SOCIAL IMPLICATIONS OF INDUSTRIALIZATION IN DEVELOPING COUNTRIES

It may seem to be a rather too ambitious effort to try and discuss in a short paper the manifold social implications of industrialization. The subject is so vast that even a superficial treatment would be difficult. The main purpose of this paper would therefore be firstly to show the magnitude of the subject and the variety of fields in which these implications occur and secondly to see in what way it would be possible for the social sciences to assist those who have to deal with promoting industrialization to cope with its social effects so that industrialization could really be regarded as a boon to the country concerned. Some important aspects will be discussed in grouping them together as far as possible but not discussing particularly the economic aspect which would require a separate contribution.

II. Demographic aspect

It will hardly be necessary to mention the terrific problems the ever-growing world population is posing today and even more so in the years to come. The increase which appeared in the censuses which took place in or about 1960 in most countries of the world was in practically all cases larger than one had expected, even in countries such as India, where, besides a long census-taking tradition, also other means such as sample surveys were used to help administrators and planners to make reasonable predictions as to the size and the composition of the population. The 1961 census figure found in India, 439 million, was a definite surprise since most authors had expected approximately 410 million, on the basis of the 1951 census (357 million) and subsequent sample surveys. In other countries the discrepancy between expected and actual numbers may have been even larger.

*This paper was prepared by the author in his personal capacity and does not necessarily reflect the views of Unesco.
The rate of increase of the world population is at present such that, according to the U.N. medium level projection, the total population of approximately 2.9 billion in 1960 will increase to 6.3 billion in the year 2000. If a rough distinction is made between "developed" and "less-developed" countries, then the total population of the first group of countries (North America, Europe, USSR and Oceania) would count somewhat less than 0.9 billion in 1960 and 1.3 billion in 2000 while the rest of the world would see an increase from 2 billion to 5 billion. This means that the increase of the first group of countries is by roughly 45% from 1960-2000, but that of the second group no less than 150%.

It is well known that the first reason for the fast growth of population in developing countries is the sharply declining death rate - Ceylon registered 29 per thousand in 1924 and only 10 per thousand thirty years later - a process which is still going on in a number of developing countries but has reached already the approximate level of Ceylon in others. The high birth rate in developing countries - 40 per thousand in Asia, 41 in Latin America and 45 in Africa - will continue to mark the rate of increase between the two groups of countries, unless family planning, strongly propagated already in some Asian countries but until now successfully only in Japan, where the birth rate fell from 34 to 17 per thousand in eleven years, will become accepted practice. "Western technology, applied one-sidedly to the control of deaths, now threatens to prevent the increase of income per head which technology produced in the West."  

1. J.N. Jones, Does Over-population mean Poverty?, Washington D.C., 1962, p.18 who took these figures from the UN Yearbooks.

2. N. Keyfitz, "The Impact of Technological Change on Demographic Planning" in Industrialization and Society edited by B.F. Hoselitz and Wilbert Moore, Unesco-Mouton, 1963, p.220. The question as to how far industrialization and falling birth rate are connected is a complex one. Although it is true that the industrialized countries have a lower birth rate, Keyfitz's view that "the connexion with industrialization is not a tight one", would seem to be confirmed by studies in India where it appeared that not in all cases this correlation existed, but rather education would seem to be the decisive factor.
To these figures should be added those of the world food production to achieve a more adequate picture. How far would increases in yield catch up with increases in population? Considering three major food crops, wheat, rice and maize, a table comparing the annual compound rates of change in yield per ha of these crops in major grain-producing countries (where the changes over the period 1935-39 to 1960-62 were given) shows that in only 19 cases the increase in yield was larger than that of the population, while it was equal in one case but smaller in 42 cases, the negative figures generally being substantially higher than the positive ones. Moreover, it appears that the positive cases are practically all confined to the "developed" part of the world.

All this most clearly indicating the tremendous problems developing countries are facing since they have to cope with the highest population increase coupled with the lowest increases in agricultural production per ha. Moreover, the population in these countries if for about 70% dependent on agriculture (including all "primary production") while industries ("secondary production") and services (including government and private services) make up for the remainder. In industrialized countries the proportion of persons engaged in agriculture is seldom above 20% and continuously decreasing to the advantage of secondary and tertiary production. Persons engaged in agriculture in the Netherlands, for example, accounted for 19% in 1947 and only 11% in 1960, while those working in industries increased from 34% to 41% and services from 46% to 47% allowing a steady increase of income per head in the world's most densely populated country. India, on the other hand, notwithstanding its very important industrial development, does not show a corresponding increase in the percentage of its population engaged in industry: the figure remained fairly stable between 9% and 11% in all the censuses between 1911 and 1961, and this figure moreover includes a substantial number of artisans and persons engaged in cottage industries.

1) World Population and Food Supplies, 1980, published by the American Society of Agronomy, Madison, (Wisc.) 1965. The data in this paragraph are derived from L.R. Brown "Population Growth, Food Needs and Production Problems", pp. 3-22. Mexico for maize and Japan for rice were positive, but there were 10 cases where there was a decrease in yield over the period mentioned which varied from 0.1 to 1.1% Statistisch Zakboek 1964, Table 74 Figures rounded Mining 1.3% and 1.5% not included.
2) Census of India 1961, Final Population Totals, Delhi 1962,p.397. The comparisons are not always easy since the criteria for the occupations have not remained the same. However a broad comparison is possible. It appears that in 1961 no less than 6.39% of the working population was engaged in "household industry" and only 4.22% in "manufacturing other than household industry"
However, some developing countries do show important changes in this respect, such as Algeria, where the figures would indicate a vigorous industrial development:

<table>
<thead>
<tr>
<th></th>
<th>1954</th>
<th>1964</th>
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<tbody>
<tr>
<td>Agriculture</td>
<td>72.0%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Industries</td>
<td>11.5%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Commerce, services, administration</td>
<td>16.5%</td>
<td>20.7%</td>
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It would be necessary to study more in detail in what way Algeria has been able to achieve this spectacular result, for we do not find in many developing countries such important shifts in so little time. Unfortunately, the experience of most countries is more similar to that of India, i.e., that the growth of population is such that the real increase in industries and industrial labour is not shown in the proportion of persons engaged in industry, although in absolute figures there may be important additions. But industrialization does not, in general, seem to have helped very much developing countries to solve their problem of rural over-population, or where there is not actually such a problem - bringing the countries nearer to a structural change in their occupational population which would hold a promise for activities which are achieving a higher productivity per head than agriculture.

There is another most pressing problem as regards the changes for a major shift from agriculture to industry, and that is the steadily decreasing number of industrial workers required to achieve a given industrial production. A simple example may be quoted to show this point: the labour time needed for producing one ton of cement decreased in 20 years (1942-1963) from 5 hours 44 minutes to 2 hours, while in some factories the time is only 30 minutes.

1) Amor Benyoussef, Les populations des Maghreb (thesis Bordeaux, 1965)
2) G. Destannes de Bernis, "L'industrialisation des pays en voie de développement", in Développement et Civilisation, No 18, June 1964, p.32
More generally speaking: labour productivity in industry is increasing yearly by about 3% thanks to better organization, more sophisticated equipment, etc. which means that in ten years one-third fewer workers will be needed to produce the same quantity.1)

This shows that, even if industry is substantially increased, it will not be likely that it can solve the problem of unemployment and under-employment, but that it can only modestly contribute to solving a problem about which many anxieties exist. It was pointed out by Mr. Morse, the Director-General of ILO that between 1965 and 1975 no less than 380 million jobs will have to be created in Asia alone to cope with the increase in population, that is more than the whole world's industrial labour force in 1950.7) The problem of choice between different technologies, relatively more or less labour or capital intensive, should be considered also from the point of view of the job-creating capacity of the factory concerned, although it will obviously not be the only consideration. But even if one would take due account of this demographic aspect, one cannot reasonably hope to solve the problem of over-population by vigorous industrialization, not only because of the limited capacity of industries to absorb substantial numbers of workers but also because of the tremendous sums required for industrial investment, there being required at least $5000 (and often much more) to introduce one worker to industry. Therefore, if for a country of some 40 million inhabitants one would be satisfied with a moderate industrialization programme which would absorb a quarter of the yearly population increase, being 2½%, of whom about 40% would enter the actual working force, one would require a new investment (not taking into account investment needed for the replacement of worn-out machinery of existing industry) for this additional industrial working force of 500 million dollars. Assuming a GNP of $4200 million and a rate of domestic savings of 9% and outside resources of $120 million (investment, aid, etc.) then it would mean that all this country's yearly savings plus outside resources should go into industrial investment, leaving nothing for agriculture, irrigation, housing health, education, or any other purpose.1a)

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1) Annual report by D. Morse, Director General, ILO, dated 26 September 1963.
1a) The country as such is hypothetical, but the combination of assumed data has been derived from an existing country, excepting the assumption that a quarter of the active yearly population increase should go into industry. In the country concerned the percentage of population actually engaged in industry was only 9.4%.
This example would show how difficult it is to meet even partially the need for new jobs created by the increase in population if one would wish to do so by finding new occupations in industry.

The conclusion should be that agriculture no less than industrialization ought to be developed in order to achieve work opportunity as well as a higher rate of savings to finance the development, industrial and agricultural. But it would also seem clear that neither will have any change of achieving results in countries with a dense agricultural population unless accompanied by a substantial drop in the birth rate.

II. Sociological and psychological aspects

a) Recruitment of industrial labour.

It is interesting to note that 1930 is the year mentioned in studies on problems of recruitment of industrial labour both in Asia and in Africa as the end of the period of recruitment through "jobbers" who went into the countryside to find workers for factories.

Up to that time the flow of rural people to industrial centres was not sufficient to keep the mines and factories working, while some years later it is found that there is a change in the general situation and one finds more and more an abundance of workers willing to start factory work, a reversed trend which has since become stronger, so much so that at present there is a flood of people coming to cities, people who in many cases will never find a job in any industry.

There are two reasons which have led to this fundamental change. First should be mentioned the world economic crisis of the early thirties which caused important dismissals in the labour force so that naturally further recruitment was not needed for some years. However, this was, at least in Asia, rather the dramatic event which emphasized and hastened a process which was going on already, namely, the ever-growing pressure of rural population in Asia, which became generally more important after the First World War.

b) An interesting set of articles on this problem is to be found in C. Eicher and L. Witt (ed) Agriculture in Economic Development, McGra Hill, 1964
In Africa, there would seem to be a different reason, since the population problem does not exist there in the same way as in Asia. On the contrary, in many African countries there was a scarcity of population, and those who would have been available for industrial work had little reason to change the security of the village for the vicissitudes of work in industry, in unfamiliar surroundings and away from relatives. It is a widespread, independent attitude often described and not only as regards Africa: even wage earning in agriculture, in the village itself, is not regarded with any favour, let alone far away, in a completely new type of work. In the first decades of this century Africans were living in rather isolated, tradition-directed societies, with - as in all such pre-industrial societies - a great reluctance to change. "And perhaps, most important, they had few felt needs which were not met by village production and occasional trade.\(^1\) These limited needs are universal in isolated societies since only through cultural contacts, knowledge of and interest in other goods than locally produced can occur. Establishment of industries would tend to hasten this process in three ways: by attracting attention to new goods, by acting as centers of the spread of money through their wages, so facilitating exchanges, and by the personal contacts of those who are or have been working in factories with their relatives who so become acquainted with a new way of life.

However, the creation of new needs is a slow process, especially in the initial stages, and the desire for new goods was seldom strong enough to attract people to factory work. This explains the role of the labour recruiter whose task in over-populated Asia was easier than in Africa. Here the need for money for taxation often helped to bring people to industrial work, but in many cases the labour recruiter also used pressure via the village head to find workers.\(^2\)


\(^2\) Ibid. The characteristic of limited needs has been established as one of the most important features of the dualistic economic theory by J.H. Boeke, *Economie van Indonesie*, (Economics of Indonesia) 5th ed. Haarlem, 1955 p.52 ff.
Here, as in Asia, the demand for workers diminished strongly after the economic crisis, while the slow process of new wants and the spread of a money economy as well as of new ideas, especially after the Second World War which brought about such rapid changes, particularly in the political situation, gathered speed to such an extent that many people, especially of the younger generation, were eager to go to town to find work in administration or industry. At present both in Asia \(^1\) and Africa there is an abundance of supply which has given rise to the problem of over-urbanization, as will be discussed later on.

The recruitment pattern in Latin America would seem to show the same features as those in Asia and Africa: people accept factory work in most cases because of economic necessity and may find later that it has specific advantages so that they finally prefer this type of work over that on a farm. "When asked why the first Cantelefffos accepted factory work, the answer is poverty." \(^2\) The difficulties of a new factory worker, accustomed to work in agriculture, should not be underestimated. Apart from the new surroundings to which he has to adjust himself, there is the altogether different type of work, hard to understand particularly for somebody who has grown up in a society without machines. Moreover, in agriculture, one works with relatives, without the type of supervision the factory has, the sun and the season dictate the time and type of work, but in the factory it is the clock and the supervisor. An unknown accuracy and precision is needed, a strain to a man who in most cases never went to school and has therefore never trained his eyes to distinguishing tiny differences as every child must do who learns to read. Factory work binds a man to his machine while on the farm one may take a rest when needed. If the factory is in a town, as it will usually be, the man from the village will feel all the

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\(^1\) This would not mean that the role of the jjobber (sardar in India and East Pakistan) has no more meaning, for where there is no personnel department in a factory - which is rare in the larger ones - the intermediary of the sardar (with all the abuses connected with it) may still be used. But it would seldom happen that the recruiter would go to the countryside to find workers, since there will always be temporary labour, or those who would even be waiting "at the gate" who are eager to take a job.

more out of place, with often other food, clothes and shelter, if he can find any. He will mostly miss the company of a family, either he is unmarried, or, if married, usually leaves the family in the village until much later when he has settled down and found a living place.

This, however, is in many cases the major problem. Housing has always been mentioned as one of the most difficult problems to solve; this was so when the Indian Industrial Commission issued its report in 1917, describing the ills of Calcutta's bustees and Bombay's chawls and had not changed when the Health Survey and Development Committee (1946) complained about the "indescribable filth and squalor" of the ahatas of Cawnpore, with their overcrowding and lack of hygienic facilities. Nor was the impression of the research workers much better when again some 10 or 15 years later they studied the Calcutta and Bombay industrial areas.1)

However, the same housing problem exists in many African towns where there is very little industry and where, therefore, one cannot blame industrial development for shanty towns and other ills of over-urbanization. On the contrary, one might wish that there were some more factories to provide at least work to the many unemployed. It will be necessary to distinguish clearly between the effects of urbanization and of industrialization, although in some cases - as, for instance, Calcutta - both have gone together.

When one studies recruitment patterns in more detail, it is found that they often still follow the trends of many years ago. It appears that in Calcutta the people from the State Orissa will be found in spinning departments of the textile mills, not because they are such gifted spinners (although the first recruitment for spinning factories was connected with home spinning in a certain part of that State), but because of the fact that people from Orissa are already in the spinning departments, so that newcomers

1) Social and Cultural Factors Affecting Productivity of Industrial Workers in India, published by the Unesco Research Centre on Social & Economic Development in Southern Asia, Delhi, 1961, p.50
from Oriya villages naturally go to their relatives already working in a factory, to find them a job. In this way certain patterns are perpetuated without there being any particular technical reason.

This pattern also shows that the new industrial worker is not as completely lost in the city and in the factory as is sometimes presumed. In the studies on this subject it is universally shown that a new worker is received by a relative or friend with whom he stays until he has found some place to live. This also implies that the social control — although obviously less strong than in the village — is not so completely missing as is sometimes presumed. It often occurs that people from the same village or area are living in the same house, or in the same city quarter. 1)

On the other hand, the greater freedom life in the city still provides is in some cases an incentive to factory work. 2)

b) Adjustment of Workers

As was pointed out already, the main attraction of factory work to the rural worker is the steady wage in contrast to the hazards of the harvest. And this factor remains of the greatest important in the process of adjustment. Although the lack of freedom in factory work will be resented the security of the wage — not only regular but also higher than one can expect in agricultural work 3) remains an attraction. Moreover, factory work is usually regarded as less heavy than farming and carries higher prestige. Young people who went to town to work in a factory like to boast about their earnings and the life in the city when on occasional visit or returning to their native village. 4) In many cases also factory workers send home


3) This aspect is often stressed. See Nash, op.cit p.30; Husain, op.cit p.141; Lopes, op.cit., p.240-241. However although this is true in general, the situations are not always easy to compare. Quite apart from the higher cost of living in a factory area or town, the fact that housing conditions are usually better in the village, and that it is easy there to get some protective food such as fruits, etc., as well as the new needs imposed by city life (other clothes, types of food, habits of cigarette smoking etc) should be taken into account when considering the nominal wages.
money to their relatives\textsuperscript{1} which undoubtedly heightens their prestige. Moreover, those who are staying for several years in a factory receive higher wages, gain a right in a provident fund or other advantages, the most important being that of free or cheap living quarters. All authors insist on the particular importance of this aspect to achieve adjustment to factory conditions\textsuperscript{2}, although it is in some cases added that a different type of housing ensuring more privacy to the worker and his family would have been more effective.\textsuperscript{3}

It is interesting to note that in cultures as different as those of the "Nordestinos" in Brazil and the Bengalis in East Pakistan, factory workers prefer their present job to work as an agricultural labourer, but that in both areas they favour particularly independent trade.\textsuperscript{4} But the relatively high value attached to factory work shows that adjustment has not been too difficult.

\textsuperscript{4} Lopes, op. cit. p.240 (cf p. 10)
\textsuperscript{1} P.N. Prabhu "A Study on the Social Effects of Urbanization" in The Social Implications of Industrialization and Urbanization, Unesco Research Centre, Calcutta, 1956, p.73; Husain, op.cit.p.181. The first author states that 69% of his sample, the second that 83% sent money home. This should not be understood as a proof of relatively high wages, but rather of the strong family cohesion to which the worker owes loyalty and which obliges him to share his income which, in the case of workers whose wife and children have been left in the village, will generally be regarded as an obligation. But very often money is sent to the "joint family" as such. It should be added that when the worker is dismissed he has the fullest right to expect assistance from his relatives in the village.

\textsuperscript{2} M.E. Morgaut, Un dialogue nouveau, L'afrique et l'Industrie, Paris 1959, p.126 stresses the importance for the African factory workers to have living quarters with colleagues as a psychological support, also as a protection against relatives who press him to share his income should he live in the village.

\textsuperscript{3} J.D.N. Versluys, Vormen en soorten van loon in den Indischen landbouw (Kinds and types of wage in Indonesian agriculture), Leiden 1938, pp.167-173. Here, as well as in the book mentioned in the previous note, stress is laid on the importance of family dwellings instead of collective housing.

\textsuperscript{4} Husain, op; cit. p.217; Lopes, op.cit.p.241
Nevertheless, many times one hears about absenteeism, which shows that adjustment is not yet the same as full commitment to factory work. It is clear, however, that one cannot expect such a commitment as long as the ties with the village are as strong as could be concluded from the previous description.

Absenteeism has often been used as a measurement of labour adjustment and commitment to the industrial situation as it appears to decrease when the workers become more and more accustomed and even committed to industry. It also appears that there are two types of absenteeism: the one-day and the relatively long-term absence of the worker who, in the busy agricultural season, goes to his village to help there, or who just has to go because there is a marriage or other celebration which he simply has to attend because of his position in the social structure of family and village, or who wants to visit his family when he has gone alone to the factory leaving behind his wife and children. This type of absenteeism is common and explains, for instance, the badli system \(^1\) in India and Pakistan where there are - or were - about 10% more workers connected with the factory, usually on a temporary basis, than the numbers of jobs actually to be filled. Such persons will work in faming also in some periods. At a later stage, when the worker and his family have settled in town and particularly when second or third generation workers are connected with industry, the ties with the village tend to become looser until the worker feels completely committed to the factory and this type of absenteeism will diminish or cease altogether, although the worker may occasionally visit the village, with which he still has connections, during his regular holidays.

But one notices rather often that there is not only adjustment, in this respect, on the part of the workers, but also of the factory. Nash reports about the factory he studied in Guatemala: "The factory closes during communal festivals, and workers are given time off to participate in social and religious duties. The work year of the factory is necessarily in accord with the workers' demands, rather than an ideal one from the point of view of most efficient production. Several attempts by the manager to

\(^1\) Husain, op. cit. p. 133. The absenteeism of factory workers in East Pakistan who were of rural background was 15.4% during the sowing period, and only 8.5% among the others.
alter the work patterns have come to nil. The factory comes back to a schedule acceptable to the Catelefo. 1) Similar adjustments are also reported from Asia 2) and Africa 3).

A different type of absenteeism was also well known in Europe in the period of early industrialization: "Absenteeism is highest on Mondays and days following pay days - heavy drinking and its effects are usually the causes. In some French-speaking countries in Africa, absence rate annual average is 3.8%, absence rate on Monday is 7.6% and after pay day 9.8%" 4) Such rates are not extremely high, but do show a certain maladjustment which is also indicated, in many cases, by frequent changes in employment. The author just quoted said that in Salisbury (Rhodesia) 80% of the workers changed their job each year, in the Ivory Coast of the 30-35,000 migrant workers, 50% change their employment every two months, while in Uganda a factory shows a labour turnover of 7.6% per month. 5) Similarly, it is reported from Brazil that the migrants coming from North-East Brazil usually do not come with the intention to stay, but only to work for some months. They will then return. "He not uncommonly migrates to São Paulo three or four times, each stay lasting from short periods to many years". However, once married the migrant may settle more permanently in the city and become more stable in his job at the factory, and become more adjusted. "Adjustment to the city does not necessarily mean, however, satisfaction with the status of factory worker". 6) When it is possible to make use of a certain dismissal compensation, or the worker feels wronged, he will leave the factory, particularly to try and set up a small independent business. Nash ascribes this attitude to factory workers

1) Nash, op.cit., pp.27-28
2) Husain, op.cit.p.258. Some employers, especially in factories situated in a rural area did not insist too much on punctuality in attendance in the beginning, allowed absenteeism at harvest time, changed the weekly closing day to allow workers to go to the market, etc.
3) M.E. Morgaut, Un dialogue nouveau: L'Afrique et l'Industrie, Paris 1959 p.35. Besides giving leave in cases when for social reasons the worker has to go to his village, some factories also give premiums for good attendance or try to develop a pleasant and homely atmosphere so that the workers feel more at their ease.
5) Ibid., p.112
6) Lopes, op.cit., pp. 240-241
"in many countries" in Latin America. 1)

A most important issue in the whole problem of adjustment is the question how far there is a continuity of culture when a man takes up a new type of employment. This would seem to play a much more important role than, for instance, the new type of work itself. The opinions differ as regards the possibility of this continuity, which is understandable since the cases, even within one country, may differ very much. Some authors have found that for various small ethnic groups in North Africa there is a cultural loss 2), which is also stated for other parts of Africa, since technology - and its manifold products - takes a very modest place in the value system and cannot replace the traditional values, which other Africans, however, would wish to throw overboard altogether. 3) Sauvy shows that in Europe the same process of "detribalization" took place in the early periods of industrialization when the artisan became a factory worker who never enjoys the pleasure of creative work. 4) And similar disruptions of social structure are also described in 20th century America, such as the case of a factory in New England which could cause the disintegration of a community where shoemakers held an honourable place but had to give up their calling to become factory workers. 5)

Many examples can be quoted from various parts of the world, and not only the developing world, showing problems of cultural adjustment: Japan's struggle to reconcile traditional values and a highly sophisticated industrial society, as well as the disappointment of Americans who turn to Europe in search of culture, only to find that in the old countries there is the same struggle to collect more and more goods that they tried to escape on leaving the States.

1) Nash, op.cit. p.30
2) A. Benyoussef, op. cit.
3) M.E. Morgaut, op.cit., p.79
4) A. Sauvy, "Industrie et Santé Mentale" in Industrialization and Mental Health, Bern, 1964, p.47
5) J.F. Scott and R.P. Lynton, The Community Factor in Modern Technology, Unesco, p.19 ff. quote this case (fully described by W. Lloyd and J.O. Low in Yankee City) and discuss its implications.
It would seem to be wrong, therefore, to conclude that industrialization is causing social change and is disrupting cultural values only in developing countries. Rather it is a dynamic process which makes it possible for an unheard of number of human beings to live under much better circumstances than ever before, but which requires, on the other hand, adjustment to a new situation. There is no reason to believe that this process is a disadvantage as such, only one should try to facilitate the adjustment and to make the transition as smooth as possible.

Nash gives an example of such a well-integrated change when describing the Cantal village in Guatemala, as already mentioned, and stresses particularly the continuity of culture which could persist notwithstanding important changes in the society. The role of the trade union as a social factor was emphasized since it provided new social ties. Not in all cases does the union provide these advantages but it often plays a similar role, creating a new interest among the workers and, even in its traditionally oppositional attitude to management, in fact "welding the worker to his job."\(^1\) This affectional role of the trade union may explain the emotional content in labour disputes and the particular importance attached by the workers to their union being "recognized".

The role of the factory and trade union as a unifying factor among the workers who may derive from different groups, districts, tribes or castes has often been mentioned. It was pointed out in a description of some factories in Calcutta and Bombay that caste does not play an important role within the factory and higher caste workers had no objection to working or eating in the canteen side by side with others,\(^2\) although this would not mean that outside the factory there would be much social contact.

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\(^1\) Nash, op. cit. p.29

\(^2\) Unesco Research Centre, op. cit., p.77, shows that in Calcutta 99% and in Bombay 93% of the workers do not find it difficult to adjust to working with people of other castes, and 96% and 82% respectively would not object to a supervisor of lower caste or from another community.
Nor does it mean that their wives would feel as progressive. The wives of factory workers are naturally far less exposed to new influences, particularly in societies where they traditionally lead a secluded life. In the Calcutta study it appeared that they very seldom go from the factory area to Calcutta (distance of about 8 km.) except on important religious festivals. Those who had been working themselves were far less restricted, kept usually their own wages as well as their husband's, and shopped themselves which was not done by the large majority of the other wives.  

However, the unifying force of the factory would seem to require a certain time to become effective: in a study in a very new industrial centre in Khulna (East Pakistan), it appeared that the two main groups of workers, the Beharis and Bengalis, caused nearly as many brawls in the factory as the total number of workers against management.  

In fact, the period of about ten years of intensive industrialization would hardly be long enough to create a brotherly feeling among groups who traditionally are not particularly friendly, and the fact that they did work together in trade union action (as well as in less official activities against management) shows that there was at least the beginning of a growing feeling of unity.

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1) Unesco Research Centre, 2p. cit., Appendix I, pp. 9-10. The same emancipating role of the factory is reported in a study on Morocco : André Adam, "L'influence de l'industrialisation sur la vie sociale au Maroc" in WAY Forum, N° 32, July 1959, p.21

2) A.F.A. Husain and A. Farouk, Problems of Social Integration of Industrial Workers in Khulna with Special Reference to the Problem of Industrial Unrest, Dacca University Socio-Economic Research Board, 1961, Appendix E.86. This table shows that 9.78% of the workers mentioned the Behari-Bengali controversy and 13.57% the workers-management clash, while 64.47% did not report any riots. The same study has also investigated the attitudes of the local village population around the industrial area vis-à-vis the factory workers, a type of investigation only rarely undertaken and nevertheless most important for a full understanding of the situation.
c) Adjustment of manager and owner

When the social implications of industrialization are discussed, it would be difficult, as pointed out in the beginning of this paper, to include them all, but it seems certainly necessary to take into account the most important role of the managers as well as that of the owners of industries and their adjustment to new responsibilities. In many cases, especially when the industries are relatively small, manager and owner will be one and the same person, or at least they will belong to the same family.

In most developing countries, industries have not received enthusiastic support from those who could make investments. In fact, the traditional pattern of investment is in land, if there is any investment and not simple hoarding. In all cases safety is regarded as essential. One should not regard this inclination as a lack of economic interest, at least not in the traditional situation. Land was obviously the only possibility of real investment, and with it went a certain social status. This importance of land (quite apart from its value as investment) is likely to be felt long after new investment possibilities are available and even after land reforms or maximum rent laws make the possession of land a doubtful economic proposition. It is well known that also in Europe the possession of land still plays, to some extent, the role of social status symbol. This means that one has to expect that long after the purely economic value of land (its value as object of speculation may be left aside at present) has diminished, its social value will remain.

As regards hoarding, this attitude is widespread and also has its very important social aspects. It is done in many ways, such as, for instance, in cattle (not used for agricultural purposes), or in carpets or wool, but generally in gold and jewellery.\(^1\) It plays a role in dowry

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\(^1\) R. Firth and B.S. Yamey, *Capital, Saving and Credit in Peasant Societies*, Chicago, 1964, gives many more items according to the various societies. Ben Youssef, op.cit. p.505 mentions wool for Morocco, carpets in Algeria and copper work in Libya. In general, everything which can keep its value for a relatively long time may be used.
or bride price and will often be one of the ways in which the married woman, traditionally without power of decision regarding the family's goods, may find a way of achieving at least some personal economic power, which may help her to assure a greater independence than "officially" granted in her traditional role. However, the situations in various cultures are very different.

The desire to save is often more general than has sometimes been presumed, and in most religions and traditional cultures there is to be found encouragement to do so. But, as is pointed out by Lambert and Hoselitz, there may not be so much "the incapacity or unwillingness to save more, but the inadequacy and inefficiency of allocation of savings once made." 1)

There is also reluctance to innovation and one should agree that the history of industrialization in various countries shows that investments made in periods which were particularly favourable to new industries - India's new factories, for instance, which during the first world war produced substitutes for the usual imports from England and did very well for some short years - come to nothing as soon as the world situation becomes normal and competition reappears. Various Asian countries showed examples of investments in industry which, made in times of high prices, could not survive, bringing about considerable losses. 2)

This reluctance to innovation is therefore not only proof of traditionalism but, in many cases, based on certain unhappy experiences. Capital formation for industry requires careful investment policy to become successful, and a new approach. The traditional investment in land has the great advantage of the continuous control of the owner of

1) The Role of Savings and Wealth in Southern Asia and the West, Unesco 1963, p.426
2) Indonesia's industrial history shows a number of such instances, especially between 1909 and 1930 when several efforts were made, also by the government. Only in the beginning of the second World War can one say that really successful industrialization began, interrupted again by that war. See J.D.N. Versluys, Aspects of Indonesia's Industrialisation and its Financing (in Dutch, Groningen, Djakarta, 1949).
what happens to his property combined with the certainty that the land will not perish. Both factors are largely missing in industrial investment; the owner of capital is not familiar with industry nor is he certain that his investment will retain its value. Needless to say, the wealthy people in a traditional society are even more reluctant to invest in impersonal shares of far-away enterprises they have not even seen.

There is moreover another deterrent to "rational" investment, and that is the tendency to invest in what one may call the community as such. The social structure of the community is strengthened by community manifestations without which it cannot show its real life and existence. Such manifestations are the celebrations which accompany the great events in human life: birth, marriage, death. Many authors and administrators have denounced the habit of heavy spending on such festivities and called it wastage of resources. Clearly, to some extent, this is completely correct, but one should not lose sight of the aspect of "investment in the community" which is not quite the same as acquiring social status. He who invites the members of the community to a festivity confirms his place in its structure and his guests not only recognize him in his particular position but are also aware of a certain debt. This can be "paid" - in the case of other wealthy people - by inviting in their turn but the majority will be unable to do so and must pay in a different way by services rendered or work done on the rich man's land without expecting him to return such services. In this way, the big land owner confirms his position in the community, acquires a favourable bargaining position and gains in social status. If at some time he may need help, he is sure that the community will feel obliged to assist him. One might, therefore, regard the habit of celebrations not only as pure wastage but also as a cementing force in the community and, to some extent, as an insurance.

The distance between this type of "investment" limited to the community and that in anonymous, impersonal industrial enterprises is obviously too large to be easily overcome. Between these extremes one would find the group of manager-owners who have invested in industry without having become real industrialists since they would have neither the knowledge nor the mentality of the actual industrial entrepreneurs. Here one finds, nevertheless, many examples of successful industries, especially if the size is such that it remains possible for one man to supervise not only the factory but also the marketing of the products, the purchase of raw materials and new machines and to maintain a link with the personnel.
The problems connected with the managerial task have often been discussed and it is not necessary to go deeply into them. Its diversity, its responsibility, the need for quick decisions on major and minor matters, the requirements of versatility, of ability to negotiate, of acting at the right time, all this demands not only intelligence but wide interest, patience and hard work. It is not the type of work for which the wealthy landowner would seem to be most suitable. Nevertheless, they, or their sons, would become in many cases the owners and managers of factories. For it is again a further development when the group of owners (usually family members) would appoint an outsider as manager. The fear of being cheated, the desire to know exactly what happens to their property, the need to provide sons and nephews with decent jobs, all these factors help to make it improbable that a group of owners would appoint an outsider, however capable he may be. Here we touch on a problem which is a very real one in many developing countries. The function of manager, which ideally should be that of the entrepreneur in the sense Schumpeter gave it in being the person who finds new combinations, is of the utmost importance to developing countries. Not many studies have been made on this subject,\(^1\) which should be investigated more closely, particularly to find out how the entrepreneurial function is developing in those countries where there are numerous problems of divided loyalties: the entreprise and the family, of hesitant attitudes, of inner contrasts between traditional culture and new approaches, and, more especially, of a controversy between the "rational" and the personal attitude to business and industry.

In a number of countries one is well aware of the crucial importance of the manager's role. Seminars are being organized so that the manager - or the future manager - may become aware of the numerous problems connected with the task of directing new industries. It is fortunately realised that the task of the manager, although it requires unique

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1) Y. Sayyigh made a study on entrepreneurs in Lebanon, a country where one can indeed discover an interesting combination of Eastern and Western approaches and influences.
abilities to be fulfilled well, is not an art given only to the few, but is rather a science which can be learned, although it is recognized that only those who have a special gift will reach the highest levels. But, even if it were regarded as being an art, the fact remains that art can also be taught and that the artist who went to an academy will always gain, although his actual work may show wide divergencies from what he had been taught.

It cannot be denied that the future of developing countries will depend, to a large extent, on the question how well the managers will have been able to learn combining the specific features of their culture with the demands of entrepreneurial activities.

III CONCLUSIONS

As was shown in the beginning, it would be unrealistic to expect that industrialization would be the sole answer to the problems of creating development. Nevertheless, industrialization is necessary and must be pursued as one of the absolute necessities for developing countries to arrive at the "take-off". Investment in industry, development and training at all levels are all essential.

Here it will be necessary to stress the importance of further research, and particularly for studies on the specific situation of each country. The relative role of industry, the choice of products to be manufactured, the tempo of industrial development are obvious problems to be studied. But it will be equally necessary to study the way in which industrial development can best be organized without causing social clashes. This is, as was shown, not only a matter of social legislation to ensure that the workers live under decent conditions, however important such measures are and - especially in the case of housing - how costly the solutions may prove to be. There is also the problem of trying to locate and organize the factories in such a way that the existing social structure can most easily adapt itself to this new element while similar studies should be made to see how best the factory could be adapted to the workers without endangering its efficiency.
Problems of urbanization will have to be tackled and this is a field of studies in its own right requiring surveys and studies in such different fields as housing, health, physical and economic planning, social and psychological issues, architecture, etc., some of which are outside the strict field of social sciences. In the same way studies about the possibility of capital formation and investment in industry, its economic and social aspects would be needed, as well as the problem of training managers, supervisors and workers, and to instil a new dynamic approach, new interests and new loyalties. And various other fields may need investigation.

A few words would be needed, in this context, on the role of education. Several authors have pointed out, both in American, in European and Russian literature, that industrialization will make headway only if education progresses at least at the same pace. One knows that in any programme of industrialization it is essential to include education. In a study made in a Calcutta factory it appeared that in the department of engineering where the highest wages were paid as the work was the most exacting, everybody was literate, whereas only approximately half of the factory people were literate.\(^1\) Zvorikine clearly shows the close correlation between years of school and position in the factory,\(^2\) while numerous American studies have been made stressing the importance of education and its immediate connection with the economic (and social) status of the person concerned.

One should consider, therefore, education at all levels, including workers, supervisors, engineers, managers, as well as the public at large, as one of the essential factors to achieve. But not the only one. Investment in

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1) Unesco Research Centre, Social and Cultural Factors Affecting Productivity of Industrial Workers in India, Delhi, 1961, pp. 43 and 62. On the other hand there was no clear proof that in the other departments literate workers were doing better.

industry, and preferably national investment - is equally important, and one of the most difficult problems to solve, not only because of the scarcity of capital but also, as we have seen, because of the natural reluctance to invest the existing savings in industry.

Finally, the problem of management. This is one of the most serious difficulties connected with industrialization. The need for special seminars and courses in management appears clearly from what was discussed above, and managers should become aware of the need for research, not only in the field of their specific production, but also on the sociological and psychological problems of the complex relationship existing in a factory.¹

The last question, not often asked perhaps, but essential is: how far will industrialization solve the problem of rural over-population, and how far will it really contribute to the wellbeing of the people concerned. Here we shall have to agree that industrialization can only solve a very limited part of the population problem. But its contribution will be essential and, to some extent, decisive. Because without it, no long-term solution will be feasible, however limited its direct influence may be. Its indirect influence, in creating new jobs in the services sector and preparing the people for a new way of life, should not be underestimated. The higher level of living, the new and better articles of consumption it provides and the new outlook of people who are gradually accustomed to a modern way of thinking, these are the important contributions industrialization can make. But it should not be thought that the process will be quick and easy, on the contrary, one will have to accept a slow and arduous road. And it will be an essential factor to see that the existing structures are not needlessly destroyed but, that, on the contrary, they are respected and maintained as far as feasible. Industrialization without tears does not

¹) J.D.N. Versluys, "Management and Social Research" in Proceedings, Residential Study Course Managerial Controls, Indian Institute of Technology, Kharagpur, 1959, pp. 72-82
seem to be feasible, but the process should be made as little painful as possible. Only then can industrialization be regarded as a boon and worth the sacrifices.

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