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GENERAL REVIEW OF THE HUMAN FACTOR IN
AGRICULTURAL DEVELOPMENT

by
DR. E. W. HOFSTEE



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Dr. E. W. Hofstee
Head, Department of Rural Sociology
Agricultural University
Wageningen, The Netherlands

It is a somewhat queer habit we have acquired to speak of a "human factor" in all kinds of activities and processes as a factor distinguished from a number of other factors which are, in fact, human as well, for example, the existing government policy, the educational system, the over-all economic structure etc. Thus the term as such is already confusing. But as a scientific concept, "human factor" is also a very awkward one. It is very difficult to delimit because it is almost impossible to draw a borderline between "human" in this restricted sense and "human" in the broader, all embracing sense.

As far as I know, no one ever tried to define this concept of "human factor"; it is almost always used in a rather loose way. Sometimes, it seems, authors and speakers mean by it the irrational element in human thinking, feeling and behavior. In that case it often has the connotation of being in the way of rational and sound economic behavior. Other authors use it in the sense of the informal element in human relations and human conduct as opposed to the formal relations and prescribed activities as required and expected in the organizational schemes of industrial concerns, bureaucratic systems, armies etc. Still another connotation which is sometimes given to "human factor" is that of the unexpected, the unpredictable and incidental behavior. A former director of the Netherlands Railway Company, for example, always explained railway accidents by the "human factor".

On the basis of the foregoing we can, perhaps, formulate a negative definition of the "human factor". It seems that those who use this term consider as belonging to the "human factor", everything which makes human beings act not like robots. It is, perhaps, characteristic that the concept is often used by planners and organizers. Sometimes one gets the impression that some of them unconsciously are deploring the fact that the people they manipulate in their schemes are not acting like robots.

It will be clear from the foregoing, that I'm not quite happy with the concept of the "human factor". This means no criticism of the way in which the organizers of this conference divided our main theme into sub-topics. They almost felt compelled to do so, I suppose, because in the circles of those who are working in the field of planning and development the idea has become more or less common that there is a certain set of intangible phenomena which could be grouped under this heading.

It does not mean either, that I'm against planning. On the contrary, personally I believe that planning, and even much more planning than we have now, is an indispensable requirement for the solution of the serious problems we have to face in the world as a whole, not only in the so-called developing countries.

I object to the use of the concept of the "human factor" because a general and uncontradicted use would sustain a number of mistakes which can be, and often are, detrimental to sound planning and realistic development. Good planning means, primarily, that one tries to get a clear and conscious picture of three things, namely, the ends one is aiming at, the present situation from which one is starting and the means one has at his disposal to reach the ends. Many planners - if they at least are not neglecting the human factor

altogether - have only a certain understanding of the rôle of the human factor in the present situation. They see this rôle as a negative one, as an element which ties people to the past and hampers the necessary development. It will be clear, that as a consequence the planner will hardly be inclined to look at the "human factor" as a possible positive means to reach his ends. And as to these ends as such, the "human factor" almost never plays a rôle at all in the mind of the planner. He thinks of higher production, better houses, better health, and other useful things. He seems to forget that in his own life these phenomena called "human factor" are of paramount importance and that they have a decisive value in determining his actions. Being subjected to the influence of the "human factor" is not only a characteristic of those who are subjected to planning, but of the planners as well and of the people of the developed countries as well as of those of the developing countries. Considering people in all stages of development one sees that their beliefs, their customs, their habits, their ways of expressing their social status, their ways of recreation and all these highly irrational aspects of their thinking and doing are the gist of their life. Underestimating the importance and the value of the "human factor" means always and under all conditions, misunderstanding people.

Thus what I am pleading for is a positive attitude by planners towards the human factor. To begin with, the planner should not only try to acquire a good knowledge of these phenomena, but he should approach them with understanding and with respect even when they are not in accordance with his own norms at all. Planning and development officers, in particular those from the western countries working in developing countries, have to learn first of all not to see themselves as the representatives of rational thinking as opposed to the irrational thinking of the subjects of their planning in the developing countries. Irrational elements in the life of the population of the developed countries, and even in that of their intelligentsia, is much more important than they often are willing to acknowledge and there is, on the other hand, much more rationality in the behavior of the people of the developing countries, than western observers often think after a superficial acquaintance. People tend to see their own irrationality as normal and even as rational and to see irrationality among other people when in fact their may be a rational behavior they do not understand. There is no more irrationality in the holy cow in India than there is in the holy dog in England.

The same positive attitude towards the "human factor" - which means in fact the living culture of the population - should be shown by planners and development-officers when they consider the means they have at their disposal to reach their ends. They should not try primarily to eliminate the existing culture as a disturbing element, but they should try to use it as much as possible.

Efforts to eliminate the existing culture and even neglecting it, will lead mostly to resistance. On the other hand this existing culture and the activities based on it, can be a mighty ally in the struggle for social change and development. As was emphasized already, the phenomena in discussion here are very important for the people in question. And people in general are willing to do something of importance for things they consider as important. Religious ideas and religious practices, for example, are often considered a hindrance to development and social change. Efforts to discard their influence lead mostly to fierce resistance. But if religious leaders can be convinced that certain changes are not interfering with their beliefs and their position and with the interests of their adherents as they see them they can be convinced perhaps to help and their help may be of the greatest value. In the Catholic parts of the Netherlands, for example, the very rapid development of agriculture in the last few decades was for a very important part due to the active support by the priests of the agricultural advisory service and of other activities for the betterment of the welfare of the farmers. Even if an adaptation of the plans and the development schemes to the beliefs, the ideas, the desires and the felt needs of the population means a temporary deviation of the straight line to the ultimate end of the planning, it is better to accept that, than to risk an open or silent resistance. This is in accordance with research and practical experience in agricultural extension. A modern agricultural advisor will start to concentrate his activities on projects which are felt by the farmers as the most important and not on those which in his opinion should have the highest priority. It is better to get people on the move along a winding path which ultimately leads to the end than to try to let them use a four-lane highway straight to that end if they are reluctant to do so because they consider modern traffic as perilous and if they hate the sight of asphalt and concrete.

And as to the ends of development and planning, every plan which is restricted to material ends and formally organized social activities, like public health care, formal education etc. is incomplete and therefore in fact unrealistic. Culture in all its immaterial and informal aspects, thus this "human factor", should be part and parcel of the planning. Cultural life in general and its informal aspects in particular cannot be planned in detail beforehand, of course. But planners should be concerned about culture. They should try to learn as much as possible about the things the people in question are really interested in and which they consider as real important.

In the plans and in the execution the wish of the planners and development-officers to further the survival and the development of those expressions of human life, should be reflected. Seemingly they have no direct relation to social and economic development but in fact they make life worthwhile.

Certain elements of the culture of the various developing countries will have to disappear of course, because they are incompatible with essential characteristics of their future society. But planners and development-officers should be more interested in stimulating the development of new forms of culture, for example by creating the material provisions needed, than in eliminating the existing ones. Social and economic developments which are not accompanied by the development of the less spectacular aspects of human life are ill-balanced and are therefore always in danger of collapsing.

In the foregoing, rather long introductory remarks, I did not mention one of the papers I have to review. This does not mean that there is no relation between those remarks and the papers. On the contrary, on the one hand the papers stimulated me to make these remarks, on the other hand, I hope that this introduction may help you to understand the importance of the various papers in the whole of the theme we have to discuss in our section.

Very clearly the very important and often decisive influence of the "human factor" is shown in Dr. Jolly's paper. He emphasizes, that it is not self-evident at all that a poor community is longing for social and economic development. Often such a development may be seen by the community as a whole or by leading groups in the community as detrimental to other non-material interests that they considered as being of primary importance. Dr. Jolly mentions and discusses in the first part of his paper in this respect, leisure, "face", social custom, cultural and political identity and religious beliefs. His remarks on these subjects are so interesting and penetrating that your reviewer is tempted to quote them almost completely here. That is impossible of course, but I hope that they will be discussed at length in our section. I have only one objection with regard to this part of Dr. Jolly's paper. In my opinion his judgement with regard to this socio-cultural phenomena, considered from the point of view of development, is too negative. Let me quote his conclusion as to religion as an example. This conclusion runs as follows: "Thus all religion tends in the long run to be obstructive more or less to economic development, more so of course in the primitive, illogical mysticisms, than in the more sophisticated persuasions. Some of the larger and more sophisticated religions actually stimulate economic growth in the early stages by helping to preserve the social structure and the ideals of the community; but even these become obstructive if they cannot adapt themselves to the changing conditions of development."

According to Dr. Jolly, religion because of its essential characteristics, is always conservative and opposed to social change. Only under certain conditions can it have a favorable influence, but only a passive one, on development. In my opinion this conclusion is one-sided and, therefore, partially wrong. That his conclusion in fact is not right is shown by many historical instances. I mentioned one in my introductory remarks and many can be added. Here I shall mention only Max Weber's famous example of the relation between protestant puritanism and the development of modern capitalism. But more important is, I believe the underlying general assumption that certain groups or institutions because of their cultural and other characteristics, are per se unfavorably inclined to change and develop and - as a consequence - others are not. I do not agree with this assumption. Any element of culture and any institution or group representing it, can under certain conditions become an agent of change while under other conditions it can be blocking it. I want to repeat here that in my opinion it is for the greater part dependent on the way in which development is started and the way it is presented to the population in question whether it will be accepted and supported or not.

Dr. Jolly's paper is not only an excellent one, it is also a challenging one. In the second part of his paper several bold conclusions are drawn which are certainly not in accordance with the official opinion in western governmental circles and which certainly will evoke criticism. I mention, for example, his conclusion that democracy according to the western model is not the community structure most conducive to economic development in poor communities. Personally I'm inclined to agree with Dr. Jolly, that the western countries have considered democracy in the way they see it, perhaps too much, as an export commodity, but not everyone will agree with this conclusion.

Very interesting is also Dr. Jolly's argumentation about government planning and government enterprise. In this case I'm not inclined to agree with him in general. I have the impression that he is representing too much the American ideology of free enterprise. Planning in fact means only becoming conscious of one's ends and of the means one has at his disposal to reach these ends. This is the basis of all rational activities. That we in a concrete case do not approve of the ends of a certain government and that we feel that it misuses its resources, for example, its human resources, is no argument against government planning which in my opinion is indispensable for rapid development. In his discussion of the problems of development and democracy Dr. Jolly argues that concentration of resources is necessary in poor, developing countries. His argument against government planning is not in accordance with this conclusion.

As to government enterprises his conclusion, I think, is also one-sided. I'm not in favor of government enterprise as a principle, but it is a myth that the leaders of government enterprises should lack the enterprising mentality. There are many cases in western-Europe, for example, which show that this generalization is wrong. Whether in a certain case from the pure economic point of view government enterprise is desirable or not depends on a number of factors and can not be solved by a dogma or ideology, whatever it may be.

Very interesting are also Dr. Jolly's remarks with regard to agriculture. I agree with his opinion that a certain uniformity and a certain specialization on cash crops are favorable for a rapid development of agriculture. I do not quite agree with him when he considers agricultural education services as not so urgent in developing countries. He overlooks, I suppose, that in the developed countries as well as in the underdeveloped countries the task of the advisory services always has been primarily that of mind-openers, much more than that of instructors even if they were not conscious of that themselves. The main problem never was to disseminate knowledge, but to make the farmer interested in knowledge and in the use of it.

It will be clear, that Dr. Hirsch in his equally interesting paper on the incentives for rural people has to discuss partly the same basic problems as Dr. Jolly. He also emphasizes the importance of non-material factors and warns against the over-estimation of economic incentives for social change. He stresses the wide variety of responses to certain actions and therefore the restricted possibilities for generalizations in this field. This conviction that we should be careful with generalizations clearly influenced the structure of Dr. Hirsch's own paper. When he discusses the existing value systems, the contacts with other cultures, the make up of the individual in society and the prevalent goals in agriculture as some important factors which determine the efficacy of incentives for changes, he does not try to draw sweeping conclusions but he illustrates the importance of these factors by a number of examples. That does not make his paper less important or less interesting; on the contrary. But it makes it more difficult for a reviewer to summarize his contribution. Let us therefore pick from his paper some remarks which certainly deserve to be mentioned and discussed. Under the heading "existing cultural conditions", Dr. Hirsch discusses the role of the family in social and economic development. He remarks that the joint family does not foster social and economic development because it does not allow individuality to develop. But at the end of his paper Dr. Hirsch mentions that "a communal effort for communal purposes may be a very effective incentive" and he continues: "Loyalty to the family as well as loyalty to the group can act as a stimulus to effort". I do not know, of course, if Dr. Hirsch in both cases had the same type of family in mind. But these seemingly contrasting remarks illustrate how complex the problems in question are. For in both cases Dr. Hirsch's arguments are quite sound and to a high degree right. It demonstrates how much the effect of any certain factor depends on the accompanying conditions. But it demonstrates also the possibilities for development officers to use seemingly frustrating factors for the benefit of their work if they know how to adapt their methods to the existing social forces. I suppose that a topic like: "The family systems in the developing countries and how to use them to aid social and economic development", might be a very interesting and useful one in our discussion.

Of great importance are the problems which Dr. Hirsch discusses under the heading: "Contact with other cultures". In a few examples he shows the importance of these contacts. I could add as an example, the very favorable effects of the interchange of young farmers between different countries and different regions which developed very quickly after the war in Europe.

At another place in his paper Dr. Hirsch quotes a report of the United Nations which says: "Economic progress will not be desired in a community where people do not realise that progress is possible". The great value of contact with other cultures for development is not so much that people learn directly new techniques and new ways of behavior, but that they see that their own way of life and of behavior is not self-evident and that perhaps change in their way of doing things may lead to improvements. Endeavors to stimulate cultural contacts

systematically will mostly encounter much greater difficulties in developing countries than in developed countries and when not planned carefully will sometimes work in the wrong way. But here lies an important problem for study and discussion.

The question how to open up the minds of the people is discussed at length by Dr. Hirsch in the last part of his paper where he writes more in particular about the problems of the acceptance of new ideas by the farming population. Here he quotes Mace who stated that in large measure the resistance to change lies in the resistance to communication. Statements like this can lead, of course, to a kind of circular reasoning. Because people are resisting change they avoid communication and because they avoid communication they do not understand the importance of change. Change and communication are certainly interdependent. What is important in cases like this, however, is not so much the theoretical relation between cause and effect but the practical possibility to interrupt this vicious circle. It seems to me that from this point of view Mace is right. A direct way to teach people to accept change as a positive value is difficult to find, but there are many ways to bring about a deliberate and systematic increase of their communication with other people.

In Mr. Tavanlar's paper many interesting problems with regard to community development are discussed. I mention for example the problem of the relation between national plans and the local community development plans. Especially interesting in my opinion is the second part of his paper where he discusses the role of community development in agricultural development. He quotes a United Nation's report about the results of community development in some countries in south eastern Asia and mentions that community development achieved only modest results in improving agricultural output and yield. One of the reasons seems to be that the people in question were more interested in infra-structural improvements, like roads, schools, water supply, houses and health-facilities than in the improvement of agriculture. Perhaps economists will be inclined to consider community-development in the areas in question because of that as a failure, or at least as a partial failure. If that would be the case, I think, they are wrong. Community development would have been a failure if the population, though they were primarily interested in these infra-structural improvements, would have been more or less forced to concentrate their activities on agriculture. In that case community development would have evoked a resistance from the side of the population and probably nothing would have been achieved while perhaps all development activities would have been frustrated for years. But because they were more or less free to choose their own objectives, community development meant that they - as Mr. Tavanlar states - acquired self-confidence, self-reliance and enthusiasm. Mr. Tavanlar, I believe, is absolutely right when he states that the greatest contribution community development made was a change in the attitudes of the rural population. Especially in the first stage of community development it is only of secondary importance what ends are reached. Of primary importance is that the population in question feel a success and learn that change can lead to the improvement of their living conditions. Then gradually the rest will come.

In the last part of his paper Mr. Tavanlar makes some remarks about land-settlement in relation to community-development. He remarks that when people are settling a new area, the economic and social situation - and I should like to add, the cultural situation also - are fluid and therefore people are open for social and economic change. He illustrates his remarks with the case of a project for land-settlement in Thailand. I think, that he is quite right in general that well-planned land-settlement can lead to a quick social and economic development of the people in question. I should like to add, that this development will not only be beneficial for the settlers themselves but that the newly settled area can also act as a good example for the old-established population in the environment.

I kept Dr. Katz' paper to the end because it is somewhat different from the other papers. It is more theoretical in character. Dr. Katz does not mention the developing countries as such at all and not even agriculture, though his paper is for an important part based on studies of rural sociologists on the acceptance of innovations by the rural population. That does not mean that Dr. Katz' admirable contribution is not relevant to the theme of our conference; on the contrary. Essentially our subject is that of social change and I consider Dr. Katz' paper as a very important contribution to the understanding of the process of social change. It is of great practical importance for everyone who has to deal with the problem of planning and development in developing countries.

It is rather difficult to do full justice to Dr. Katz' paper in this review, He is not discussing just one or some aspects of the process of the adoption of innovations but he touches almost all major problems related to this phenomenon. In principle four factors determine the process of adoption of innovations namely; 1. the communicator, thus the individual or group, who disseminates intentionally or unintentionally certain knowledge about a certain subject; 2. the characteristics of the subject of communication, thus of the

possible innovation; 3. the channels through which this information flows to the possible adopters; 4. the characteristics of these possible adopters.

In the first part of his paper Dr. Katz is mainly concerned with the characteristics of the subjects, thus of communication of the items in the process of diffusion of innovations. Often in the research on the diffusion of innovations no clear distinction between various items from the point of view of the process of adoption is made at all or inadequate distinctions like that between material and non-material are made. On the basis of research during the last few decades, Dr. Katz proposes a classification of items of adoption according to the following characteristics: 1) the "communicability", the ease with which the utility of a certain item can be explained and demonstrated; 2) the "pervasiveness", its ramifications or indirect consequences in other spheres of life; 3) the risk of an item of innovation as it is determined for example by the existence or non-existence of the possibility to return to the status quo ante (the reversibility) and the possibility to adopt the item in small amounts (the divisibility); 4) the "profitability" or material and non-material advantages resulting from the innovation.

The question could be debated whether the four characteristics mentioned above could be stated in objective terms or that they are at least partly dependent on the attitudes and, in general, on the characteristics of the adopters.

But it is clear that when Dr. Katz comes to the central theme of his paper, the "compatibility" of an item, the degree to which an item is compatible with the characteristics of the adopters, we are in fact discussing the adopters and not the items anymore. Dr. Katz mentioned under the heading of compatibility first, of course, the well-known problem of certain values existing with the adopters which prevent the acceptance of a certain innovation which from the pure rational point of view would be very useful for them. But more systematically than most authors in this field, Dr. Katz mentions other characteristics of the adopters. Important are his remarks with regard to the unit of adoption. The question whether a certain innovation has to be adopted by the individual, by a collectivity, by the husband or by the wife, for example, will in relation with the existing social and cultural characteristics of a certain society often influence the adoption of a certain innovation.

In the last paragraph on compatibility the importance of the social structure, including also the distributional structure, the political structure and the distribution of resources, is mentioned. Often in discussions on diffusion of innovations these phenomena are disregarded.

In one of the paragraphs devoted to the problem of compatibility Dr. Katz discusses also the channels of communication. I should have preferred a separate discussion of the channels of communication, but this does not alter the fact that his remarks on this subject also are interesting. All extension officers for example should let his remark sink in that the same channel of communication is not always the best for all items.

The wealth of information Dr. Katz gives in his paper means that my discussion of it could hardly be more than a short summary emphasizing some of his most important conclusions. With regard to one conclusion of importance only, I do not quite agree with him, namely, with that on traditionalism versus modernism. I'm convinced - and this conviction is based on years of research in my own department - that the distinction between the traditionalistic and the modern mentality is of basic importance for understanding the process of adoption. The existence of a modern mentality is not just one of many factors determining adoption as seems to be the point of view of Dr. Katz. The misconception one often meets in the discussion on these and related terms is that modern mentality is considered as equal to rational. That in my opinion is wrong. Traditionalism means essentially a negative attitude to change because the traditional man finds the norms which direct his behavior in the past. Having a modern mentality means having a positive attitude toward change but it does not mean at all that a man with a modern mentality is moved by rational motives only. The coming into existence of a modern mentality, as I see it, is an intervening variable, a prerequisite for change, which creates the possibility for a free interplay of motives, rational and irrational, which in every concrete case will determine whether a certain innovation is accepted or not. For the traditionalistic man this free interplay can not exist because for him change as such is wrong and therefore unacceptable. When the concepts modern and traditional mentality are used in this way, many of the objections of Dr. Katz against their general applicability cannot be maintained in my opinion.

Concluding my review of the four papers, I express as my opinion, that they give us an excellent starting point for discussion. I want to remark however, that a more or less negative view of the "human factor" is too much predominant. It is seen too much as a disturbing factor which hampers planning and development. Too little it is considered as a possible positive force and as an indispensable element in human society which has to develop in close connection and in harmony with economic life and formally organized social activities.