

WAR POTENTIAL

4 February 1954

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COLONEL WING: As you know, it is not customary here to introduce one of our own staff, especially at this late date in the academic year. All of you already know Colonel Rindlaub, our Vice Deputy Commandant. I just want to take a moment to explain why this subject is being presented at this time.

Yesterday you were all given a memorandum which provided a brief preview of the problems to be presented in Unit X, Economic Potential for War, which starts on 15 March. This memorandum listed some of the economic factors which are to be considered and applied in estimating the comparative potential effectiveness of the economies of the Soviet Bloc and of the free world to support a general war. I am sure this morning's lecture will help to clarify and point out the extent to which your previous studies--and particularly those factors which will be covered in Production, and in Public Services--will help to clarify and solve the problem being posed in Unit X. It is being presented at this time in order to alert each of you to the applicability of things you will encounter in your studies between now and 15 March. As you can readily see, this is a big problem. It is a major problem. It is a problem that is occupying a good many people in Government today in trying to solve it, and there will be only a short period of time for you to reach your solutions.

Before turning the platform over to Colonel Rindlaub, however, I am sure I would be in ill repute with Professors Stevens and Roberts if I left this introduction end while covering only--"why this subject, at this time"--and didn't mention--"why this speaker." As you well know, an expert is someone with a brief case from out of town. This morning's speaker doesn't carry any brief case that I can see. He has, however, prior to his present assignment, been chief of the Economic Potential Branch for two years. He has frequently been called on to speak at the Navy War College, the Army War College, and at the NATO Defense College in Paris, and at other senior institutions. We figured maybe we ought to use a little of our own talent right here at home. Colonel Rindlaub.

COLONEL RINDLAUB: Thank you, John. General Greeley: This morning we are going to discuss an abstract subject, one on which we have considerable difficulty getting lecturers. That is probably why I am here. Most of the people we ask to talk on this subject consider only a narrow segment of it in spite of the scope we give them. If I didn't feel I was here among friends and other officers of the services who would have some compassion on one who has been put on the spot, I wouldn't attempt to cover this subject either. But I will do the best I can this morning.

The usual title for a lecture such as this is "The Measurement of War Potential." Now to me the word "measurement" connotes an ability to find a numerical answer, at least approximately. There are so many intangible items that affect war potential that it is impossible to find a numerical answer. There just isn't any. So I have limited the title of this talk simply to the words "War Potential."

I am going to discuss first what war potential is. After that, we will talk about the elements of war potential, the things which go to make up war potential. Then we will take a very brief time going over one method by which this analysis might be approached.

What is war potential? I think we can say that it is the potential power which may be generated by a nation or group of nations to cause other nations to accede to their will. Ultimately, it is potential power in a military conflict. People are very apt to only look at the surface and judge the potential power of nations by their apparent military posture. That is the thing which you see emphasized in most of the newspapers and periodicals--how big armies are at the present time. Military officers are far too inclined to give too much weight to the military side of the problem and forget that it is essential that we have the support of the civilian population behind the military, support both in the economic and political field.

Perhaps my point is best illustrated by an incident which happened to a friend of mine, John Thomasson, a good many years ago. He was a struggling young lawyer out in San Bernardino. Being an energetic as well as a personable young man, he managed to augment his income by doing bookkeeping at night for some of the commercial firms of the city. At this particular time he was working for a firm whose offices were next to the Golden Eagle, the city's largest bar or tavern.

In that same city there was a girl whose name was Laura Burkhardt. She was a young lady in her late twenties who was living alone in the house of her father who had just died. She was quite attractive but she had one fault--she liked to gossip.

One day John heard that at a cocktail party the previous afternoon she had said, "John Thomasson must be an awful drunkard. I have seen his car parked in front of the Golden Eagle every night for the last week."

That is what I mean. You can't judge everything by surface appearance.

Of course, John was well equal to the situation. That night, and for the next three nights, he drove his car to Laura's house, parked it squarely in front of the entrance, got out, and walked home.

I don't think it is necessary to talk too much about this, but we must not, as in the case of John and Laura, be fooled by the apparent surface indications in our analysis of potential power of opposing nations. I don't think it is necessary either, with a group as selected and experienced as this group, to dwell too much on the importance of war potential. I think it should be apparent to all of you.

In the field of national strategy, the determination of war potential is analogous to the estimate of the situation which is made by the tactical commander of a small command. Every military commander is taught very early in his service to make an estimate of the situation. He is taught that he must find out everything that he can about the enemy capabilities and about friendly capabilities. He is taught that it is only through as complete a knowledge as possible of enemy capabilities and friendly capabilities that he can reach logical tactical plans and logical tactical decisions. The situation is exactly the same in our consideration of national strategy, both political and military. Unless that strategy is based on the best possible knowledge of enemy and friendly capabilities, it is not going to be as logical or effective either in the political or in the military field.

In the past, we haven't been too good at this business of analyzing the potential power or of discovering the potential power of other nations. If you will recall, in a speech in 1942, President Roosevelt said that Italy, Germany, and Japan had reached their maximum productive capabilities for the building of ships, planes, guns, and tanks. Then, you will recall that Germany in the years between 1942 and 1944 increased its production of planes and ships over three times, its production of guns over four times, and its production of tanks nearly six times. We under-estimated our own productive capabilities just as greatly. Now we know more about the subject and I don't think we will ever fall into the errors which we fell into before, but I think those examples of our failures in the past point up very definitely the importance of this subject.

Personally, I believe it is one of the most important things that we can possibly tackle in the military service or in any part of the Government. Now, you will say, "Granted it is important at the national level, how about the lower level? Is it important there?" Well, of course it is. Every theater staff has to know all that it can about enemy and friendly capabilities, about the potential power of opposing nations. The staffs who designate target systems have to know everything they can about the potential power of the enemy in order that they may select targets which will reduce as rapidly and effectively as possible the enemy's war potential.

I am not going to say any more about this matter of importance because I think if you understand what war potential is and understand it thoroughly, the importance of it becomes very, very evident to anyone.

I said that war potential is the potential power of a nation or group of nations in armed conflict. What kind of a conflict are we talking about? There are many economists--we run into them all the time--that is one of our greatest difficulties here--who say that you cannot approach a study of war potential at all unless you limit it to some very narrow, definite strategic situation. Up until the last year or so that has been the feeling in many Government agencies. I think just within the last year or two the higher Government agencies have gradually changed their viewpoint. I don't think you have to limit war potential to the degree previously thought, but you do have to surround the subject with some kind of boundaries if you are going to make it manageable. You have to limit it to some degree.

In this atomic age, there are very generally speaking three directions that a major war may take. There is, first, the possibility that one nation, through an overwhelming advantage in initial strength and through surprise, may so damage its enemy's economy that the enemy can't mobilize its industry or its forces. Victory is quickly attained by the attacking nation. There is a second possibility, and that is that the offensive capabilities of both nations so outweigh their defensive capabilities that after the destruction which occurs in the initial attacks the industrial complex of neither nation can recover for a period of years. In this case, of course, victory is going to depend entirely upon initial military strengths and stockpiles of supplies and equipment, plus strategic considerations. Then there is a third possibility. That is the possibility that neither side can destroy initially the economic industrial complex of the other nation or its power to mobilize. After the opening strikes which commence hostilities, action gradually reduces to a temporary stand-off while both nations mobilize their military and industrial strengths.

The third possibility is the one which actually resulted in World War I and World War II. The first two possibilities are based entirely on initial military strengths and stockpiles of material. Therefore, they don't cover the whole problem of war potential or of the economic part of war potential which we are interested in at the present time.

We aren't in a push-button age yet and if you analyze it, you will see that all of our national strategic plans are based upon the third possibility, the possibility that both nations are going to be able to mobilize their strengths after the opening of hostilities. Actually, with a careful analysis of things as they are now--they may not be that way a decade from now; we may be in a push button era then--if the war is a short war, it is inevitable that we will lose; we are licked.

So today I am going to ask you to assume that the third possibility is the possibility in which we are interested, and that is the one upon which we will base our study of war potential. Now, of course, there is a fourth possibility, and that is the possibility of cold war, which

we are in now, but that is an entirely different situation. I want to side-step it for the purposes of this discussion because it gets into many other things besides those which we are talking about.

When is the conflict going to take place? It is important that we know that for nations are continually changing. New factories are being built, present factories are becoming obsolete; new deposits of minerals are being found, old deposits are being depleted. Both in industry and in the Armed Forces technological progress is changing the product and the effectiveness of man's work. The potential power at any moment of any group of nations or of any single nation is different from the potential power of that nation or that group of nations at any other time. It is an entirely different thing to talk about analyzing the potential power of a group of nations for fighting a war in the immediate future than it is to talk about the potential power of a group of nations for fighting a war a decade from now. Those are two entirely different things.

So before we start our analysis of war potential, we have to determine or set the time period about which we are talking and the approximate date of the assumed commencement of hostilities. To make a logical study, one within manageable bounds, we must enclose our study within two boundaries, one, the type of conflict about which we are talking, and, two, the time at which we are assuming that conflict to take place.

Of what is war potential made up? Writers on this subject talk glibly about dividing war potential into factors--economic, political, military, psychological, ideological, and social--and they go on and write something about each one of the factors. They may write a lot about each one of them. But then they usually stop.

The important thing is not only to discover all you can about each of the factors, but to find out how all these factors mesh and tie together, interrelate to create potential power. Very few of them do or make any attempt to do that.

I am not going to propose that one group of factors or method of division of war potential into factors is any better than any other method. When you get into that field, you get into a type of semantic argument which gets you nowhere. Let us look at this thing from an entirely different view. I think you can consider that war potential is made up of two classes of factors. On the one hand, you have a group of material things, things which, if you can get information about them, you can list, you can tabulate, and, to some extent, interrelate. You can get hold of them. On the other hand, there are a number of factors or class of factors which are intangibles.

On the material side, we can find out the numbers of factories, the natural resources which exist in the various countries. We can find

out the manpower force available. We can find out what the factories are producing. And we can put that all together and get a material basis for a study.

On the other hand, we can find out a great deal about the attitudes of the populations, their subservience to a central government. We can find out about the skills of the people. We can then take these intangible things and combine them with the tangibles and arrive at an analysis of war potential.

This business of analyzing war potential is somewhat analogous to trying to estimate to what diameter a boy will blow a rubber balloon. You know the maximum diameter to which the balloon can be blown without breaking. You don't know to what diameter that boy is going to blow the balloon. You give it to one boy who may tire easily when the balloon is partially expanded, the boy quits. The balloon has only been blown to the diameter which is a small fraction of its capability.

Another boy takes the balloon. He has lots of lung power, he is willing, but he doesn't have very much skill. He blows the balloon but he can only expand it part way. The balloon again reaches only a fraction of the diameter which you know is the balloons capability.

Then you get a boy who is strong, is willing, and has skill, but he doesn't understand the effect of his blowing. He can't coordinate his efforts. He blows and blows. Finally, bang, the balloon bursts and has no capability of achieving a maximum diameter.

It is very much the same when considering war potential or potential power of a nation. One nation may not have the will to make the maximum use of its material capabilities, and its potential power may be only a small part of the potential power which it might have. In another nation the labor force in the population may not have the skills to make the maximum use of the resources and the material capabilities which exist within the nation. Another nation may have a poor government. It may not have an effective political organization, or may have come under the control of a dictator. Disruptive internal situations within a nation may completely destroy its capability for asserting power and its whole power effort of the nation suddenly collapses.

I think you can see that this study of the war potential of a nation when you start applying the intangible things to the material gets you into quite a complex field. But it is one which anyone analyzing potential power has to tackle.

Let us go on from here and look at in a little more detail, the elements which create the potential power of a nation or group of nations. When we are considering an abstract subject such as this, I think it helps to have some very simple visual analogy, something which is familiar

to all of us and into which we can put all of the elements which we are considering. I like to think of national power as an axe wielded by a powerful hand. Within this axe, the handle, and the hand, you can put all of the elements which create national power.

(Diagram)

As you can see in this illustration, the Armed Forces are only a small part of the axe, the cutting edge, but they are a vital part. However, without the weight of the things which make up the head of the axe and carry that cutting edge into whatever material it strikes, the cutting edge is useless. Without the handle, the weight in the head is useless since it is the handle which allows manipulation of the head. And, of course, without the force of the hand, the axe lies unused.

Now, let us see the things which go to make up the weight in the head of the axe. Behind the armed forces we have the munitions industries. These are industries which are relatively small in time of peace and have to be expanded rapidly in time of war. Directly behind the munitions industries, we have the manufacturing industries and the service industries. The manufacturing industries are those industries which take the raw materials and produce the end items, both for the military forces and for the civilian population. On the other side, the service industries are such things as the communications industry, the transportation industry, the wholesalers, doctors, lawyers, and all that miscellaneous group of people and agencies which serve the rest of the nation. For instance, it is a service industry which transports the raw materials to the factories and the end items to the consumer, be he military or civilian.

Behind these two major branches of our industry are the extractive industries, those industries which take from the surface of the ground or under the surface of the ground the raw materials which the manufacturing industries are going to convert into end items. In order for the extractive industries to operate, we must have resources, material resources, which they can work on. We must have human resources, the manpower which exists within the nation to operate all of these industries and to man our armed forces.

Where we are short of material resources, it is through our foreign economic relations that we maintain the favorable political climates in other nations which allow us to trade with them and get those items of raw materials which we lack and which are essential to our production processes and to the support of our armed forces.

Behind all of these things, of course, there is the land itself, the shape, location, and configuration of the nation; the topography, the climate, the soil, and the temperature, all of which have a great effect on the productive power of the nation.

I am not going to say any more about this. I am not going to try to go very greatly into detail because most of it is in the Economic Mobilization Study, which I wrote and which you will have to read later anyway—or at least it will be issued to you for that purpose. Those are the things, mostly material, which go to make up the head of our axe.

Now, we can consider that the handle of our axe is Government, and when I talk about Government, I am not talking about the form of Government because for the purposes of an analysis like this, we must be dispassionate. The form of Government has no bearing on the effectiveness of Government, the ability of a Government to control its population; to get the population behind it so that it will support to the maximum national objectives, both in peace and in war, so that the people will accept a lowering of their standards of living and at the same time produce and fight to the maximum. This Government may be totalitarian, democratic, Socialist, or even Communist. For the purposes of a study like this, all that we are interested in is the efficiency and effectiveness of the Government, and that is what we have to determine.

The hand we can consider as the will of the people; the will of the people to support the war effort; the will of the people to utilize to the maximum the material capabilities of the country under the guidance of a central government or governmental control.

This is just one way of looking at the power of a nation, but I think it is a fair method of approach. You can see that the material things are your industries, your factories, your manpower. Together with those, you have a great number of intangible things, the skills of the labor force, the leadership of individuals in industry, the political and psychological aspects of government together with its effectiveness, and the will of the people. It is only by combining all of those things together that you are going to get a picture of war potential.

We frequently forget also, in making a study of war potential, that there is only a part of the total production of a nation that is available for the support of the armed forces. You all know, you have heard it this year a good many times, that in time of war, 40 to 60 percent of the total productive power of the nation must go to the support of the civilian population. Otherwise, the Armed Forces won't get any support at all. You have to maintain the workers in the factories, the workers on the railroads, the workers in the electric power plant, the workers in the communications setup. If you don't make it possible for workers to get to work by furnishing them transportation—and in this country that means private transportation; in many cases pooled, of course—if you don't feed them satisfactorily, if you don't feed their families satisfactorily, you are not going to get the maximum of work out of them. So you have to consider in making an analysis of war potential the part of the potential power of any nation which must go into the support of the civilian population. It was over 50 percent in the last war.

In this illustration, I was talking principally about a single nation, but in these modern times actually war isn't fought by single nations. War is fought by groups of nations. So what we are interested in is the potential power of the group rather than the potential power of single nations. The potential power of a group of nations isn't the same thing as the summation of the potential powers of the individual nations.

For instance, one nation may have weaknesses which require support from another nation of the group, which tends to decrease the total. One nation may have surpluses which it can give to aid another nation without any effect upon its potential power in conflict, and this tends to increase the potential power of the group as a whole. There are weaknesses in strategic location which must be protected. Lines of communication between nations have to be maintained. And in any grouping of nations there are weaknesses, there are conflicts in the ideological, the military, the economic, and the political fields. These conflicts mean that decisions have to be arrived at through compromise rather than determining the most effective solution. Even in totalitarian countries, this particular weakness exists.

So in considering a group of nations and trying to analyze their war potential, it is necessary that you consider the weaknesses and disadvantages of the combination as well as the advantages.

How are you going to tackle a job like this? How are you going to go about making an analysis of war potential? I think what I have said before, the division I have made was one possible method of approaching the problem. A logical thing to do first is to find out all you can about the present material capabilities of the nation or group of nations you are considering; what information you can about what their factories are producing; what their manpower situation is; and all of that sort of thing which can be obtained almost entirely from general source information, United Nations publications, and private publication of many, many types.

When you get through with this study, you have a pretty good idea of the capability of each nation to produce what it is producing at the present time. That is your start. You can find out about the skills, ability, numbers of men in the labor force, the size of the labor pool, make an estimate of the number which can be drawn into the labor force from the labor pool in time of war, and the number which can probably be drawn into the armed forces. That gives you some idea of the human capabilities of the nation. All of this factual information as of the present will then give you a base upon which you can start your analysis. But that is only a base. Now you get into the more difficult part.

You have been doing a lot of statistical work which has taken a lot of time and energy, but which is comparatively easy to get. What

you want to determine is not what the nation is producing now but what the nation is going to be able to produce of the items which are required in a war situation. So you have to step from your base and determine, for instance, how fast factories making war essential items can be expanded so as to produce more war essential items and how fast factories now producing nonessential items can be converted to the production of war essential items. You have to determine how fast new factories can be constructed, and how much they can produce, and whether natural resources within the group of nations are available to allow this production.

Then you have to figure out how long it is going to take to train the manpower to operate these new production lines which are to be built or expanded; whether labor in each country is willing to change from one type of job to another and how effectively the change can be made; whether labor is willing to move from one geographical location to another.

This problem of expanding the labor force and converting it to wartime production is a very, very difficult one. You got a good bit about this in the Manpower course and you know that expanding and converting the labor force is very difficult in the United States. It is even more difficult in the older European countries where there is very great resistance to change. At times even political or psychological commitments of the government in past years may affect the entire situation.

You will recall that in Germany prior to 1936, in order to reduce unemployment, the government started the "Küche, Kirche, Kinder"--kitchen, children, church--movement which was intended to draw the women out of the factories. It was extremely successful. Most of the women left the factories and the objective was reached. Unemployment was decreased. But then the war came along and the government wanted to expand production. They wanted to get the women back into the factories. Neither the men nor the women were willing for the women to go back into the factories. So the government had to stand on its previous political commitment, even though there was a great economic penalty attached. That is just an illustration of some of the difficulties you get into when you analyze war potential.

Then there is the question of will, the hand wielding the axe. The hand is extremely important because a country may have all the necessary material capabilities, be very superior to any other nation in material facilities, but at the same time not have very much potential power because the will of the people to make the best use of that power isn't available. You have to make some estimate of how far the populations are going to be willing to reduce their standards of living and still produce to the maximum. There is an optimum point which you will have to try to determine.

Now we come to the final part of the study, which is the stumbling block which in the past has almost universally been avoided. That is the determination, after you have done all these other things, of the probable damage in the initial strikes in an atomic attack.

Now in Unit X you are not going to be concerned with that particular element, but all the rest of the study is building up, with this analysis of economic potential to that point, a base for you to use when you get into the final unit of the course, Economic Mobilization, which Colonel Barnes explained to you a couple of weeks ago.

I think I have said enough to show you that statistical and tabular information, while it is essential and vital to a study of this kind, can lead us far astray unless we apply to it the intangible factors. There are many columnists in this country who are probably doing this nation a great deal of harm by making comparisons and listing statistics in popular publications about the production and other capabilities of the Soviet area and of the United States and the rest of the free-world nations. They leave the impression that Soviet capabilities are only one quarter to one third of the free-world capabilities. They show, for instance, that the Soviet steel production is only a small part of the steel production in the United States. Those statistics are very comforting if you don't stop to analyze them. But when you realize that essential steel requirements in time of war of the people of the Soviet Union are almost nothing compared to the essential steel requirements to maintain the civilian population of the countries of the free world, then those figures aren't comforting at all. The situation is entirely different. We have to be careful not to be misled by many of the things you see published in popular magazines.

This whole subject is new. This country has never experienced a situation which made it essential for its government to know the war potential of various nations. We never have faced a total war. It is just since World War II that our governmental agencies and thinking people in the Government have realized that we must be able to analyze the potential power, war potential of opposing groups of nations. During the last decade we have been trying to figure out some way of doing it.

Our progress has been very slow, partially because of a lack of students of the Soviet area. We didn't have many people in this country who were interested in studying Russian or the Russian people, their government, or anything else before World War II. And we didn't have as much analyzed data on the Soviet areas as we had for almost every other area in the world. This, of course, has slowed up our progress in determining potential capabilities.

There is another thing that has probably slowed our progress up, and that is our intelligence organization. The intelligence unit of

one agency is responsible for collecting and publishing intelligence on the free world and another agency has the same responsibility for the Soviet area. Of course, that makes coordination a little bit more difficult. There is a coordinating agency now which is making an attempt to get a clear understanding of the potential power of the opposing world blocs in which we are interested at the present time.

Because of the newness of the subject, there are great opportunities for anyone to come up with new ideas for approaching this subject which may be of great assistance in solving what is a vital, major problem.

There is nobody on the faculty who is so naive as to think any of you in the limited time available is going to come up with a solution to this problem. You are going to come out of Unit X with an understanding of what makes up war potential and an understanding of the economic relationships between the various nations of the world. These understandings are certainly vital knowledge for any senior military officer in this day when the United States is progressing into world leadership.

As military officers, you are probably better equipped to handle this problem than almost anybody else. We have found that most economists and political scientists who tackle this problem are specialists who are, by all of their training and experience, primarily interested in a rather narrow segment of the entire problem and they find it very difficult to back off and look at the picture as a whole. You know one definition of an expert is that he is a man who avoids the small errors as he sweeps on to a grand fallacy, and that goes for many of our experts. After all, it is your own respective necks which may be dependent upon the accurate solution of this problem of war potential by Government agencies if another war comes. Unless we have an accurate knowledge of comparative war potentials within our Government, we are not going to have logical strategic plans.

Now in closing, I just want to make one remark. I want to repeat what I said before. You can tabulate all of the material things, all of the statistical things you can get about nations, but they aren't going to be of very much value unless you consider with them the intangible factors which affect them. I think it will help in the study of this problem if you keep in the back of your minds the fact that the axe is useless without the hand to pick it up and wield it.

I realize that was a terrifically heavy dose for a new subject in one period. It will probably take you a good bit of time and a lot of thought to reach conclusions of your own on this subject. I will answer to the best of my ability any questions which you have at the present time.

QUESTION: I have a little difficulty understanding how you could take the war potential of one country and add it to the war potential of a second country and come out with a total which is less than the sum of the two. I can see where, if one country had a surplus of wool, their total surplus might be less, but they can't fight a war with wool and your combination would necessarily be greater than for one in the end. Could you give us a practical example of that?

COLONEL RINDLAUB: Well, suppose you have one nation that has a certain potential power. To start with, when I say "add," I am not talking about adding numbers. I would like to make this clear right now, that when you make a study like this, if it is going to be a good study, you are not going to come up with any set of tabular figures or any set of comparisons. You are going to come up with compromises as to relative capabilities, and that is all you are going to get. Maybe some day methods will be developed where you can get more than that, but that is certainly all you can get at the present time.

But to try to answer your question specifically--and it is a tough one--you might have a potential power within one nation to fight a war. You might have a potential power in another nation to fight a war. One nation is just barely able to feed itself. The other nation may have a deficit in food. In order to get the maximum fighting force out of both countries, the nation that has the most food sends some to the other nation to equalize their effort. It takes ships to send the food; it takes additional protection of the lines of communication between the two nations, all of which tends to subtract from the total power capabilities of the two nations as individual nations.

QUESTION: In those conditions, though, the second country that is being supplied couldn't have fought the war in the first place.

COLONEL RINDLAUB: Well, it can fight a war. You say "the" war. What do you mean by "the" war? In other words, you are getting into the most difficult areas of the subject by your question. They can both fight a war. You are increasing the capability of the second nation to fight a war. The question is whether that increased capability of the second nation is equal to, greater than, or less than the reduction in the capability of the first nation, due to the assistance which the first nation has to give to the second nation. The difference may not be very great; it may be. There is a possibility in both directions. There is a possibility that by doing what you are doing you are increasing the power potential of the two nations; there is also the possibility that the drain on the first nation is relatively so great that you reduce the power potential of the two.

The reason I said that particular thing--and that is probably the least important of the areas I discussed--is that it is something that has to be considered. Actually, the greatest difficulty and the one

which we are experiencing right now in Europe, in NATO, is the difficulty due to conflicts between the nations in the various economic, political, and ideological fields; the necessity of arriving at compromise solutions such as in the infra-structure program of NATO, where the NATO standards are a compromise and result in the lowest operational and housing facilities in the air fields that any of the nations will accept. That is what we have as a NATO standard for air fields. It is just about as low as any nation will accept. So individual nations going into air fields have to bring them up then at their own expense to the standards they would like or think most effective on an air field. That is the kind of compromise that has the most importance in the comparative study. Does that help at all?

All through this study you will find you are dealing with things that are very hard to grasp and pin down. I think that is apparent. That is why nobody has solved the problem yet.

QUESTION: Colonel Rindlaub, as depicted in your chart, the will of the people is one of the most important factors in war potential. As we look back upon the start of World War II when the attack upon Pearl Harbor gave the United States a real will to fight, that was one sort of a will of the people. Then the Korean war failed to have that incident which would weld the will of the people together. We have the two extremes, I suppose, in the will of the people to fight. My question is, in studying the economic potential of a nation or group of nations to fight, it seems the important factor of the will of the people is going to be determined in the last minute, that is in the manner in which the war starts. So I see great difficulty in trying to determine that ahead of time.

COLONEL RINDLAUB: I agree entirely with you when you say we have difficulty. It is the key to the whole situation. I can't agree with you quite as to the conclusion of the Korean war as the other end of the scale from Pearl Harbor. Actually, initially our people were very much united when the Korean war broke. Congress gave the military almost everything they needed almost immediately. I don't know of any popular disagreement in the initial days of the Korean war with the Korean war. Later on, factional disputes developed.

QUESTION: May I change that to state it this way: There is a difference in the will to fight at the start of World War II and at the start of the Korean war, a considerable difference.

COLONEL RINDLAUB: That's right.

QUESTION: How are we going to estimate that will of the people to fight in a future conflict if we try to analyze this thing ahead of time?

COLONEL RINDLAUB: There are going to be all sorts of degrees of reaction to any type of opening of hostilities. The first thing you have got to do is to make some assumption in your mind as to the actual possibility of the type of opening of hostilities, and then, through a very complete study of the governmental setup and of the psychological attitudes and historical background qualities and ideologies of the people--and it is only a psychologist, a political scientist, people with backgrounds in those areas who can make those analyses effectively, and it requires a person who has intimate knowledge of the populations within a country--but having that intimate knowledge of the populations, you can make estimates as to the probable reaction of the people under conditions like that.

Your estimates are not going to be exact. That is why I keep saying that you can't reduce this thing to anything numerical, but you can get an idea of the most probable reaction. It is an intangible thing, and the more you know about the peoples in a country, the more accurately you can estimate the population's reaction to a particular event. And that is what you have to do in effect.

QUESTION: You probably will have to do this every year also. I want to go back to our numbers racket. I am bothered with vague impressions of potential here, a very vague Soviet potential, certain formulae set up for rough comparisons of manpower resources, productive capacity. We try to find out such factors. We think they do give us some basis for comparison. I gather those may be more misleading than helpful.

COLONEL RINDLAUB: They may be if you consider them by themselves. They are very valuable. They are essential. You have to find a base on which to start any analysis of this kind. You have to know all of those things and you have to gather them all together.

QUESTION: What better comparison can you have than by evaluating these things and putting weights on them?

COLONEL RINDLAUB: That is a very good comparison up to a point. It will give you the probable maximum capabilities, won't it? Because most of them are in terms of maximum. All right. Then, in my opinion, you have to apply to those maximums the intangible factors which tend in general to reduce them. You need the factual figures; they are valuable; but if you don't consider the intangible factors which may reduce them and reduce them markedly, your results may be entirely different.

It is tough to even determine all of the elements that have to be considered. Nobody is expecting you to take this thing all in a day, for even after you have been working at it for two or three years, you

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keep on spotting things that you have missed before. Very few people have even considered war potential as a whole until recently. They have considered parts of it.

Our Government hadn't tackled it. It is only in the last two or three years that we have been developing studies on this thing as a whole within our Government. This College probably worked at it before any other government agency got into it to any great degree. We were entirely wrong at the start. Our approach was numerical as we started out. As we have discussed it and the students worked on it, we realized that the numerical answer is simply a base upon which to start.

Thank you very much.