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NAVAL WAR COLLEGE REVIEW

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CONTENTS

BACKGROUND OF DECISION MAKING	1
<i>Professor Herbert A. Simon</i>	
AN HISTORIC REVIEW OF FOREIGN POLICY, 1784-1944	25
<i>Professor Gordon B. Turner</i>	
RECOMMENDED READING	49



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NAVAL WAR COLLEGE REVIEW

**Issued Monthly
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Newport, R. I.**

BACKGROUND OF DECISION MAKING

A lecture delivered
at the Naval War College
on 26 August 1957 by
Professor Herbert A. Simon

Rather than pose as an expert (which, obviously, I am not) on naval decision making, or any other kind of decision making for that matter, I thought that I would explore with you this morning how one might go about training the decision processes — our own processes, or the processes of the other men in the organizations for whom we are responsible. Then, I will follow that up by some observations on current research on the decision making process which I think carries some very important implications over the next few years for decision making in military as well as civilian organizations. As a matter of fact, an important segment of the fundamental research now going on in this area — since the war, particularly — has been carried on under military sponsorship. At Carnegie Tech, for example, we have had for some years an Office of Naval Research contract for the study of logistic decisions and now are carrying on work with The RAND Corporation under Air Force sponsorship.

The Decision-Making Process

You recall the hero of one of Moliere's plays, who was surprised to be told sometime in middle age that he had been talking prose all his life. I think that talking about decision making is a little bit like telling somebody how to talk prose. We have all been making decisions all of our lives; hence, I do not think it is likely that someone can come along and tell us a lot of things about decision making that we do not already know and that are not familiar facts about our everyday decision-making processes. Sometimes, however, it is useful to review even familiar facts. Sometimes it is useful not only to talk prose but to be aware that one is talking prose, and to look a little bit at one's own processes when he makes decisions.

One can find analyses of the decision-making process that will seem reasonable and common sense by going back in both the literature of psychology and the military literature. In psychology, people who are interested in decision making often go back to a famous passage in one of John Dewey's books, in which he laid out the elements involved in orderly problem solving or decision making. Likewise, in the military there is a process that has become formalized over the years as "the estimate of the situation." This is, basically, an outline of the processes and stages that one goes through in solving a problem in an orderly manner. I understand that considerable attention will be devoted here in your courses of training to the use of the estimate of the situation as a tool in military decision making and military planning.

There is nothing very abstruse or peculiar about either Dewey's problem-solving steps or the theory underlying the estimate of the situation. In order to make a reasonable decision, there has to be an objective or a goal — something we are trying to accomplish. So, somewhere along the process — and usually early in the process — it is a good idea to get clear as to what that objective or goal is. I am sure that many of you know, and maybe practice, the familiar ploy by which you can set almost any committee meeting into an uproar; that is, after there has been an hour and a half or two hours of fruitless discussion about this or that, to turn to the other people at the table and say, "Now, gentlemen, what is the problem?" In naval conferences perhaps that question gets asked earlier than the end of the first hour. Believe me, I have sat in plenty of committee meetings where the question upset the whole proceedings!

Let's suppose that we are solving problems in an orderly fashion. First, we have stated the objectives. Second, according to most of these schemes of problem solving, we are supposed to find the alternative courses of action: what are the things that we might do? Third, we are to evaluate each course of action: what will happen? what are the consequences? will I achieve my

objectives? what side effects will it have for good or for bad? Fourth, having made evaluations and perhaps tentatively agreed on a course of action, we have to do some final checking against particular things that we want to be sure to take care of. Finally, but not always the easiest part of the decision-making process, we act on our decision.

One can find these elements listed in a variety of ways and in different terms, but I think that the list tends to boil down to the basic, very familiar, and very common-sense elements I have mentioned: (1) clarifying, stating, or defining the objective; (2) finding some alternative courses of action that give promise of attaining that objective; (3) evaluating the actions in terms of the objective and in terms of side effects; (4) checking the action out; (5) acting on the decision.

Search Process and Evaluation Processes

Another way of looking at the decision-making process would really boil it down to two sorts of things — two more elementary processes that are involved in all of the steps I have mentioned. First, of all, there are *search processes*. One looks around for plans of action. What are the things that I might do in this situation? One tries to search these out and to elaborate on them. Then there are the search processes involved in discovering the consequences of an action — if I do this, what will happen? Second, there is the *checking or evaluating process*: taking a course of action that has been developed, setting it up against some standards, and then seeing whether it meets the standards. If we really looked in detail at what somebody does when he is going through the stages of the decision-making process, I think we would find that we could further analyze these stages into a whole succession or complex chain of search processes and of checking processes intermixed.

In a sense, what I have said so far perhaps sounds not only like simple and common sense, but perhaps it sounds even simple-

minded. Anyone who has seen an experienced and capable executive go through the processes of making a decision has a feeling that when one mentions these common-sense elements he has left out the important part of the problem.

There are some names for the important part of the problem that is allegedly left out. We say, "Well, yes, you go through these steps; you search and you check. But there is also a big 'X' here: there is a judgment factor. A person has to exercise judgment; he has to have intuition. He cannot just go through these steps in an orderly and logical fashion. In addition, he has to have some intuition if he is to make good decisions." In decisions that involve coming up with a novel course of action or something new that has not been tried before we say, "Well, sure, but there also has to be that spark of creativity."

We have these labels: judgment, intuition, creativity (maybe you can think of some other synonyms for them) to signify that we really do not think that one can solve difficult problems in an intelligent way just by going through the stages that I mentioned earlier.

One of the important and interesting questions about the decision-making process is just this: Is there something more in the form of judgment, intuition, and creativity; or are the stages of the decision-making process I named earlier and the simple processes or search and checking all there is to it? Is that all the human mind is doing in solving problems?

I would like to leave that question open for just a few minutes and talk about the ways in which we might develop, train, and improve at least those parts of the decision-making process we can put our fingers on. Even if there are intangibles that we perhaps do not understand too well, there are some tangibles that we do not understand and that are discernible in human decision making and in good decision making — the stages and processes that I have mentioned. How can an individual or an organization go about improving those processes?

Decisions of Encounter and Set Pieces

That question really ought to be answered in two parts, because the kind of training one does depends on the sort of decisions one is talking about. For this purpose, I find it useful to talk about decisions of *encounter* and decisions that are *set pieces*. The motions behind this distinction — if not the terms — are familiar to anyone in military or civilian life, too. On the one hand, there are decisions that arise because an occasion arises — either is made to occur by the enemy, or by the weather, or by something else — in which action is called for, and a decision has to be made as to what that action is going to be. The set-piece decision occurs in situations in which there is a lot of time to plan out a future course of action. A characteristic example are the decisions that are made in designing a ship. These are quite different from the decisions of encounter, like the tactical decisions that have to be made in a battle.

In distinguishing these two classes of decision I do not mean to imply that very different psychological processes are involved, or that the way the wheels turn in the brain is drastically different in the two cases. I do not think that is so. I think the differences are in the occasions under which the decisions are made: the kinds of information available, and the time element or speed with which the decisions have to be made. It is because of these differences in the way in which the decision occurs, rather than the differences in the basic mental processes, that we are talking about them separately.

The main characteristics of the decision of encounter are that, first, the occasion for making the decision is usually determined by somebody else or by the environment, by nature or the enemy; second, and as a consequence, the decision has to be made by a certain time — usually as soon as possible or day before yesterday — at any rate, it has to be made under extreme time pressure. There is no point in talking about decision-making processes that do not get the decision made in that time.

The set-piece decision is more often made on occasions determined by the decision maker himself, or by others in his organization. In a large military or business organization, it is often one's commander or one's boss who decides that there is an occasion for a decision — and then the individual makes the decision. In other situations, the individual himself decides that there is something to make a decision about — and he makes it. The time pressure is usually much less than it is in the decision of encounter. There are usually much more elaborate procedures for checking a decision, or for erasing, so to speak, and making corrections in the decision, because you do not take action immediately upon formulating a plan. So, again, in the case of the design of an elaborate structure, or the design of a ship after a set of designs has been prepared, there remains time to review the designs from a variety of standpoints. They can be checked and cross-checked, and can be modified.

Although from this description it would seem that decisions of encounter are the more difficult to make, and that a man would have to be a natural-born decision maker and have good judgment to handle such decisions, in other respects it is more important for people to train themselves — and to train others in their organizations — for decisions of encounter than for the set-piece decisions. This is because of the very fact I have just mentioned: the opportunity for error correction, the interval between decision making and action is so much less in decisions of encounter. Therefore, one had better have a good initial decision-making process if he wants to avoid disasters.

Training for Decisions of Encounter

I think that if a man will look back over his own military training at various stages of his career he will see some obvious things that he can do to become more capable in handling a decision of encounter.

One can train a man so that he has at his disposal a list or repertoire of the possible actions that could be taken under

the circumstances. He knows some of the things that one can do and that appropriately can be done. While that seems very obvious, people are not born with that kind of knowledge. If you compare the behavior of a person who is driving a car for the first month with the behavior of a driver after four or five years of experience, one of the important differences is that when a situation arises in which action needs to be taken the person who is new at the game does not have immediately at his disposal a set of possible actions to consider, but has to construct them on the spot. Constructing possible actions is a time-consuming and difficult mental task. Similarly, the decision maker of experience has at his disposal a check list of things to watch out for before finally accepting a decision.

Both the list of actions and the check list of side effects and other consequences to watch out for tend to be specific to a particular class of decision-making situations. Probably there is not a lot that can be done, on this score at least, to train a man in general for decision making — so that any emergency that arises will be met by instantaneous and appropriate decision. But, people can certainly be trained to respond in a very rapid fashion with possible courses of action and with checks on courses of action in any particular area of human endeavor — as, for example, handling a ship in a tactical situation.

A large part of the difference between the experienced decision maker and the novice in these situations is not any particular intangible like “judgment” or “intuition.” If one could open the lid, so to speak, and see what was in the head of the experienced decision maker, one would find that he had lists of the kinds that I have described; that he had at his disposal repertoires of possible action; that he had at his disposal check lists of things to think about before he acted; and that he had mechanisms in his mind to evoke these, and bring these to his conscious attention when the situations for decision arose. Most of what we do to get people ready to act in situations of encounter consists in drilling these

lists into them sufficiently deeply so that in fact they will be evoked quickly at the time of the decision.

Training for Set-Piece Decisions

When one turns to the more deliberate or set piece kind of decision, training is in some respects less important because of the opportunity for self-correction. I think the kind of training for decision that we want here is less specific to the situation than training for decisions of encounter. One does not have to know all about the technology of the particular situation with which he is dealing. If one is handling a ship and something has to be done about it, he has to know, then and there, the technology of handling a ship. If one is designing something, it is good to know all about the technology of that design, but, if the time pressures are not too severe, one of his techniques can be to sit down and acquire the technical information which he does not have at the moment.

Orderly Problem Solving. So the training one wants to give people to improve their capacity for making set-piece decisions is more general training in orderly problem solving. An initial training goal is developing a habit of looking at a problem in an orderly sequence of steps. One important role of the estimate of the situation is not simply to have a check list in front of a man when he is making a decision and saying, "Do this; then, this; and then, that," but to have it as a training device so that the habit of approaching a decision-making situation can be built into a man, and he responds to the situation automatically in that way — even when he is not using the formal estimate of the situation as his decision-making device.

Alertness to Innovation. On slightly less familiar ground — at least, less familiar in terms of existing training programs for decision making — a great deal can be done (and very little is done) in organizations to develop the skills of actively looking

for occasions for decision and actively looking for novel alternatives of action. If I had to characterize the strengths and weaknesses of typical organizations in decision making, I would say that an organization that engages in a particular kind of activity for any length of time soon develops the check lists and the repertoires of action that enable it to respond promptly — and, usually, more or less efficiently — to situations as they arise. But it is often deficient in its development of prods and of triggers that set it looking for a problem when the problem is not presented by the environment. By and large, organizations do not seem to do as good a job of thinking up problems that have not been presented to them as they do in dealing with the problems that are presented to them with some urgency. Let me give you a concrete example from some research we have been doing on decision-making processes in business.

We have been looking at a number of companies that have recently decided to acquire electronic equipment (digital computers) to help with their accounting work. We have been interested in seeing how they went about selecting a particular computer from among the various ones that are available to them on the market. We have been equally interested in discovering why they got involved in this particular decision at the time that they did. It turns out in this case (it certainly is not true in the case of every fad and fancy) that almost all companies in the past five years, when they have gotten around to considering the computer decision, have ended up by deciding that they wanted a computer.

I do not want to argue here whether they should have or should not have decided that; whether it was a wise decision or not; whether it was because it would save them money, or because the vice president felt embarrassed with his golfing companions if he did not have one of these toys in his office. But, whatever the reason, the decisions have been nine to one — or, perhaps, nineteen to one — in favor of acquiring computers. From

a little contact with some naval installations, I gather that somewhat the same process is going on in the Navy at the present time: that computers are being acquired in large numbers and for a variety of purposes, Yet, there were great differences in the promptness with which companies looked at their own accounting and clerical problems and raised for themselves seriously the question of whether they ought to have such a device.

The real variation was in selecting the occasion for decision, and not in the content of the decision that was thereafter reached. One gets the impression in business organizations (and maybe this would be true of military installations as well) that the big difference between the organization that is just sort of getting along and the organization that is really on its toes does not lie in the care or skill with which they evaluate alternatives when somebody presents them with the alternatives and says, "Look! You decide!" — but that the big differences lies primarily in the promptness with which they detect new challenges in the environment and the promptness with which they detect new problems and new opportunities for innovation and for change — and respond to that challenge.

If one were to go into an organization and improve it on this score, one of the main things he would try to do would be to develop habits of systematically looking for occasions for decision, of systematically scanning the whole horizon and saying, "What new things are there in the world today — new technologies, new states of affairs, as far as the world situation is concerned — that this organization ought to be responding to, or ought at least be attending to — on which it ought at least have a study group?"

I know that in large organizations — military and otherwise — there are some built-in procedures of this kind. I am simply reflecting an over-all observation about organizations: that even though procedures of this sort are developed to a certain extent, they are still by far the weakest part of the decision process.

Organizing for Effective Decision Making. In addition to training to develop an orderly decision-making process, and to develop a process that will actively *search* for occasions to make decisions instead of them being presented, a third approach is to look at the organization structure itself as a major determinant of the way in which the individuals who have been put in that organization make decisions.

Let me first cite an industrial example, and then let me pose for you a probable example, from the military standpoint. If the shoe fits, you can put it on; if the shoe does not fit, you can throw it at me and I will try to dodge it up here.

The industrial example is this. I can tell an audience of business men a little story about a conference that involves the sales manager, the production manager, the product design man, the production-scheduling man, and two or three other characters that I can bring into the scene. This is a session in which these gentlemen are trying to straighten out some of their scheduling problems. I can construct a little dialogue in which the salesman says: "Well, if this factory had a little more flexibility in meeting customers' specifications and delivery dates, we would be able to build up our sales."

The production manager then says: "If you salesmen were not always promising day-before-yesterday deliveries to our customers, we could maintain an orderly schedule in the factory."

I won't bore you with the rest of the recital, but those are just characteristic complaints that one can hear in almost any business concern.

The usual reaction of a business group to this story is: "Gee, have you been planting microphones around my company?"

A sales manager reacts like a characteristic sales manager because different telephone calls and different letters come to his

desk than come to the desk of the production manager. He is praised and blamed for different things than is the production manager. The whole world of company decision making looks to him a somewhat different world than the world of the production manager. If you asked them about it, both of them would say: "Well, what we are after is company profits." But, company profits to a sales manager primarily means satisfied customers — customers who get what they want when they want it. Company profits to a production manager largely means low costs and large-volume production in the factory. It's like the story of the blind men who were looking at the elephant: one grabbed it by the trunk; the other grabbed it by the tail; they saw two entirely different elephants. Similarly, there are two entirely different views about how one can make profits in the company.

Executives do this not because they are stubborn people, not even because they are power-hungry — although the desire to get ahead in the world motivates people in business as it does in other organizations. They do this in considerable part simply because they are responding to the part of the environment that they see. The sales manager is shielded from the problems of the production manager because those problems are handled in the factory. The production manager never has the angry customer on the other end of the 'phone.

When we look at some of the problems that arise in the Department of Defense in connection with Armed Forces' Unification, irrespective of whether we look at these from the standpoint of one of the Services or whether we stand outside as a layman and grumble about all of the politics going on, we should realize that what is going on here is not merely (although surely there are elements of this involved) jockeying for a position in a large and complex organization, each unit trying to get its part of the organization into a position of power. Really, there are a number of people looking at an exceedingly complex situation — a situation that is far too large for the computational powers

that an individual human mind has available. Therefore, they are seeing enlarged the particular part of the situation for which they have particular responsibility, the part that is brought to their attention in their day-to-day operation — and they are perhaps seeing as rather small those parts of the situation that are other people's responsibilities and in other people's environments.

In these complex situations that organizations have to deal with — and certainly it would be difficult to find one more complex than the one which I am using for an illustration here — human beings tend to fix on subgoals. They tend to deal with a part of the problem rather than the whole problem — partly because they are operating against the very limits of their own thinking and computational abilities. A large part of the difficulty we get into when we try to put the parts of such a complex organization together stems not from failings of human motivation, not from stubbornness, not from desires for power or prestige or advancement — but from the fact that the people who are in the situation are simply seeing different worlds.

I think that some recognition in organizations, and some understanding by the decision makers, of this fact — and that it is a fact we are not going to do away with, for we are not going to make these problems very much simpler — might make them a little more tolerant and understanding when they try to deal rationally — or, what seems to them rationally — with persons who see the situation from quite a different standpoint and who are exposed to quite different parts of the problem. Related to this, we would see the problem of putting together a complex organization — putting together the Department of Defense, putting together the Navy, or even putting together one part of the Navy — as a problem of designing the environment of the individuals who have to make the decisions in that organization. We would try to design the environment so that the various specialized considerations that have to contribute to decisions are not lost sight of (we do have to have specialists), but, at the same time,

the differences are not exaggerated by the partial views that individuals have of the problem.

Military organizations long ago developed at least one important device for accomplishing this, or for helping to accomplish it — and that is rotation of duty. I know there are always mixed feelings about this in any organization that adopts the procedure — and certainly in an organization that adopts it as rigorously as does the Navy — feelings that one never really has a chance to acquire specialized knowledge about any one subject. But, against this, there are very great advantages.

When you sit across the table from an officer who has different responsibilities from yours and try to reach a decision with him, you can at least appreciate that if he views the problem a little differently than you view it, and if he comes up with somewhat different answers, it is not because he is full of human cussedness. You can appreciate, from other assignments you have had in the same organization, his point of view and the problems he is facing. Industrial organizations are increasingly adopting the technique of horizontal transfer of people — that is, rotation — as a device for giving executives this broader interdepartmental point of view.

These comments on how to make people in an organization more effective decision makers in set-piece decisions are, to be sure, generalizations. But, perhaps they also provide a check list against which to measure an organization or organizational unit. One can look at an organization and ask himself these questions:

First: "What are we doing to develop the decision-making skills of the members of this organization? what are we doing to get people to look at problems in an orderly fashion? what are we doing to internalize as a part of their own habit structure, or their own personality, the kinds of steps that are involved in the estimate of the situation?"

Second: "What are we doing to building into them habits of looking for occasions of decision, or scanning the horizon?"

Third: "What are we doing to arrange this organization so that people will be exposed to the kinds of experiences and contacts with the relevant parts of the world that will, in itself, bring to them the considerations that are important and relevant when they come to a decision-making situation?"

Toward a Science of Decision Making

Let me pass from the problem of training in decision making to one other topic; then, I will close. We often make the distinction between science and art in terms of the difference between those things that can be stated and taught through quite explicit principles and those things that are handled by people without knowing exactly how they handle them, without being able to state very explicitly what they are doing when they are handling them, and without being able to be explicit in training other people to handle them. I do not suppose we have any doubt that decision making has been largely an art rather than a science. I do not think that anything I have said this morning about the process would take it out of the category of art and put it in the category of science. Nevertheless, I have a deep conviction (and I will try to give you some of the basis for that conviction) that this state of affairs is about to change — is, in fact, changing already.

Both the military services and our civilian economy have gone through a tremendous technological revolution in the last fifty years, which I do not need to detail to you. One of its consequences has been that the practical arts — the arts of making things and doing things in the everyday world — now rest for the first time on a foundation of fundamental research in the physical sciences. It becomes less and less possible to be effective in the practical arts without a bridge back to underlying knowledge of physics, chemistry and the other physical sciences. In one respect the most important aspect of this revolution is that it has

created the college-trained engineer as an essential intermediary between the basic physical sciences and day-to-day practice.

I believe that the change now coming about in our knowledge of the decision-making process is going to produce a corresponding change in the relations of the practical, everyday affairs of running, constructing, and designing organizations to the underlying human — behavioral or social — sciences. We will shortly be in a situation in which the men responsible for designing and operating organizations will have to build a bridge back to the behavioral sciences. It is entirely possible to make good decisions according to present-day standards without knowing anything in a formal way about psychology. This is a matter of considerable regret and chagrin to psychologists, and to others of us who are in the behavioral sciences and who would like to think that the world of practical affairs had some dependence upon us. What I am asserting — and I hope to produce a little evidence in a moment — is that this state of affairs is going to change rather drastically.

Let me give you a few of the signs and portents of this change. All of these developments belong to the post-World War II era, and most to the last ten years or less.

Theory of Games and Operations Research

We have had the invention of something called *Theory of Games and Economics Behavior* by the late John von Neumann, one of the most brilliant mathematicians of our generation. There was a period just after the war when some people — mostly scientists on the fringe of the military — thought that the *Theory of Games* was really the clue to fighting wars in a scientific fashion; that one formulated the military problem up as a game problem. Then one found the best strategy by mathematical means, according to the techniques of von Neumann and Morgenstern, one issued some directives based on this strategy, and then the battle was won. If there were any such illusions, I think that these have departed.

But the mathematical *Theory of Games* has, in a very important way, illuminated the concept of strategy and the concept of surprise. Whether any of you have been exposed to the theory in a formal way or not, a great deal of what goes on now in military instruction and in military war gaming in the armed services has been influenced and affected by some of the basic concepts that were developed in the *Theory of Games*.

Second, there is something abroad called "Operations Research," which I won't try to define because you can find about as many definitions as you can find operations researchers. One view is that it is common sense and mathematics applied to problems to which they had not been much applied before. By this definition, the Theory of Games is a part of operations research. Since the war, techniques have been developed that allow one — by the use of fairly high-powered mathematics and computing machines — to make good decisions in complex situations; in fact, to make decisions that are at least as good in some cases as those made previously by men of considerable experience using rule-of-thumb techniques.

The greatest successes of operations research techniques to date have been in such areas as inventory and production control; the scheduling of oil refineries; the scheduling of shipments from warehouses, and similar problems. Some of these techniques are now being used in military installations. In fact, this development actually first started (as many of you know) in the military. Operations research techniques have been applied to a number of naval and military problems, like the submarine search problem. You are better able than I to evaluate with what effectiveness they have been applied.

But I think the significance is this: in some areas of decision making one can now substitute, for what the man of judgment used to do, formal techniques making use of mathematics and computers. The area in which one can do this is still relatively

limited. The kinds of industrial problems I have mentioned are those that occupy the attention of a factory manager or a factory scheduler rather than a vice president. We have not displaced very many vice presidents yet — but, the development and the trend is nevertheless significant.

Routine, Well-Structured and Heuristic Decisions

What about the vice presidents? What about the whole host of decision-making situations where the decision is not a very precise thing — where it is not a question of how many “widgets” are to be kept in stock or how many are to be shipped out this month, but where the decision maker is faced with a rather ill-defined problem: where there are not any known automatic ways of cranking out a solution, and where the traditional elements of judgment and intuition have their field day? Is there really any prospect that we are going to understand these processes in the near future or that we are going to be able to do better than the human mind in performing them? I think there is such a prospect. Let me clarify what I am saying by making a couple of distinctions.

First, there are decisions that are of quite a routine sort: cut-and-dried decisions. One can write them out in an SOP in fair detail. Then, having written out an SOP, one can get a clerk to do them, or, sometimes, one can even get a machine to do them. many of the tactical decisions of air defense are of this kind: that is, the decisions involved in operating an air defense installation or a surveillance operation. As long as one's patience lasts, he can set down in considerable detail what a person ought to do, and he can reduce a large part of the process very nearly to a clerical routine.

Second, there are decisions that one might call “well-structured.” One knows what the objective is; one can even measure the payoff in dollars or some other unit. One knows what the alternatives are: as in the inventory or production control decisions,

or many of your logistic decisions, at least in peacetime. Operations research techniques are gradually giving a broader and deeper understanding of these well-structured decisions, and gradually showing how to supplant human decision-making processes with machine processes.

Now I will talk about a third class of decisions. Let me give them a name. It is not a very familiar word, but it is the closest thing that I can find in the dictionary — let's call these "heuristic" decisions. These are the unstructured decisions, or those that are not very well structured. They are the ones that involve intuition and judgment, if anything does.

Research on Heuristic Decisions

Within the past several years, there have been several successful attempts to program an ordinary digital computer — a large one, but no larger than those now on the market — to make decisions of this kind, and to make them essentially by imitating the processes that humans use in making them. I can outline just briefly the furthest developed example.

If you think back to your high school geometry, you will perhaps recall that getting a *proof* of a theorem was kind of a high art. There was not any systematic way of cranking out answers to problems, or of rearranging things in an orderly way as there was in algebra. In high school geometry, you just had to have a good idea to find a proof for a theorem. If you did not get the proof, and a fellow classmate or the teacher did, it always had an element of surprise and trickery in it. "How did he ever think to do that?"

In research that is going on cooperatively between Carnegie Tech and The RAND Corporation (which is an Air Force contractor), we picked a problem like the geometry problem (it happens to be a problem in symbolic logic, but it has very much the flavor of Euclidean geometry), and we asked ourselves whether we could induce a computing machine to discover proofs for theorems in

much the same way as in high school geometry. We now know how to do this — the machine can prove most of the theorems in Chapter II of *Principia Mathematica* — which is not going very far, but perhaps as far as one could go with a class of college sophomores in a semester.

In the course of doing this, we think we have learned a good deal about how human beings solve problems heuristically. We did it not by using the brute force of the machine — not just by making the wheels turn faster. We did it by imitating as closely as we could the processes we thought we saw humans going through.

This research answers one of the questions I posed in my opening remarks: Are there some mysterious things hidden in those terms of “intuition” and “judgment?” Are there some processes going on that are over and above the common ones that have been observed in the problem-solving process? I think the answer is quite generally “No.” Judgment and intuition — at least, insofar as our imitation of this particular area of human activity is concerned — turn out to be just more check lists of things to look at, things to think about, and things to try first. Successful problem solving in this unstructured, heuristic area is largely a matter of judicious balance between willingness to search a range of possibilities (even though one is not sure that any of them is going to work) and having good facilities for evaluation of those possibilities so that one does not waste all his time in trying them out.

The monkeys in the British museum did not succeed (you remember they were trying to type out the works of Shakespeare by sitting in front of typewriters and pecking at random) simply because the number of possible sequences that one can type on the typewriter is so large that they never got around to the particular sequences which correspond to the works of Shakespeare.

The reason why a computing machine, programmed as machines usually are for operations research or for scientific computing problems, would not be able to type out the works of Shakespeare is that it would not do *enough* random searching; it would not do *enough* exploring. It would be tied down to the basic computing program that one gave it.

What humans do down in this area is to search selectively — not to search completely at random, but to be very sensitive to the kinds of cues that arise as they go along. If you have children at the Easter egg-hunting age, you will have observed that it is very easy to hide an Easter egg so that a child will take an hour or two hours to find it. He will even get angry with you before he finds it. But if you tell him when he is getting warmer and when he is getting cooler, he can find the same egg in the matter of a few minutes.

All that we are able to discover in the processes of heuristic or judgmental problem solving is that the problem solver, while he does not have any way of turning a crank and systematically reaching the conclusion, does know enough about the situation so that while he is exploring he can at the same time be evaluating the “warmer” and the “cooler” of his explorations. If we can program a machine to do this (as we now can — at least in some areas), we can get the machine to do judgmental problem solving.

I do not want to make a prediction as to how many years it will be before machines will be doing better than vice presidents do now, nor the corresponding statement about military ranks. Nor do I want to predict when machines will be more *economical* problem solvers than people.

You are perhaps familiar with the Air Force story (or, maybe it is a Naval Air Force story) about a pilot who was told about the marvels of the new pilotless aircraft, and all the things

they would do: the feed-back controls, and the servomechanisms that control these aircraft.

The officer's reply was: "Yes, but where can you get a non-linear servomechanism for \$600 a month that reproduces itself?"

So, I am going to be a little wary about my prediction. What I will be bold to predict is that we are now on the verge (or over the verge) of understanding the human problem-solving process in some of its vaguer and more mysterious manifestations. The line that has been drawn up to the present, limiting the things one can attack with systematic techniques and high-powered mathematical tools, is becoming obscured. The opportunities for these tools are moving directly into the area that has been traditionally called "judgmental decision making."

I do not want to make any very definite predictions, nor do I want to argue whether, when a machine is doing these things, it is "thinking" or not. You can decide how you want to define the word "thinking." I do discover (as also my colleagues and other people who have worked in this area) that when a machine has been programmed like this, after a few days it becomes very hard to refer to the machine as "it" instead of "he." But that is another question.

It would be my guess that these developments are going to have a major impact on the processes of running organizations — both military and civilian organizations — not in the distant future, but in our lifetimes. I do not feel a real hesitation in saying that it is going to have an impact within the next ten years.

What I said earlier about set-piece decisions would apply at the present time to the need to be alert to these impending changes. It is exceedingly important at the present time that organizations in our society have their scanning mechanisms

turned to this particular part of the horizon; that they begin to attend to and evaluate the possibilities of a revolution in our decision-making technology and in the whole man-machine relationship in organizations that will be a consequence of this revolution.

This recommendation will seem less strange perhaps to the organizations which you here represent than to almost any others because you have already had important changes in the man-machine relations — particularly in observational and surveillance techniques — in military operations. What I foresee is a similar shift on a much larger scale, affecting a much larger part of the total range of activities that are now carried on by human beings — by these non-linear self-reproducing servomechanisms. Research is going on in this area in the military at the present time, and there is some indication that research is also going on in Russia. On the whole, our development appears to be somewhat further along than the Russian, but there are probably people in this audience who are better able to evaluate that particular aspect than I am.

In Conclusion

I have talked already a few more minutes than I had intended to. Let me stop on this note and suggest that in the discussion period I would be glad to carry the discussion further on the problems of training people to become more effective decision makers in either of the two types of decisions I have mentioned; or, if you like, I would be glad to be more explicit about some of the things that I have said very vaguely and very briefly concerning the impending mechanization of decision making.

Thank you very much!

BIOGRAPHIC SKETCH

Professor Herbert A. Simon

Professor Simon was graduated from the University of Chicago with an A.B. degree in 1936, and received his Ph.D. from there in 1943.

From 1936 to 1939, he was associated with the University of Chicago as a research assistant and staff member of the International City Managers Association. After three years as Director of Administrative Measurement Studies, Bureau of Public Administration at the University of California, he returned to the Illinois Institute of Technology to become a Professor of Political Science. He became Chairman of the Department of Political Science in 1946.

Professor Simon has held positions with the United States Bureau of the Budget, the United States Census Bureau, the Cowles Commission for Research in Economics, and has served as Consultant and Acting Director of the Management Engineering Branch of the Economic Cooperation Administration. Since 1949, he has been a Professor of Administration and Head of the Department of Industrial Management at Carnegie Institute of Technology in Pittsburgh.

Professor Simon has been the author and co-author of several books relating to his field, including *Administrative Behavior* and *Public Administration*.

AN HISTORICAL REVIEW OF FOREIGN POLICY, 1784-1944

A lecture delivered
at the Naval War College
on 18 September 1957 by
Professor Gordon B. Turner

Gentlemen:

I have been asked to take a look at the first 160 years of American foreign policy from the lofty eminence of 1957 and, having taken that look, describe for you this morning just what foreign policy is, and what limitations are imposed upon those who frame it. This is the kind of assignment that makes association with the Naval War College so stimulating for civilians. It is at once a challenge and a source of pride that the naval staff should place such faith in the synthesizing powers of the academic mind. Since I have no wish to disabuse that trust, I am not at liberty this morning to follow the line expounded by some scholars — that for the most of our history we have had no foreign policy. For to do that, you see, would inevitably bring me to the end of this lecture with the rather bizarre statement that, having conducted a survey of American foreign relations, I can only conclude that there is no such thing as foreign policy.

But, of course, there is; it depends upon how we define it. If we were to agree with Ambassador Hugh Gibson that it is “a well rounded, comprehensive plan, based on knowledge and experience, for conducting the business of government with the rest of the world,” and that it is aimed at promoting and protecting the interests of the nation, knowing, of course, just what those interests are — well, in that case, we might say: we have no foreign policy. By his definition he has made the job too tough. How can it be expected that we should have a concrete plan for everything we do in world affairs? How can we be sure to protect the national interest when we don't always have knowledge

of the intentions and means of other nations, and, indeed, when we cannot even know precisely what our own interests are?

The national interest is another one of those elusive concepts which cannot be pinned down with exactitude. One distinguished American historian has written two fat volumes on the subject and has concluded that there has never been a single national interest which could be accepted by all as such. Walter Lippmann has written that for fifty years after the Spanish-American War the American people could not agree on what the true national interest was and therefore had no settled and generally accepted foreign policy.

So where do we stand? The first thing to be said is that foreign policy is too complex and elusive a term to lend itself to precision definition. On the basis of American history, immediately discard the idea that foreign policy entails having a comprehensive plan for everything we do in behalf of the national interest. As much as we would like to have one, as much as the military establishment feels the need for a positive directive for its own planning purposes, it is simply beyond the realm of reason to expect one in this area. And if we do expect one, we shall be deluding ourselves; we shall condemn the government for its failure to perform the impossible, and, perhaps to our detriment, we shall continue to wait for the impossible to occur.

This is a point I should like to underscore. Military personnel are accustomed to framing concrete plans; they study the planning process; they act on the basis of plans laboriously constructed, and it is essential that they should do so. Being the implementers of the nation's foreign policy they look to the State Department to give them a long-range directive which will enable them to formulate a military policy, to place orders for complex military hardware, and to set in motion the vast planning process by which ideas are turned into action. Unfortunately, the State Department is not always in a position to fulfill this expectation.

And if it did attempt to do so, if it did lay down concrete plans and rigid formulas, it would only have to alter them to meet new circumstances or damage the nation's security beyond repair.

Mr. George Kennan, that brilliant practitioner and expositor of Soviet-American relations, has said that foreign policy is reconstructed every morning, implying thereby that internal and external factors impinging upon foreign affairs change so rapidly that policies must be constantly reviewed and revised in order to keep them up-to-date. Others talk about the "seven year itch," referring, of course, to the fact that certain weapons require seven years from drawing board to mass production. They plead for a closing of the gap between seven years and every morning. They refer to matters military and technical, saying that the seven years cannot be reduced and that long-range planning is the very heart of military security. In this, they are correct.

They then go on to say that the Department of Defense must lay its plans in accord with national policy because military and foreign policies must not be allowed to get out of balance. In this, also, they are correct. Finally, they come to the conclusion that in order to close the gap foreign policy makers must be forced to make hard and fast decisions about how we will act in world affairs for the next several years. They must frame and promulgate a concrete, long-range plan on which the military establishment can act decisively. Here, gentlemen, they indulge in wishful thinking. And when they go one step further and charge that because State has no such plan it has no foreign policy, they are in error. Why? In order to answer this question we shall have to find out just what foreign policy is.

To begin with, foreign policy is a whole cluster of things, including courses of action and statements of intention. It is an accumulation of doctrines, traditions, ideologies and decisions previously made. It is a pattern of behavior toward other nations designed to promote and protect national ideals, principles and

material needs. It is a system of adjusting means to ends, factors to goals, power to principles. It is a set of aspirations and objectives.

I wonder whether I am reading your minds correctly. Are you thinking? Wow, here we go into the wild blue yonder of abstraction? Well, we are. I don't deny it. The very nature of the subject requires it. But I'll do my best to get down to earth before the hour is over.

Let's look a little more closely at this cluster of elements which is foreign policy as a first step in our descent to the concrete. I spoke of courses of action and statements of intention. More precisely, foreign policy constitutes a continuing evolution of courses of governmental action and reaction with reference to the governments of other nations. For example, the Monroe Doctrine evolved gradually. Originally, it constituted little more than a wish or a hope that we in this hemisphere might be left to work out our destiny unmolested. For the first thirty years or so it was not even considered a doctrine, but simply an aspiration. It was many decades before we put it into action by our own strength, and extended it to mean that we exercised police power over our near neighbors. Nevertheless, throughout its entire period of evolution from mild hope to tough action, it was a foreign policy of the United States.

It is sometimes thought that a government must ceaselessly be engaged in positive actions with respect to the rest of the world or it is drifting without a firm policy to guide it. But a policy of inaction may be policy nonetheless. The extended period of American withdrawal from European affairs during the nineteenth century did not mean the absence of policy. Withdrawal was not only a deliberate decision but a decision repeatedly affirmed in the most emphatic terms.

A recent example of inaction being characterized as lack of policy was the United States Government's behavior toward Japan in the 1930's. Lack of policy, it is said, precipitated Pearl

Harbor. The Roosevelt administration, however, *did* have a policy toward Japan — a negative one, to be sure — perhaps it can be called a deliberate policy of drift because we did not have the physical means, the moral power or the will to do more. *But*, for good or ill, it was a conscious policy of letting events take their course in the Far East while we concentrated on doing what little we could with the means at hand in another portion of the globe. We are at perfect liberty to condemn this policy, but we should not deny its existence.

There are occasions, of course, when mere statements of intention constitute foreign policy. A government has an objective or a set of objectives and aspirations which it announces publicly or more discreetly through diplomatic channels. If it has the strength in being to carry out its words, it may not have to act at all. The announcement of intent will be synonymous with achievement; the statement of intent itself constitutes action in this case. Where the announcement is official and is obviously meant as a serious and sincere statement of purpose, it must be considered as foreign policy even though the means of implementation do not immediately exist. Such was the case with the Monroe Doctrine which we did not have the means within ourselves to carry out, should other powers hold it in contempt.

Another illustration of how statements without power may constitute foreign policy is to be found in the Open Door Notes. Secretary John Hay began in 1899 by seeking declarations from all the powers then engaged in dismembering China that they would not discriminate one against the other within their own spheres of influence. Although all of these powers made it clear that they had no intention of helping the United States in this endeavor, we continued to expand our statements of intention until American policy in the Far East finally came to be defined as maintenance of the integrity of China and the Open Door in the Orient. Now, this was no self-implementing policy and the United States certainly lacked the armed might to enforce it against the will of the

major Pacific Powers. Yet, the United States Government continued to stagger along, proclaiming principles, compromising where necessary, until, a quarter of a century later, it managed to get a nine-power agreement embodying the principles of the Open Door and the territorial integrity and administrative independence of the Sick Man of the Far East which it had so long sought.

This was all achieved through diplomatic means, but let's look at foreign policy in time of war. Either courses of action or statements of intent precipitate wars, but what happens in the midst of war itself? It has often been said that during our wars foreign policy has been forgotten, the diplomats have sat in the shade and given the soldiers their place in the sun, and the political objectives for which the wars were undertaken have been submerged in the drive and fury of achieving military victory. This, to a certain extent, is inevitable and true, but not completely so. Political objectives are often altered or held in abeyance while military expediency dictates the course of events, but this does not mean that foreign policy has totally collapsed. In modern times — that is, in the period with which we are concerned this morning — warring nations have usually generated and proclaimed a set of war aims, a statement of purposes, which constitute policy. The purposes may be unattainable; the aims may be unwise; but they are policy nonetheless, and as long as war continues the armed forces are the implementers of that policy. As the course of events change through military action, new war aims are proclaimed and new directives are given to the military forces to accord with the new situation. Thus, foreign policy continues to exist, and it continues to be made up of courses of action and statements of intent.

Earlier, I mentioned not only action but reaction with respect to other nations. The point here is simply put. We are dealing with an area beyond the jurisdiction of our own government where actions and intentions of foreign powers impose limitations upon

what we can do toward achieving our objectives. This means one thing, if it means nothing else: we cannot always exercise *our* will. We must not lay down rigid plans; we must be ready to take advantage of opportunities, sometimes holding our principles in abeyance, sometimes retreating, at others advancing our purposes as the situation permits.

For example, during the American Revolutionary War it was the general will of the people to break away not only from England but from all of the Continental Powers who had embroiled us in their colonial wars. We were suspicious of France; we distrusted Spain; yet, we sought alliances with both. We took advantage of France's power and desire to bring England to her knees, and reluctantly but unwaveringly wooed her support. Violating our republican principles, and risking future subordination to a foreign power, we joined with France because we could not achieve our primary objective of independence in any other way. We reacted against the hated policy of England, took advantage of the opportunity provided by France to gain the most important of our objectives, and only later on broke away from all of Europe to achieve our other ends.

Too often we criticize our foreign policy — and I am an offender in this respect, too — for not having prevented things from happening which, after all, we could not prevent in any case because we could not control the actions of foreign governments, but could only react to them within limited channels. I need cite no examples here. Rather, let me move on to the next cluster of elements which describe the nature of foreign policy; namely, the accumulation of doctrine, traditions, ideologies and decisions previously made.

If, at times, we are forced to react to situations outside our borders in ways we do not want, equally there are times when we frame our policies in accord with certain patterns which history imposes upon us. Recently there has been a spate of literature condemning American foreign policy for having been too

idealistic, for having involved itself in a mass of sentimentalities and Utopian theories, and for having allowed the true interests of the nation to be neglected. Yet, even its most eloquent and responsible critic maintains that our foreign policy must be the projection and expression of what we are like as a national community; that our domestic values will determine our attitude toward foreign affairs rather than vice versa — that, in short, the tail does not wag the dog.

The issue posed is this. Should we, in framing our foreign policies, follow the dictates of our own conscience and be guided by our principles, or should we react to the ways of others who employ power politics and who engage in unending power struggles? The answer that history gives is that we should and have done both. There have been times when we have entered wars though desiring peace; there was a time when, with an uneasy conscience, we plunged into imperialistic ventures, thus violating our avowed ideals; and there have been periods when we became entangled in the affairs of the outside world when we much preferred to remain aloof.

Yet on the whole I should say that we have, for better or for worse, been guided in our foreign relations by the values we cherish, by the traditions which history has furnished, and by the doctrines and decisions of the past. How could it be otherwise? How could we maintain any kind of a reasonably consistent foreign policy merely by reacting to the ways of others? Without some polestar to guide us, we would end up with a collection of short-range, contradictory policies designed to meet specific international situations but in no way leading us steadily toward the national interests which foreign policy seeks to promote.

All nations allow their policy to be influenced in some degree by their preference for one kind of society as against another. This country traditionally has had a vision of America as a haven for the oppressed, a land where the individual is free to develop along lines best suited to his own capabilities, a country in which

government is designed to protect the individual in the exercise of certain natural rights, including traditionally the rights of life, liberty, property and the pursuit of happiness. It was in pursuit of this vision that we declared our independence from a government which was failing to accord those rights. It is the reason why we withdrew from the affairs of Europe, engaged for three-quarters of a century in vigorous expansion of our frontiers, and threw open our doors to the less fortunate of other lands. Wasn't it eminently reasonable, in conformity with these aspirations, and while affairs in Europe permitted us to do so, that we should have devoted ourselves to the development of our own strength, our own concepts of liberty and progress, rather than to have asserted ourselves in the external world? This was the essence of the Monroe Doctrine. This was foreign policy — policy as an ideal, a doctrine, an aspiration.

Eventually, this vision was extended to apply to other lands. We developed the concept that all democracies were good, especially if they were created in our own image. We began to feel that individuals everywhere should have the opportunities of Americans. It wasn't long then before we found justification for engaging in commitments in the Caribbean, the Philippines and in China. American imperialism was never wholly materialistic. Even at its worst it intended to give the subject peoples some of the benefits of freedom. At times, economic and strategic motives existed; at others, not. But at all times there was some idealistic basis for our action.

This desire for universal human progress has influenced our foreign policy in other ways. It has produced other doctrines than that of President Monroe. It was the basis of Woodrow Wilson's Fourteen Points, Mr. Hay's Open Door, President Roosevelt's Four Freedoms, Mr. Hull's Good Neighbor Policy, and the Truman Doctrine. The Jeffersonian concept, that human beings are innately good and can progress if government and environment permit it, has surely been the basis for expending so much energy

on arbitration treaties. In one period of about thirty-five years this nation entered into 97 international arbitrational contracts of one kind or another. The reasoning here was apparently based on the belief that there is an inherent harmony of interests among nations and it was up to us to make that harmony a fact. The reasoning behind our Utopian efforts to outlaw war, to disarm, to abolish the use of armed force in international disputes, was again based upon the concept that only through peace could man progress and fulfill his destiny.

It is such concepts as these — that democracy is good, that conquest is immoral, that universal peace is attainable — which shape the pattern of our behavior toward other nations. And this is so primarily because the interests we seek to promote and protect through foreign policy include our ideals and principles as well as our material security. A few weeks ago on this platform Admiral Ingersoll in his welcoming address spoke to this point when he said: all nations have their national interests, national philosophies and ideals, and these are precious to them. Under no circumstances would I presume to put words in Admiral Ingersoll's mouth, but from this statement I suspect he, too, believes that the national interests which we seek to promote encompass not only our physical security but our principles and ideals as well.

And here is where those go astray who charge us with neglecting the national interest, claiming we have a moralistic approach to foreign affairs and are too much preoccupied with ideals. Apparently in their minds national interest means nothing but physical security. This presumably is to be obtained by pursuing policies aimed at maintaining a balance of power, and this can be done only by hard-headed professional diplomats sitting behind closed doors immune to the voice of the people, playing power politics, and operating in a vacuum with respect to morality and national ideals. One gets the impression that this concept of "national interest" is entirely a rational one, that it is free from

any value judgments and can be arrived at by estimating the numbers of lives and dollars and cents we are willing to expend upon survival.

American history tells a different story. It reveals a multiplicity of interests which embrace not only the need of society for security against armed aggression, but the public demand for higher standards of living, and the maintenance of stability in national and international affairs. National interests are the continuing ends for which a nation acts. They tend to be synonymous with long-standing traditions and habits of thought, and, of course, they differ among different nations.

In the United States, only in the earliest and again in the most recent periods has survival been a main concern of foreign policy, because during the middle years of our history there was no external threat to us. But, even when survival has been an issue, we have not limited our interests to that single point. While we were still weak and surrounded by enemies actual or potential, the men who shaped our policies and led national opinion were concerned with other things as well. Even Alexander Hamilton, who had the clearest conception and greatest concern of any of the founding fathers with the physical aspects of national security, was not without an ideal or vision of what the United States should be, and he expounded a foreign economic policy to achieve that goal. He was perhaps more interested than any other member of the Constitutional Convention in creating a strong central government for the express purpose of defending our shores against foreign aggression; yet, when the Convention began moving away from his ideal of what our society should be, he picked up his bags and walked out.

Hamilton was an economic nationalist, believing in a system of economy which would produce and support great commercial and industrial leaders. These were the men to whom the national government should look for support. Jefferson, on the other

hand, was an agriculturalist. He believed that the free and unfettered farmer was the only sound support of a democratic state. He was an environmentalist, conceiving that industries created cities, cities created slums, and slums produced corrupt men incapable of governing themselves. For Jefferson, then, agriculture was the only way of life for a free and healthy republic. Land, and plenty of it, was what the United States needed. Jefferson, therefore, held that the national interest called for the acquisition of adjacent areas for cultivation by the farmers of the future. This vision, or ideal, he was able to realize in the Louisiana Purchase. The primary motivation for that act was not, as some people conceive, to remove potential enemies from our backyard. Indeed, the Purchase might well have plunged us, weak as we were, into war with Spain, which vigorously opposed the transfer of this territory to the United States. Jefferson took that risk because his concept of the nation's welfare called for such a step.

The influence of the democratic ideal on foreign policy is naturally strong in any democratic nation. The French revolutionaries in the 1790's tried impetuously to force their ideals upon the rest of Europe. England, when she had the means to back up her words, was not averse to introducing democratic ideals into her relations with other nations. In this country at the end of the 18th century, when we could ill afford the luxury of British hostility, some eminent Americans were willing to incur her wrath merely out of sympathy with the French Revolution. And, later, we came within an ace of declaring war on France and England simultaneously for somewhat similar reasons.

Surely one basis for the Monroe Doctrine was the democratic ideal. The declaration praised the democratic principle and exalted democratic forms in contrast to the monarchies of Europe. Its origin lay in sympathy with the Latin American revolutions which had thrown off monarchical rule, and its intent was to see that monarchy was not restored. American history is replete with examples of the democratic ideal shaping foreign policy. This

government acted quickly to recognize the Second French Republic, brought about through revolution. It gave the Hungarian revolutionary, Kossuth, a welcome which takes second place only to Lindbergh's ticker-tape parade down Broadway. Wilson's war to save democracy, and his call for the German people to throw off the yoke of their Hohenzollern rulers so that they could have peace and freedom, are obvious examples of the democratic ideal at work in foreign policy.

This ideal has been so pervasive, so consistent, in American diplomatic history, that I think we must conclude that it has not only influenced policy but has been one of the interests that policy promotes. Despite changing forms of expression, national interests are the constants rather than the variables of foreign relations, as you well know. Being few in number but durable in nature, they provide the broad framework within which policies are developed.

But, of course, foreign policy is more than a set of ideals; it is more than a pattern of behavior designed to promote national interests. These things constitute policy in the abstract. They are important because they are an integral part of the nature of foreign policy, but policy has its concrete side too. National interests always exist, but they are not always in sharp focus. When, however, some act or statement of a foreign government seems to threaten one of the nation's interests, or some pressure or expectation or demand within society requires that a particular interest be vigorously promoted, it then becomes an immediate and definite objective which requires the active exercise of power or influence to establish it beyond dispute.

In this sense policy is a means to an end, and the national calculation of the means-ends relationship is the very heart of foreign policy. The problem of deciding what goals to achieve, which of the many purposes or interests it is most vital to serve, is not easy; but the problem of correlating means and ends is

infinitely more difficult. No nation has the power to promote all of its interests simultaneously; it may not even have the means to achieve its one most vital objective. The task of adjusting a variety of resources to a variety of goals — that is, of balancing power and policy — is the principal problem of the policy-maker. And it is further complicated by the necessity of having to feed into this equation the powers and policies of other states, enemy and friend alike. In a very real sense the weighing of information about the power, the institutions, the interests, purposes and policies of other states spells success or failure for one's own policy.

But I don't want to get into that complex business this morning. Rather, let's consider the power formula as it applies at home. Walter Lippman has written that "a foreign policy consists in bringing into balance, with a comfortable surplus of power in reserve, the nation's commitments and the nation's power." Essentially he is correct in this, although I would argue with him that foreign policy is not simply a matter of commitments. Nevertheless he goes on to define his terms in this way, and I quote:

"I mean by a *foreign commitment* an obligation, outside of the continental limits of the United States, which may in the last analysis have to be met by waging war. I mean by *power* the force which is necessary to prevent such a war or to win it if it cannot be prevented. In the term *necessary* power I include the military force which can be mobilized effectively within the domestic territory of the United States and also the reinforcements which can be obtained from dependable allies."

Thus says Mr. Lippmann. Now if we are willing to content ourselves with defining foreign policy in such narrow terms — as a balance of commitments and military power — I am willing to concede that we have no foreign policy now and probably never had one.

But the means of foreign policy are no more confined to military strength than the ends are confined to formal obligations which must be met if necessary by war. Strength is composed of both physical and moral elements; it can be either material or nonmaterial. Our geographic position has always been an element of strength which our policy-makers could employ to great advantage, as Admiral Mahan pointed out here at the War College many years ago. Industrial potential and economic strength have both served us well. Population is a factor in the national calculation of power. I don't mean that population in itself is necessarily a source of strength. A rising birth rate in an overpopulated country may compel a policy of expansion and lead to disastrous war. Conversely, a country with a small population can be strong beyond its numbers by possessing political unity, common ideals and a balanced economy. Again, as Admiral Mahan said, it is not mere numbers that count but the characteristics and abilities of the people. Yet the demographic factor, when associated with other factors, is part of the formula for estimating strength. The same can be said with regard to the military establishment. Sheer numbers of troops may once have been a valid gauge of military strength, but no longer. At a minimum, military power means trained troops, weapons adaptable to several kinds of war, and a logistic capacity which will permit a flexible strategy. As with the population factor, the military component must be judged in relation to industrial capacity, national will and political stability.

So much for the types of means available. There still remains the difficult business of adjustment and balance, the determination of what minimum means can be brought to bear for the accomplishment of the nation's goals. And American history is a rich mine of information for this purpose.

To begin with, American independence was conceived in the seed of popular ideals; it was born through the painful labor of French and American military effort, and it was permitted to grow to manhood because the struggle for power in Europe left

no nation free to crush it. It lived by the sufferance of the balance of power abroad. It is worthy of note that, while military power should rationally accompany a policy of expansion at the expense of others, only once during the whole course of American territorial expansion on this continent did we resort to war. The frontier from the Appalachians to the Mississippi was secured through diplomatic negotiation by a nation militarily exhausted. The vast region known as the Louisiana Purchase was secured from Napoleon despite his promise to the Spaniards that he would not alienate it. The acquisition of West Florida was brought about by a revolution which we did nothing to discourage and which we summarily exploited. East Florida came to us without war, although unofficial military pressure played a part. Texas, true to its traditions, came into the United States of its own accord, but, again, only after a revolution which American citizens as individuals did much to support. It was intended that cold cash was to be the means of bringing the California territory into the fold, but here was one of those instances I mentioned a moment ago when calculation of another nation's intentions, abilities and interests is a necessary part of formulating a successful foreign policy. We miscalculated with Mexico, went to war, achieved victory, and then paid her anyway. And so it went to the tip of Alaska.

During all of this period, and indeed up until the 20th century, the United States was conducting its foreign policy under the latent protection of the British Navy. As you know, the Monroe Doctrine was operative only because England willed it so. She would have gladly joined us publicly in this declaration, but President Monroe and his successors preferred the appearance of acting unilaterally. Thus the United States, although she lacked power within herself commensurate with the pronouncements, nevertheless had the sea power of another invisibly on her side. When, after the turn of the century and with the rise of Germany and Japan, England was no longer able to act as a makeweight in the European balance of power or secure us under the mantle of her protection, we mistakenly extended our commitments —

forgetting that power and policy must be balanced. Americans had become so accustomed to their security that they forgot that its foundations lay outside the United States. As George Kennan says, "They mistook our sheltered position behind the British fleet and British Continental diplomacy for the results of superior American wisdom and virtue in refraining from interfering in the sordid differences of the Old World." The power factor in foreign policy which 18th century Americans thoroughly understood, gradually slipped from the minds of nineteenth century statesmen, and seemed to disappear altogether in the 20th.

It was at this time that the United States began to accumulate interests and commitments in the Far East incommensurate with its own political and military power. Only in the Western Hemisphere did American power keep pace with policy. In the Far East things went from bad to worse until, in the Washington Disarmament Conference 1921-22, we deliberately stripped ourselves of the power to command the western Pacific while increasing our commitment to defend the integrity of China. Here, indeed, was a strange spectacle: an American Secretary of State sitting at a conference table with a British First Lord of the Admiralty and a First Sea Lord telling them just what ships they should scrap and what they might keep. Secretary Hughes opened the Washington Conference with the customary opening-day banalities, while the delegates settled back in their seats expecting no excitement. In this, they were not disappointed, but then came a sharper note. Logically, if somewhat undiplomatically, Mr. Hughes told the delegates that the only way to disarm was to disarm, and not in the distant future but immediately. He then proceeded to strike one American capital ship after another from the active list. Having neatly disposed of the United States Navy, he then proceeded to attack the British and Japanese navies until the tonnage ratio of capital ships in the American, British and Japanese navies was 5-5-3 respectively. The immediate reaction in the hall was one of stunned silence. Then Senators, Representatives and Supreme Court Justices broke into wild applause. This was

indeed the greatest naval encounter on record. In fifteen minutes Charles Evans Hughes, Secretary of State, had managed to sink more warships than all the admirals in the world had sunk in a cycle of centuries. As one British newspaper man put it: all we wanted to do was go away and think.

The Japanese, although they secured in this battle undisputed command of the Far Pacific, refused to ratify the agreement until we had promised not to fortify further our bases in the Pacific. Even after this concession, ten years later, the Japanese repudiated the Washington Treaty — as they had a perfect right to do — by giving one year's notice. The Japanese people didn't like being on the short end of the stick. As their ambassador pithily put it: 5-5-3 sounds too much to Japanese ears like Rolls Royce-Rolls Royce-Ford.

We may condemn the Washington Conference for failing to protect one of our vital interests; we may call it naive and unrealistic. But it is to be remembered that it came about through pressure exerted by the American people on Congress, and by Congress upon the administration of Warren Gamaliel Harding. The fury for disarmament in those recent years is difficult to recapture today. It produces such strange spectacles as the suggestion from a leader of the United States Chamber of Commerce that all of the antiquated cannon encumbering our public parks should be carted off to the dump yards. Groups of citizens drew up monster petitions calling for disarmament. In St. Louis, a huge dial was erected in a public square. With each thousand signatures the hand moved forward, and with each 10,000 a courier was sent rushing off to Washington to spread the word.

This spectacle of public opinion influencing the formulation of American foreign policy was not unique, although it is perhaps as exaggerated an example as we can find. Ordinarily, public opinion does not operate effectively on specific issues of foreign affairs so much as it does on the general principles on which

policy is based. Washington's Farewell Address, in which he warned against our involving ourselves too deeply in European affairs, was not the result of pressure from the people; yet, over the years its message became part and parcel of American tradition. Washington had said: "it is our true policy to steer clear of *permanent* alliances with any portion of the foreign world . . . but we may safely trust to *temporary* alliances for extraordinary emergencies." In the course of repetition, however, this distinction between temporary and permanent alliances was submerged and finally disappeared. Americans came to look upon isolation as immutable, as a policy to be followed under any circumstances and at all cost. When conditions at home and abroad altered, and made isolation an unwise course of policy, the tradition was so deeply ingrained in the American public that it became virtually impossible to change it. In the 1920's and '30's it became almost pathological in its intensity; and foreign policy came to be based upon emotion rather than on reason.

To be sure, public opinion played a vital role in bringing on the Spanish-American War by one of those sudden and sweeping changes that occasionally occur in national mood. Yet history indicates, and public opinion polls confirm, that most questions of foreign policy are far too complicated and technical for the average citizen to do more than indicate his general preference for one trend rather than another in foreign affairs. We wouldn't be too far off in saying that about a third of the American people are unaware of any specific issue of foreign affairs; perhaps a half are aware but uninformed about international issues, and less than 20% consistently show knowledge of such problems. This being the case, old habits of thought, political principles and moral attitudes — rather than detailed knowledge — provide the popular guidance for framing foreign policy. Almost every student of the American scene agrees that the problem of foreign policy in this country is the problem of the public mind. As a member of the foreign policy planning staff, Charles Burton Marshall, puts it:

“Ours is an accountable government. Acceptability to popular opinion is certainly a factor in the conduct of foreign policy. Popular opinion is not of much, if any, value in helping in the discovery of answers to the problems in this field. It certainly counts, however, in setting bounds to the area of maneuver available to those charged with responsibility.”

Professor Dexter Perkins puts it this way:

“If there is one thing clearer than another to the historian, it is that the American people will never hand over their affairs to a small diplomatic caste, however wise that staff may be. They have, almost from the beginning of their government, insisted upon having a voice in foreign affairs; they stirred up all kinds of trouble for General Washington in his second term; and ever since, whenever they felt strongly, they have insisted upon making themselves heard.”

George Kennan, in his excellent little treatise on American diplomacy from 1900 to 1950, gave his formula, which he believed to be coldly realistic, for what we should have done from 1913 on to protect and promote the national interests in a world involved in war. Having given his formula, he then went on to say:

“But I think I hear one great, and even indignant objection to what I have suggested People will say to me: ‘You know what you have suggested was totally impossible from the standpoint of public opinion; that people in general had no idea that our interests were affected by what was going on in Europe in 1913; they would never have dreamed of spending real money for armaments in time of peace; that they would never have gone into a war deliberately, as a result of cold calculation about the balance of power elsewhere You hold yourself out as a

realist, and yet none of these things you are talking about were even ever within the realm of possibility from the standpoint of domestic realities in our own country.' ”

And then Mr. Kennan replies to his hypothetical critics:

“I have no quarrel with this argument. I am even going to concede it. But I still have one thing to say about it. . . . A nation which excuses its own failures by the sacred untouchableness of its own habits can excuse itself into complete disaster.”

And with Mr. Kennan's statement I shall not argue. I merely wish to point out that in a democracy such as ours it is public opinion that often calls the tune. No matter what their convictions, policy-makers must take some account of the domestic climate of opinion. Under popular government, it's impossible wholly to ignore the power of appeal which certain broad generalizations hold with the public. A failure to assess the force of these conceptions is a failure to understand the motivating forces of American diplomacy.

Now then, during the course of this lecture I have indicated explicitly or implicitly some of the factors which impose limitations on the formulation of foreign policy. Most of these restrictions derive from the nature of foreign policy itself. One task of the policy-maker is to identify the national interests which include both physical security and the principles and ideals the nation lives by. A second task is to calculate the complex material and nonmaterial resources of the nation which can be brought to bear to promote these interests. If the various interests are in harmony with one another, or if there is one overriding interest which has the support of a united people, the problem of means will be minimized, for then resources can be tapped without popular protest. If the interests to be promoted cannot all be achieved, or if ideals and reality are in contradiction, some will have to

give way temporarily; a balance between means and ends will have to be created, and a policy adopted flexible enough to maintain the balance despite changing interests and changing resources and changing national moods.

Finally, the policy-maker must assess the international situation; that is, he must attempt to analyze the interests and means of other nations, and feed this information into his domestic equation to be sure that the proper balance is maintained. This division between internal and external factors and between means and ends is, of course, an artificial one, made here merely for the purpose of presentation. In practice, consideration of all these elements is nearly simultaneous. And the multiplicity of interests and ideals, the variety and changing nature of the internal and external factors which restrict the achievement of national objectives, make it well nigh impossible to frame a long-range, consistent and settled foreign policy. We are constantly tinkering with the mechanism, the organization, the process by which policy is made, but I would suggest that no system can be devised which will make rational a process which has in it so much of the irrational and the emotional. If we keep in mind that what we are dealing with here is essentially a balance, an adjustment between means and ends, we will more readily realize that insistence on rigid plans is a mistake. If we understand the true nature of foreign policy, we will have more tolerance toward those who frame 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 and was also a research assistant on an Organizational Behavior Project there. During 1952-53, he was Director of a Military History Project. Since 1952, he has been Assistant Professor of History at Princeton.

He was on leave from Princeton University to act as Consultant for International Relations and Social Sciences at the Naval War College during the first term of Academic Year 1956-57, and during the present academic year is occupying the Ernest J. King Chair of Maritime History at the College.

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

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 them of interest.

The listings 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 these 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:** *Limited War*. 315 p.
- Author:** Osgood, Robert E. Chicago, University of Chicago Press, 1957.
- Evaluation:** The author deals with a problem that goes to the very heart of American foreign policy. He attempts to give at least tentative answers to the questions: How can the United States protect and promote effectively its interests on the international scene without running the risk of an all-out atomic war? How is it possible to conduct foreign policy in the shadow of the atomic deterrent without making of that deterrent a reality? He re-examines the part that war has played in American foreign policy and argues most convincingly that the United States must develop a sound and successful strategy of limited war as an instrument of our future diplomacy. He points out that the development of weapons of unprecedented destructiveness has confronted the United States with a major problem: how to use force to prevent aggression, on the one hand, and how to avoid an all-out thermonu-

clear conflict on the other. He argues that we must be able, if necessary, to use limited warfare to achieve our political objectives and yet prevent the degeneration of such tactics to the total destruction of unlimited atomic warfare. He attacks the basic issues involved in the continuing controversy over military policies, presents an assessment of our present military capabilities and outlines a military strategy for the future.

- Title:** *American Military Policy.* 494 p.
- Author:** Furniss, Edgar S., Jr. New York, Rinehart & Co., 1957.
- Evaluation:** The intention of this book, as stated by the author-editor, "is to inquire into the nature of the military component in American statecraft, how it has been envisaged by policy makers and how it may be used in various geographical areas to balance communist capabilities and communist behavior." Despite the complexity of the subject, this objective has been substantially achieved. Although the basic text of the book is provided by a series of excellent articles, this is much more than a mere compilation. Treatment includes a broad survey of the present geographic commitments of American military power plus specific case studies of Latin America, NATO, and the Near and Middle East. It presents an analysis of the organizational role of the military in framing and executing foreign policy, and discusses two specific problems: disarmament and continental defense. Finally, it presents the strategic doctrines of the three military services and discusses various military concepts ranging from limited war to massive retaliation.

- Title:** *Soviet Economic Growth.* 149 p.
- Author:** U. S. Library of Congress. Legislative Reference Service. Washington, U. S. Government Print. Office, 1957.
- Evaluation:** A concise summary, using the latest information, of statistical data relating to the comparative positions and relative growth performance of the United States and the Soviet Union in Industrial output, transportation, agriculture, population, labor force, national income and the standard of living. The treatment is painstakingly fair within the limitations posed by the sketchiness of available Soviet data. There is little attempt at prediction, and the interpretative sections are suitably cautious — used only to cast light on the problem of comparison.

- Title:** *Russia Since 1917.* 508 p.
- Author:** Schuman, Frederick L. New York, Alfred A. Knopf, Inc., 1957.
- Evaluation:** Professor Schuman presents a highly condensed history of the rise and operation of the Soviet regime during the last four decades. He ranges from the foundations of Bolshevik thinking and its relation to the teachings of Marx, Engels, Hegel, et al., to the future of the U. S. S. R. and U. S. A. in world stabilization. Initially, Professor Schuman develops the early intraparty conflicts between the Bolsheviks, the Mensheviks and other groups, and the effect of these struggles on the ultimate goal of suppression of the bourgeoisie through a dictatorship of the proletariat. From this period of early struggle, he traces the effect of Western armed interference during 1918 and its contribution to World War II and the cold war. The Russian position relative to the Fascist States is premised on Western weakness, particularly that of the "Men of Munich." One wonders how the application of force so clearly advocated would have served during the postwar period of confronting Russian expansion. In similar vein, Korea is presented as a conflict that was neither Stalin-provoked nor encouraged. Professor Schuman indicates that the current strength position of the U. S. S. R. is based on the proven success of the Soviet economic system and glosses over the inefficiency that has deprived the citizens of the U. S. S. R. of the promised "good life." He does, however, make a keen analysis of the results of the low production of consumer goods and its ultimate effect on government and the Soviet administration. In attempting to achieve a balance of viewpoint, Professor Schuman describes the cruel regime of Stalin with a stark realism that outdoes Nikita S. Khrushchev in his own attack on Stalinism. The closing portion of the book is devoted to a studious development of the future of man in achieving peace and advancement. Although highly idealistic, Professor Schuman summarizes his ideas with specific policy recommendations which must be pursued if the U. S. A. and U. S. S. R. are to attain mutually beneficial goals in Europe, and Middle and Far East.

- Title:** *German Rearmament and Atomic War.* 272 p.
- Author:** Speier, Hans. Santa Monica, Calif., The RAND Corp., 1957.
- Evaluation:** The author reviews the period from 1952 to 1957 in reference to the changing circumstances in Germany's

position in Europe. He traces the developing emphasis upon the German rearmament issue, both in the internal politics of Germany and among the principal partners in the NATO coalition. He canvasses in detail the thoughts of German military and political leaders as to the implication (for Germany and Western Europe) of atomic war, both tactical and strategic. In general, the author concludes that Germany, Europe and the West must (in the light of German attitudes and the position*of Germany) be content with "shield forces" in maintaining the "sword" in the backs of the non-European nations.

Title: *Southeast Asia Among the World Powers.* 336 p.

Authors: Vandebosch, Amry, and Butwell, R. A. Lexington, Ky., University of Kentucky Press, 1957.

Evaluation: A comprehensive survey of the underlying political, economic, and ideological factors of the newly independent countries of Southeast Asia. The authors outline the problems confronting Indonesia, the Philippines, Thailand, Malaya, and Burma caused by the rapid transition from colonial status to that of sovereign states. They indicate that the emergence of nationalism — combined with the absence of the stabilizing rule previously exerted by Britain, France, and the Netherlands — has created a "power vacuum" in this area, with the Western democracies and the Soviet Bloc as the contending powers. The survey also includes an analysis of the policies and methods which the United States has pursued in dealing with the countries in this area since 1945. The mistakes, as well as benefits, that have resulted are pointed out.

Title: *Tides of Crisis.* 328 p.

Author: Berle, Adolph A. New York, Reynal & Co., 1957.

Evaluation: The problems facing the United States as a leader of the free world are dealt with by the author. A man of vast experience and distinguished service to his country, he believes that the chances of peace in the remaining half of this century are brighter than in any period in the last seventy-five years. Concerned for the most part with history, he presents pertinent facts that set forth the causes of our present-day world power struggle. The author considers the economic aspects in dealing with global problems and emphasizes the need to give greater consideration to the Latin American area, which he feels should rank first in our foreign policy deliberations.

- Title:** *Middle East Crisis.* 141 p.
- Authors:** Wint, Guy, and Calvocoressi, Peter. London, Penguin Books, Ltd., 1957.
- Evaluation:** The specific crisis examined is the nationalization of the Suez Canal. The situation discussed is one of many that may be noted through the course of history and may be the beginning of more serious ones if the tensions in the Middle East cannot be eased in the future. The study of the nationalization of the Suez Canal is made under eight headings: The Nationalization of Oil in Iraq; The Revolution in Egypt; Anglo-Egyptian Treaties; The Baghdad Alliance; Israel; Arms Deals With the USSR; Involvement of France; and the Aswan Dam.
- Title:** *The Torment of Secrecy.* 238 p.
- Author:** Shils, Edward A. Glencoe, Ill., The Free Press, 1956.
- Evaluation:** A study of the contemporary and historical background which has and still is contributing to this country's preoccupation with espionage, subversion and sabotage during the past ten years. The subject is thoroughly examined from all aspects: that of the accused, the accuser and the judge; the effects of this preoccupation on our civil and intellectual life and its challenge to constitutional government; and the traditional rule of law. An assessment of the security-loyalty measures now in force is made and the author concludes with a series of specific recommendations for our security-loyalty program which he considers more effective than the present program and which will, at the same time, preserve the liberties of an open society.
- Title:** *Airpower: The Decisive Force in Korea.* 310 p.
- Author:** Stewart, James T. Princeton, N. J., Van Nostrand, 1957.
- Evaluation:** An edited collection of articles written especially for the *Air University Quarterly Review* concerning the air war in Korea. The articles attempt to analyze specific techniques in specific areas; i.e., the battle for control of the air, applied airpower against enemy ground forces, and the support elements which made the Korean air battle a possibility.

PERIODICALS

- Title:** *Konrad Adenauer.*
Author: Prittie, Terence.
Publication: THE ATLANTIC MONTHLY, September, 1957, p. 49-54.
Annotation: A portrait of the Chancellor of West Germany, outlining important issues in the coming election in Germany.
- Title:** *Decatur's "Doctrine" — A Code for Outer Space?*
Authors: Yeager, Philip B., and Stark, John R.
Publication: UNITED STATES NAVAL INSTITUTE PROCEEDINGS, September, 1957, p. 931-937.
Annotation: Summarizes briefly the air space problems of today and factual reasons why air space laws are becoming more necessary.
- Title:** *Year of Discovery Opens in Antarctica.*
Author: Boyer, David S.
Publication: THE NATIONAL GEOGRAPHIC MAGAZINE, September, 1957, p. 339-398.
Annotation: Shows through pictures and text how scientists of many nations are launching their most ambitious assault on this continent.
- Title:** *The Communist Challenge in Asia.*
Author: Wilson, Colonel A. Vincent.
Publication: UNITED STATES NAVAL INSTITUTE PROCEEDINGS, September, 1957, p. 954-960.
Annotation: Reviews the events which lead to the communists' domination of China, while challenging the contention that the United States should recognize Red China.
- Title:** *China Passes A Dividend.*
Author: Davenport, John.
Publication: FORTUNE, September, 1957, p. 151-160, 254-264.
Annotation: Delineates the failure of communism as an economic

system in Red China: it has failed to supply the barest need of the Chinese people.

Title: *Communists Are Risking Free Elections — And Winning.*

Publication: U. S. NEWS & WORLD REPORT, September 6, 1957, p. 55-56.

Annotation: Explains how communists are using free elections, a new technique for them, as a means of gaining control in a number of countries.

Title: *Congress Reappraises U. S. Foreign Aid Policy.*

Publication: CONGRESSIONAL DIGEST, August-September, 1957.

Annotation: Surveys the history and current status of the foreign aid program and presents a discussion on the future of the aid program.

Title: *Is Russia Ahead in Missile Race?*

Publication: U. S. NEWS & WORLD REPORT, September 6, 1957, p. 30-33.

Annotation: Reviews facts on the relative position of the United States and the U. S. S. R. in the missiles race and explains what it means to U. S. security. Includes a statement by Secretary Dulles.

Title: *"Guided Democracy" in Indonesia.*

Author: Van der Kroef, Justus M.

Publication: FAR EASTERN SURVEY, August, 1957, p. 113-124.

Annotation: Analyzes President Sukarno's concept for the new form of government which he instituted to offset the instability of Indonesia's parliamentary government. This new government includes a number of communists.

Title: *International Naval Review.*

Publication: NAVAL AVIATION NEWS, August, 1957, p. 20-25.

Annotation: Describes the reviews held last June, and many of the 114 vessels which took part.

- Title:** *The Fantasy of Limited War.*
- Author:** Josephson, Matthew.
- Publication:** THE NATION, August 31, 1957, p. 89-91.
- Annotation:** A critical appraisal of the concept of limited war as advanced in Osgood's *Limited War* and Kissinger's *Nuclear Weapons and Foreign Policy*.
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- Title:** *What U. S. Should do to Keep the Lead in Science.*
- Author:** Libby, Dr. Willard F.
- Publication:** U. S. NEWS & WORLD REPORT, August 30, 1957, p. 78-82.
- Annotation:** An interview with Dr. Libby of the Atomic Energy Commission, giving answers to questions concerning the shortage of scientists.
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- Title:** *War Dangers in Middle East.*
- Publication:** U. S. NEWS & WORLD REPORT, August 30, 1957, p. 21-24.
- Annotation:** The strategic importance of Syria is shown and the development of communist control is traced.
-
- Title:** *Is NATO Expendable?*
- Author:** Strauz-Hupe, Robert.
- Publication:** UNITED STATES NAVAL INSTITUTE PROCEEDINGS, September, 1957, p. 923-930.
- Annotation:** Warns against a trend in thinking which could lead to the dissolution of NATO and argues against this line of reasoning, listing five reasons — some strategic and some practical — why we should keep or strengthen NATO.
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- Title:** *The Meaning of Khrushchev's Victory.*
- Author:** Nicolaevsky, Boris I.
- Publication:** THE NEW LEADER, September 2, 1957, p. 5-8.
- Annotation:** This last article of a series on Soviet political leadership describes Khrushchev's victory and stresses the importance of the Middle East in Khrushchev's future plans.

- Title:** *Capital Ship for An Air Navy.*
- Author:** Liebhauser, Commander C. H.
- Publication:** UNITED STATES NAVAL INSTITUTE PROCEEDINGS, September, 1957, p. 961-969.
- Annotation:** Briefly traces the development of seaplanes, both military and civilian, citing problems which had to be overcome and projecting the possibilities of it as a future weapons system.
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- Title:** *Ballistic Seapower — Fourth Dimension of Warfare.*
- Author:** Jackson, Senator Henry M.
- Publication:** NOW HEAR THIS, August, 1957, p. 5-12.
- Annotation:** Senator Jackson discusses the importance of the ballistic missile to the Navy, and tells how the guided missile submarine can add a new strategic dimension to the concept of seapower.
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- Title:** *How Important is the United Nations in American Foreign Policy?*
- Author:** Barco, James W.
- Publication:** VITAL SPEECHES OF THE DAY, September 1, 1957, p. 674-678.
- Annotation:** A practical explanation — by the Deputy U. S. Representative on the Security Council — of how our foreign policy is carried out within the framework of the United Nations organization.