



COMPARATIVE MANAGEMENT PRACTICES

Dr. David Granick

NOTICE

This lecture has not been edited by the speaker. It has been reproduced directly from the reporter's notes for the students and faculty for reference and study purposes.

You have been granted access to this unedited transcript under the same restrictions imposed on lecture attendance, namely, no notes or extracts will be made and you will not discuss it other than in the conduct of official business.

No direct quotations are to be made either in written reports or in oral presentations based on this unedited copy.

Reviewed by: Colonel J. Inghire, USA 6 December 1962

**INDUSTRIAL COLLEGE OF THE ARMED FORCES
WASHINGTON, D C.**

1962 - 1963

Comparative Management Practices

21 September 1962

CONTENTS

	<u>Page</u>
INTRODUCTION -- Colonel Clarence E. Reid, USA, Member of the Faculty, ICAF	1
SPEAKER -- Dr. David Granick, Professor of Economics, University of Wisconsin	1
GENERAL DISCUSSION	18

NOTICE

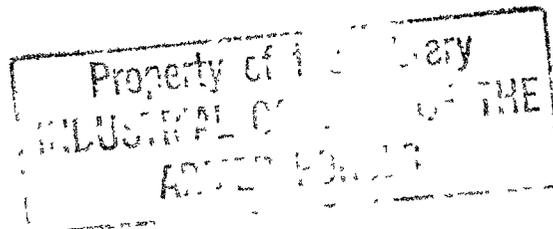
This lecture has not been edited by the speaker. It has been reproduced directly from the reporter's notes for the students and faculty for reference and study purposes.

You have been granted access to this unedited transcript under the same restrictions imposed on lecture attendance; namely, no notes or extracts will be made and you will not discuss it other than in the conduct of official business.

No direct quotations are to be made either in written reports or in oral presentations based on this unedited copy.

Reviewed by: *Col. S. Inguise USA* Date: *6 December 1962*

Reporter: Albert C. Helder



Publication No. L63-29

INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington 25, D. C.

COMPARATIVE MANAGEMENT PRACTICES

21 September 1962

COLONEL REID: General Stoughton; Gentlemen:

Our speaker today has traveled quite widely in the Soviet and in Western Europe, and has recently completed two books; one, the "Red Executive," and the other, the "European Executive," which are available in our library and included on your reading list.

Of course, our previous speakers have covered management in both industry and in public administration in the United States.

Today's subject is "Comparative Management Practices." Professor David Granick is currently Professor of Economics at the University of Wisconsin. This is his second lecture at the Industrial College.

Professor Granick, it is a pleasure to present you to the Class of 1963.

PROF. GRANICK: General Stoughton; Gentlemen:

What I'm going to do today is to try to present to you some of the different kinds of views of management which we find in other parts of the world, and I'm think in particular here, of Western Europe and of the Soviet Union. Management is quite clearly a pretty crucial sort of input into production. Everyone reads that the quality of management makes a good deal of difference in the quality of the business effort. At the same time I think it's reasonable to say that we don't know an awful lot about it. We get quite different views in different places without very much reconciliation of these or too good tests, I would think, as to which views turn out

better results.

Let me try to indicate some of this from this point of view. 'The general stereotype, not only in this country, but abroad in the rest of the world, is that United States management practices are a model for the world in general. When we look at management literature in countries like France, Germany or England, it looks pretty much like American management literature, and a great deal of it consists simply of translations from American. / At the same time we've got - and I'll try to show - somewhat different patterns in these countries, and we have to ask, "What kind of evidence is there to indicate that the American management pattern is more successful?" I guess the only kind of test that I would think of is the results test, of what this has done, what kinds of results we've seen in improvements in production over time in different countries.

Now, if we look at some of the industrial production figures, we know that the post-war record of increases in industrial production in the United States look rather poor as compared with those of many of the West European countries, particularly those on the continent. For example, if we take 1959 industrial production with 1960 as a base, we see an increase of 17% to the United States, 60% in France, and 101% in West Germany. And if we push this through '63 we'll see much the same pattern except that France would have crept up somewhat on Western Germany. We could look at Holland. They look in somewhat the same pattern.

Now, we can say, "Well, this is a short period; how about a longer point of view?" And it's true, if we take the point of view of the last 60 years, we compare 1959 with 1901; these comparisons are obviously very rough because they indexed

the number of problems. But I'm using OEC data which attempted to reconcile them with national figures. We see United States production in 1959 - industrial production - at 900% in 1901 as compared with 387% for France and 547% for Western Germany; which would seem to be in line with the concept of the American long-run record being vastly superior. However, we're interested here in the issue of what is the contribution of management to this. And perhaps from this point of view it would be best to try to exclude some of the factors where, clearly, management had no role. So, suppose we say, "What was the increase in industrial production per capita in these countries, to exclude the fact that the United States population growth was much greater than that of the other countries?" And secondly, let's try to make an exclusion - it's fairly arbitrary but still, perhaps, useful - for the fact that the United States production grew quite sharply during both wars, while continental production fell sharply and only recovered within a few years after the end of each of the wars.]

We, then, consider industrial production per capita and exclude whatever increases occurred during the years of each of the wars, and the period immediately afterward, in which the European countries were beginning to recover their pre-war levels. So, suppose we exclude growth which occurred during 1914 to '20, and during 1938 to '47. Doing this we find that it is France which is the great leader in that its '59 production adjusted for population was 352% of what its 1901 was. Western Germany was 291% and we were down to 255%. I'm not giving these figures to indicate that the French record was necessarily better than our own. What I'm quoting these for is to indicate that as I see it there is nothing in the evidence of this century to

indicate conclusively that America's management record has been clearly better than that of the European countries. What I'd really like to draw out of this is that we've simply had inconclusive results from this figure.

Now, when we talk about differences in views of management, let's be specific; what kinds of differences? Well, one major difference is with regard to education. Here we get differences which are rather unrelated to social systems. If we take France, Belgium and the Soviet Union - a rather unlikely group to combine here - you have the doctrine accepted in all three countries that top management must have an engineering degree. In the case of the Soviet Union there is some compromise to this in that a small proportion of their top management can have what amounts to an industrial engineering background instead of a strict chemical, mechanical, or what have you.

But in none of these three countries do you have at the top level of management any real representation of non-engineering personnel. If you take England you get by and large in the larger companies and in the companies which have been the elite type, the exact reverse pattern of having a decided bias against people with an engineering degree. This is not true of all of them; for instance, Rolls Royce is an outstanding exception, but by and large one would get this sort of bias.

If you take Germany or the United States, they don't seem to have any particular bias, nationally, one way or the other, with regard to types of education which is considered appropriate. If we consider the concept of mobility we get rather widely differing views. Take Belgium where the tradition has been that there can really be virtually no mobility among people at the management level. Not only can there be

no mobility between large companies which cross industry lines, but there can be no mobility between the various subsidiary companies owned by these giant holdings which are particularly important in Belgium.) I've had the view quoted to me frequently by people important in personnel administration in Belgium, that once an engineer has been out of school for some five years or so, it is really quite impossible to train him to go into another industry; they've tried it a few times and it really doesn't work, and this is why engineers who have worked in the Congo, for example, are essentially unemployable elsewhere in Belgium, even within their larger companies.

[This is extreme. France and Germany represent at the higher levels very much of an extreme in the other direction. The French pattern in the larger public companies has been that of distinguishing sharply between middle management groups coming from what they consider to be lesser engineering schools, and your upper management group coming from a few of the top engineering schools such as Poly-Technique. Of the top management people the traditional way to recruit them is to recruit at the ages of 35 to perhaps 45, people who have gone through one of the top schools, who have held important government posts and then are recruited at something comparable to a vice-presidential level or perhaps a higher level.]

[Here there is very sharp mobility at the top level, although none below.] Let me give an example of one steel company which was a subsidiary in a larger group which I visited. There are considered to be essentially three members of top management in this firm. None of the three had had any connection at all with steel until they entered the steel company at that point simultaneously, about two years

before I visited it. One had been in the submarine service, one had been with the railroad, and one had been in some other field entirely - automobiles, perhaps. This was not considered any particular handicap, and one of the three was really only interested in this steel company as a jumping stone to get out of steel and into the main company's activities in other areas. High mobility was considered quite normal in this company.

In Germany, for top management, one gets very much the same sort of pattern. There is a very distinct bias toward saying that if someone remains in middle management for long this is really a proof that he does not have the proper entrepreneurial instincts and abilities necessary for top management and therefore he is by definition disqualified from any serious consideration for top posts. Let me give an example of a firm employing about 10,000 people where the Board Chairman was considering where they would be getting their members of the future working board - people at the vice-presidential level - during the next 10 or 15 years. And he considered it to be quite outside the question that they should get any of these people from inside the company. He said, "Look, we're really a pretty small company. We offer no significant opportunities at a level below the Board of Directors level for people to engage in any serious management, because we're so small - 10,000 - and therefore, anyone who is willing to remain in our company at a level below this must be someone we could not possibly allow as an employee, so we'll have to recruit from outside.

This, my impression was, was much more of a typical than an atypical type of approach in Germany. One has questions as to, say, the building of a manage-

ment team. Edith Penrose, formerly at Hopkins and now at the London School of Economics, wrote a very interesting book a few years ago, arguing that when one looks at the growth of individual companies one finds that the major limitation on growth being the inability of management to expand management teams sufficiently rapidly to undertake unlimited growth, and that companies which are in a position where the economics of the situation allow for expansion, the really limiting factor tends to be the speed with which they can expand the management team by incorporating new people. This was based essentially on American and Australian experience.

I tried this argument out in Belgium where the argument made perfect sense to some people who had been involved in rapidly expanding firms there. I tried this out in Germany in a firm which had also had very rapid expansion, and it made no sense at all. The man in charge didn't really know what I was talking about. The concept of a management team was quite strange to him. He considered that as he needed managers he would go out and hire them from other companies; that there was no problem of their developing the ethos of the corporation; and if there were general problems he would solve them; he would tell the other people what to do, and it didn't matter very much whether they developed an ethos of the organization or not.

Over the period of the last decade or so they've been quite successful with this philosophy, a philosophy which is quite incomprehensible in Belgium and certainly quite incomprehensible in many American firms.

Let us take the issue of management as a profession. In this country we've had

a great deal of attention given to the concept of developing management as a profession - managerial tools - business schools developed, etc. This is something which has not developed particularly in Western Europe or in the Soviet Union. We see it flourish most in Western Europe, under American influence, in Belgium, and we see fringes of it in the other West European countries. But it has never really taken hold. If we look at England, for instance, it seems to violate the essential concept in most companies, of what is really necessary for proper management, for people who are making the basic decisions as to future personnel and to investment policy, etc. Here you've had very much of the tradition of the amateur, of looking for people whose training has been in fields which are supposed to make them think, supposed to test their general qualities as thinking people rather than their ability to solve particular types of managerial problems.]

For example, during the last ten years or so the Oxford Placement Bureau has been particularly successful in Britain in placing its arts graduates - not science people - its arts graduates in large companies where they have started in middle management, and where they will be looked upon as failures if they do not reach upper management within 10 or 15 years after their original appointment. Their record has been, on the whole, quite good with regard to making such rapid advance. Here the concept has been that it really doesn't matter what they major in in college; the best preference is still the traditional subjects - Latin and Greek specialties - but other arts fields are quite acceptable as well.

But the basic concept here is an amateur training. If we look at the only business school in England which has a really first-rate reputation in Britain, the

Industrial College at Hanley on the Thames, [this is a college which is essentially devoted to the philosophy that the important thing is not to teach managerial techniques in a three-month program which they run, but rather to take people who have gone through middle management, who have grown up along some particular branch of business, or government, or banking, or a particular variety of groups, and who are now serious candidates for movement out into general management positions. And the problem faced by this business school is simply to broaden them; get them to look at all kinds of problems with views other than that of their specialty. Essentially the problem is to help them forget the various techniques which have led them to get where they are. The problems now will be entirely different ones of coordination. This is the essential role of the Industrial College; it seasons them. It gives them a smattering of the techniques.]

[If we look at Germany, the only really important business school there is a school which has sessions for about three weeks, and where the main function of this school is to create a social integration of people who are the future business leaders of Western Germany; so they get to know each other; they're influenced by a common ethos; they accept the ethos of their teachers who are all practicing big businessmen - academics aren't allowed in the place. This is what is important in management - not techniques at all.]

[Russia has had a little emphasis on techniques. They used to have a school back in the '30s for a little while dealing with industrial management. Just the last year one writer put forth the feeler urging that such be created again, but by and large there hasn't been very much attention paid to this kind of concept.] The ideas

of administration have been those of taking a good engineer, exposing him to different kinds of experience, making sure that he is a good party man, politically alert in the Communist Party sense, and he should be able to do a respectable job of managing.

There are quite different views here of what's possible. Suppose we consider the question of how continuity of policy in companies is to be attained. If we look at the United States we see, apparently, an increase in the age at which people come to the level of chief executive officer of a company. The period of being in this position has tended to decline. The stability policy has generally not been the stability in terms of a long period of tenure for the top one or two people, but rather, a tenure built into the middle and upper brackets of management in general, where the entire group tends to be relatively stable. And it is in this stability that continuity is hopeful.

Organization charts have had a great play in this country; not simply organization charts in the chart sense, but in the sense of reasonably formalistic division of authority over different fields, as between different people setting up reasonably firm channels of authority, etc.

Now, suppose that you compare this with the German tradition where, typically today, and in the last decade, and this appears to have been the case in the '20s and '30s - I can't push it beyond that at all - the continuity has been quite different. The continuity has been attained by selecting people for the top one or two positions in their 30s - often in their early 30s - and gaining the continuity through having the same individual heading the organization for some 30 years; a very personal

type of continuity.

If you take the French view, the continuity, I suggest, has been a little different. It has been a continuity essentially in the fact that top management is selected from rather similar types of people - a very high proportion of top management in big business being selected from graduates of a single engineering school - Poly-Technique - which turns out about 180 graduates a year and is expected to provide the top leadership for much of the government as well as for industry, and then a variety of chance people - Cabinet Members, writers, etc. etc. They cover the gamut pretty well.

You get a continuity in your larger companies by having graduates with the old school tie playing a very strong role; people of very similar backgrounds succeeding one another at the top level; and groups below the top not really mattering very much in the managerial technique, the managerial practice. Here you've had very much of the Napoleonic tradition. Let me read a quotation which relates to the family firms at the turn of the century, written by August De Tour, who is really the French industry's Will Rogers. He is widely quoted from that point of view.

"The French industrialist," wrote De Tour, "works endlessly. Since he pays his collaborators poorly they are mediocre. But this does not displease him; he detests the idea of feminine collaborators. Thus, he is forced to do the work of his subordinates and has no time to do his own. The end of the rainbow for him is that shiny day when he will retire and pass on the succession to one of his sons. In reality, however, he will die of heartaches because his son is not good enough to take over and because basically he will never believe that anyone else, whoever

he might be, could do as well as he himself. "

Now, this is a quote relating to the family firms at the turn of the century, but this is often referred to in relationship to large public firms of today. One finds, generally in French industry, a horror of the organization chart. You can't find it. Now, sometimes you hear that it exists, but it is very carefully locked up in the president's desk. It is possible for someone outside of the company - well, an American professor is a rather privileged visiting fireman because he's an American and thus outside of the French society context; and being a professor it gives him social standing in the French society, so he has the best of both worlds. But generally, this organization chart, if it exists, will be carefully locked up and certainly unavailable to anyone on this chart except the president.

The reason for this is that the organization chart is looked upon as a stultifying phenomenon; it's stultifying because if it exists it means that there are standardized means by which policy is decided, by which action is carried out; it is looked upon, then, as abnormal, if the president goes wandering around in the depths of the organization wherever his fancy may take him. He has a standard group of people who should have access to him and who are categorized according to different kinds of products.

Well, this one has, as part of such ethos of business, that business should express one's personality, and the president here, as one personality, does it. He is the person who is able to set policy here. This is a very stultifying limitation on his personality and one which is very rarely accepted. You begin to find American subsidiaries in France and a few other firms, with very strong resistance to

this kind of thinking.

If we look at the Russian pattern I think we get a rather interesting concept here also. In a formal sense the Russian management is a highly formalized structure with very formalistic organization charts, very formal production programs or plans which cover a wide range of activity. However, it has always been recognized that in fact it is not possible to accomplish all of the objectives of whatever plans are set down for individual production units in factories or combinations of factories, that if the formal channels are followed, of trying to amend plans to get a few of the materials in the appropriate factory, etc., the system will simply bog down; time pressure prevents this. And so, there has always been a dual system incorporated.

On the one hand, the slogan of the plan is long, which essentially provides great importance to the formal organizational structure - the formal program. On the other hand, the concept of priority; one of the key elements of proper management is to know what is important and what is unimportant. This refers to what is important in the plan, as well as elsewhere. Where choices have to be made - and they always have to be made - the appropriate manager must be able to pick out the priority elements of his plan, the things he should fulfill at the cost of other elements. When he has a number of customers depending on orders from him he should know which are the priority orders and which are not, etc.

He cannot really get any formal guidance on it because these priorities change, depending on the economics of the situation, local conditions, etc. It is of the essence of his job to guess what will be the priorities as they are seen by his

superiors in reviewing his record. This is very much of an entrepreneurial kind of a job. Other channels are set up alongside of the official managerial channels which can give him some aid and can give him a lot of trouble. And I'm speaking here, in particular, of the Communist Party. While the appointed manager of the state organization such as a factory, has complete authority over deciding what are really priority activities and what he can and can't do, he's expected to get guidance from a Communist Party official. Now, guidance is a tricky word here. If it turns out that the party official is wrong in the guidance that he gave him it's the neck of the man who accepted the advice as well as the man who gave it. This is not a channeled system in the sense that the factory manager can say that the party secretary of the plant or the city suggested that I do such and such and I did it.

Rather, this is a way of channeling to him information and general priority views about the area which may or may not be right, and which he finally has to decide by himself. The party really has extra-legal channels of providing materials, of providing a labor force to managers, which run quite outside of the normal channels, especially if the party at an appropriately high level can exercise the priority concepts.

Here is essentially a rather informal sort of structure, always one in a very hesitant state of balance, the relative relationship between Communist Party officials and management officials.

Well, given this situation, given this concept of decentralizing to a considerable degree, not in law, not in theory, but in fact, of forcing people to make decisions, there is a problem of how you get continuity built into this organization, so that

people at lower levels - at the factory level - make the kinds of priority decisions which people at higher levels would have wished them to make if they had had all the facts available to them. Essentially the medium that has been used in the Soviet Union to lay great stress upon providing an organizational personality. And this is something which we get in many American companies as well, and in government organizations. The emphasis has been upon doing this through membership and long indoctrination of virtually all administrators who are at a fairly low level in the Communist Party; of using this as a device to shape people's ways of looking at things - ways of looking at the economy and the society - so that there will be a reasonable amount of similarity between the way people at one level look at things and the way people at another level look at them.

Obviously, the Communist Party performs many other functions; I'm looking at it simply from this one function of being an integrative force in management. This, perhaps, is one reason why membership in the Communist Party and not simply membership, but activity over a considerable period of time, has been virtually a basic requirement for management in most areas of the Soviet Union. There are some exceptional areas where there are special reasons why this general principle breaks down. This provides an integrative force which seems to permit a fair amount of mobility of top executives decreeing rather different sorts of organization.

For example, there is a great deal of mobility between people holding Communist Party official positions - as officials in the party - and people holding management roles in one or another state organ; performing different kinds of functions,

but having had a good deal of integration in this general Communist Party management organizational personality.

Let me just come very quickly to one last item that I wanted to mention, and this was in regard to management in underdeveloped areas. The general pattern of management which we have tended to push in the United States and which other underdeveloped countries have read about, because this kind of literature exists in management, have been attempts at copying the American patterns. Often these have been quite unsuccessful in class-conscious types of underdeveloped economies.

Let me suggest that for many of these economies a management system of the French type might, in fact, work a great deal better. It might work a great deal better for the following reasons. The French upper management is very much of an elitist management; it is a management which comes out of the top schools of the country, where, generally speaking, they have come out of the top 10% or 20% of the class of these groups. An examination of the records at Poly-Technique over three decades indicates this clearly. They go into government service and leave government service in their 30s or 40s to move into industry at a top level. For them the traditional curse of business, of its not being really a quite respectable kind of activity, is taken off. Because, these aren't really businessmen; these are Poly-Techniciens - graduates of this school. These are people who could have had a fine career in government, which is perfectly respectable. They left it. This is their background. These were their possibilities. They clearly moved into business for personal reasons; they chose this. Their respectability is based upon quite other facts.

This makes business at this level quite respectable, in a fashion which is generally not the case in many underdeveloped countries. It's a rather unorthodox kind of activity for a person to engage in. France has seen a great development of planning during the last decade, and this has been a quite successful type of planning. Now, I would suggest that French planning rests upon a very unusual set of phenomena; that the people who are engaged in this, both on the government side and on business' side; the trade unions have played a role, but in fact this is a very insignificant role. On both sides these are people who are old classmates, usually former colleagues in government, people who know each other in a very small Parisian circle. In this sense they are ideally equipped for mutual trust, for coordination which doesn't have to be purely formal, but rests upon a long personal history of cooperation between the kinds of people involved here.

A good deal of authority can be given to the representatives of the private firm involved in planning their own industry's expansion; in a sense it can work very much like a cartel; precisely because the government people involved have a great deal of confidence in the private representatives because these are the people they have known all their life. They are people coming from the same kinds of backgrounds.

Here is a planning system, then, which is a highly elitest type of system, and one which I suggest might be well-adapted for use in countries where you have a traditional hostility to business, a traditional distrust of private businessmen, a high prestige for top government posts or for non-industrial types of activity. In this type of society it may be that in this fashion one could bring in traditional

leaders into new types of activity - into new industry - and get a coordination and cooperation between government and the private sectors - these are 'obviously very large companies in private sectors - which, in fact, you do not see today. This, of course, would put all the emphasis on the very large company. It would lead to no breakdowns in class rigidity if we use traditional class concepts and translate them into business. But it might, for this kind of reason, be much more attractive to societies which are very closely controlled by the top classes. And, certainly, this applies to many of the underdeveloped areas.

Well, the reason for suggesting this is simply that we may tend to overlook some available management patterns which may be particularly well-adapted to particular kinds of institutional and social structures in other countries, thinking solely of our own as pretentious.

Thank you.

QUESTION: Professor Granick, from your travels in the Soviet Union could you attempt to describe a typical Soviet top-level manager; how he lives; how much he's paid; how much he is respected, etc?

PROF. GRANICK: Well, suppose we take someone who is at the level of a director of a fairly good-sized plant. He would have an income level which would be roughly the same multiple of the average salary of the workers in his plant, as would be the case for an American executive. The relationship of his income standard to the general Russian standard of people working in his kind of industry, would be roughly the same as an American executive of the same standing toward

people in his background. This would mean, then, that the Russian executive would have a substantially lower real income, but a relative income much the same. This would be particularly pronounced in housing, where housing is generally quite poor in the Soviet Union. There's a good likelihood that he would not own a personal car, although he would have the use of a factory car. He might be a little sensitive about the degree to which he used this freely for purely personal reasons. He would certainly use it, clearly, to some extent, for personal reasons, but it would always be a concern for him.

In this sense the standard of living would certainly be essentially lower than the American of his status. His general status would be quite high. The engineers have traditionally had a very strong status position in Soviet society, and engineer-administrators particularly would fall into this category. He would have, as far as the position for his family is concerned, much less opportunity than the American would, of transferring his status on to his children. He would certainly have some advantages. With regard to higher education he would have some advantages informally, essentially, of getting his children into the university. He could certainly make it easier for them in the sense of supplementing the university stipend for scholarships which are quite low.

There is an inheritance; he can leave money, but there is not very much that can be done with it as a means toward status jobs in the Soviet Union in that there is no private property of factories or other means of production. In this sense he would be more limited than the American in passing on status to children.

QUESTION: Professor Granick, is there anything done in the Soviet Union to

stimulate the workers to innovate, and do they have these suggestion systems, or is all their planning done at higher levels?

PROF. GRANICK: They've pushed worker innovation very heavily, as they have always done - well, certainly from the late '20s. It's very hard to judge the degree of success. We can get figures on X million number of suggestions submitted during each year, etc. etc., but, of course, it's hard to know what this means. In one plant I visited there was a very interesting system being utilized, where, in addition to the standard system of providing bonuses to workers to give suggestions which are adopted, and the bonuses were based essentially on the amount of saving which developed from these suggestions.

The foreman in charge of the worker involved - the innovator - also shares in the bonus. The argument for this was that in this way one can encourage the foreman to give technical help to a worker in developing the innovation, and secondly that you discourage the foreman from sitting on the innovation which he might otherwise do on the grounds that his superiors might ask why he didn't think of it instead of the worker under him. It's a way of trying to get around it. But it struck me as a very interesting kind of device.

QUESTION: Professor Granick, have you reached any conclusions as to whether there is a present curriculum for management training under U. S. conditions?

PROF. GRANICK: No. I think I can answer it just that simply.

QUESTION: During the last party congress in Soviet Russia the matter of automation and cybernetics received heavy emphasis. Would you care to speculate, professor, on the impact on Soviet management, of the increases in improvement

particularly at the plant level and at the trust and ministry level?

PROF. GRANICK: Well, it would seem to me that the point at which we are going to see really significant changes is when automation gets beyond the point of automating production processes. And when we begin talking about automating decision-making processes. To some extent we get this in, say, using computer machines for warehousing problems; for other routinized decision-making problems. We're seeing this, of course, in the United States. The Soviet Union has also been concerned with these kind of problems. My impression is that the relative scarcity of computers limits the practical implications of this very severely up to the present.

It would seem to me that the time when this will really change management is when you begin to develop programs which can computerize planning on a scale of combining various factories or even dealing with whole regions; or where you can computerize many decisions today made at vice presidential source or levels. I think here we're talking about the developments of a decade or two off at the earliest. Before this point I wouldn't see really significant changes.

QUESTION: Professor, you mentioned that the Belgian employers deplore this influx from the Belgian Congo, even in their own companies in Belgium. Does the Belgian Government endeavor to place these well-trained and experienced people?

PROF. GRANICK: There has been some effort at re-employing them. The Society Raull, the big Belgian Holy Society, which is particularly important in the Congo,

has made efforts in this direction, but they didn't feel that they were too successful. There was unemployment; there was early retirement, etc. And, you've seen a large movement back to the Congo by engineers who were moving out shortly before the Congo became independent, and then much more rapidly immediately after independence. I'm not really familiar with the scale of the problem today.

QUESTION: Professor Granick, in your book, "The Red Executive," you pointed out that a limited source for obtaining potential managers was a program of absence from the classroom in both Russia and the United States.

PROF. GRANICK: A program of what?

QUESTION: After-duty classes. You pointed out, however, that the quality of education of such classes is sharply below day-session levels. You referred to the inferior evening programs. Would you care to elaborate on your reasoning in this discussion? To many of us here it's a rather logical source for good management help.

PROF. GRANICK: Well, I guess my basic reason is my personal experience of university work, where, generally speaking, I think it's fair to say that the evening classes are taught at a lower level than the identical classes in the daytime. This has been true at all universities which I've been at and that I've been familiar with these various programs. I think basically this has been because the evening students have been relatively tired after work and have not been in the mental position to put forth the effort that they could in the daytime, and even more, that they felt limited with regard to reading assignments and that they haven't done the outside work.

I think this has been the experience of one of the business colleges at Glasgow that I'm familiar with, which runs both types of program where they have a very high drop-out rate from evening session people for precisely the type of reasons, of the difficulty of maintaining a sustained effort over a very long period of time. You know the many years that are required to finish the program on a part-time basis; the general difficulties there.

If we look at the English system, generally, of engineering training, most engineers are trained through these evening session programs, for the higher "National Certificates," as they are called. This universally, of the people I've spoken with, is considered to give a substantially inferior program to the normal university or higher engineering school training which occurs in the daytime.

If you look at the Russian experience, their engineer drop-out rate is enormous in day-session correspondence schools. These groups provide a very high proportion of engineering enrollments in the Soviet Union, with a very minor proportion of engineering graduates. None of this is conclusive, of course.

COLONEL REID: Professor Granick, on behalf of the Commandant, the faculty and the student body we wish to thank you very much for coming down here and spending this Friday with us, and in karoosky 'ochin vorshov.

PROF. GRANICK: Thank you very much.