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MANPOWER UTILIZATION IN INDUSTRY

Dr. Eli Ginzberg

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Reviewed by: Colonel J. H. M. Smith, USAF

Date: 21 December 1960

INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, D. C.

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16 November 1960

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Reporter: Ralph W. Bennett

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COL. DE CAMARA: You have all heard that old cliché, "Our speaker needs no introduction." Certainly that holds true this morning. All you have to do, if you want to find concrete evidence of his contributions in the field of human resources is refer to the card catalog in our College Library.

It's a distinct pleasure and a privilege for me this morning to introduce to this Class of 1961 Dr. Eli Ginzberg, of Columbia University. Dr. Ginsberg.

DR. GINZBERG: I've been here many times before, but this is the first appearance in this auditorium. The improvement that you have made during the course of a year is extraordinary. It puts me in a kind of embarrassing position to try to improve equally, and I can't do that. I can tell you that ahead of time. But, hopefully, the improved environment in which we are meeting will have some effect also on the quality of my presentation.

Last year I really turned my presentation on its head. I was supposed to talk about manpower utilization in industry. I had just completed, with my associates, a long-time study of the ineffective soldier; and what I had done then was to extract the lessons of this eight-year research project, based primarily on military materials, and try to indicate what the lessons were for management and for the nation.

Well, this year, since I can't repeat myself--I get too bored and

fall asleep--you know that old story about the professor who dreamt that he was lecturing while asleep, and discovered he was--this year we have two other books pretty far under way. I have many titles and one of them is Director of Staff Studies of the National Manpower Council. The National Manpower Council has a big volume on "Government and Manpower" just about ready to come out, which deals with the issue of manpower utilization from the viewpoint of the employer. Then we are completing another volume called "The Waste of Manpower," which also deals with the utilization problem. So I thought that this year, instead of dealing with completed books and trying to extract their lessons for you, I would give you a preview of some of our ideas that are not yet out.

I'm going to do four things this morning rapidly. And, since I have the cooperation of the staff here that the best part of the presentation is our informal discussion--questions and answers--I must be clear not to take too much time in the formal presentation. I want to do four things. I want to tell you a little bit of how I think one ought to think about manpower utilization. The big problem in most fields is how to think about the problem. If you ever think straight, the answers are easy. But if you can't really get an approach to a problem, then you can flounder for a very long time.

The next facet of the problem is, How can one approach the subject of more effective manpower utilization from a managerial point of view? The third facet of the presentation is, What are some of the broader factors in a situation that go beyond management ability to affect utilization

patterns? Management cannot deal with the utilization problem solely or alone. There are other forces at work, as we will see. And all the way through, and in conclusion, I want to put before you some of the specific implications of these considerations about manpower utilization for the Armed Services, which are a particular type of structure, with a particular type of manpower problems. O.K. That's my schedule for myself.

Now, let's start by saying how to think about it. The first point I want to make is that there is a contradiction between a democratic society and the concept of a maximum utilization of manpower. The ends of a democratic society are the greater fulfillment of the meaning and values of individual lives; and the maximum utilization of manpower really conceives of people as an instrument. And there is an inherent contradiction there even, let us say, in times of national emergency and war.

That is, if you think about the story that I remember General Collins, former Chief of Staff, told me some years ago about that when the Russian infantry advanced, and they had no mine detectors, it was possible for the Russians to take a squad of soldiers and tell them to go through the field and really to use human bodies to detonate the mines. Now, I ask you whether it is conceivable to operate American armed forces, even British armed forces, in that fashion. You will see that, even in terms of a major emergency, there are inherent interplays between the value structure of a society and what it can or cannot do with people. Let me just remind you that in the middle of a major war General Eisenhower almost lost General Patton because all he did was to slap a soldier. That gives

you an idea of the sensitivity between the value structure and what you can do with people. That's the first point. You have to think about this.

The second point about manpower utilization is that there are different ways of viewing the utilization problem depending on whether you think about it in terms of the individual, the employer, or the larger society. And you don't come out with the same answers depending on your vantage point.

Take the question of retirement at 65, or at any earlier period, which is compulsory. From the viewpoint of the individual that may be good or it may be bad. If you have noticed the advertisements in the Sunday Times or in other papers, you will see the banks saying that this is an ideal to strive for--to put enough money aside so you can retire early. On the other hand, if you are the kind of person in good health and otherwise interested in work, forced retirement may be a bane rather than a desirable action.

From the point of view of the employer, if he is really operating in a situation in which he has more people than he wants or needs, he's glad to get rid of his older people. On the other hand, if he's operating in a tight market, a system of compulsory retirement might really handicap him. And this has happened, of course, in the case of certain corporations that have compulsory retirement, in terms of their scientists and engineers; and they have been caught on the horns of a real dilemma where there are shortages of scarce personnel and still they have compulsory retirement.

Then from the point of view of the society at large, whether compulsory retirement is or is not effective manpower utilization depends upon the levels of unemployment, or the absence of unemployment from the point of view of the general society. You get two different readings. I notice that the President-elect has indicated that he hopes to bring General Taylor and, I think, certain other generals back to active service. I don't know whether to active service, but, anyhow, to governmental service. This raises a rather nice point about manpower utilization.

From the viewpoint of an individual who has been in a system such as you have been in, with earned retirement after twenty or thirty years of service, the individual may maximize his position by leaving the system and taking his pension and working elsewhere. But if you look at it from the point of view of the society, during which he has acquired very specialized skills, like General Gavin or General Taylor, it doesn't follow that from the society's point of view of the use of skills, it makes very much sense to have let people like Taylor and Gavin get out of the Government at a time when their skills may be required.

So that what I have tried to suggest to you is that there is no single or unitary way of looking at this manpower utilization. It depends on how you turn it.

Now let me show you that, even from the viewpoint of the individual himself, or from the society, how the question of manpower utilization relates to the costs involved in using people. I have recently been party to an international conference on the aging in San Francisco; and there were

some Swedish research materials which indicated that a considerable proportion of the older workers in Sweden are working although it is to their physical harm. They are actually shortening their lives, as far as the best medical opinion could discover, although they weren't aware of the fact. That is, that the objective view of the physicians who examined these people is that a certain proportion of the older people were really paying a very high cost for continuing to be utilized.

Then, if you think about it from the viewpoint of an organization, the Standard Oil Company of New Jersey had a very rigid compulsory retirement rule. In the middle of World War II a very important foreman, with very specialized skills, came up for retirement. It went all the way to the board of directors as to whether the rule would be waived, and they decided it would not be waived. They retired him even though they needed his skills. And then they followed through what happened. And they discovered that seven people were promoted because this one man got out.

So it is a question of how you look at the organization. I don't have to really elaborate this point to the military, which is very conscious of this. But if I were dealing with a civilian audience, I would need more emphasis on it. This is a question of which way you look at the utilization--only with respect to the individual who is staying or leaving, or its impact upon all the other individuals in the organization.

In our studies on the waste of manpower we recently ran across an example in the State of California where the State is investing up to $200,000 to rehabilitate a single individual to return him to work. Now, whatever

justification that may have on a humane basis, that is, we're a rich society and whatever we want to do for human beings in their own right may make some sense, from the point of view of the economics of employment, I would raise with you some questions as to whether it makes much sense to invest $200,000 to bring back to work a man who may only have ten years to go or fifteen years to go. I don't remember what it was.

I saw a fair amount of this difficulty of the costing of utilization during World War II, when the Army and the Air Corps, I suppose it was then called, got really blocked with limited-service men. It was quite true that a lot of people could be used; but, after all, this was a big organization and the question was, What was the overhead cost of finding where they could be used be? and what was the assignment and reassignment potential that these people with handicaps had? And we found after a while that we really got blocked with them. We had so many of them. They got in the way of a flow of personnel that you needed to get your basic missions performed.

So this whole question of the cost of using people is an important one.

Now, let's take the question of whether you think about utilization in terms of the total population or only in terms of the labor force. We count unemployment in terms of the people who are actively looking for work. But there are a large number of people in our type of society who are outside of the labor force who may be interested in working but who have given up looking for it.

Now, the question of how well a society is utilizing its resources,

its manpower, depends really on the vantage point of whether you have the narrow frame of just thinking about the people who are actively in the labor force, or whether you think about the, I would suspect, millions of women of middle age who would be glad to work under certain conditions; but there are no jobs; sizeable hundreds of thousands of the handicapped; a considerable number of older people; and, believe it or not, not an inconsiderable number of young people. We now have compulsory school attendance laws which keep people in school in certain States up to seventeen and eighteen unless you graduate from high school.

My view is a little bit unusual in this matter. As an expert in human resources you would think I would be in favor of more and more schooling. I'm not necessarily in favor of more and more schooling unless I see some profit to it. In my opinion, there is a sizeable minority in schools who I don't think are profiting very much and, in fact, maybe are being harmed by being kept in school. They are in school because there is no other place for them in society at the moment. That is, neither the employers nor the trade unions or the society as a whole, the way we've been developing, have much room for fifteen-year-olds. That may be the problem of the society--to re-think whether the school is necessarily the answer to all adolescents. I have my own doubts about this.

Now take the question of manpower utilization from the viewpoint of the use of the alternative time when one is not working. In the U.S.S.R. you have an expectation that most women, including women who have young children, will work. We have a view that the time that women spend in this country

in the rearing of children and in the running of a household is productive activity even though they are not counted as members of the labor force. And this is an important question as to what kinds of value attach to the alternative use of time.

There has been a great discussion in the United States about a reduction in the work week, and the supposed lack of intensity that some people argue that workers now have with respect to their work as over against earlier days. I want to submit on the other side the question of whether one takes into consideration this whole "Do it yourself" affair; and to what extent this is simply a statistical mirage. That is, we don't happen to count as part of productive work the painting of a house, the repairs, and the large number of other activities that people now do for themselves.

Finally, from the viewpoint of how to think about manpower utilization, let me call your attention to the whole argument that Mr. Galbraith has precipitated for the American public and that is whether people are usefully employed or not depends really on your valuations that you attach to the end product. Mr. Galbraith thinks that it's not very useful to have big, fancy tail fins and it would be better to have other things produced in the society. So he concludes that there's a lot of redirection of resources that would be desirable. If you deal with the teetotaler group, they would consider all the people employed in the liquor industry as being wasted--not only wasted; it's sinful. I mean, it's a negative kind of a view.

These are very difficult judgments to reach. Take the advertising field. If you look at it narrowly, as a first approximation one could say:

"Well, they're not 'creating' anything except a lot of words." But if you then ask a more sophisticated question about the dynamics of advertising in terms of the production and distribution system that we have in this country, you come out perhaps with not such an obvious answer.

So I hope by this first section that we have reviewed you are now convinced that there's nothing very simple about thinking systematically on the questions of manpower utilization. It is a very complicated subject, which requires really multiple vantage points from which to approach it; and the answers you get are embedded almost in the approach that you take.

With that as background, I want to now move to the second section, which is, What can one say about the opportunities for improved manpower utilization open to management? What can management do to try to improve the manpower utilization of the people whom it employs?

Very roughly I want to make three distinctions, and then I will explain them.

One way in which management can operate is to try to improve the matching between the skills of the work force and the functions that there are to be performed. This is one kind of a matching. The closer it can come to getting people of appropriate skills into the appropriate functions, the better.

The second facet of the problem is, What is the relationship of the human resource factor to the other resource factors that management can employ to get the end product produced, that is, in terms of labor versus capital?

Thirdly, What can management do about the organization and general morale of the organization to elicit higher orders of participation which hopefully will be reflected in higher productivity of those people whom it does employ?

These are three axes that we can inspect briefly.

Let's look at this question of skills and functions. In World War II we had a Selective Service System which operated on the notion--for a long time; not throughout the whole of the war, but the most of the war--that everybody who came into the armed services had to be suitable for infantry assignment. In point of fact, probably two out of three men who saw service in World War II never heard a shot fired, never came anywhere near the combat area.

Now, obviously, if your requirements are artificially high, that is, if you are looking for people to perform task A, but many of them never have to perform at that level, they only have to perform tasks B, C, and D, this is a fantastic mal-utilization in the sense of creating all kinds of troubles for yourself. This is a very important point.

I recently had to interview girls for a new secretary. I had a girl and she lasted eleven years, which is pretty good for New York, and then went home to the West Coast and I had to find a new girl. It was quite clear to me that one of the things that I had to look out for, since I had an unusual office, was not to get anybody who had more skills than I needed, because that was just playing for trouble. That is, there is such a thing as getting people who are over-skilled for the functions as well as under-skilled, because if you get people who are over-skilled for the functions,

you also create all kinds of troubles.

I think this is one of the issues that the Armed Services have, frankly. As I recall, Captain Nimitz of the Navy some years ago, and a large number of other semi-senior officers, took themselves out on the belief that their skills were just not being intelligently employed. This is a problem for every organization.

I am amused when the large corporations come around to the campus and all they want is the honor students who have been three-legged men, who have been ahead of all the student government and so on. I say: "What do you want them for? To sell refrigerators for General Electric? What do you need them for?" If you get these kind of people, they will only get in your way, because they will be dissatisfied in terms of their expectations and their qualifications. You can't use them, or you can use very few of them.

So that an improved understanding of the real requirements of an organization, and an understanding of the distribution of the aptitude and skill level of the work force, and a better matching of the two, is very important.

I think actually the Armed Services have done a pretty good job on the new AFQT operation, in which they have now tried at the margins to make a determination as to whether they can take in a marginal person, not only on the question of his intellectual aptitude, but whether he also has certain skill aptitudes. That's a much more imaginative way to handle this--instead of dealing with a single factor, to deal with two or three

factors at the margin.

The next thing that you can do under the skills-to-functions relationship has to do with the economizing of the scarce personnel. And in every organization there are people of certain skills that are scarce, and there are different ways to economize.

I think you've done a pretty good job in the Armed Services, but only pretty good. That is, you suffer from the tremendous difficulty of being a very rigid hierarchical structure; and each person up on the rank level can or cannot do certain things by virtue of his rank without relationship to his skills. And you have this very radical split between the enlisted man and the officer. That is, you have none of the flexibility, let us say, of Dr. Lawrence, now dead, in his laboratory out in California, the Radiation Laboratory, where a Nobel Prize winner and a director of the laboratory, like Lawrence, on certain projects would be a working member with a young instructor as a chief, because that young instructor knew more than Dr. Lawrence did on certain projects. On other one Dr. Lawrence was in charge, and on still other ones someone else was in charge. That is, there is a great necessity, in my opinion, for more effective manpower utilization; and the more technical you get, the more important this is.--to try to break this rank and skill hierarchy, because there are not the same; and it does not follow that the person higher up is necessarily the more knowledgeable.

I've been dealing with DuPont on a series of research seminars, and I point out to them that one of the great difficulties of a technical

company like they are is that it takes twenty years, more or less, for a man to become, let's say, one of the key vice presidents for research. But in twenty years he's likely not to be at the forefront any more of the scientific knowledge in the field. And the problem, therefore, of how to balance out technical competence and organizational maturity in a rank structure is a really tough one.

The place where it works best is in a very loose organization, in which you can see that a 34-year-old fellow out in California manages to get a Nobel Prize. That is, the thing is so open that people can operate at their own steam without relevance to their place in the hierarchy. That's very unusual. You can't imitate the university across the board. I understand this.

You can make some improvement, however. You can break, and at least have parallel lines toward the top. You don't have to have people necessarily move over from their technical or scientific line into the administrative line in order to go to the top.

After World War II I worked with the then Surgeon General of the Army, General Bliss, to arrange a new system of promotion, which made it possible for a man to stay in his technical specialty and to have as high a rank as the Surgeon General of the Army. That is, the top surgeon or the top medical man or the top psychiatrist could achieve within his specialization area as much rank as the senior administrator in the corps.

This becomes very important when you start to say that what you really want to do with rank is to hand it out in terms of the contribution

that a person makes to the organization. In the old days it was quite true that the person who had final responsibility to the organization was the person who ran the organization. That's why he had the highest rank.

The more technical an organization gets, the more you have to re-structure it, to try to make some elbow room for what might be called the more individual contributor. The largest defense manufacturer in the United States--and it's no secret; it's General Dynamics--the president of that company, who used to be the Under Secretary of the Army, told me a few months ago--Well, I'll tell you two parts of the story. Mr. Pace, in a lecture at the Pentagon some months ago indicated that, in his opinion, 50 percent of the profitability of that company depended on two people. He didn't identify them, but I'm sure they were in the scientific and not on the general managerial level. Fifty percent of the profit of the company, the real productivity of that company, was the function of two people. And the president told me a little while ago that he had taken one of his two scientists and just decided to automatically double his salary, because he thought it was silly to give him modest raises, because the contribution was out of all proportion and it didn't seem to make any sense; so why give him a 10 percent raise? He gave him a 100 percent raise. This is a real headache now as organizations get to be more and more technical.

The next point is that management has to think about the utilization problem in terms of two time perspectives. And, obviously, the Industrial College of the Armed Forces and the other schools are indicative of the

fact that the Armed Services have always been somewhat aware of this problem. That is, you pay a price for reducing current utilization in order to be sure that you have the skills that you need at some future date. And this is a difficult problem if you are running a profit organization, as to how much investment do you want to make to increase the skill level so that you can fulfill tomorrow or the day after tomorrow its function?

On the other hand, this can get to be perhaps really inverted in the Armed Services. I remind you of the testimony before one of the congressional committees in '52, which looked at the scientific laboratories of the Armed Services and the proving grounds, in which it was quite clear that the conventional military policy of the rotation of personnel was creating a very low level of effectiveness in the management of these organizations, because people were being turned over all the time as part of the rotational policy. That is, no commander was long enough in his post to really become competent to manage the post properly; and there was a God-awful lack of efficiency all the way through the organization because of the rapid turn-over. That's the other half of it.

So you have a very subtle problem of balance here between, How do you make reasonable investment to insure effective utilization in the future by building up skills? and, on the other hand, How do you make sure that you aren't so future-oriented that you make it impossible for effective work to be done currently?

My general view of the Pentagon has been over the years that it takes a year for a man to come in and catch on to what's going on. He starts

to work effectively in the second year. By the third year he is looking for his next assignment. So that the pay-off is very, very limited. It's a very serious problem.

I would argue that the Armed Services are in a certain sense so future-oriented in a formal sense of the term that they are really not getting the returns out of current utilization that they ought to be getting.

Now, another point with respect to skills and functions is the necessity for management to re-study its assumptions about the quality of the labor force and the kinds of assignments that it has. We all are loaded, every group of people is loaded, with impressions as to the kinds of work that other people can do or not do. Let me give you an outstanding illustration.

The Regular Services before World War II operated in general with a very low level of enlisted men, by and large. It got sweetened a little bit during the 1930's, because it was a depression period. But on the whole it was a marginal group of poorly educated, somewhat wild youngsters who went into the Regular Service.

Came World War II and the Armed Services got a cut of the entire population of the United States, with high levels of education, including college. And for a long time the senior officers weren't aware fully of the major changes that should have been made to take account of the fact that you had entirely different personnel now to deal with.

I'll give you another illustration. I was impressed, during my World War II days in the Pentagon, with the kinds of assumptions that were being made about, let us say, Negroes; and I sort of explored that a bit, and I

realized that many of the senior officers were southerners who had grown up in Georgia, Alabama, Mississippi, in 1905, 1910; and their image of what a Negro could and could not do, his education and competence, was a function really of their basic impressionable years, when they were still growing up. They didn't know anything about northern-trained, northern-educated, industrialized Negroes, who were skilled people.

Now, this is a problem we all carry within ourselves. You saw that with the WACs, incidentally. That is, we carry within ourselves a series of operating assumptions about the qualities of the labor force that may or may not be right; and the odds are, if the population is changing rapidly, that the odds are wrong, that the old assumptions don't hold.

So much for skills and functions. Let's look at this question of labor in relationship to other input factors.

There was recently reported in the New York Times very sizeable reductions in force in the largest mercantile company in Great Britain, called Marks and Spencer, by J. C. Penney, which came about by the elimination of a colossal amount of inventory records and sales records and stockroom records. What the management of this operation finally discovered was that it was better to lose a little property and to make the savings in personnel; there would be a certain number of additional thefts, that there would be some loss of property, but nothing in comparison to the gains on the personnel side; that is, that you would be able to pay for this many times over.

Now, I recall a story that my father told me about the Bibliotecque

Nationale, which is the largest library in the world; that in his student days in Paris at the end of the nineties they had no guards in the library except in their most rare books, which was centralized. It was cheaper to trust most people and to recognize that some people would steal books from the library and to have a few fellows buy them back the next morning on the Seine than it was to guard the whole place. You see, this was a very shrewd kind of Gallic estimate of how you could accomplish your end, which was to keep your books, in the cheapest possible way; and it was cheaper to do it that way.

I had a hard time during World War II trying to convince the Surgeon General of the Army's hospitals to stop counting the laundry and everything; that it cost much more to count the darn stuff than it was worth; and that if you would increase your losses, you would still be way ahead of the game when your manpower was short. This was a constant problem of trying to think this through.

We have the opposite problem at universities. Universities are very backward places. Each professor is supposed to be his own typist. You may not pay professors very much, but you pay them more than typists, but we still sit there and type out--most of them; I don't say everybody--but most of the professors type out their own letters and do all these kinds of chores, because the universities have never gotten to a point where they understand the nature of making use of some additional investment along the line.

Another point has to do with the question of what management can do to redesign the work process through new capital investment. You have

heard a lot, I suppose--or maybe not so much--about the movement of the cotton textile companies from New England down south. The usual explanation is that you get cheaper wages down south and tax remissions and so on. I don't believe that's the answer at all. The basic gain that comes about is that when you finally build yourself a new plant, like this one, you have a chance, that you don't have in the old place, to really make a whole set of new assignments. You get a new personnel, a new group of workers, and you sort of can free yourself from the work rules, limitations, and the bad habits that have grown up over fifty or a hundred years. That's the real gain that you can make.

That's why I think Mr. Roosevelt during the 1930's found it necessary, when he wanted to get quick action in the governmental agencies, to build up parallel organizations. He didn't see any possibility really of getting some of the old line agencies to move. According to all management theories, that's very bad--to build up parallel organizations; but it just depends on how important it is to get something to happen. And his answer was to simply build parallel organizations. It may be a price you have to pay sometimes.

One of the big transformations that are going on now is the constant sweetening of more staff personnel and the reduction in what might be called manufacturing labor in large-scale industry. We now have in companies like Standard Oil of New Jersey and General Electric almost half of the work force on salary. There has been a recognition of the fact that your total objective in terms of your overall costs of getting the stuff produced is cheaper by

increasing the amount of skill and technical competence at the staff level, so you do better planning and better control; and you can then reduce, with the machine, your operating labor way down.

That is, just in passing, one of the reasons why most of the discussions about labor productivity are so meaningless unless you take the total labor costs of an organization, because if you just take the factory labor, what you really have is a whole transformation of the way in which things are produced.

Another aspect of this is how much money you are willing to put into supervision. The great problem, obviously, in World War II, which made it so difficult for the Armed Services to get effective manpower utilization, was that you started, as I recall it, in the Army and the Air Corps Combined you had about 18,000 regular officers, including those on extended active duty, when the war began. You ended with 800,000 officers. The amazing thing is that the organization worked at all. You had ninety-day wonders around. And the problem was, you had very little time to really indoctrinate the leadership to do the supervision. One of the problems that any management has is how much money it is willing to devote to the supervisory level to really try to raise the quality of performance of the people on the line.

Now, the third facet of this has to do with administrative changes that give you some chance for productivity increases. One of the big developments in so-called American industry over the last decade has been decentralization. I think more has been said about it on paper than actually

is warranted in fact. But there is a problem that the larger the organization you have, the more important it is to try not to have too many papers flow to the top and have to flow back again.

As I recall it, I made an estimate a couple of years ago that, in order to get, let us say, another wing on an Army hospital, that paper had to flow through thirteen levels in the Pentagon and the Bureau of the Budget before it got approved; that it was reviewed twelve times before there was action. Well, obviously, without trying to outguess what the new President is going to do, there is some necessity to collapse an organization so that at least you get only half of those many levels if you want anything to happen. Thirteen levels is an awfully large number of levels to review.

One of the big problems, therefore, in manpower utilization is to try to make sure that between the initiation of the work and the completion of the work, the number of review levels are kept to a minimum, not extended to a maximum.

Another problem is to what extent are the existing personnel policies and procedures appropriate to the new kinds of organization that you may have. Let me show you what I mean.

If you ran a factory, your safety department and your insurance department may say that you had better get everybody out of there on Friday at five o'clock and keep it closed Saturday and Sunday, especially if you are dealing with materials that can explode. And from a line point of view, that's a sensible way to operate. But what happens if the future of the

organization depends upon research and development in part and you lock the laboratory so the scientists can't get in?

The whole appropriateness of your personnel policies and procedures for the kind of people that you have and the kinds of functions that you have to perform has to be constantly re-studied. And if you don't make the adjustment, you are guaranteeing poor utilization.

Then another facet of this problem is illustrated, I would say, by the steel strike and the General Electric settlement. If you have a management that is really insensitive to the important elements that are of concern to the people who work for it, then you are going to have trouble. And that's what happened in steel. They started to disburb the work rules without really knowing fully what they were disturbing.

That didn't mean that the steel union would not have been willing to negotiate under certain terms some changes in the work rules, but they would have insisted on negotiation, because the work rules that get established are part of a man's total returns on a job. They are as important as his wage, because they affect his seniority and everything else.

So I would say it was a major error of management, based upon insensitivity of what really was important to the people with whom it had to deal, and that's why the strike got way off into left field.

On the other hand, on the recent GE settlement, the management, I think, had a much shrewder estimate of the degrees of priority that its work force had. And it was able on a reasonable kind of an offer, to really beat the union at its own game.

This is just a way of saying that the smartness of a management--I'm not "advocating" that one operates labor relations in the United States the way General Electric does. That's its own business. I'm just indicating that you can be smarter or dumber from a management point of view with respect to being aware of the sticky points with respect to the people that you are trying to get to be productive.

I am going to move very quickly now to top. 3, which is simply to call your attention to some of the other kinds of factors that spin around and spill around that affect manpower utilization; and then I'm going to draw in the very concluding minutes some of the morals for the Armed Services.

The most important factor that affects manpower utilization in the society at large is the level of your economy. If the economy is operating at a very high level, it means that more and more people who want to work and are capable of working will have a chance to work. This is obvious. The people who are in the economy will have a chance to move and acquire more skills. Workers who will ordinarily be following restrictive practices will be more relaxed about it, because there are plenty of jobs and they don't have to worry. And in general, if you want to have better manpower utilization, the real nub of it is high employment.

Now, there is a negative aspect to it, and that is that with very high employment you will get some loss--some loss but it's a small loss, I think--in the discipline, and to some extent perhaps in the efficiency, of a work force, because it simply realizes that it can move and get another

job elsewhere. But it's a minor loss compared to the gain.

Another kind of factor that affects manpower utilization tremendously is the question of your technology. For all practical purposes, the Armed Services are slowly finding it more and more difficult to use people with very limited education. So then you get other kinds of funny things happening. Rene Dubault, the famous research biologist at Rockfeller Institute, pointed out that in World War II acute eyesight was sometimes a matter of life and death for a fighter pilot. Today, with the new electronics panels, there is some advantage to being near-sighted. That is a dramatic indication of the extent of adaptibility depending on the technology. One of the conspicuous things about technology, of course, has been that it was due to technology that you could use women. As long as you had great, big, heavy work, the effectiveness of using women in the economy was much more reduced.

Another kind of important factor is the political-cultural milieu. There is a distinguished professor at Vanderbilt, by the name of Nichols, who has just written a book on the South. What he really says is that the South is a part of the United States which has not been primarily interested in industrialization--he's a southerner--and has paid a very high price in its industrial progress because it values other things more.

You know, the South insures the out-migration of, let us say, skilled Negroes. It has a system of segregation which just makes it that much easier.

If you think about the desegregation in the Armed Services, it took

a particular situation, namely, Ridgeway's lack of replacements in Korea, and the fact that he got a shipment which didn't have any notations on it as to what the color of the replacement was. He suddenly found himself with a lot of Negro troops, and he used them. This is one of the ways in which you change utilization patterns. I don't know whether you know that, but that is a true story.

Next is that there are cultural determinations as to the prevailing attitudes toward work. We used to have a society as late as 1924 in which the steel workers on the swing shift worked 84 hours a week. We are moving to a society which is going to work 32 hours a week.

Just in passing, one of the reasons you can't get more schooling out of the youngsters is that, as I pointed out, you can't run schools on Saturday, because if the parents are going to work four days a week, you can't get the kids to work six days a week. But that's just in passing.

Among the other kinds of factors that are involved here are the workers' attitudes towards what they will or will not accept. If you take professional groups, like the doctors, you can't get any rational development of utilization patterns in medical personnel, because the people who are directly involved are doctors and they have their own ideas. They are not interested in "abstract concepts of maximum utilization of medical personnel." They are interested in maximum "professional good life," as they define it. That's a conflict.

Obviously, you can be much more rational about the use of doctors in the Armed Services than you can be on the outside, where the people themselves

determine it.

Another kind of problem is an interesting one having to do with the way in which the labor market institutions themselves operate. We had a situation until recently in New York State where a fellow could not get retrained if he lost his job, because he would lose his unemployment insurance. So you had a disincentive system working, to make it impossible for a guy to get reemployed in a certain sense. We finally changed that.

And, finally, the whole question of advances in knowledge itself is a major way of improving utilization. As you get more understanding of the nature of the people and the nature of the work, you've got a chance to improve utilization.

Well, what does all this mean to the Armed Services? I've got ten points and I'll take twenty seconds a point.

One is, I think you've got to know much more than you now know about the manpower pool, both in the short run, when you have limited Armed Services, and for mobilization. One of the great difficulties in military manpower planning is a lack of knowledge of the characteristics of the pool. And that's not easy to improve; and I've been trying to testify before a new committee of the Senate about the importance of research in this area. The Government is not doing enough research in the universities on it.

The next thing is to get to really know your requirements much better than you do, because until you get to know your requirements better,

you are going to be making all kinds of unnecessary and expensive utilization of manpower.

The next point is to really take a look at this men-machines problem, not only from the point of view of what kind of people do you need to operate some of your new equipment; but you've got to broaden your perspective to say, what about the maintenance and the replacement of these people?

I was impressed during the Korean War with the fact that you had such fancy signal equipment in Korea that it wasn't used, because you didn't have the people who could use it. They went and used old World War II stuff. I submit that in many areas we have probably really over-developed on the technical side, because we haven't kept the proper balance in the human resource factor; and if it costs you a fantastic amount to train not only the operators but the maintenance people, and to maintain a replacement group of people, you've got to re-think early what the net gains are on the technological improvement. It's an important point.

You ought to do more than you are yet doing, although you've made sizeable improvement, on economizing on the use of scarce personnel. This is a constant invitation for improvements of manpower.

The next one is to keep on re-studying the policies and procedures so that you introduce more flexibility than you now have. One of the great dilemmas of a large organization is that it needs a few simple policies, and a certain number of procedures. You can't really have a retail system in a large organization. But I argue that it doesn't have to be

as rigid as it has been. That's frequently an excuse for really lack of competence at the staff level, and a kind of foolish rigidity that really isn't justified.

The next point is that you ought to re-study the total cost and to see whether there are some new combinations of manpower and other resources that will give you better answers than they now will. I think the Air Force has been most imaginative about that in recent years. They have moved to ways of contracting that I think impress me as having tried to escape from some of these dilemmas better than the other two services. This may be just an outsider's impression. But the whole question is of seeing this as a costing problem, in which one of your real troubles is the manpower.

The next one is really to remember that what the Armed Services can do with respect to attracting and retaining personnel is very much a function of the larger society. And the fact that you have compulsion on the books doesn't really mean that this answers all your questions.

I remember discussions with General Maddox, who used to be up in the Department of Defense. He was more aware than the other people around there about the hidden costs of compulsion. You may not be able to escape from it at the moment, but I'm not sure that you have really put into the scales all of the prices that you are paying in this kind of a society.

Next, I think you've got to re-think the amount of effort that you are willing to make at the supervisory level.

Next, and very important, is the question of experimental programs, especially for an organization that has to worry about mobilization. If you concentrate only on effective manpower utilization in terms of your present situation, you are just walking out of a major part of your challenge and your directive. And I think that there's a great confusion on the part of the Congress, and a great confusion on your own part that you've been party to, that in trying to make your money go further now than it would otherwise go, you do not have the skills and the leadership and the practice that you need on how to deal with a cross cut of the population, which you will have to deal with if you get into a major trouble.

And, finally, I have a major view about this, and that is that, since I am not the world's greatest believer in reorganization in terms of drawing new charts, the only reorganization that I know that finally works is to thin out headquarters. And the biggest contribution that I believe can be made to effective manpower utilization is to keep the headquarters so thin that they can't get in the way of the people that have got to do the work.

Thank you.

COL. DE CAMARA: Gentlemen, Dr. Ginzberg is ready for your questions.

QUESTION: Dr. Ginzberg, we have been reading here an awful lot about manpower utilization, greater efficiency in the employment of personnel, and everything else, and today we are talking about a 32-hour work week. These two sort of jar me as being in conflict with each other.

Would you elaborate on that?

DR. GINZBERG: I tried--and this just shows what one can't do in an hour--to say that the concept of manpower utilization always has to be thought of in terms of the largest frame of value, which means that if a society finally gets to think that all it wants to do is work 40 hours, 30 hours--I mentioned the 84 hours that we used to be willing to work earlier--within whatever hours it is willing to work, you can still be more or less efficient.

The point is that ours is a society which has not found it necessary, obviously, to work very much more than we are working. We seem to be growing at a not bad rate, although there are a lot of arguments, and I'm not much impressed with them, about our rate of growth. So that one of the things that we have done with our increasing productivity is to take out part of the gain through leisure. And we have generally had a point of view that it was desirable to have more leisure. And we still got a large number of additional goods and services produced. That is one of the options that a society has--is to work more or to get more goods; and, as far as I can see, the society decides that. But within whatever frame it makes the decision, you can still use people better or worse.

My own view is--and I'll tell you what I think. I have found that when I got my new secretary, I decided that, what did I have to offer at the university? One of the things I had to offer was flexible hours. People don't like to work uptown in New York. They prefer to work downtown. So I said: "O.K. You can come in at nine thirty and leave earlier

than the normal hours--four o'clock if you like." I find out that she does all the work in that period of time that my "very efficient secretaries" did in their regular work day earlier.

That is, there's a tremendous elasticity in people's ability to put out work. As I recall it, the Army in the old days, and the Air Corps, in the warmest weather in Honolulu used to get up at seven or seven thirty and go home at twelve, and that was all. That was a work day. And I'm sure all the work got done in those hours.

QUESTION: I'm sure that your attempt to thin out headquarters couldn't fall on more sympathetic ears. But I don't see it happening here. What contribution can you make toward eliminating some of the extra layers?

DR. GINZBERG: Well, I'm not quoting any secrets at the moment beyond what I read in the New York Times, which is a pretty good source. Incidentally, just in passing, one of the foolish things that I think really interfere with manpower utilization are security regulations. My experience is that when you make it very difficult for people to handle so-called confidential and secret and top secret papers, you make some gains; but I think you have tremendous hidden costs, because the people who ought to know things don't know and you're just, you know, tripping yourself. Since the Russians probably know everything they have to know about that, it looks to me to be a little foolish. That's just in passing.

In talking about not being privy to plans, I think that the present

notion that what would make the service Secretaries perhaps Under Secretaries of Defense and thereby have a collapse of PS ones into one, that is, the Assistant Secretary level of Defense, the Secretary's own office at the service level, and then the Assistant Secretary-this is one way in which one could begin to move. I don't think it's the only way, but it's one way.

Another way would be to remind Defense that it's supposed to be policy and not to be involved in all kinds of picayune operations. This is a constant problem. It is very hard for people at the top, and especially in Government--I'm very sympathetic--to really stay with the job they're supposed to stay with. Somehow or other, the details of the job swamp them.

This has to do partly because the Congress is on their necks. The press is on their necks. And there are very few civil servants and/or other people in Washington who can say: "I don't know and I'm not supposed to know. I'll find out." I think that if you could get a league of the Cabinet and the sub-cabinet who would begin to answer both the Congress and the press that way--"I don't know. I'm not supposed to know. But I'll find out"--maybe they would start to do the work they ought to do.

COL. DE CAMARA: Dr. Ginzberg, you know that comment about the Service Secretaries is Senator Symington's recommendation to the President-elect.

DR. GINZBERG: That's what I refer to.

QUESTION: In a recent book, "Discrimination, U.S.A.," the statement is made that: "Discrimination, its practices and effects, cost us about 30 billion dollars of our gross national product." Would you comment on this statement?

DR. GINZBERG: I don't like to put money values on things which I think are really not subject to such evaluations. I would say that if we are in violation of our basic tradition, our constitutional commitments, and our problems of human dignity, I would say it's much more than 30 billion dollars, to begin with.

I would say, further, that since I believe that our discriminatory practices cost us very dearly overseas, and especially in the major continent of Asia and secondarily in Africa and South America, I wouldn't know how to price that, since the measure of the U. S. in terms of people overseas will always be in terms not of what we say but what we do. And we are particularly vulnerable, therefore, to this kind of misbehavior on our part. And the Commies are very clever about this. So I would say it's very high.

I assume that the 30 billion dollar figure means more technically this: You have to have a lot of duplicate facilities in the South. You have to have duplicate schools. You have to have mal-utilization in the ways you assign Negroes and whites. You fail to really put training into some of the minority groups when you should, and so on. You could build up this kind of a figure very easily, I would say.

QUESTION: Do you think that there is a direct relationship

between the effective utilization and the present unemployment problem? The greater the utilization, it seems to me, the greater the unemployment.

DR. GINZBERG: Well, that's a nice problem. My view is that unemployment is a key charge that a society is not being effective in its utilization if you have people able and willing to work who can't work. So that under the Employment Act of 1946 we have a charge on the Federal Government to constantly develop policies which will insure the maximum number of jobs for people who are interested and able and willing to work.

So that the first view of this is that if people are not working, we had better figure out how we can get them to work. I would say that we have not done a good job in the last few years of publicly becoming more concerned about two kinds of employment and under employment.

In my opinion, our farm problem is not primarily a commodity problem or pricing problem. It's primarily a human resource problem. We have too many millions of people on farms who can't earn a decent livelihood; and the real challenge to the country is to develop a policy for taking--you can't take the older people off the farms. They have to live out their lives there--but one of the big problems is how to train and facilitate the industrial absorption of the surplus farm population among the younger age groups. This is my definition of the farm problem. We have done poorly, in my opinion, because we have done so little, in coming to grips with the depressed area problems in different parts of the country. This is evidence of mal-utilization.

Now, what you're saying is that if you are going to constantly improve the manner in which you use your people, you will be able to get on with fewer people--the way I suggested of thinning out the Pentagon. I would say that the correlative of that is, How imaginative are we in creating the conditions for growth in other ways? We need more people in medical service. We supposedly need more people at the schools. We need more people to develop services for older people. So that the big trick is really how to keep a dynamic economy developing a new kind of work opportunities which the economy wants because it needs the services, and thereby being as efficient as possible in other areas. And the big trick is to build the bridges between the two. And I think, if you look at it historically, we have done reasonably well over a hundred years or fifty years, but we're not doing as well as we ought to be doing.

QUESTION: Doctor, we've read a lot and heard a lot about human resources. I would be very interested in your definition of this term.

DR. GINZBERG: I'll tell you a funny story. When we started the conservation of human resources project at Columbia--General Eisenhower did it when he was president--my secretary used to answer the phone and say "Human Resources" and she got the idea of a human abattoir--eyes, noses, arms, legs, and so on. It's a very tricky concept, really.

I would say that the concept of human resources is that human beings, from the point of view of the economy, represent a potential or actual manpower resource. The distinction between a human resource and a

manpower resource, which I think is a helpful distinction, is that a manpower resource is a developed human resource which has value for the operations of a going economic system. It is a resource that you need in order to produce goods and services. A human resource is a potential manpower resource. That is, children are a potential manpower resource. And the question as to the quality of the manpower resources of the country depends on how well you develop your human resources, because the education, the training, the health, and so on will all determine the future of the manpower resource. So your human resources are the concept of thinking about a population in terms of its actual or potential value for economic output. It's not coextensive with human beings. There are other factors.

QUESTION: You talked about compulsion being a drawback. How do you propose that we replace compulsion with volunteers?

DR. GINZBERG: Well, I have been a little less active in the Pentagon in recent years. I'm not up to date on all of the logistics of the question. The argument was in the old days, when I heard it, that you could look forward to something like a million and a half to a million and three-quarters volunteers in the absence of Selective Service; and ostensibly you needed two and a half million. So there was a gap of something like a million.

My own view is, from experience, that there are several possibilities of helping yourselves, as I suggested the Air Forces had in part. There were X number of functions which could be performed effectively under contract, and I have no belief that the Armed Services gave gone

to a maximum degree in that direction. That's number one.

Number two was that there was more scope, I thought, with respect to the use of some of our indigenous personnel in the areas where we were based overseas. We have done a fair amount of that, and I know there are good military reasons why you don't want to go too far. Nevertheless, I thought there were margins.

And, finally, I was by no means sure that the figure of a million and a half or a million and three-quarters was necessarily anything more than a pessimistic estimate. And while I would not have taken such a radical position to say to the Armed Services that they should "abandon" compulsion. I would have liked to have seen more effort made over a period of years to see whether the whole of the services could have moved to a more voluntary basis, because I believe that, when you have a sociey like ours, which is basically as negatively inclined toward things military and as negatively inclined towards compulsion, and where there is such great inequity in the way in which the draft operates--I think it's a public scandal, and have so said in congressional testimony--that is, you can't have a universal military training and service act which in my estimate--I know the Department of Defense doesn't agree--will only involve about 33 percent of the new age groups--I think this is just outrageous. You can't have it. You can do that on a lottery basis.

So I think we're just playing for trouble, and I would like to see more experimentation to get away from it, because I think you get very low utilization out of the people whom you force in.

QUESTION: Dr. Ginzberg, I'm sure all of us in this room have our own opinions about this particular thing that I'm about to ask you. We have gone through several regimes in the conduct of our military services. I am talking now about the trend from true discipline to the democratic type of an organization that we have now. Take the system of sanitization, take the system of mechanization, and all of the types of management report, the personnel counseling, the playing to the whims of the individual, and I'm sure--and, as I say, I have my own views as to how effective we are. What do you think in this trend of where we have completely reversed our position in the operation of our Armed Forces--have we really made any money, do you think? Do you think that's a good pattern to follow?

DR. GINZBERG: I have a double view on that. My impression is that during World War II the whole fancy emphasis on morale and on the penetration of psychiatry in the military was unbalanced, way out of hand; just went haywire.

I understand why it happened, but I think that it fooled us. I don't believe that morale is that important. If the commander can't control morale, you'd better remove the commander. So I was very restive about that.

On the other hand, you have to realize that what the Armed Services can do in the management of their personnel is very much conditioned by by the attitudes and values and expectations of the citizenry at large. You're not an independent body without the elements of this larger universe.

I am just now finishing a book called "Management's Authority in a Free Society," indicating how industrial management--this comes out of my military study--has had its power to manage constantly reduced by virtue of the way in which the democratic society has evolved. And therefore the big trick is to be sensitive to what is going on in the larger society, but not being pushed off base. And in my "Ineffective Soldier" I have a considerable number of cases where I think that the military went way too far on its own discipline.

So that this is never a thing that you can answer "either or." It's a question of being sensitive to the kinds of values which you cannot ignore except at your peril; and, on the other hand, not to fall victim to a lot of foolish gadgeteering. It's in between.

That's an evasive answer, but it doesn't mean to be evasive. You've got to find a way in between them.

QUESTION: Dr. Ginzberg, in some of our earlier discussions of manpower that we have had here there has been the feeling that we should not interfere with this, you might say, unemployment insurance or think in terms of having some sort of product from the worker, some kind of productive utilization as long as they are receiving unemployment insurance. This attitude is a little bit hard to understand in terms of some of these other factors. Can you comment on that?

DR. GINZBERG: Some of my earlier studies in human resources dealt with the problem of the unemployed back in the late thirties. I would say one has to make a distinction between the short-run or intermediate

type of unemployment and really chronic conditions.

I think that Mr. Roosevelt was correct basically when he turned his back on the British dole and moved toward a WPA or PWA system in the mid thirties, to say that it was injurious to the individual, bad for society, to keep people at bare minimum levels of income and not permit them to work. And I would unquestionably believe that was right.

On the other hand, running in an economy of 70 million people, with different rates of technological change in different regions of the country, a different movement, I don't think we ought to get in our own way. It's hard enough to keep that economy running. And I think one way to keep it running is to build in certain supports for people who get affected by the change problem. And I would say, therefore, that for what is now thought to be something like 26 weeks, half a year, I would prefer to think about that in terms of unemployment insurance, and not move to any kind of unemployment relief that has work tied in. I would make a distinction, therefore, between trying to move with programs to create employment in chronic areas and continue to use general programs to keep the economy at a high level from Washington and use unemployment insurance in the intermediate group. That's the distinction that I would make.

QUESTION: Doctor, we have heard a lot about the preoccupation of the individuals in this country with security problems--not national security, but their personal security. This seems to be affecting most of the younger people too. How does this affect our general labor force, and specifically the younger people who are coming into the force?

DR. GINZBERG: Well, no; I have some real questions about the validity of all of this. I think there are major transformations going on all the time in a society. There's a chapter that I wrote in a little human resources book called "The New World to Work," in which I tried to make explicit the changes that I thought were going on.

I'm not sure about this "great interest in security." What has happened is that people have new options now that they didn't have in the earlier days; and I would say they would be very unintelligent if they didn't think about those options, because one sign of intelligence is to try to "maximize whatever you're interested in." And there is a new situation here.

I think that one of the problems on the security side is that people marry earlier and have youngsters earlier, and therefore family obligations move quite differently now than previously. What a young man can do for himself in terms of taking chances and risks is quite different from what a father of a family of three can do. And I think we have reshaped where we are looking for many of our satisfactions in this world; and the job area is only one of the two areas. I think we have built up "the home and bringing up of kids and community activities" as a major area. Who am I to say that that's bad. I think that this security thing is a bit misunderstood in that connection.

It so happens that my current research deals with talent, superior performance. I am worried about early marriage and early child forma-

tion with respect to the very creative people, because I think they need some orders of freedom. But that's a different matter. That has nothing to do with the genesis. But I don't accept the basic premise, except as you re-interpret it much more broadly, in its larger frame.

QUESTION: You outlined some of the problems in manpower utilization. You have outlined some of the things that need some doing. My question is, Organizationally, structurally, or in terms of how we are approaching this problem in Government, are we on the right track? Or what are the things that you try to do? How do we go about this job?

DR. GINZBERG: As I mentioned in passing, the National Manpower Council is coming out with a three- to four-hundred-page book called "Government and Manpower," in which we have tried to make over a period of several years, including chapters on military manpower, tried to get some overall judgments.

In general, interestingly enough, we feel that the Government has been falsely accused of being much more inefficient than we have really found it to be in general. We are not at all convinced, and in all of my lecturing to the large corporations I don't see so much difference between, let us say, a large company like General Electric and the way the Pentagon operates. For my money there is a great parallel. The problems are embedded in size, in specialization of functions, and in the degree of sophistication that exists in the higher management about how to deal with the human resource factor.

So I would say that one thing that I would be in favor of in terms of Government is to try to learn more about the people whom you hire,

promote, lose, retain, and so on. The research is an important instrument of improving utilization.

The second thing is to try to get people into senior positions who have some awareness and alertness of this; and I don't know how you do that, frankly. I think that probably this is a generational matter.

It is probably true that the younger age groups--not necessarily true but probably true--that if the gap between the leadership and the people that are employed in age is narrower, you may get some higher sensitivity for what some of these issues are. That is, let me be very explicit.

I would think that a young officer coming through the service academies now would have much more training in the service academies about the nature of technology and modern science in relationship to weaponry than some general or admiral who went through thirty years ago. And in turn that would reflect itself in terms of his sensitivity and awareness of how to deal with technical personnel. I would hope so, at least. So partly this is a generational problem.

Partly I think the question of in-service training is an important story. There are no easy answers. I am very, very negative about the growth statistical control measures that, let us say, Representative Davis' committee and so on would use. I don't like that at all. This is really a general test of management skills; and the best answer I have is very unsatisfactory--to try to pick good people.

COL. DE CAMARA: Dr. Ginzberg, I know you have stimulated

enough thought so that we'll be turning this around in our minds for some time to come. On behalf of General Mundy and the faculty and the students, thank you very much.

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