of Economic Resources.* Whether we accept the Tender Flower theorem about the nature of the free market economy or not, we can all agree that the waging of, or preparation for total and limited war today, creates a substantial demand upon any national economy and cannot fail to create challenges which in some instances, might threaten the existence of the conditions under which the free market operates. In monetary terms,

World War II probably cost this nation in excess of \$300 billion in resources consumed; it required the most extensive system of controls ever imposed upon the free market mechanism; it led to the greatest degree of governmental interference with the satisfaction of consumers' desires ever experienced; and it imposed upon the market mechanism, the need to meet ends which do not inhere in the operation of the mechanism. War, therefore, places such extraordinary demands upon the outputs of economy, and tends to transform the economy so greatly, that some consideration must be given to what lies behind a nation's ability to wage war.

In the limited time available, I should like to stress three economic factors which are of crucial importance in a nation's potential: (1) the absolute size of its output of goods, or what we might term its national product; (2) the rate at which this national product is growing; and (3) the method the nation has for organizing its economic activities, or the implications of the free market and planning organizations for fighting wars. A myriad of other economic considerations are important also in determining economic potential, but we shall do better in the time available to concentrate upon these three.

a. *The Level of National Product.* Perhaps of greatest importance economically is the total and per capita levels of national product when the attempt is made to gauge economic capabilities in the military sector. At the present time, the United States' gross national product is about \$400 billion: that is, the amount of goods flowing to consumers, investors, and governments at all levels each year from the activities of that year's economy operations is about \$400 billion worth. Dividing this by a population of 164 million, we obtain a per capita product of about \$2,400. We can assert confidently, that historically, no nation has ever achieved such levels of output. Both the total and per capita levels are large multiples of such data for other national economies today. The Soviet Union, for example, has a total prod-

uct of only about one-third that of the United States and a per capita product only one-fourth that of the United States.

Of course, an important question is the degree to which the national government in times of war can call upon this national product for its own uses. We shall later in this lecture discuss the important bearing, the method of organizing the economy has upon this question. But let us turn briefly to the study of what amounts of national product might be devoted to the waging of total and limited warfare.

In 1955, this national product was distributed in this manner among users of good and services:

<i>Type of User of Goods</i>	<i>Percentage of GNP</i>
Household consumers	65.2%
Investors (home and abroad)	15.2
Governments (all levels)	19.6

Government expenditures (all levels) may be broken in two ways as follows:

(a) Expenditure by type of government

Federal	12.0%
State and local	7.6%
Total government expenditure	<u>19.6%</u>

(b) Expenditure in regard to security and non-security

National security	10.5%
Non-Security (all types of government)	9.1%
Total government expenditure	<u>19.6%</u>

We might typify this pattern of use of the national product in this fashion: in the cold war year 1955, households took about 65¢ of each dollar's worth of product, investors (or those who took part of the product of the United States to use for further production at home or abroad in future periods) took an average 15¢, and governments of all types took about 20¢ worth of product.

Of that 20¢, about 12¢ went to the federal government, and about 11¢ of it went for national security expenditures.

If, in a period of rather intensive cold war, the United States is spending 11¢ of its product dollar for national security, let us see how this bite of national product compares with the years of preparation for and actual waging of total war:

*Federal National Security Expenditures
as Percentage of Gross National Product*

<i>Year</i>	<i>Percentage of GNP</i>
1939	1.4¢
1940	2.2
1941	10.9
1942	30.7
1943	41.4
1944	41.5
1945	35.3

In a period of total war, the national security expenditures of the nation reached a peak annual rate of about 42¢ of every dollar's worth of product produced in the nation.

Next, let us turn to a period of limited war — from 1950 to 1953 — and see what happened to national security expenditures. From a level of 6.4¢ per product dollar in 1950 it rose to 11.3¢ in 1951, 14.1¢ in 1952, and 14.2¢ in 1953.

Let us then use the years 1955 as typical of cold war, 1953 as a peak limited war year, and 1944 as a peak total war year, and seek to find how the changes in the national security portion of the product dollar were derived from cutbacks in the amounts of the product dollar going to other destinations.

Type of Conflict	Con- sumption	Invest- ment	Gov't. Security	Gov't. Non-Security
Cold War	65.2¢	15.2¢	10.5¢	9.1¢
Limited War	63.3	13.9	14.2	9.0
Total War	52.3	2.6	41.5	3.6

Because of the fact that we must ignore the chronological order of the years selected, our conclusions must be regarded as tentative. However, the historical stability of the amounts of the product dollar going to the various claimants has been quite great, and allows us to argue more confidently than if they fluctuated greatly.

Note that in total war, consumption is indeed restricted in terms of the amount of each dollar devoted to it — but also note that at the height of total war, the greater part of each dollar of product went to the household for consumption. The amount of compression shown above may be much larger than might be expected in the future, since we entered World War II with substantial unemployment. The absolute amount of consumption increased in World War II; however, the fact that in the immediate past levels were not high meant that the society, starting from lower experience levels, did not have to have large increases. Therefore, the *relative* reduction could be quite great. On the other hand, if we were to enter a total war from levels of full employment, we should not have this advantage.

Also, our total war experience reveals a drastic cutback in the real amounts of product going to the investment sector. This was cut back by about 12¢ of the roughly 15¢ or 16¢ normally going into investment. It can be argued forcefully that this represents much too great a reduction in the amount devoted from each product dollar to an extremely crucial sector. We shall return to this point when discussing the importance of the rate of growth in examining economic potential.

Lastly, governmental non-security expenditures seem drastically compressed, but it is doubtful if another total war could bring about this same degree of compression, for reasons analogous to those quoted to explain analogous qualifications for consumption.

Let us venture forth upon totally uncharted seas and attempt to answer this question: Suppose a total war of the World

War II type should once more face us? Under conditions when the entire nerve and fibre of the economy were strained to the limit but short of a real and present danger to our national existence, what limits might we set for the economic potential available to the military? I should propose that the following limits would be near-minimal for consumption, investment, and governmental non-security: for consumption, 35¢; investment, 8¢; government non-security, 5¢. This yields a total of 48¢, leaving a residual of about 52¢ of each product dollar available for the waging of the total war. I should not attempt to defend these figures as "correct" in some meaningful sense, but I should stress that they are of minimal order of magnitude. The lesson they teach — that even under conditions of total war just short of disaster, little more than 50 percent of the national product would be available for strategic expenditures — is an important one in the consideration of available economic potential.

Gauging the degree to which limited war draws upon economic potential is a more difficult problem, for if objectives are limited they, as well as the resources needed to obtain them, can vary continuously from cold war to the all-out demands of total war. The only example which has any current relevance, of course, is the Korean imbroglio, whose objectives were quite limited as compared to what limited war in the future might entail. In that action, however, consumption declined from about 69 percent of the national product in both 1949 and 1950 to the 63 percent recorded above, at the height of annual expenditures. This represents about an 8 percent reduction in the relative share of consumption, as compared with a 30 percent reduction in the year of greatest activity in World War II. Investment activity showed no compression, this fact constituting the greatest difference between the relative shares in total and limited war. We shall return to these points in connection with the discussion of the other two factors in economic potential.

Let me touch briefly upon the manner of financing these governmental national security goods and explicitly note that although what I have to say about these matters refers to hot wars, it has an equally important bearing upon cold war. The question is: How can the government obtain from consumers and investors, the goods necessary to compress these components of national product sufficiently to fight a war? Note, the important thing is to get the goods, or the resources; it is not the ultimate purpose to get the money.

Several ways exist to obtain these goods. One way is to tax it away from consumers and investors by taking portions of their income and wealth so that they cannot purchase goods. A second way is to sell bonds to individuals and non-bank institutions, in this way inducing investors and consumers to forego their command over goods and resources. A third way is to allow the government to create money to the extent necessary to buy up the goods and services: that is, to disallow all other purchasers to create money and by using the money-creating powers of the government and other institutions, to bid goods and services away from consumers and investors. All three methods have their place; all three have advantages and disadvantages. But one point is vital: the second two methods involve the flotations of government debt. In modern governments, flotation of debt is the manner in which they increase the money supply. It is *not* a method of passing part of the burdens of a war on to future generations: no mere manner of financing a war can alter that burden one iota. The level of the national debt is important primarily in terms of the inflationary or deflationary state of the economy: its good or evil cannot be judged independently of that state of affairs. Nor should the level of national security expenditures be dictated by the state of budget balance only, or even primarily.

b. *The Rate of Growth of National Output.* An extremely important variable in the gauging of an economy's war potential is the rate at which product is growing. One reason this is true, is that

an extremely high growth rate indicates that an economy is dynamic and vital: the capital stock of the economy usually is growing fast, new products and new ways of doing things characterize it, an efficiency-minded entrepreneurial class is directing its destiny, and so forth. These characteristics of a society cannot help to add to its war-making potential. However, to concentrate only upon these features of a high growth rate would be to employ it merely in a symptomatic fashion: it has an importance in and of itself which will become increasingly understood as this nation moves into an age of limited and cold war.

This importance is based upon the fundamental proposition that it is easier to take something which they haven't got away from the consumer and the investor than it is to take something which they have got. In limited (and cold) war the patriotic incentive to sacrifice must be notably less than in total war, so that the compression of consumption and investment must generate much more friction in a society oriented about the free market. The problem can be much more easily solved in an economy with a large growth rate than in one with a small growth rate. In the latter type of economy — let us say one with a zero growth rate — the only way to get to a new plateau of security expenditure, is by reducing the absolute level of goods the consumer and investor are absorbing and using these goods to further national security purposes.

On the other hand, let us take as an example the United States, which has been enjoying a growth rate in national product of about 3.5 percent per year. Under these circumstances, a security build-up can occur without depressing consumers' and investors' *absolute* levels of well-being — or even allowing them to increase — by using the increment of product, accruing as growth year by year for security purposes. At the present time, the growth rate of the United States means that about \$14 billion is added to national product year by year (and, incidentally, that unless we progress by this much from year to year we have failed to gain

normal progress). Using a substantial part of this for building up our security program would give us a very quick build-up.

For example, let us contrast an economy with a \$400 billion national product and a zero growth rate with an economy with the same national product but with a growth rate of 3.5 percent. Suppose that national security expenditures are 10 percent of GNP in both economies — 10¢ of each product dollar is going to security posture — but that a limited war breaks out, requiring the gradual approach to an expenditure of \$60 billion per year. The stagnant economy will have to depress consumers and investors by \$20 billion per year ultimately. But, assume that in the dynamic economy population is growing at 1.5 percent per year and that we decide to hold per capita consumption constant. Also, since we are leaning heavily upon growth, let us allow investment to grow by 3.5 percent per year so as not to kill the goose that lays the golden eggs. Using our 1955 relationships roughly, with consumption at 65 percent, investment at 15 percent, government non-security at 9 percent, our initial division of national product would appear as follows:

Dynamic Economy Build-Up
(Billions of Dollars)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Consumption	\$260.0	\$263.9	\$267.9	\$271.9	\$276.0	\$280.1
Investment	60.0	62.1	64.3	66.6	68.9	71.3
Government Non-Security	40.0	40.0	40.0	40.0	40.0	40.0
Security	40.0	48.0	56.3	65.0	74.1	83.7
Total	\$400.0	\$414.0	\$428.5	\$443.5	\$459.0	\$475.1

In a three-year period the dynamic economy has increased security expenditures by about 50 percent and in five years by about 100 percent, while per capita consumption has remained constant and investment has been allowed to grow as the economy itself. This rapid rate of security build-up could be slowed down by allowing consumption per capita to increase somewhat, or by allowing

investment an even greater rate of growth. The illustration is sufficiently realistic, however, to indicate how extremely important is this rate of growth, particularly in circumstances where absolute restriction of consumption and investment is difficult or politically impossible.

c. *The Method of Organizing Economic Activities.* A last consideration has a peculiarly important bearing upon the ability of a society to wage war: this we can refer to, as the way in which that society organizes its economic activities. In the United States, this coordination of individual actions to meet society's economic goals is worked out on a trial and error basis in an extremely efficient way via the ministrations of an impersonal free market for the greatest number of such actions. Two world wars of the total variety, have taught us that under the spur of the need to organize totally, to attain objectives of defeating and imposing one's will upon large sovereign nations, is sufficient to overturn the essence of this market mechanism and yet allow it to function efficiently in a more restricted field.

Let us attempt to explain this further: the free market is an impersonal coordinator of the actions and desires of individuals, these persons acting under the motivation of attaining their selfish, individual ends; only the limitations in themselves and in the actions and desires of their fellows as revealed by market forces, act to hinder them in the attainment of their individualistic goals. From the time of Adam Smith, this has been the peculiar paradox that has fascinated thinkers: the best way of meeting the economic goals of society is to adopt a *laissez faire* attitude to the selfish motivations of individuals when these latter act through the discipline of the market, for this latter will harmonize the welfare of the society and the individual out of selfishness for the optimum attainment of societal welfare.

This type of reasoning postulates that society's welfare is merely the sum of the individual welfare of the persons in the nation. There are, however, certain collectivistic goals in a society

which cannot be met via the market which have always been accepted as exceptions to the general rule: governmental functions of police, administration of justice, building of highways, and defense, are examples of such goods which can be obtained only by arbitrarily interfering with peoples desires as they reveal themselves in the market and taxing away the wherewithal to provide for the collectivistic goals.

This upsetting of the market's goals has become very serious in times of war and deep depression. However, the transition to a newer basis for organizing an economy for lessening the role of the free market has been successful in World Wars I and II, as previously noted. In cold war and in the Korean War, I felt, success was much less marked. Indeed, the Korean War demonstrated such inability to call upon patriotic motives to accept the interferences with the market on the part of labor, management, and agriculture that a real question arises as to whether our type of society can wage successful limited wars. Practically speaking the only way in which this lifting of collective goals above individual goals can be sustained is by the striking of a balance of power between these three groups in our economy: only if all three accept the necessity for controls and self-control in the exercise of self-seeking through the market, we can use the free market in wartime. The Korean experience is disheartening as an index to the future.

The current conflicts raging around the longer-run cold war strategy of this nation give further illustration to the point. The present administration is dominated by a group of men who have been schooled in the lore of the free market — the need to minimize the role of seeking collective goals in order to keep it healthy, and to prevent the tender flower of confidence from suddenly wilting in the heat of the military blast. Meanwhile, the conditions of our national existence have changed, for good or for evil: the United States is confronted with the need to accept free world leadership, economic as well as moral. This cannot but

have revolutionary effects upon the free market economy; it cannot but increase the importance of the collective goals of the economy relative to the individual goals. This must interfere with the free market by restricting anew individuals' abilities to dictate the amounts and kinds of goods to be attained. However, if the priorities of the collective goals are believed to be higher than those of the individual goals, the free market mechanism as we have known it, must give some more. Surely, it makes no sense to worship the sacred cow of a free market and force cold war and limited war strategy into a strait jacket because of the rigidities in the thinking of administration leaders.

4. *Summary and Conclusion.* As in any other form of human activity in which the means of attaining ends are limited, there is an economizing process which is implied, and war is no exception. In this hard-headed sense, then, the more pedestrian and less satisfying criterion of maximizing the nation's selfish, individual interests becomes a criterion which surpasses all others in selecting those objectives which are to be attained.

This need to economize is met not only in the manner of reaching objectives but in the need to limit objectives. As Professor Osgood of the University of Chicago argued so eloquently at the Naval War College last year, fundamental changes in the attitudes of Americans to the purpose of war — and specifically to an acceptance of the concept and limitations of limited war — will be an increasingly important need if our foreign policy is to be effective in the coming years, and if the economic drain of war is to be minimized.

Perhaps of greatest importance to the nation's ability to wage war economically, given the objective, are three factors: the absolute level of national product, the rate of growth of national product, and the manner of organizing economic activities in a nation. All three of these headings raise troublesome problems when limited and cold war are subjects of consideration for the American economy in the next twenty-five years. Some of the more troublesome of these problems we have attempted to raise today.

BIOGRAPHIC SKETCH

Professor Robert E. Kuenne

After serving with the United States Army from 1943 to 1946, Professor Kuenne attended the University of Missouri and received his B.J. degree in 1947. During the next two years he attended Washington University at St. Louis, Missouri, where he received his B.A. and M.A. degrees in Economics. He was an instructor there during the summers from 1949 to 1952.

For the following three years he was a Teaching Fellow in the Department of Economics at Harvard University, where he received his A.M. and Ph.D. degrees. He served as an instructor of Economics at Harvard from 1953 to 1955. The following year he was Visiting Assistant Professor of Economics at the University of Virginia and is presently Assistant Professor of Economics at Princeton University.

Professor Kuenne has served as an academic consultant in Economics at the Naval War College during academic year 1955-1956 and also during the present academic year.

THE INFLUENCE OF WEAPONS ON MODERN STRATEGY

A lecture delivered
at the Naval War College
on 18 December 1966 by
Professor Gordon B. Turner

Gentlemen: My subject this morning is "The Influence of Weapons on Modern Strategy," with a minimum of discussion on historical perspectives and maximum coverage of developments in the decade just past and the decade next to come. This is a large and complex subject, so without preliminary remarks I shall plunge right in.

In discussing weapons of the period 1945 to 1965, the first thing we should be clear about is that we are not concerned solely with firepower but with mobility as well. Although the element of mass destructiveness is exercising a profound influence on strategic planning, equally impressive in its impact is the mobility of the new weapons complex, and by mobility I mean both range and speed. In this year, 1966, firepower has already reached a capacity for destructiveness which is at the point of diminishing returns, but we are just on the threshold of the absolute in speed and range. In the next decade or so, we can expect that nuclear propulsion will catch up with nuclear explosiveness to give us highly destructive weapons of infinite mobility.

In assessing the influence of modern weapons on strategy, then, we should, if we are to make that assessment meaningful, consider more than the bomb and the shell. We should include also the means by which the firepower is conveyed to the target. In this context not only the bomb, the rocket and the guided missile are weapons, but the nuclear-powered submarine, aircraft and aircraft carrier, and the supersonic plane should all be considered as weapons, as weapons systems, or, if you prefer, as a complex of weapons systems.

Weapons, looked at in these terms, have already had certain practical, tangible effects upon strategy itself. But more important they are having, and will continue to have, profound effects upon strategic theory, upon the whole process of thinking out just what war is and what strategy means in the nuclear age. What are these effects — both the practical and theoretical? There are six that I want to list briefly and then discuss in greater detail.

First, the present weapons complex, by making the offense vastly superior to the defense, has convinced us as a defense-minded nation that we must depend for protection on instant retaliation. Weapons of the future, however, will make this strategy obsolete unless we increase the mobility of our weapons system. Second, modern weapons have thus far encouraged us to formulate strategy in terms of deterrence or defeat, all or nothing, peace or war, capitulation or suicide. This is unacceptable. Therefore, third, we are being forced to reshape our thinking about war itself in order to give us greater freedom of strategic maneuver.

Fourth, while these new weapons have in the last ten years made us think of strategy primarily as a science of destruction, in the future they are going to make us think of it once again as the art of control. Moreover, and this is the fifth point, under the impact of new weapons, military strategy will have to be restored to its proper place as only one element in national strategy, and a subordinate one at that. And, sixth, modern weapons are making necessary a renewed appreciation of the role of logistics in strategy — a role we have tended to forget or submerge in our fascination with nuclear power as a destructive force rather than as a means of propulsion.

Now, if we were to draw up a balance sheet on these six points and look at the net effect of the new weapons, some might conclude that strategy is being simplified — made a matter of black and white — whereas by all tenets of logic it should be realized that strategy is every day becoming more complex, less a science of measuring degrees of destruction and more the art of

maneuver and control. Perhaps we should say that brainpower or intellectual insight is the missing element in strategy today. I don't mean that able men are not struggling to reshape strategic thinking. They are. But the revolution effected by weapons has been so swift that it is difficult to keep pace with events.

Now, from such preliminary thinking as has been done, what can be said about the influence of weapons of offensive *vs.* defensive strategy? Historically, increases in firepower have generally favored the defensive. This was certainly the case in the First World War when artillery was lined up hub to hub, and human flesh could make no headway against it. On the other hand, advances in mobility have generally favored the offense. During World War II, when aircraft flew over the lines and tanks sliced through them, the offensive was rehabilitated even in the face of vastly increased firepower. In the postwar years it has been the mobility of long-range bombers with their nuclear payloads which have kept the offensive supreme.

Again historically, when the offense has outstripped the defense, the classical strategic solution has been to meet the aggressor with a counterthreat. This has naturally led us, with our capacities of firepower and mobility, to the doctrine of retaliation. This is what the modern weapons complex has done to strategy so far. But have we thought through the situation fully and given due weight to the weapons of the future?

I think not. Given our present strategic doctrine, the supersonic bomber and intercontinental missile of the future may hand the enemy the chance to destroy our retaliatory power before it is ever launched. With the degree of speed and accuracy forecast for weapons systems of the future, the defender's ability to defend himself may well decline to zero. Under such circumstances we would have to strike first or capitulate. These would be acts of desperation which we must avoid. The aggressor, by incurring the onus of the entire world, would lose the peace by the very process he employed in winning the war.

What can we do about this? There can be only one answer unless all nuclear powers reach such a harmonious relationship and mutual trust as to permit disarmament. Our only alternative is to give our weapons complex such mobility as to guarantee us the power to retaliate under any circumstances. Our current strategy depends upon a large number of fixed air bases spread throughout the free world. This will not be adequate for the future. When supersonic speeds become a commonplace among the great powers of the world, and when intercontinental ballistic missiles with nuclear warheads are capable of being laid on targets in advance, our fixed bases will scarcely remain retaliatory assets. They will be easy to locate, difficult to defend and vulnerable to a single hit. The mobility of SAC, as presently constituted, should not be overestimated.

Nuclear-powered aircraft carriers of the future, constantly on the move, will increase the mobility of our weapons complex to some extent, and if long range aircraft and missiles can be launched from them, we will retain some retaliatory capability. Nevertheless, for the years ahead they will not be enough. They will be relatively slow-moving and will make tempting targets for manned aircraft.

It is in the development of the nuclear-powered seaplane that we may well find the best answer to this problem of mobility. I say seaplane rather than land-based aircraft for two reasons. In the first place, land-based planes, even if they could remain in the air to the limit of human endurance, would have to return eventually to a fixed base which could be obliterated. For maximum assurance that a surprise attack will not destroy our retaliatory power, moving bases are essential. Counterattacking forces must not only be widely dispersed but constantly shifting.

In the second place, I am informed that the flying boat is at present the only answer to the weight problem of nuclear power plants. No landing gear has yet been designed which can

stand such a burden except for the seaplane hull. It would take relatively few such aircraft, constantly on the move with their own transportable pontoon docks, establishing bases for themselves wherever a suitable stretch of water was available, to keep our retaliatory power high. Such docks have been developed. When the nuclear-powered seaplane has also been constructed (and research on it is already under way), a few of them can give a measure of guaranteed retaliatory power unmatched by dozens of vulnerable land-based craft.

Fortunately some people are already thinking about how to fit such seaplanes into our retaliation system as they become available. They realize that the firepower of the present, and the mobility which the future seems to offer, indicate that the counterattack, or defense through offensive retaliation, will remain strategically valid only if we are not hypnotized by the pseudo-mobility of a completely land-based air force.

It has been truly said that strategy is indivisible. We must remember this, and think of strategy as a whole rather than let ourselves be ensnared by the lure of its separate elements. Under an integrated system of strategic thought we will concern ourselves less with a particular weapons system and whether it is land-based or sea-borne or is an aspect of airpower. We will concern ourselves instead with what strategy must accomplish, and then develop whatever weapons complex that strategy dictates.

My second point follows logically from the first. The construction of weapons which will guarantee our ability to retaliate is just a first step — not the last — for even if the enemy is deterred from launching an all-out attack through fear of committing suicide, there are other ways of waging war which we must be able to counter. Moreover, the enemy may not be deterred. By restricting ourselves to a retaliatory strategy, we are wagering our physical plant, our governmental structure and indeed our whole way of life against the enemy's. These are, to put it mildly,

unfavorable odds. Military men should know better, and most of them do. They know that to risk their fleets and armies unnecessarily is an unforgivable error, and they will seek to accomplish their missions by means which will reduce the hazard. How much greater a blunder would it be for a nation to risk its existence by deliberately depending on a strategy which permits it no alternative but annihilation or capitulation in the face of every threat!

This nation has the highest standard of living in the world; it has a democratic philosophy and system of government which is the greatest tribute to man's ingenuity ever devised. To throw these assets on the bargaining table as equal stakes against the poverty and human degradation of the Soviet system is an act that cannot be tolerated unless our vital interests are imperiled. And the fact is that they will not be risked if the Soviets act only in areas where our interests are of minor import. The principle of deterrence is, after all, based on the will to act. If we are unwilling to set our rigid strategy in motion except where our vital interests are threatened, we will lose our minor assets by default. And it is worth noting that a series of minor losses can have important cumulative effects and may even culminate in a vital loss to the free world.

It has been said that our strategic air force is an insurance policy protecting us from nuclear weapons in the hands of others. It has been called a police force to promote world stability. Both terms are semantically incorrect. SAC does not *insure* us against assault nor does it pay off if we are attacked. It is a desperation strategy pure and simple. As for a police force, *its* purpose is to keep order by preventing crime and apprehending criminals. Strategic air power cannot possibly play all these roles. It can perhaps prevent major crimes and punish *them*, but chaos, not world order, will result from nuclear war. Strategic bombing is a method of employing weapons in one particular type of war. The very existence of SAC may channel future wars into something less than total conflicts, and *this* is its great asset. But we should not claim

for it more than it can do, and thus rigidify our strategy. We must still have the weapons and the strategy to cope with the lesser and more subtle conflicts that may arise.

How did we arrive at this all-or-nothing thinking? From the moment the first atomic bomb was dropped on Japan we became hypnotized with the power we had created. Having a monopoly of this power we became complacent. Even when the threat from Russia became apparent, we had only a momentary twinge of uneasiness. Korea demonstrated that our nuclear strategy was impractical, and we were forced to build up our conventional forces in the Far East and in Europe. But this didn't last. Gradually we dropped back to the sterile concept that all but the most powerful weapons were futile. Almost daily we read in the papers and military journals that the eventual use of atomic weapons in war is inevitable. Military leaders, government officials and news analysts are saying either in criticism or with confidence: "A major war must now be atomic in nature. Why? Because the posture for atomic warfare cannot be reconciled with retaining a conventional capability." They are saying in other words that since we have nuclear weapons, we must use them, because they impose on us a nuclear strategy which leaves us no alternative.

Korea, Indo-China, Malaya, Suez and Algeria are vivid demonstrations that a strategy of all or nothing, of peace or total war, is unnecessary, unimaginative and inappropriate to the nuclear age. But so blinded are some of us by our new weapons and their influence on strategy that we cannot see what is staring us in the face. Even today when we have lost our monopoly of nuclear power, we cling to our faith in a strategy which had only limited validity when we alone held that power. Being dazzled by our nuclear weapons, we are basing our strategy on what these weapons and no others can permit us to do. Nuclear weapons, then, have become an end in themselves rather than one of many means to attain political ends.

By premising our thinking on weapons of mass destruction, and basing our military strategy almost exclusively on the advantages of these weapons, we have deprived ourselves of flexibility. With a rigid military strategy, no policies can be formulated and no objectives can be achieved which cannot be implemented by nuclear destruction. It is one thing to negotiate through strength; it is quite another to negotiate on the basis of a power which breeds self-destruction. We are not only power-minded but nuclear power-minded. Our rigid strategy did not help us in Korea. It has given us only limited additional strength to deal with the Suez situation and none for the Hungarian crisis. In a sense it ties our hands by tying our minds to a single objective: total peace or total war — deterrence or self destruction.

This is what the development of nuclear weapons has done to strategy to date. It has rigidified it and left us increasingly with no policy but deter or die. Such a situation is obviously unacceptable. Thus we are forced to reshape our thinking not only about strategy but first of all about war itself. We must find ways to give us greater freedom of maneuver by providing more alternative objectives. There is nothing inherent in the weapons system, in strategy, or policy, or in the international situation which automatically restricts us to the extreme alternatives of peace or total war. Nothing limits us but our range of thinking.

The idea that wars *must* reach the apex of destructiveness to be successful is not a new one. It began with a misinterpretation of Clausewitz; it grew in stature during the First and Second World Wars; and it has become a fetish with us since the growth of nuclear weapons. There is nothing in this concept, however, that can't be changed by changing our thought processes. You know the expression: "There's nothing right or wrong but thinking makes it so." This is the case here. If *our* statesmen and soldiers and those of the enemy are convinced that total war is inevitable, it will be. They will make it so by adopting strategic plans which permit no alternative.

Had there been no Korean conflict, the idea that war must be total might have proved impossible to shake. But we *have* had a limited war waged by a nation possessing atomic power, and more recently we've had one in the Middle East. These two cases alone provide ample demonstration that, even with nuclear weapons, wars do not have to be carried to the extreme. They can be, they may be, but they do not have to be.

If we are going to minimize the chance of nuclear war, we must provide alternatives. To do this we must start our thinking not with war as an end in itself but with the purposes of war or the objectives which they serve. Now, war as a rational act must serve to maintain or strengthen national security. Nuclear war can be employed only as a last resort, because the most it can do is to preserve the sovereignty of the victor. It will virtually destroy everything else. Certainly, nuclear war cannot leave a belligerent better off than before the war; it can only leave it better off than the enemy. The meaning of the phrase "to win a war" has, then, been sharply curtailed. The more limited the war, the more advantages victory can bring. The winner of a limited war can win in every sense of the term; the victor of a total war cannot.

With this in mind we can think through our problem more clearly. We will not fall into the line of thought which once caused a German General to say: "The best thing that diplomacy can do is to create the most favorable situation for military action." To be sure this is one objective of diplomacy — to build alliances and create situations of strength, but the primary objective of both diplomacy and war is to create the most favorable situation for a stable peace. Our foreign policy must see to it that we do not become isolated in an inflamed world, for this would create conditions for total war. Likewise, our strategic plans must be so framed that there is something other than wreckage to work with when peace is restored.

What I am driving at is this. We must get away from the idea that policy governs only until war begins, that it is then discarded and war emerges as an end in itself. To prevent such an idea from dominating our minds, the first thing to do, is to stop thinking in terms of complete peace and stability, on the one hand, and uncontrolled and unlimited war on the other. At a time when weapons have such a strong influence on strategy and when the single act of target selection can destroy the world or prevent postwar stability, it is dangerous for the policy-maker and the strategist to think in terms of extreme alternatives, although the tactical commander may have to do so.

It is time to realize that there is a yawning gap in our thinking between peace and unlimited war, that there are middle degrees of conflict, and that we can control our destinies only by keeping a firm hand on these lesser conflicts. We should be prepared to deal with realities and normalities rather than abstractions and extremes. Complete peace and absolute war have never existed. Total absence of conflict and war to the point of suicide are meaningless abstractions. Human nature being what it is, with its appetites, jealousies and passions, will never allow complete harmony to prevail. And if we can credit mankind with any degree of logic and intelligence at all, we can conclude that world suicide is an unlikely choice. It is the middle degrees of conflict between these extremes that should concern us, because these are the real areas in which we have to operate.

The actual situation reveals a continuum of conflict, starting with a maximum of harmony at one end and graduating toward increasingly intensive and broadening conflicts across the spectrum. We might describe these degrees of conflict in this way. First, there is the state of international tension at a level which still permits cooperation. Conflicts in this range may be economic or political in nature. They can have to do with trade barriers or boundary disputes. They may be local, regional or global in scope. This is a state of affairs in which we still have control of our

actions and emotions. We are still using logic and reason to arrest conflict or wipe out its cause. This, historically, is the most normal state of international affairs — controlled conflict characterized by varying degrees of cooperation, compromise and the will to reduce tensions.

The next state of conflict is one that we have come to call "cold war," but which any previous age would have characterized in quite different terms. We call it cold war because two great power blocs exist so violently opposed to one another that, but for the presence of nuclear weapons, they would long ago have been engaged in direct military action. The name we give to it is unimportant so long as we understand that it is a situation of conflict so acute and brittle that we have kept it controlled with only limited success. We might call it semi-controlled conflict, for, despite an arms race and threats of retaliation, brushfires occasionally do break out. Persuasion and pressure rather than cooperation characterize this conflict stage — mainly diplomatic persuasion and economic pressure, but with frequent threat of military force.

The last stage in which some degree of control is exercised is that called "limited war." Coercion rather than persuasion dominates this phase. It is one in which the final vestige of control is easily lost. One false move, one heightening of objectives, one wrong weapon employed, and the war of extinction can come with startling speed. Coercion gives way to destruction, and even if the world survives, the chance for a stable international order has been shattered. In limited warfare, however, there is still the possibility of restoring control, and there is everything to gain by doing so. This stage is man's last hope of survival.

Our efforts, then, and this includes our strategic thinking, should be maximized in the direction of keeping affairs at the lower end of the conflict spectrum. As long as we limit the intensity of conflict, we control our destinies; and strategy should

be planned with this in mind. It is a fundamental error, and a dangerous one, to base strategic planning exclusively on that extreme state of affairs in which control has already been lost and destruction is inevitable.

Strategy, therefore, should not be considered as a science of destruction. Following the reasoning of Dr. Herbert Rosinski, I prefer to think of it as the art of control. This, you may recall, was the fourth point I made about the effect of modern weapons. Nuclear weapons have led us to think of strategy in terms of mathematics — so many miles of range per gallon of fuel, so much speed per unit of energy, so much destruction per target selected and pound of explosive dropped, so much mechanical efficiency per dollar spent. The machine replaces the man; the manned aircraft gives way to the guided missile. There is less thought about maneuver, flanking movements, double envelopments and more about the straight punch.

Strategy has reached a low point indeed when it depends on machines to destroy rather than on men to maneuver and control. It cannot fulfill its true function under such circumstances. After all, gentlemen, what is strategy but the manipulation of resources to achieve desired ends in situations of conflict? The element of conflict or competition is part and parcel of any strategic situation. We can't think of strategy divorced from a state of conflict. This is why we talk about strategy in poker, in football, in politics. In such cases we try to outwit, outplay, outmaneuver the opponent. We play for victory if we have the resources, the power, the cards, or whatever, but if we cannot win, we adjust our strategy to limit our losses. We figure odds, take risks, attempt to exercise control over the action of our opponent by bottling up his resources, by hobbling his strength, by depriving him of initiative. We don't try to destroy him, but deprive him of the ability or will to continue the play by destroying or curtailing his *resources*.

And so it is with the kind of strategy we are concerned with this morning — the strategy of a nation seeking to maintain its security in a world of conflict. By means of strategy the nation seeks three kinds of control. It seeks to direct or control its own resources, tools, weapons and power. It seeks to control or restrict the use of its enemy's resources by destroying them or making it unprofitable to use them. And it seeks to control the conflict situation — to channel it into lines most profitable to itself. Never before in history has the element of control been so important. Nuclear weapons have made it imperative that we keep the conflict in the lower ranges of intensity. The objective of strategy, whether national or military, is so to control its own power and that of the enemy that the conflict will not get out of hand and erupt into total war.

How is this to be done? One way is to always keep our eye on the objective, to realize that this objective is to maintain our way of life, and that the only way to do this is to control the conflict between our enemy and ourselves. We have already made a large stride in this direction when we have recognized that we are not in an all-or-nothing situation, but that the degrees of conflict are multiple and ever-shifting.

How does this help? Because to exercise control, we must have alternatives — alternative courses of action, alternative means, alternative goals. If our goal is total victory and our tools are hydrogen bombs, there's no alternative but total war. If, on the other hand, we set forth as our goal, keeping somewhere on the wide spectrum of conflict other than its extreme destructive end, we immediately give ourselves maneuver room. Our courses of action then lie in the economic, diplomatic, and psychological realms with all the tools available to those fields of action. Moreover, we have a wide range of alternatives in the military field ranging from simple displays of power to limited, peripheral wars. And, in all these cases, a good military strategy retains a

tremendous ability to maneuver and capacity to keep the conflict under control.

The hydrogen bomb by giving us the power to commit suicide, has forced us to control this power, and has thus reopened for the military strategist vast new challenges for weapons development, and unparalleled opportunities to exercise imagination in their employment. This should be an exciting and challenging age for the strategist. Never has he had a greater variety of tools in the field of communication, transportation and weaponry. Never has his theater of operations been larger, yet more accessible. Never has he been more capable of acting in the air, on the ground and in the sea. It's the weapons of mass destruction which have forced this opportunity on him, because never before has he had an enemy which can destroy his country in a matter of hours if he makes a simple mistake. His mental energies, then, must be directed as much toward controlling the enemy's actions as his own. This has always been true in war, but never to the extent it is today. Strategy, as the art of control, has come into its own once again.

Strategy, of course, is not simply a matter of *using* resources. It must also direct their development and timely construction. Let's take a current example. Last summer Britain and France envisaged military action in Suez, but neither country was ready to apply military power of a type suited to the situation. Both could have used strategic airpower immediately, but this couldn't accomplish the objective of physically occupying the canal and keeping it open. What was needed was a combination of sea and airborne landings supported by all the paraphernalia of conventional warfare. Neither France nor Britain had the weapons, forces or logistic capacity for such rapid a operation last summer, and apparently they didn't have it last month when they tried to seize the whole canal before it could be blocked. Their strategy was rendered useless and dangerous through lack of timely development of the means required to make it work.

The first thing then, the strategist must know, is the kinds of results he will be expected to achieve. Knowing this, he can then, and only then, determine the weapons and forces he will need. If he is to fight the kind of war which will create future conditions of peace, if he is to maintain the flexibility necessary to meet the wide range of conflicts which our continuum has revealed, he will need a wide range of weapons. If he is to be ready to fight instantly in any portion of the globe, under all conditions of weather and terrain, he must stockpile military hardware of quality and in quantity. If he is to strengthen the hand of the negotiators in cold war situations, he must have the capacity of graduated deterrence, for if we can only react massively and not oppose lesser aggressions against minor interests, the hands of the diplomat will be tied. In other words, the strategist must maintain the capacity of employing selective force as well as massive retaliation, and both must be ready for instant use.

Not only does the strategist need to deter all kinds of aggression, and keep the conflict limited, but he must have the means to make the enemy change his mind. His task in the nuclear age is to destroy the enemy's *will* to continue fighting rather than his ability to fight. For in order to destroy his ability completely, his cities or his military forces must be destroyed; and with Russia as the enemy, it appears that this can be done only by nuclear war. If, on the other hand, you can destroy the enemy's *will* to fight, you won't have to destroy his ability, and yours as well.

The means of curtailing an enemy's will to fight are numerous. The threat of massive retaliation is one important way. The ability to stop his minor aggressions in their tracks with precision weapons is another. Diplomacy and propaganda, and economic pressures, are still others, but these must be accompanied by military preparations which complement them rather than oppose them. As Clausewitz said over a century ago, there are a thousand ways to achieve objectives in war — some subtle and some not so subtle. The main thing to remember today is

that the use of nuclear weapons, and especially strategic ones, reduces the thousand ways almost to one. As soon as military *destruction* is substituted for lesser forms of coercion and pressure, the ability to control the degree of conflict is lost, and so is our objective. In order to retain control — that is, to keep the war limited — the strategist must have the capacity to fight both general wars and local ones; he must have ground, sea and air weapons of infinite variety in order to protect his homeland and that of his allies.

Having developed the weapons needed to keep the conflict limited, the next step is to direct the *employment* of the weapons in accord with the situation. Weapons themselves are inert until put to use. It is one of the tasks of strategy to employ them correctly. Strategy, then, among other things, provides the intelligent direction of weapons and forces to the achievement of a variety of goals. Again, I emphasize the element of control, for strategy is an intelligent system of direction *and control* — a means of convincing the enemy that it is in his interest to sue for peace. Of course we must first convince ourselves that the absolute destructiveness of total war is the negation of strategy rather than the furtherance of policy.

And this leads me to my fifth point — that it is particularly important in the age of nuclear weapons for military strategy to be subordinate to national strategy. I touched on this a moment ago when I said there were certain non-military means which might persuade an enemy to stop fighting, and that military action should not contradict them. As you all know, in theory, military strategy has always been subordinate to national strategy, but the awfulness of modern weapons has made it particularly important that from now on we actually do keep military strategy in its proper place.

Please take particular note that I did not say military “men” but military “strategy” should play a subordinate role in national strategy. Paradoxically, it may be that in order to restrict

the one it will be necessary to elevate the other. For in actuality it is the civilian who is forcing preoccupation with weapons by failing to provide alternate objectives and policies, and by withholding the financial resources necessary to permit a flexible military strategy. I have every confidence that the military expert, if given a wide range of goals and ample means, would formulate alternate strategies. It is primarily because his strategy is rigid that it has come to dominate affairs.

Now, if we define national strategy as the art of developing and directing a nation's resources to the maintenance of national security, then military strategy must be the art of developing and directing *military* resources to the same end. You will note I do *not* say that the armed forces are to be used to achieve *military* aims, because this is not always the case. No matter what the resources — whether diplomatic or economic, psychological or military — they should be directed toward the maintenance of *national* security, national aims — not simply military ones. Here is where we often make our great mistakes. By directing military force exclusively toward military ends, we let military strategy override national strategy, and with today's weapons such a course can be a fatal one.

For example, some years ago we decided that one means of maintaining our national security was to strengthen Western Europe. We wanted to build it up as an element of strength for the free world. To that end we developed a national strategy which included employing our economic resources in giving economic aid to Europe. At that time our military strategy was based simply on attacking Russian cities from the air if the Soviet forces moved westward. Then under fear of Soviet military aggression we began giving military as well as economic aid to Western Europe. We entered into diplomatic negotiations to form an Atlantic Alliance in which we pledged ourselves actually to defend Western Europe. This was something new. The North Atlantic Pact was not designed to have us withdraw from Europe and return, but to defend

it. When we had a monopoly of atomic weapons, our military strategy was in line with our national aim of keeping Europe whole. The economic, the diplomatic and the military elements of our national strategy were parallel.

But on the day that Russia exploded her first atomic bomb, the situation changed drastically. Since that time a military strategy based on using nuclear weapons has been out of harmony with our national aim of defending Europe. A nuclear war cannot preserve Europe; it can only insure its destruction and waste the economic resources we have poured into it. If we do not use the nuclear strategy we have devised, we must, in the absence of other means, withdraw from Europe, which, again, is contrary to our aims. If our military strategy can only produce destruction or withdrawal, it is dictating a national strategy of destruction or withdrawal whether we plan it so or not. The only way the two strategies can be brought into line with policy, is to provide weapons which will give us command of the air in order to keep Russian bombers out of Europe and lend cover to NATO forces on the ground. Tactical air power, however, remains secondary in our military scheme of things.

Putting this another way, we have one policy for peace: economic and military aid to strengthen Europe with massive retaliation to preserve the peace. And we have another policy for war: destruction or withdrawal. Our military strategy then is designed to achieve a military aim: military victory over Russia through destroying her even at the cost of wrecking Europe. Perhaps I have overdrawn the situation for the sake of brevity, but I think not. Certainly the essence of what I am saying is true; and it does not make sense. The only thing that does make sense is to make our military, economic and political strategies parallel so that they do not work at cross purposes. Only in this way can military strategy be a true servant of national policy. Our military plan in Western Europe should aim first at deterring war, and, failing this, to prosecute that war in such a way that we

can achieve a favorable settlement with a minimum of damage to a healthy Europe. We must not let our preoccupation with mass destruction weapons make us frame a military strategy out of harmony with our ultimate objectives and out of harmony with the national strategy by which those objectives are to be pursued.

Now, I said a moment ago that I might be oversimplifying our current military strategy by implying that it was an all-or-nothing concept, but I wonder if I was. We *do* have air, sea and ground forces. We have some atomic weapons of relative precision as opposed to those of mass destruction, and we still retain a certain capability in conventional warfare. But the question is: how quickly can we put such forces into action and sustain them? Are we prepared logistically to shift from SAC and total war to infantry and brushfire conflicts? Has our strategic planning for unlimited war precluded us from exercising the control necessary to keep the current conflict limited? The answers to these questions necessarily turn on our logistic capabilities, for our armed forces as instruments of control, are of no use unless they can be transported to the point of conflict quickly and sustained long enough to permit them to stamp out brushfires and regain control.

You will recall that my sixth point concerning the influence of modern weapons was that they were causing us to subordinate the role of logistics in strategy. Gentlemen, this is the trend, and we must reverse it as a brief look at the definition of strategy will demonstrate. Strategy is the art of the possible — the logistically possible. It is, as I have said, the art of directing a nation's resources for the maintenance of national security. It is inseparable from logistics because both logistics and strategy are concerned with resources. One provides them, the other employs them; and strategy can do no more than logistics permits. At the highest level of military decision it is frequently discovered, when it is too late, that a nation's strategy is restricted to what is logistically feasible rather than to what is strategically desired.

American strategy today is designed primarily to deter or destroy, and the main instrument to effect this is the Strategic Air Command. SAC rightly has priority on our military air transport system. Even if SAC is not used, ample air transportation must be held in reserve for it. The question is, whether under these conditions, M. A. T. S. is set up to implement any other strategy — especially one designed to control the enemy's actions by conventional means? Our strategic plans are apparently based on the full use of our air transportation, but what happens if an unforeseen emergency should arise?

Let's take an example which is only partly hypothetical. A few weeks ago we urged the creation of a United Nations Emergency Force to control the conflict in the Middle East. It was to our interest to keep the Suez open, and the government's policy was to get French, British and Israeli forces out of Egypt quickly so that Russian volunteers would have no excuse to move in. Our objective was to control the situation, to get the conflict back on a non-military basis, and to keep out alien military forces which might bring on a conflict of greater intensity. Air transportation was the quickest method of putting the UN Emergency Force on the scene, and we offered air transports on a limited scale to fly it to a staging area short of Egypt.

So much for the facts. The question is: could we have offered more planes without undue risk? SAC retained priority on our transport system and always will, because we can't afford to curtail in any way the effectiveness of our greatest deterrent and striking arm. The rest of M. A. T. S. has heavy commitments to other tasks: the evacuation of thousands of military dependents from danger zones, support of NATO, protection of the United States, and so forth. Moreover, what if Russian volunteers should begin moving in? Do we then drop bombs on Moscow and bring on the very war we are trying to avoid, or do we fly troops of our own into the Middle East either to limit the conflict geographically or perhaps prevent war altogether by facing the Rus-

sian volunteers with a superior force? The answer to this question depends upon our logistic capabilities.

Here is a situation in which we cannot exercise the control necessary to keep the conflict in reasonable bounds, because weapons of mass destruction have influenced our strategy in a single direction and caused us to underestimate the logistic capabilities necessary for a flexible strategy. And what has been said of air transport applies in varying degrees to every other aspect of logistics. I would also say, to the extent that the science of logistics is concerned with the movement of men, equipment and supplies, we should be making great efforts to see what nuclear propulsion can do for the development of that science.

Time does not permit me to give a full summary of the influence of weapons on strategy today and tomorrow, but this much should be said. Since nuclear power has made the offensive so vastly superior to the defensive, we must have a highly mobile weapons complex in order to retain our retaliatory capabilities. Keeping pace with this requirement is going to demand an integrated system of strategic thought in our military establishment, less concern with the separate components of air power, sea power and ground forces, and far greater emphasis on the logistic problems which a highly mobile weapons complex is bound to raise.

The new weapons of mass destruction have inflicted us with a kind of myopia. We have become so shortsighted as to plan our strategy in terms of an all-or-nothing policy when in fact, more than ever before, we should be concentrating on the middle ranges of conflict and framing our strategies, both national and military, with a view to controlling the situation in order to prevent it from degenerating into all-out war. Control requires flexibility. It requires an assortment of aims, of means and courses of action.

The strategist in the nuclear age, then, has a staggering task. He must first of all frame his plans so that they will be consistent with a wide range of national strategies all aimed at

achieving our objective of maintaining our way of life. For this task, he must provide himself, in advance, with a variety of tools, and by this I mean, men and machines, communication and logistic techniques, and, above all, brainpower and imagination. With such instruments at his command, he will have the opportunity to restore strategy to its proper level, to lift it from the depths of mass destruction to the higher plane of persuasion, pressure and control. The strategist's challenge is to provide that intelligent direction which is the essence of strategy and which alone can save civilization. It is a superb opportunity. Let us not lose it.

BIOGRAPHIC SKETCH

Professor Gordon B. Turner

Professor Turner received his A. B., A. M., and Ph. D. degrees from Princeton University. During World War II, he served in the United States Army. Following the war, he was a research assistant at Princeton University on a Marine Corps History Project.

From 1950 to 1952, he was an instructor in History at Princeton University, serving as research assistant on an Organizational Behavior Project there during 1951-1952 and as Director of the Military History Project the following year. Since 1952, he has been Assistant Professor of History at Princeton University.

Professor Turner is currently undertaking research on the History of American Military Policy under a Social Science Research Council grant and also teaching the History of Military Affairs in *Western Society* at Princeton University.

He is the editor of *A History of Military Affairs in Western Society Since the Eighteenth Century*.

Professor Turner was on leave from the University of Princeton during the first term of the 1956-1957 academic year to act as Consultant for International Relations and Social Sciences at the Naval War College.

RECOMMENDED READING

The evaluation of books listed below include those recommended to resident students of the Naval War College. Officers in the fleet and elsewhere may find these of interest.

The listing herein should not be construed as an endorsement by the Naval War College; they are indicated only on the basis of interesting, timely, and possibly useful reading matter.

Many of the publications may be found in ship and station libraries. Books on the list which are not available from these sources may be obtained from one of the Navy's Auxiliary Library Services Collections. These collections of books available for loan to individual officers are maintained in the Bureau of Naval Personnel; Headquarters ELEVENTH, FOURTEENTH, FIFTEENTH Naval Districts; and Commander Naval Forces, Marianas, Guam. Requests for the loan of these books should be made by the individual to the nearest Auxiliary Library Service Collection (see Article C9604, Bureau of Naval Personnel Manual, 1948).

- Title: *United States Shipping Policy*. 250 p.
Author: Gorter, Wytze. New York, Harper, 1956.
Evaluation: An objective, nonpartisan work written by a graduate economist under terms of a Carnegie Fellowship. It is an impartial factual discussion of United States shipping policy. Professor Gorter examines the facts concerning shipping, shipbuilding, and ship operation in the light of the various U. S. aims and policies. His conclusions are quite thought-provoking and invaluable to a current appraisal of the present United States shipping policy.
- Title: *The Communist Party of the Soviet Union*. 245 p.
Author: Meissner, Boris. New York, Praeger, 1956.
Evaluation: Essentially, this is an examination and analysis of Soviet Communist Party developments between the Nineteenth and Twentieth Party Congresses, i.e., between

1952 and 1956. Emphasis here is upon the "Stalinist heritage" and the Party's administrative activities. The appendices are particularly interesting and valuable to the researcher; there are included therein discussions of the Statutes of the Communist Party of the Soviet Union, Stalin's "Economic Problems of Socialism in the USSR" and "Collectivity of Leadership — The Highest Principle of Leadership," by F. Yakolev.

- Title:** *Diplomacy in a Democracy.* 115 p.
- Title:** Wriston, Henry M. New York, Harper, 1956.
- Evaluation:** A short but well-written refutation of the old theory that the diplomacy of a democratic nation, such as ours, must necessarily be less effective than that of other, more authoritarian, systems. The author, former President of Brown University, is peculiarly well-qualified in this subject as he is not only a long-time student of international affairs but also headed the President's Public Committee which surveyed our own Foreign Service in 1954, and recommended revised personnel procedures which are now being implemented. The author's general comments on the conduct of diplomacy, and his realistic appraisal of the impact of public opinion on international relations, are most enlightening.
- Title:** *Atomic Weapons and East-West Relations.* 107 p.
- Author:** Blackett, P. M. S. London, Cambridge University Press, 1956.
- Evaluation:** Presents one man's (British) viewpoint of the effect of atomic weapons on East-West relations, and the acute controversy as to the role of atomic weapons in Western military planning. The author has attempted to outline this role in his first chapter and has assumed that a strategic atomic stalemate does exist and that all-out war is unlikely. In the second chapter, he discusses atomic weapons and aircraft and rockets to deliver them, and the efficiency of defense measures. In the final chapter, he discusses those factors which have led to the present opinion as regards the role of atomic weapons in military planning. He also discusses the technological arms race between East and West and has concluded the official doctrine is, that Western survival depends on winning this race, although no serious attempt is being made to do so. His final remarks deal with guidelines for future military policy.

Title: *Brassey's Annual; The Armed Forces Yearbook, 1956.* 438. p.

Author: Thursfield, Rear Admiral H. G., ed.

Edited by: *Brassey's Annual* deals with matters of defense policy and strategy and the development of the armed forces of all countries, principally from the point of view of the Armed Forces of the United Kingdom and the British Commonwealth. However, three chapters are by American authors of authority. This volume is largely concerned with problems arising out of the development of weapons of obliteration, the range and speed of aircraft capable of delivering them, and out of the increasing potentialities of guided missiles.

PERIODICALS

Title: *The West in Disarray.*

Author: Spaak, Paul-Henri.

Publication: FOREIGN AFFAIRS, January, 1957, p. 184-190.

Annotation: An appraisal of the United Nations and NATO in the recent crisis finds them lacking in force and unity of action, and sees as one result of the crisis a renewed interest in European unification.

Title: *Organization of Future Armies.*

Author: Miksche, Lieutenant Colonel F. O.

Publication: MILITARY REVIEW, January, 1957, p. 78-85.

Annotation: Analyzes and describes four basic types of wars that we may have to prepare for: the total atomic war, the limited war, the conventional combat war, and the uprising or local war, and suggests the type of forces needed to fight each.

Title: *Nuclear Plenty and Limited War.*

Author: King, James E., Jr.

Publication: FOREIGN AFFAIRS, January, 1957, p. 238-256.

Annotation: Considers the defense policy as the United States' predominance in nuclear weapons declines.

Author: *Our Weakest Spot.*

Publication: Barbey, Daniel E., Vice Admnral, U. S. N. (Ret.).

Title: THE SATURDAY EVENING POST, December 22, 1956, p. 35, 73-74.

Annotation: Declares that the United States is vulnerable to surprise attack by enemy submarines and, at present, could do little to combat such an attack. The author proposes that a 500-mile security zone be declared for all foreign submarines.