

**GOVERNMENT OF THE  
CENTRAL PROVINCES AND BERAR**



**REPORT**  
OF THE  
**INDUSTRIAL SURVEY COMMITTEE**

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**PART I—VOL. 1**

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**NAGPUR  
GOVERNMENT PRINTING, C. P. & BERAR  
1939**

**[Price—Annas 8]**

**This report  
is printed on hand made paper**

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### PART I.—VOL. 2\*

- Chapter I.—Memoranda submitted on behalf of public institutions.
- Chapter II.—Selected reports of group leaders.
- Chapter III.—Notes by members on selected industries.

### PART II\*

*(This part will deal with the report on the forest and mineral resources of this province and the recommendations in regard to key industries, public utilities, etc.)*

\* To be published in due course.

# REPORT

OF THE

## INDUSTRIAL SURVEY COMMITTEE

PART I—VOL. 1

### CHAPTER I.—CONSTITUTION AND TERMS OF REFERENCE

This committee was appointed under Resolution No. 5064-3014-VII of the Government and notified in the Gazette, dated the 15th December 1938, with the following as the terms of reference:—

(1) To review the work done in the province by the Department of Industries since its establishment.

(2) To supervise the collection of data relating to large, small and especially cottage industries from previous publications and reports by an officer appointed for the purpose.

(3) To advise the officer-in-charge as regards the lines on which the industrial survey of the province should be undertaken and to review its progress from time to time.

(4) To visit typical villages, study their economic condition and examine the possibility of reviving cottage industries and in doing so to take the advice and guidance of the All-India Spinners' Association and the All-India Village Industries Association.

(5) To report on the industrial possibilities of the raw materials available in the province, with special reference to the forest and mineral resources.

(6) To report on the measures which Government can undertake to promote industrial development within the province, especially of cottage industries in the villages, and to suggest methods for financing the same or otherwise promoting them.

The Committee consisted of the following ten members:—

#### *Chairman.*

Sjt. J. C. Kumarappa, Wardha.

#### *Members.*

„ Chaturbhujbhai Jasani, M.L.A., Gondia.

„ V. V. Subhedar, M.L.A., Saugor.

„ K. P. Ghaira, General Manager, Central Provinces Syndicate, Ltd., Nagpur.

„ R. N. Jha, Secretary, Berar Chamber of Commerce, Akola.

„ K. P. Sagreiya, I.F.S., Sylviculturist, Central Provinces and Berar.

Dr. A. N. Kapanna, Demonstrator of Chemistry, College of Science, Nagpur.

Sjt. Walter Dutt, Bar.-at-Law, Nagpur.

The Director of Industries, Central Provinces and Berar.

Dr. R. S. Thakur, Officer on special duty in connection with Laxminarayan Institute of Technology, Nagpur University, Nagpur. He will also act as Secretary to the Committee.

The Committee is empowered to appoint sub-committees and to co-opt members for specific purposes.

To this number the following two more were added under the Gazette Notification of Resolution No. 175-89-A-VII, dated the 12th January 1939:—

Shrimati Sarahamma Ittyerah, M.A., Wardha (late Professor of Economics, Lahore).

Sjt. E. R. Mahajani, Managing Director, Shri Laxmi Oil Mills Company, Limited, Akola.

The proceedings of this committee were inaugurated by the Hon'ble the Prime Minister on the 16th January 1939 at the Secretariat. The work of the committee was divided into stages. The first is a rapid survey of about 25 villages in every district of the province to be undertaken by the members of this committee so as to enable them to study the needs of the villagers and then suggest ways and means of ameliorating economic distress in the villages, the results of this survey to be embodied in Part I of the report. With the knowledge gathered from this survey and from that report, we shall endeavour to find out what the Government should do in an organized way to help the industries carried on by the villagers.

The forest and mineral resources will have to be studied and the results embodied in subsequent reports indicating the general policy to be followed in regard to the organization of all the economic and industrial activities of this province.

### CHAPTER II.—GENERAL CONSIDERATIONS

1. Functions of the State.—It may not be out of place here to enunciate some of the important principles on which the considerations that follow in the report are based.

A social organization such as a nation or a political unit like a province needs a proper adjustment of the long-range and the short-range view-points. In certain matters the short-range view-point has to be emphasized, while in others a long-time view-point has to be used. Generally speaking, an individual is inclined to look at problems from his own limited range of interests. Where individual interests run counter to the general welfare of the people, it is the function of organized society to balance these interests and direct individual activity into channels which may not be harmful to the social unit taken as a whole. Similarly we find that the interests of rural economic units such as a village organization and urban industrial units within the province, clash with each other and adjustments of these divergent interests are necessary for the economic well-being of the body politic as a whole. One of the most common organizations which is

entrusted with the performance of this function is the State. Those in charge of the affairs of the State will be justified in interfering for the common good.

Although we agree that the State should not interfere in more ways than it can help, yet as society is made up of both the strong and the weak, the interests of the weak have to be protected by the State and to this extent the interference of the State is called for. Again, there are functions to be performed which will be above the reach of the individual citizen. For instance, research, the organizing of marketing facilities and studying the needs of the people, will call for much time and money. This will place these functions beyond the means and the capacity of private individuals.

**2. Taxes and Expenditures.**—In order to perform its functions the State draws its wherewithal from the people by way of taxation. If the State exists for the people it necessarily follows that the incidence of taxation should be such as will not harm the economic life of the people, nor reduce their taxable capacity. This throws a heavy obligation on those who are entrusted with the performance of the functions of the State to see that the expenditures of the State by their very nature help in the distribution of wealth in a way which will increase the national wealth as a whole, specially considered from the point of view of human values. When taxes are drawn from the poor people and the expenditures enrich the well-to-do, it naturally decreases the human value of the national dividend. As the income of the State in India is drawn mostly from the very poorest, this consideration would enjoin the greatest amount of economy, especially in expenditures which tend to send the purchasing power outside the jurisdiction of that State. The idea of economy is not an absolute one. Economy does not mean that low prices are to be paid for articles. The Government has to look at its expenditure not from the money point of view only. An article needed by the State may be obtainable from abroad at a cheap price, but if that same article can be produced locally, even at a higher price that may be paid, the money will be circulating within the province and thus the price will not affect the taxable capacity of the citizen. Such a course will distribute wealth and encourage local enterprise. But when the article is obtained from abroad, the purchasing power is transferred over a boundary line which obstructs the free flow of exchange. As long as we have such artificial barriers as Customs Duties, Control of Exchange, Freight rates, etc., it is impossible to expect the adjustments that will result in mutual good through the free flow that would be characteristic of a free market.

As the world is organized today our economic goods are directed mainly by artificial means and it requires ceaseless vigilance to see in which direction the expenditures of the State help the current of productivity of the people to flow. If a Government looks only to cheapness and gets its requirements from outside its jurisdiction, it will lay itself open to the charge of creating unemployment within its jurisdiction, because whatever goods are produced for consumption create employment in their production, but when the goods used are obtained from outside the province, the employment that is created by such demand is lost to the province. Therefore, the State can either create employment or unemployment by the mode of its expenditure.

Considered from this point of view, how cheap an article may be that is imported outside the field of taxation of a State, it is too expensive from the point of view of employment. The State, in this case, is doing a service to the people from whom it draws taxes and is introducing into its consideration a short-range view-point which ought not to be applied in such cases.

**3. Capital and Labour Wealth.**—Our economy differs considerably from the economy prevailing in western countries. The economic organizations were based on the assumption of capital being available in abundance. Such a situation was brought about, prior to the Industrial Revolution, by the transferring of hoards from the eastern countries. Since efforts have always been directed towards increasing the labour cost of articles produced and increasing the returns to the entrepreneur.

In our own country, a visit to any village makes it absolutely clear that capital is scarce and labour is abundant. Therefore, if we wish to evolve a system in which the people will be prosperous, it is necessary that such a system should be based on the fact of abundance of labour and on the availability of capital. Where a large amount of capital is called for as in the case of Key Industries, Public Utilities and in the exploitation of natural resources the State should undertake such enterprise on behalf of the people. And so, the standards in the one case cannot be used in the other. In our own country we have to see that the equipment necessary for the production of goods is of the cheapest. Where the percentage of labour cost in an article is high, it indicates that distribution of wealth has taken place in the very production of that article.

The Government, generally speaking, gets its finance from the annual productivity of the people which forms part of their income as against their capital. In many of the Government expenditures, the idea of economy is introduced by considering the period of life of an article which may extend over a considerable number of years. For this purpose durable foreign articles are often procured. This, again, is a wrong principle in economics. What we require is that since the money that is drawn by the Government is contributed from the annual income of the people, the expenditures can also form a charge on the revenue.

By way of explanation, we may be allowed to cite one instance. Not only in this province but all over India, even through jungle areas and country-sides, the telegraph posts that do not cross border lines of railways, are made of steel. In the United States of America the country abounds in timber. In countries like America and England which are reckoned among the wealthiest nations of the world, these posts are invariably of wood, excepting in the city and town limits; but in our country, which is one of the poorest countries, an expenditure for foreign metal posts is incurred. The reason is usually given for this expenditure is that steel posts last longer, while the wooden posts are eaten up by white ants and other insects. This is a consideration that may well be admitted by a private owner but not by a State or a utility concern. At the present time even the possibility of an attack by insects can be repelled by chemical treatment, but apart from that the point of view of Public Finance, such expenditures are inimical to the interests of the people. Our country abounds in forests containing

which can be used for this purpose. Poles of various kinds of indigenous timber can be made available. This will give employment in the forests to a large number of people in cutting, fashioning and treating the poles. If the poles are less durable than steel ones they are also cheaper, and even if they have to be renewed more often, the amount spent on such renewals out of taxation is only made to circulate more frequently within the country.

Ordinarily, the State ought not to attempt to capitalise the revenue it gets from the people. To do so would be to dam the current of circulation unnecessarily. This creates a situation which is likely to lead to dire poverty. Taxes are paid by people who can hardly afford to have the very necessities of life. Taking money from such people and putting it aside for the future is a wrong financial policy. The proper way to deal with such a fund is to utilize it so that the amount spent falls more or less on the revenue rather than on the capital.

This policy has another advantage. If the asset wears out sooner, the Government will have also to find the wherewithal to replace it, therefore, they will have to go to the people once again for moneys. This will keep the transactions of the Government more clearly before the people. In dealing with public expenditures of a democratic institution, this check is a very important one. It curbs any tendency towards extravagance, however irksome it may be to the administrators.

In this connection we should like to suggest that every year and in every village a statement showing how much income the Government has received from that type of village and how much of Government expenditures are allocatable to that type or representative village should be prepared, framed and hung up in the village in prominent places like the school, the post office and the hospital.

We have already stated that in our country industries which have to have a wide base should be founded on labour rather than on capital. This is a real difference which disables cottage and village industries in our country to even compete with the foreign articles made under methods of centralization. This means that the artisans will pay for their goods with that which they possess in plenty, namely labour. This is an economy that requires to be carefully understood before any scheme can be formulated for the villages in India. A casual look-round in a village will reveal the fact that most of the houses of persons who have no material wealth are built of mud and thatch, while the *sowkars'* and *malguzars'* houses are built with brick in mortar and are tiled. This is not merely a sign of poverty as understood under a material economy but is in itself part of the economic order and represents an adjustment to circumstances and environment over a period of centuries. If a bricked and mortared building needs repair, an outside skilled mason has to be called in and paid for his labour, but if a mud wall comes down, the cottager himself can plaster it up and do the necessary repairs. Similarly, if the thatching leaks, the cottager can attend to it himself. He is in a position to put in his own labour in buildings of this nature, but when pucca buildings are erected, it requires material wealth to maintain them. It is because of this difference that we invariably found the *malguzars'* houses in very bad repair while the poorest of the poor, namely, the Harijans, kept their houses neat and clean. Though they may be lacking in material

wealth, their surroundings are very much cleaner because of their wealth in labour. This aspect of our economic order is hardly ever understood. Unless we keep this in mind it will not be possible for us to evolve a scheme which will fit into the general background.

4. Money and Barter Economics.—It is in this connection that we have to draw attention to the fact that the system of partial payment in kind known as "Dan" or "Baluta" or "Jamini", the payment of goods in terms of that unit which is available, is also in setting. Money economy has its own strong points but too great an emphasis on the use of money has been necessitated by the economic organization in the West where articles from very great distances become primary needs for their industries. The farther we go for raw materials or markets, the greater is the need for a money economy. Emphasizing a money economy in villages has led to extension of the markets from which they buy their articles in a country which has not got the necessary power to control its environment best suited to itself. This emphasis on money economy has placed the villagers at the mercy of the foreign salesmen. Frequently we hear it said that the villagers should do such things as will bring them more money. Money is not a commodity which satisfies any primary need. Man cannot live by money alone as Robinson Crusoe has shown us. Money represents the power to control other peoples' lives because the owner of money is on a foundation that differs from that of the possessor of the exchangeable article. It is not possible for exchange in commodities to take place equitably when one person is in possession of stronger bargaining power. Gold does not depreciate by itself, while most commodities for which it is exchanged depreciate inherently as well as with time. For instance, a mango-seller cannot keep her mangoes indefinitely with her, whereas the holder of money can afford to keep his money, and therefore, the mango-seller at the end of the day has to dispose of her fruits as best as she can because her commodity depreciates, while the possessor of money can hold out. This shows that by introducing a money economy on a very wide basis in the villages, we shall be placing the people who do not possess material wealth at the mercy of those who possess it in abundance. Whatever may be said for metal as money, in some respects it operates as an unfair medium of exchange when the perishable is balanced against the non-perishable and brings about an inequality between the persons entering into such transactions. It is from this point of view that we feel that the villagers ought to be less dependent on world markets and more dependent on their own productive forces. It is not a feeling of nationalism that brings about this view but pure economic considerations.

5. Barter and Government Funds.—There is one point in connection with barter that affects Governmental functions. The tendency has been to greatly reduce the human value of the purchasing power taken from the people for Government expenses. People who do not get primary necessities such as even food, have to pay for maintaining a heavily paid administrative staff. The money taken from those who have no facilities for obtaining even clean water to drink, is used for building marble flush latrines. Wherever we went excepting in villages where there were Government rest-houses, we invariably had to sleep on mud floors, in verandahs or open

spaces in the neighbourhood of cattle in the most insanitary conditions. This is not because the villagers are inhospitable. The poor have large hearts but small purses. This is all they could afford to entertain us with. They did not have even a spare 'charpai' to give to the visitors. Government funds are largely drawn from people in this condition and money economy makes it possible for them to be spent in a way which has no relation to the source of the revenue itself. When we returned from our survey, we were generously housed by the department in the Assembly rest-house. This building has been put up for the purpose of housing members of the Assembly during the sessions which last about two months in the year and for this purpose the members are given well built rooms carpeted and furnished with beautiful furniture and spring bedsteads, with wash basins and running water in the bathrooms. When money is drawn from villagers who have hardly got a roof over their heads and who live in dire poverty all through the year, and buildings of this nature are constructed for the convenience and comfort of those who are said to be the representatives of the villagers, it seems to us wrong in principle. This building with all its equipment exclusive of the site costs Rs. one lakh and thirty-two thousand. Our representatives are the guests of hosts with an income of Rs. 12 per year and to call upon them to entertain their guests in rooms costing Rs. 3,300 per member shows clearly the anomaly of the situation stated above. A situation of this kind has been facilitated greatly by money economy which transfers, with the least amount of friction, the purchasing power from the remotest villages to the cities, and produces this loss in human values in revenue. Taxes are collected in the remotest of villages and palatial buildings are put up and maintained in provincial towns. This method of Governmental expenditure in itself brings about a decrease in the national wealth of the country in human values.

On the other hand, if revenues can be collected to some extent in kind, there will be some check in the fall of utility because the use of paddy or wheat collected by the Government will be restricted to payment to officers locally and the difficulties of marketing these products will create a certain amount of friction in bringing the purchasing power from the villages to the cities. Although the expenses of collection may be heavy this conservation of the marginal utility specially in terms of human values will more than justify the administrative difficulties. We are not recommending that a complete system of barter should be adopted but we do feel that to a certain extent payment in kind, when properly schemed and worked out, will go a long way to relieve the distress of the people. It is not an infrequent thing to find villagers forced to sell their products to pay their taxes. These forced sales have the effect of lowering prices and later on these very people are obliged to buy back the goods at a much higher price. Under these circumstances, it would be well to examine this question in greater detail but as this matter does not come within our purview we have merely indicated the problem.

**6. Raw Materials, Production and Profit.**—Another fundamental consideration that is constantly lost sight of, is the fact that in the absence of any abnormal factors, the labour spent on an article nearer its consumption stage pays very much better returns than one which is nearer the raw material stage, because the principle of the ability to bear the charge operates. A consumable

article which is about to be sold for one hundred rupees can easily bear a profit of five rupees, while the raw materials of which this article is made which cost Rs. 10, though they may bear a profit of eight annas in the same proportion, yet will not bear a profit of five rupees. From this it follows, that an artisan who always works nearer the consumption stage of an article, will get a much better return for his labour than one who works at the raw material stage. Generally speaking, there will be people working at both the stages within a limited area and therefore society as a whole will not suffer but the present organization in the world is so devised that one set of people, say in Europe, are always working at consumable goods and another set of people, thousands of miles away, with all forms of artificial barriers between them, are confined to the production of raw materials. This system involves that the former group stands to gain considerably more than what would be justified by their contribution in the transformation of raw materials, while the latter group is destined to perpetual under-payment.

A study of the composition of Japanese export shows that between 1914 and 1937 their export in foodstuffs failed by 33 per cent, that in raw materials and semi-manufactured goods by 50 per cent, while that in finished goods went up by 108 per cent. Export of raw materials is conducive to creation of unemployment and spread of poverty. Without realising this principle in economics many people commonly say that agriculture does not pay. Agriculture as a whole cannot pay as long as it is confined to the production of raw materials only. The greater the tendency to shift to money crops in disregard of national requirements the less will be the return to society from agriculture. It can be said that individual farmers benefit by resorting to money crops. What an individual may obtain is not necessarily a thing that benefits society as a whole. When we take society as a whole which should be the view-point of a Government, it ought to be clear that the more raw material producers we are, the greater will be the poverty of the nation. On this ground, food crops contribute very much more to the welfare of the nation, and money or commercial crops for purposes of export, impoverish the people. The tendency in our country, during the last generation or so, has been to emphasise money crops and the result faces us at every turn in the villages.

A farmer who cultivates money crop for factories is no better than a factory labourer. In fact the lands which are given up to these crops are functionally part of the factory, which means that the farmers working on these farms are themselves factory labourers. They lose their independence; they have little or no bargaining power; and they get the lowest of returns. A farmer is proverbially a person loving freedom and independence, but when he deserts food crops or crops which he himself or his neighbours can convert into consumable goods, he leaves behind his tradition of the love of freedom. Unfortunately, the policy of our Agricultural Department only enhanced the evils attendant on this change. Its researches have been largely directed towards commercial crops. This has been done under a very short-sighted policy. The Government has not been able to see further into the future, or being largely manned by persons who were not able to look to conditions which will uplift the economic state of the villages. For instance, various kinds of palm trees abound in uncultivated

and in cultivable land. They can be made into a source of economic wealth, but in contrast the researches of the Agricultural Department have emphasised the growing of sugarcane which requires intensive cultivation and good wheat lands, the reason being that sugarcane is a good raw material for mills while the palm juice has to be converted into sugar by cottage process. Similarly, the Agricultural Department has spent no time or thought on extending the field of production to consumable articles. India is one of the largest oil seed producers in the world and yet the seeds are exported rather than converted into consumable products. India has a great internal market for oils of various kinds for edible and medicinal purposes, for illumination and for lubrication. If the department had spent a little time in extending the market for finished goods from oil, they would have easily devised some kind of lamp for burning vegetable oils, but instead today every village imports thousands of gallons of kerosene oil for the purpose of illumination. Instead of the villagers obtaining their needs from their own labour, they have to export their labour at the less paying point for articles where high payments have to be made.

#### 7. Administrative or Creative Efficiency.—

We have noted that the taxable capacity of the citizen is being lowered by the policy followed in regard to Government expenditures. We have also to draw attention to the fact that under a plea of efficiency, the Government has tied itself into a knot. Efficiency we must have, but there are limits after which so-called efficiency becomes harmful. Revenues received by the Government are a public trust and we should be the last persons to advocate that they should be spent carelessly. But there are limits to everything. The safety brakes on a steam locomotive have a function to perform but if the driver of an express train jammed on the brakes under the plea that he did not want to take any chances of derailment, there will certainly be safety at a static condition; there will not be any progress. Unfortunately, the Government organization today appears to have reached this stage. Officials of very senior rank are burdened with routine work which can be done by office boys. The result is that there is no room for planning and initiative. It is good policy to get a perfectly reliable person to decide whether one anna postal excess payment is to be paid or not. In ordinary offices such decisions are made by the despatch clerk or the peons but bills of this nature had to be submitted to the Director of Industries. We beg to point out that this is waste of national funds to have an officer of that stamp safeguarding the loss of a few annas. The result has been that the "administrative efficiency" has reached petrification while creative faculties have been frozen to death. If the taxable capacity is increased, the risk of wastage of a few annas can be overlooked in the light of the gain of hundreds and thousands of rupees. No risks and no gains, and that is the policy that appears to be ruling governmental expenditures today. A river flowing with a life-giving stream will be utilized by weeds and rushes, but it in the main fertilizes a whole country-side.

8. Impediments to Production.—With great eagerness to raise funds for the Government all manner of taxes have been levied at all stages of production without regard to the results that such impediments to production will bring about. The nearer the incidence is to the raw material,

the greater is the leverage to the impediment. Eight annas per unit charged at the point where raw materials are collected at the early stages from perhaps the forests, is likely to stop the possibility of a much greater tax at the consumable stage, but the present system has valued the golden egg and killed the goose.

Not only are Government taxes crushing the industries because of bad planning and unscientific principles of public finance followed but in addition to this the malguzars, municipalities and local boards have joined in as a triumvirate making the burden unbearable. We wish to sound a note of warning that these burdens are now reaching a point where disaster will soon follow if immediate steps are not taken to rectify these. The malguzari exactions should be carefully examined and legislation, if found necessary, should be introduced to safeguard the people from such exactions.

The larger villages which form the market centres had "municipalities" of some sort but the financial organisation of these municipalities is anything but scientific. The one idea with which their budgets are prepared seems to be to get as much revenue as they can regardless of the consequences. The result is that many industries are being killed by thoughtless octroi duties and terminal taxes. These remarks apply to the larger district towns also. It is hardly to be expected that these towns as well as the villages would have the necessary trained men to plan out their system of taxes on sound principles. Hence this unhealthy state of affairs. The Government has to examine scientifically the system of taxes and to make sure at least that none of these harm the village industries if they cannot be helpful. The villagers themselves are thoroughly ignorant and they do not realise the full implication of the taxes they pay, with the result that even where drawbacks could be obtained, overpayments are common, owing to ignorance and the difficulties of applying for them. When taxation reaches unsophisticated people, it should be in such form as can be easily understood by them. Therefore, wherever possible, these impediments to production should be carefully avoided.

The tendency of the taxes that have been imposed has been to increase the cost of raw materials. We do not say that the taxes themselves, detached from the condition of the industry, are heavy but the incidence and the point at which they are levied, are wrongly placed. We dare say that when these are properly planned out the industries would be able to bear a very much higher tax than they can do at the present time.

The bazars in most of these villages are stocked full of foreign goods. This is a clear indication of the extent to which employment in our own country has suffered by the exploitation of the opportunities for production by foreign countries. If the municipalities levy high sales taxes on these goods which are imported into the village instead of taxing articles that are locally made, they would probably be doing a service. Periodical lists of articles to be found in village shops should be prepared and carefully scrutinized to see which of them are harmful to the economic life of the village. Even articles supplying primary needs are now being imported into the villages. The more there are of these that come in, the less employment there will be. These articles come in largely because of facilities of transport extended to finished



products. The organization of the movement of goods requires intelligent guidance. These are functions which naturally fall to the Department of Industries. In villages the general order should be such that foreign goods should be the exception rather than the rule. Today almost the reverse holds good.

### CHAPTER III.—INTRODUCTION

1. **Per Capita Income.**—Our survey showed that most of the industries are tottering. There are hardly any which can be said to be even in a normal state. The taxable capacity of the people is rapidly going down and if the matter is not taken in hand immediately, the time is fast approaching when the Government will get nothing from the people.

A walk round a village will convince anybody that the financial position of the inhabitants is steadily going down. No elaborate statistics are necessary to show that once they were flourishing and now they have not got the funds even to repair the mansions built by their forbears many of which are in ruins. While looking into the economic condition of the villages, we found that the income of the people was unbelievably low. We are told that the villagers may be exaggerating their condition for fear that our inquiry may lead to further taxation, but our survey, being broad-based and covering 606 villages, shows us clearly the uniformity in the low level of the incomes received by the people. In even skilled industries such as weaving, people are not able to get more than 50 to 70 rupees per annum per family which works out to about 12 rupees per head. If a cottager is able to make about an anna per day on the average throughout the year he considers himself well off. We may safely say that the per capita income per annum in the province would be in the neighbourhood of Rs. 12. If any one disbelieves this statement which has been the result of information given to us with remarkable consistency in regard to the income obtained from the various industries surveyed covering all the districts of this province, he has only to go into any village and see for himself the condition of the people. The only question that arises is how they have been able to keep their body and soul together with the meagre nourishment they have been able to obtain. It speaks highly for the tenacity of the people who have stuck to their industries in spite of all odds. If at the present time the Government moves in the right direction and takes the necessary steps to resuscitate the industries of these people, it will not yet be too late to put them on a sound footing.

2. **Diet.**—It is hardly necessary to say when the per capita income is 12 rupees per annum that the peoples' diet is not balanced. Their food is largely rice or some other grain, sometimes taken as gruel to fill themselves up with water, but the tragedy of the situation is, that even this little amount of rice that is available to them, is polished rice making their diet even worse. They hardly get the chaff. This makes it incumbent on the Government to see that at least the rice that is given to the poor people has all its nutritive elements left in it. It is therefore that we are suggesting that the rice mills should be banned. Such mills not only remove the nutritive part of the food but also take away the purchasing power of the people. Whatever may be said for the rich who add to their diet nutritive elements from other sources, it is imperative that those who

have very little should be helped to conserve what little they have.

Continuous propaganda is necessary to enable people to understand the nutritive value of their food. A certain amount of dietetics must be made a necessary qualification of every village teacher, and pupils and students in the schools must be taught this subject. This science which affects the very life of the people is hardly known even to the teachers.

There is a considerable amount of waste water in nearly every village. This waste water can be utilised for the purpose of growing vegetables and fruits. In every village there is a cesspool round about the well which breeds mosquitoes and emits a foul smell. There is no reason why this should not be turned to good account by utilising it for the growing of vegetable gardens. With a little effort the villagers can make this nuisance into a blessing but they require leadership and that leadership can only come from those who have the welfare of the villagers at heart, and Government has to render these services to the people, if not on any other higher principle, at least on the principle of rendering them some service for the taxes they receive.

Mahua flowers are said to possess some value as food but even the flowers of these trees, if the trees are in malguzari land, are not allowed to be used. Malguzari rights may be maintained but not on "a dog-in-the manger" policy. Food is an essential item for human life and nothing should stop people making use of articles that otherwise would go to waste.

Under Pisciculture we are recommending fish as part of the diet and the need to take necessary steps to stock rivers and tanks with good varieties which will afford a plentiful supply of wholesome food.

If oil seeds are properly cleaned before crushing, the cakes can be used as an article of food. The cake can be made into "chatnis" of various kinds and when mixed with gur it forms a wholesome sweetmeat. It is taken in this form in other parts of the country.

Not so long ago a nutritive survey was carried out in the Central Provinces and we trust that steps will be taken to rectify the maladjustments which have come about in the course of decades in the food values of the diet taken in this province.

3. **Agriculture.**—Our terms of reference do not extend to agriculture, but inasmuch as the industries in villages touch agriculture at various points and are dependent for their well-being on the prosperity of the farmers, it is incumbent on us to point out some of the difficulties that the farmer meets with. We have, in a way, already touched upon the question of payment of revenues. In addition to this, the land tenure appears to us to require careful examination. For various industries the raw materials have to be collected either from jungles or from malguzari lands. These collections are subject to varying duties. The malguzar shares his revenue with the Government but there are exactions for fruits, collection of leaves and grass and taking of clay, etc., for which also he makes demands either in kind or in money. These exactions work harshly on the villagers and handicap their productivity. After careful scrutiny of the existing practices, it may be necessary to take legislative action to safeguard the welfare of the people. A great deal of harm has been done and is being done

because of the unscientific dues taken without careful planning. Naturally the malguzar is only concerned with a short view-point with his own interest and we cannot expect him to take a distant view in a detached way, observing the consequences that his momentary claims will bring on the people of the village.

We have already pointed out that the change to money crops has affected the people's welfare adversely. We should like to mention also the need for carefully planning out the agricultural activities of the province so as to make the province as far as possible self-sufficient in food and other primary necessities. There is no industry that will equal agriculture in its capacity to increase the wealth of the people. If by a little care it is possible to increase production by a few annas per acre it will mean an enormous increase in the purchasing power and productivity of the province.

During our survey we found that very little attention is being paid to renew the fertility of the soil. No adequate arrangements for agricultural analysis are provided in the districts. Manuring is neglected. A good deal of the available farm-yard manure is either burnt as cowdung or wasted without being collected. If Sisal hemp is prepared, the residual pulp obtained is a fertilizer rich in nitrogen, phosphoric acid, potash and lime. This manure is considered better than cattle dung. The bones are largely exported. The people of the province do not seem to be alive to the manurial values of bone-meal. It is no use preaching constantly, in season and out of season, to the ignorant farmers and saying that such propaganda has not produced much results. It is time that the Agricultural Department took this function of re-fertilising the soil on its own shoulders and supplied to the farmers manure from various depots in the villages at the proper season getting back their return at the time of their harvest. Manufacture of artificial fertilizers should form a key industry. Seeds also may be given out. In this way, to a large extent, the speculative side of agriculture may be spread out, because, in some parts, the Agricultural Department will gain and in other parts it will lose. In a very uncertain industry like agriculture, it is essential to have some means of spreading the risks. As far as our experience goes, we find, that the agriculturist, not only in this province but also elsewhere, is very anxious to avoid taking any risks. As it is, natural forces are often against him and if we add to his risks the expenses of manure and seed, he is crushed under the weight of it. Therefore, if the Government could step in and undertake the task, it seems to us they can increase the taxable capacity of the farmer considerably; this in itself will justify the existence of such a department.

We may be allowed to state here that the finances available to the villagers and specially the agriculturists, are becoming more and more scarce. Co-operative societies have not been a great success. Taccavi loans by their very nature are insufficient to meet the requirements of the agriculturist. The Debt Conciliation Boards, as far as we can gather, have affected the credit of the farmer, possessed and now he has been parted from his old friend the sowkar by the various efforts to help him. From the instances that we have inquired into, we find the Land Mortgage Bank almost inoperative. We find that the farmers are really stranded without a ray of hope. Under these conditions it becomes imperative

that some steps be taken to enable the farmer to get the credit he needs.

4. Methods of Production.—Constantly we find in the reports of the Department of Industries that certain of the cottage industries cannot be worked on an economic basis so as to compete with mill-products. Such statements are made from a faulty consideration of the problem. The question of competition with the mills does not arise because, at the present time, large-scale organized industries are rendered various services and are granted concessions by the Government which enable them to produce cheaply, while village and cottage units hardly get even the recognition of their existence, not to mention services and concessions. They are made to fall back on their own resources as regards development of the industry as well as the opening up of the market. Unless these handicaps are removed and these industries are given their fair share of Government attention in regard to technical research, facilities for obtaining raw materials, and the many obstacles in the way of their efficient working are removed, it will not be right to draw comparisons. Even apart from such considerations, industries which tend to concentrate wealth have anti-social consequences, to avoid which the State is empowered to regulate and control economic life. Cottage and village industries, as long as their natural tendency is to distribute wealth, have a definite unchallengable place in the economy of a nation and more especially in that of our country.

A careful examination will reveal that any cheapness in production in large-scale industries or any economies that may be effected, are not necessarily inherent in the method of production. It is largely due to expenditure which should be debited to this method of production being spread over the whole country.

This fact indicates the place of large-scale industries in our national economy. That is, where we require the risks and the capital necessary to be spread over the whole country, we need to resort to centralisation of industries. Since the risks and expenses are spread over the nation, it also follows that such industries must be run by the State or under a close control of the State. Giving over such industries to private management would amount to a subsidy of certain advantages granted to individual enterprise.

Centralised production, as it gathers its raw materials from distant places and focusses its productive activity in a definite locality, has to control the means of transport and facilities for controlling the production of raw materials. These involve control over the activity and life of others and therefore it cannot well be delegated to private control. Without such powers it is impossible to produce on a large scale. The corollary to holding such power is the control of the Army, Navy and the Air Forces. The expenses of these arms of State can only be justified if the benefits of these departments of State accrue to the common-people. As a rule, this cannot be said to be of such universal benefit to the masses. The Army, Navy and the Air Forces are charged to Indian revenues, while their benefits accrue largely to citizens resident outside the taxing limits of the Government of India. Therefore, if there is any cheapness in production from these large scale industries, it is due in some measure to certain part of the expenses connected with this method of production being charged up to the general revenues of the country. It is fallacious

to argue therefore, that articles produced under large scale industries are cheaper. To bring them on a par with cottage and village industries which hardly get the advantages of any Governmental function, it is necessary to charge for the special benefits received. When such a charge is made, it would be seen that no such cheapness of production will result.

We have already stated that production at a stage nearer to raw materials is less remunerative than production at a stage nearer to the finished article. If a set of people are to be raw material producers, you can only keep them at that stage by controlling the environment of the people and such control is also a Governmental function. Large scale industries cannot, therefore, be given over to private enterprise and should only be resorted to under State control in the case of key industries, public utilities and the exploitation of natural resources for the benefit of the general public.

According to our programme these large scale industries will be considered in our subsequent reports. As far as this report is concerned we are dealing mainly with individual production under cottage and village industries.

#### CHAPTER IV.—DEPARTMENT OF INDUSTRIES

1. History.—We are asked to review the work of the Department of Industries. When the department was started its scope was very limited. It was largely an inspectorate concerned mainly with factories and other organized industries. From time to time it has been expanding so as to cover village and cottage industries also. Unfortunately, as its scope widened, the creative part of the department was neglected and the administrative part seems to have overshadowed the whole organisation, with the result that little or no help has been given to the villages as such. As it is organised today, the department is not equipped to direct industries, it is nothing but a glorified inspectorate. Spasmodic attempts have been made to organise it so that it might be of greater service to the province. Unfortunately, in the re-organisation that has taken place, sufficient emphasis has not been laid on the needs of the people which the department should have met. In most of the villages there is nobody to give the villagers new ideas, or to experiment with their tools and implements, or to suggest ways and means of altering their designs to suit changes in demand. These are all functions that the Department of Industries should perform. If this Department is to fulfil the purpose of its existence it needs to be re-modelled; mere re-organisation will not be of any avail. It seems to us that the department must be humming with the activity of the villages and that it should have live units which are working away at their own industries.

2. The Staff.—Men who work in these units must face the difficulties of disposing of their output, must be in touch with the market prices, must confront every problem that meets a villager. Unless this is done, it is a waste of public money to run a department totally isolated from the real currents of life.

The Director of Industries himself should be either an experienced technical man or a person with a wide range of knowledge of the scientific part of business and not necessarily a member of an administrative civil service.

No expert worth the name can be away from his field. A textile expert who is not found at his loom day in and day out cannot be entrusted with the welfare of the textile industry any more than a medical man who is not practising but possesses only a medical degree can be entrusted with the curing of even ordinary ailments. Practice in the profession is the essence of an expert.

3. The Organization and Functions.—Similarly, if this department is to give help in such industries as oil-pressing, paper-making, spinning and weaving, etc., these industries ought to be carried on by the department itself in small units organized and equipped so as to be within the financial resources of the villagers.

We feel that there should be greater contact and coordination between the department and villages. The organisation of a department of this kind should be such that every villager will turn to it naturally for help and advice. When the villagers visit the department, they ought to be able to return to their occupations richer for the time spent in the department. In most of the villages the village people hardly know even of the existence of this department. This state of affairs must be remedied if the economic condition of this province is to be improved. This department should be the pivot round which the productivity of the masses should revolve. It should provide direct help in every way—scientific, financial and technical.

In addition to the functions that we have already suggested, this department should also be well-equipped to regulate the quality of goods. One of the great defects of goods produced in India is that they are not properly graded or standardised. Such regulation by proper inspection and grading must be entrusted to various officers stationed at important towns, somewhat in the same way as the All-India Spinners' Association regulates the quality and prices of the production of its centres and certifies its khadi to the public.

Arising from the above duties, and perhaps as part of it, will be the control of weights and measures. In many cases the ignorant villagers are being cheated of their legitimate dues by middlemen and traders by various forms of short measure. The department should control the standards so as to ensure as far as practicable that this does not occur.

The experts of this department must themselves be taking part in the every-day life of the people whom they have the privilege to serve. It may be too much at this stage to recommend that the heads of the various departments should themselves be capable of earning their livelihood by practising the industry they preach but this will be the acid test of their efficiency. Unfortunately, our system of paying exorbitant salaries to officers, will make this appear an ideal and a dream instead of its being the business-like, commonsense method of dealing with the matter.

The suggestion that has been made here is on the lines on which the All-India Village Industries Association and the All-India Spinners' Association are already working successfully. At the headquarters of the All-India Village Industries Association at Maganvadi, Wardha, various types of village industries are being carried on. Students are trained in the industries and for village work. A certain amount of scientific research is made. The goods produced are marketed in a shop organized by the Association. There

is attached to it the Magan Sangrahalaya which is a museum of the type that is described hereinafter. The Spinners' Association has emphasized all these points and, in addition, has organized the village producers and built up a network of shops all over the country to find outlets for the products of the organizations in the villages. Their method of work, in short, is to provide cotton to be ginned, carded and made into slivers which are spun into yarns of graded qualities; the hanks of these are taken over on payment and given to weavers for being woven into cloth and the pieces of cloth are marketed in their shops. If this department is to perform its function, it must follow some such practical lines which have already proved of immense help to the villagers.

In India the two most efficient departments of the Government have been the Judiciary and the Revenue Departments. Both of these have functions which do not add to the productivity of the people, but the Department of Industries which should have been even more efficiently organized and manned, has been almost completely neglected. We feel that in its organization and functioning, this department ought to be the premier department of the Government. It is more important than the Revenue Department because it goes further into the every-day life of the people. The Revenue Department itself would receive larger revenues if the Department of Industries functioned satisfactorily. Therefore, these two departments should decrease and the Department of Industries should increase. At the present time, looked at from this point of view, the Department of Industries is as nothing. If this department develops to the stature we have in mind, it will absorb all the intellects that are at the present time unemployed and attract talent for the improvement of industries more than the Judiciary does now.

4. The Director.—This department is an outcome of the proposals of the Indian Industrial Commission, which was in favour of appointing a technical man or an industrialist as a director. This view was endorsed by the Provincial Banking Enquiry Committee. Objections were raised to this recommendation on the score that such a person "would have a bias towards his own special industry to the neglect of others, and also that this position may be exploited by businessmen to acquire inside information". We cannot subscribe to either of these objections. It seems to us, the problem is not one of qualifications, but of character. If a man of character could be placed in that position, these objections cannot be valid, and if the incumbent is lacking in character, nothing can stop him from exploiting the situation.

We find that the Director of Industries has had tacked on to his office several other offices such as the office of the Registrar of Co-operative Societies, the office of the Registrar of Joint Stock Companies and such other offices which are purely administrative departments. The Directorate of Industries, if it has to be carried out satisfactorily, will in itself involve much more work than one person can shoulder, and, therefore, we recommend that no other office should be tacked on to the office of the Director of Industries, we are further of opinion that there should be a permanent Director of Industries.

5. Industrial Education.—This department has from time to time spent sums for training selected scholars in different industries. Some

of them have been sent abroad for courses extending over two to three years, but on their return they have found employment either in private companies or as lecturers in colleges. It is questionable if scholarships of this nature should at all be spent from public funds. If men are trained out of funds available to this department, they ought to remain in the department for all time, unless the department finds it impossible to absorb them. Training men for the staff of private companies can hardly be the function of this department. Again, training individuals for lecturerships, though it may have a place in a University programme, is out of place in the Department of Industries. There should be no objection to expenditure by the State on industrial education with the object of setting up new industries or promoting the progress of existing industries, but in any case education for public purposes must be the first charge on the public funds. There has been some difference of opinion amongst us on this question and we have, therefore, left the matter as it is just inviting the attention of Government to the problem with a view to further investigation.

Industrial education under this department can be carried on by admitting apprentices to various sections of the department, which, as described already, should be run as part of this department. If, for further studies in these industries, men have to be sent abroad, members of the staff of these units who have shown special aptitude should be chosen and not raw students.

6. Museums.—Attached to this department, when it is properly organized, should be a museum which should depict in miniature the industries emphasising the process of production rather than the finished article. This museum should enable the visitors to get all the information needed to start an industry, short of practical experience. There should be such museums in every district backed by the kind of industrial units that we have described. At every district headquarters, if such museums can be organized dealing with the main industries of the province and with the raw materials available in the locality, it would be a great step in adult education and a definite move towards the amelioration of the economic condition of the masses.

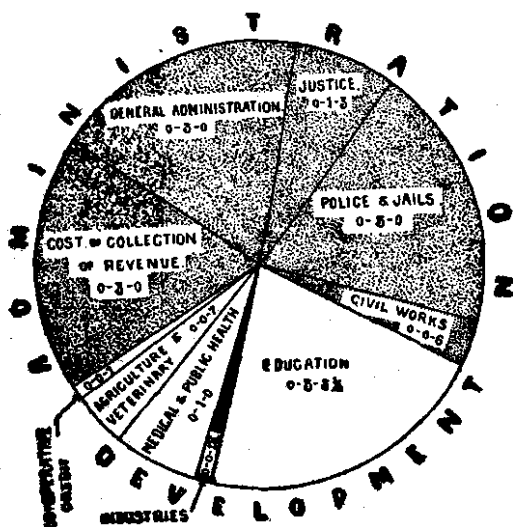
7. General Education.—Fortunately, the line has been cleared by the Educational Department of this province accepting the principles underlying the Wardha scheme of education. It is not necessary to go into the details of this plan of education. It is based on the possibility of the creativeness and cultural values of handicraft being exploited for purposes of developing the child. This opens up a vast field for co-operation between the two departments—Industries and Education. When we have the population trained physically from childhood, the workmanship will be of a much higher standard than when we teach the same craft to grownups. We feel the lines on which the Vidya Mandirs are organized will form a sure foundation for building up an organization such as we have suggested.

8. Finances.—It is often said that there are no funds available for the schemes that are suggested. We are making our recommendations with the full knowledge that much more funds than are being doled out to-day will be necessary. Even at present there are ample funds but these are being diverted into channels which

are unprofitable to the villagers. The annual revenue of this province is about Rs. 4.75 crores; of this the expenses of collection and a top-heavy administration take Rs. 3.65 crores leaving barely over a crore. What constructive work can be possible under such a financial system? The outlook of the Government has to change before any industrial scheme can be launched. Surely, the Government must do something in return for this money obtained from the villagers. The first charge on this fund must be the expenses connected with the productivity of the villager and every other claim must take a secondary place.

We had surveyed only about one and a half per cent of the villages in this province and even these few have contributed about four times the amount Government spends annually on this department for the whole province. Our survey shows that for this contribution that the villagers have made, they get practically nothing in return. If the oft-repeated objection to the development of this department on the score of lack of funds is to be examined in regard to these villages that we have surveyed, we shall find it groundless. The reason for lack of funds is what may be rightly termed misappropriation of available funds for other purposes. This department, which should be a nation-building department, is meted out a beggarly 3 lakhs, which again, is wasted in administrative work.

*Diagram showing the distribution of Public Expenditures (Provincial Government and District Boards) of the Central Provinces and Berar in terms of a Rupee.*



In these villages there are practically no roads worth the name. There are to be met with occasionally a few hospitals at distances of several miles which, in effect, are of no use to the villages other than the one in which it is situated and as a rule there is no veterinary aid available excepting at the tahsil towns. In many of the villages, postal service is hardly known; in some parts it may take over a fortnight for any communication to reach. Under these conditions, surely, no Government can make a claim on the people for services that are not rendered. The argument that the money is taken for the protection that is provided is also without foundation. These villagers have nothing that others would covet. They live in poverty and there are no police forces in the neighbourhood, and as regards the military expenses, it benefits only those who have something to lose. When people are starving and

their only possession is their capacity to work, there is hardly any weight in the argument of military defence. If the wealthier classes in towns require these services, surely it is a wrong principle of public finance to tax the penniless in the villages for it. Therefore, we do not feel that the Government can neglect this department on the score of lack of funds. There is enough and to spare if only the problem is approached in the right spirit.

In considering the uses that revenues may be put to and the powers of Governments as divided between the Central and the Provincial, we have not taken into account the present constitutional handicaps because these are not natural but man-made, and if the proper governance of the people require their alteration, the constitution will have to be changed rather than that the people should suffer under a badly devised system. The welfare of the people should be our first consideration and a system should be modelled to perform the functions of Government in the most convenient and efficient manner.

We are aware that in all that we have said we are making suggestions which go to the foundation of the conception of the government in India, but as the disease has spread to the very being of the people, it is necessary to face this problem squarely and boldly. It may be that the Government is in no mood to listen to such suggestions, but that is not our concern. Our duty has been to place before the Government the ways in which we consider the prosperity of the people can be increased, and it is up to the Government to examine these suggestions carefully and sympathetically.

## CHAPTER V.—THE SURVEY

1. **The Procedure.**—In accordance with the resolution of this committee to carry out a survey of some villages in each district, an appeal was made to the colleges of the province to allow as many students as could be spared to help in the survey. There was an enthusiastic response with the result that we were able to use 207 students including eight women students to work with our members and help us in this survey. We had co-opted 14 persons to lead the survey parties to the villages. Each member of the committee which included two women leaders was put in charge of a group of about 10 students and each group was detailed out to survey an area equivalent to a district. We have surveyed in all 606 villages covering a population of over 15 lakhs which pay an annual revenue to the Government of over Rs. 11 lakhs. This survey has cost us about Rs. 3,000 which works out on an average to Rs. 5 per village surveyed. We have inquired into the industries which are commonly carried on by the villagers a list of which is given in Appendix A.

The survey began with the assembling of the students on the 21st of January and finished on the 6th of February. The reports of the survey group leaders were submitted to the committee by the 15th of February after which this report was prepared.

It may be mentioned that this survey differs from the usual type of surveys in that we have accepted axiomatic truths without attempting to find accurate statistics to prove them. We have, in the main, concentrated on finding out the problems of the villages rather than making a scientific study of the case from the academic point of

view. Therefore, when we make our recommendations we make them from the broader outlook of live human needs as against the narrow approach from the marshalling of dead facts. It was for this reason that we felt that every member of the committee should go into the villages to come face to face with the realities of rural life. This forms the foundation on which our super-structure is to be built, and any suggestions that we make come out of the reaction to our personal contact with village problems.

2. **The Villages.**—With hardly any exception we found the villages varying in sanitary conditions. There was no arrangement for latrines, or even proper arrangements for the disposal of night-soil. Many of the villages do have a *safai* tax levied by the Panchayat, but little or nothing is being done. Where in some houses latrines are being used, the night-soil collected is auctioned, but the streets are very dirty and constantly one has to go over streams of drainage. These can be avoided by having trench-latrines in the fields during the dry season, and using, where the soil conditions permit, bore-hole latrines during the wet weather. Even in the case of houses having latrines, people should be taught to cover up the defecations with a little ash so that flies do not get at it. As a rule, this is not being done with the result that the smell emanating from these, fouls the atmosphere of the village. As regards drains, since many of the houses have small yards attached to them, the people can be taught to grow simple fruit trees like papai, plantains, etc., which will enrich their diet as well as use up the waste water. Some leafy vegetables can also be grown with such water. This part of the work should be definitely assigned as a function of the Agricultural Department, which could also suggest ways and means of improving the water-supply. In many of the villages this is still a problem. The primary needs of the people suggest that sanitary surroundings and fresh and wholesome water-supply must form a first charge on the revenues of the villages as it affects the health of the people. Unfortunately, water-supply has been neglected especially the supply of water to the Harijan families. Whatever may be said against social customs, we cannot wait until these have been reformed to enable these down-trodden communities to get water. In some cases, even the cattle have access to more wholesome water than human beings. Here again we cannot accept the oft-repeated plea of financial stringency as there is sufficient income coming in from these villages to provide all that is necessary even out of one year's income. A loan can be raised immediately for the provision of wells which it ought to be possible to pay off within a period of 10 years, if a 10 per cent reserve is made out of the revenues of the year for these needs. The immediate needs of the people for good water will thus have been met. The people themselves may contribute something in the form of free labour. They ought not to be burdened with any material contributions unless they can provide such contributions out of their own production, such as bricks, lime, etc. As diseases like malaria and cholera take a big toll of lives extensive measures to disinfect water are called for.

3. **Industries.**—Many of the industries that we have examined are interlaced with the main string of agriculture. Injury to one affects the other. Because of this inter-relationship villagers will stand or fall together in their economic conditions. It is not possible to deal with these so as

to affect the welfare of one industry only. Some people imagine that the world is coming together in a single unit but they forget that such a unit must in itself be made up of several composite parts which would themselves be interlaced. Unless the basic units are firmly tied together, the final world unit will be heterogenous. The strength of a building depends on the quality of the bricks and the quality of the bricks depends on the adhesive power with which the particles in the brick are held together. Therefore, if we do not focus our attention on these village units, ultimately the super-structure—the nation and then the world—will crumble. We have to remember that when we separate the strands that make up the rope, we weaken the strength of the rope; in the same way, when we introduce outside influences into the village separating the united strength of that unit, we weaken the unit itself. When new industries are introduced into villages, without any relation to the existing industries, we destroy the economic cable that binds the country itself. In our survey we noticed everywhere all manner of industries interposed without any policy or plan. The result of it all is that today we find the villages disintegrating. Apart from new industries where even new processes were being introduced, we found the same unthinking and unintelligent methods pursued. In some cases Government itself was responsible for such "improvements". When we introduce a method of improving production by new devices, we have also to see that such increased production is followed up right through the line to the consumer. If at any time we find there is a congestion, it is ominous to introduce these devices without improving the channels ahead. Supposing the drainage in a town is built to carry ten thousand gallons of water during a given period and by opening up new feeder pipes we introduce into the same drain an extra quantity of water from a much higher level, it would follow that the original drain will burst somewhere and bring about destruction. Or again, if to a bullock cart which is built for slow motion we attach a Ford engine without redesigning the body of the cart, we shall find, when the engine works efficiently enough to bring about a speed of 40 miles an hour, the spokes of the wheels of the bullock cart flying into air and it will bring about destruction of both the bullock cart and the new engine. This has been the case largely with our villages. The Government departments, entrusted with the improvement of the villages, have not considered the correlation of the industries, the market and the finances. This has resulted in the blowing up of the old system to smithereens. So in looking at our village units, we have to look at them as one whole and scheme the production of the people in such a way as to bring about prosperity to the whole village, not to any definite community or groups of individuals. Therefore, when we discuss various village industries, we shall look at them not merely as individual industries but as units which go to form and regulate human life in the country side. In dealing with industries we shall take them in the order in which they are necessary for fulfilling human needs—food, clothing, shelter, comfort and luxuries.

We may say at the very outset that we are anxious to see that the villagers are provided with the latest comforts of life; but we have to take things as they are today and then proceed upwards. Any haste in trying to quicken the pace will lead to disaster. While the villagers are

not even able to provide themselves with bullock carts, it will be ruinous to induce them to use motor cars. It is with this full realisation of that which is gone before, that which is, and that which is to come, that we are approaching these problems. Therefore, if we appear to advocate measures, which, on the surface, seem to set back the clock, it would be well to remember that this is merely to give us a starting point from which we should proceed to build up the structure. If a building has been added to in such a way that the weight added on to it is bringing down the whole edifice, to put matters right, it would not be sufficient to place buttresses to hold it up. The satisfactory way of dealing with it may be to take down the portion where the stress has become too great, and if necessary, to rebuild from the foundation. In the same way, if we find that the village has been damaged, we may have to go down to the very foundations to reconstruct and strengthen it.

In what follows we are mainly dealing with the salient points in each of the industries so as to keep the report within reasonable bounds, but it is proposed to publish fuller reports of particular industries in a second volume which will be brought out within the next few months, so that those who are interested in particular industries may have fuller information available to them on those industries.

## CHAPTER VI.—VILLAGE INDUSTRIES

1. Paddy-husking.—In many parts of this province rice is widely cultivated, therefore, an industry that is directly connected with the processing of the paddy and making it fit for consumption, is one which should command our attention. In examining the industry we have to see—

- (1) that the process itself does not injure the product from the point of view of nutrition,
- (2) that the industry distributes wealth while it also produces it,
- (3) that the instruments and implements used in the process are directly connected with, and support other industries in the place,
- (4) that the equipment necessary falls within the means of people who take up this industry, and
- (5) that it does not upset the natural economy which should make use of the by-products.

Nutritively to get the best out of rice, only the outer cover of paddy, namely, the husk, has to be removed. Then, the bran, the germ, along with the minerals contained in the grain itself are made available for human consumption. Our first purpose, therefore, must be to remove the husk and keep the nutritive elements so that the finished product does not lose its natural value as food. Formerly, individuals who wished to use rice as food stored paddy and dehusked and partly polished it in their own homes as and when required, because the rice so dehusked cannot keep for long, as being nutritious, it is attacked by weevils; and those who wished to trade in rice used to employ labour for dehusking the paddy and partly polishing it and keep only a small store to be disposed of according to the demand. The labour employed was usually

that of old women and dependents to whom the wages they earned provided a living allowance.

This process needed only a pestle and mortar or wooden or mud "chakkis" or "dhenkis". All of these were made by the carpenter, the blacksmith or the worker himself and the cost, being a few rupees, fell within the capacity of the villager.

The husk was used either as manure to replenish the elements that had been taken out of the fields or as fuel, and where the bran was too rich for the consumer, the rice was partly polished and the bran so removed was given as fodder to animals.

This arrangement was upset by the introduction of rice-mills. We found them everywhere where they went hard at work, destroying the food values of the grain and, unconsciously though it may be, doing a disservice to the people. The machine, by its very nature, cannot carry out its function without bringing death and destruction with it because when a person sinks a certain amount of capital in the machine, it is to his advantage to work it as much as he can in order to reduce his over-head charges; this entails the dehusking of a very large quantity of paddy, and this quantity of rice cannot be stored for a length of time unless it is highly polished, because polished rice is not so readily attacked by weevils. This process of polishing removes the germ and the bran which latter contains minerals, proteins, fat and vitamins B and leaves mainly the starch. Where people are poor and depend mainly on this grain for nutriment, if these nutritive elements of the food are removed, the consumers are liable to various kinds of deficiency diseases. Although the rice-mill can prepare unpolished rice, it is not a practicable thing from the point of view of the mill-owner, because he cannot keep the mill running at the same speed, as unpolished rice can only be prepared in small quantities.

Far from distributing wealth, a mill of this kind brings about concentration of it; it gathers up small amounts the charges that are made for dehusking rice from a large number of people from within a radius of several miles and concentrates them in the hands of the mill-owners. This brings about a loss of national wealth in terms of human values. The indigent women who were carrying on this industry are now facing starvation as there is no alternative employment given to them.

The machinery is imported from abroad. This importation has brought into decay the work of the carpenter and the blacksmith and the workers who were formerly employed in preparing the raw materials such as timber and iron. The running of the machine exports a good deal of our productivity as many of these rice-mills run on imported crude oil.

The cost of the equipment is such that it is far above the means of most people in villages. Practically it is possible only for one among several villagers to own such a mill.

The paddy for dehusking coming from distant villages, the husk that has been removed cannot be used for refertilising the land on which the paddy was grown because the return transport charges will be excessive. Due to a similar reason the bran removed while polishing the rice is largely wasted. In this way the new order is destructive from many view points and is socially from the point of view of diet.

It has often been argued that the mill husks rice at a much lower cost. This, of course, is

illusion because the cost of this industry has to be looked at from a wider view point. In so far as the damage done by this industry affects the welfare of hundreds and thousands of people, the cost is far too great for the nation to bear and, therefore, we feel that Government should take definite steps to ban these mills as evils.

The change that has been brought about has reduced the purchasing power of many whose very necessities of life are not being supplied.

During our visit to the Central Jail at Nagpur, we found that even there they were using machine-milled rice. The Government in all its expenditures must see that its disbursements go towards using articles produced by the people of the province. It should insist that all its institutions should use only hand-pounded rice. The existing mills may be licensed and the licence fees fixed heavily enough to make it prohibitive so that ultimately they will be obliged to drop out of existence. Unless the Government is prepared to view with complacency the ruin that is being brought about in the health of the people, such steps must be taken.

Research should be carried on to increase the efficiency of the individual paddy husker by improvements in the implements as well as by providing cheap materials from which the instruments can be made. The quarries in the Central Provinces may be able to supply good stones but no research has been made so far and no information is available as regards the qualities of stones to be found in the province.

We found that hardly anybody in the villages knew anything about the nutritive value of rice and the proper way to cook it. In some places custom seemed to ensure the use of elements taken away by the washings of rice by such water being used for cooking pulse, but in other places the water in which the rice was boiled was thrown away. The Government should be able to carry on propaganda for utilising rice to the best possible advantage. Research may be carried on in the proper use of the rice husk. A method has been found of preparing activated charcoal from this husk and utilising it for purifying sugar. Similarly it may be used profitably as manure. Researches will have to be made to see what other commercial possibilities there are in the husk itself. These are the lines on which we may improve the productivity of the masses and not by introducing rice-mills.

The people near about Naghbir in Brahm-puri tahsil were alarmed at the prospect of a novel mill for preparing "poha" being introduced. This is the first of its kind, we understand, but soon many will follow unless the Government takes this matter in hand immediately. "Poha" making from rice is an industry carried on largely by very poor communities like the fisher-folk during their spare time. It provides an occupation to the poorest of the poor. Even this is to be snatched away from them by the well-to-do by the introduction of this new device.

We found there was no research being carried on in this industry anywhere in the province excepting at Maganwadi, the headquarters of the All-India Village Industries Association, at Wardha, where new devices in different forms of "chakkis", winnowing fans and large chakkis worked by bullocks and other devices are being experimented on. It is claimed that the newly shaped wooden chakki, which the association advocates, is very effective.

2. Flour-grinding.—What we have already said in connection with paddy-husking can be more or less repeated in connection with flour-grinding. The instruments in use are capable of much improvement and they have been set aside as a result of the advent of the flour-mills. Here also, no experiments on this subject have been carried out excepting at Maganwadi, in regard to improvements in the instruments. This industry used to provide occupation for a large number of women, paying them about an anna or an anna and a half per day. These power-driven mills render much the same disservice to the country that the rice mills do. In many instances they are run by engines which can be switched over to paddy-husking or flour-grinding according to the purpose needed at the time.

3. Oil-pressing.—This province produces considerable amounts of oil-seeds, ground-nut, linseed, "karanji", "jinji", "mahua", etc.

Practically every village used to have bullock ghanas. The community of telis do this work. They are now more or less out of skilled employment and have taken to labour on the fields. A few of them are still carrying on but on very low returns. This is an industry which serves a large number of people as the product forms one of the principal items of diet. We found such of the telis as were working, doing so in a very inefficient manner. The machines were old; their extractions were poor and their methods were dirty. They have all been reduced to this position by the introduction of machine-expressed oil into the market. It is said that the oil pressed out between wooden surfaces by the cold process retains its nutritive value while the mill-expressed oil loses much of it.

The Ghani process of extracting oil is the cold process as distinct from the hot process which is followed by power mills and to some extent by the Marwari ghanies. The oil-seed contains globules of oil in cells made up of membranes. In the former process the oil is extracted by bursting the cells under pressure. In the case of the oil-mills, heat is applied to the seeds to burst these cells. In this ghana process, therefore, the amount of pressure that is applied will be the measure of the efficiency of the machine. The ghana consists of three main parts the mortar, the pestle and the weight beam. All of these are usually made of wood and as wood is available in plenty in this province, it costs little to prepare this instrument. There is a particular sub-caste of carpenters who make these ghanas. Other carpenters do not know the technical measurements but the All-India Village Industries Association has now investigated into the mathematical relationship of the various parts and published directions which will enable even the ordinary village carpenters to make them. It is now very simple both to construct the machine and to repair it.

As in the case of other cottage instruments, the ghana also distributes wealth as it produces, and the implements as we have already stated are simple and can be made locally. The product, namely, the oil, is used locally for food and is sold elsewhere also. We found that a great many of these ghanas had stopped working. Nearly 25 lakhs of maunds of seeds are now being exported.

In the past, in addition to being used as an article of diet, vegetable oils were used for illumination purposes. In the most remote villages we now find large quantities of kerosene oil



imported for the purposes of illumination. This Province imports about 12 lakhs of maunds of kerosene oil. The cost comes to about a rupee per head per annum, so that even small villages were paying amounts which were almost equivalent to the revenues paid to the Government. The burning of kerosene oil necessitates also a very large trade in kerosene lamps. No effort has been made to invent or devise a lamp that can burn vegetable oils, giving, if not better, at least the same illumination as kerosene oil. In China, the Chung Lin lamp has been devised to burn vegetable oils and it has practically driven out kerosene oil from her villages. There is no reason why we in India should not do something like it. This is a matter to which, if the engineering brains at the disposal of the Government could be applied, the solution should not be far off. This will increase the demand for vegetable oils which, in its turn, will raise the prices that the farmer will get for seeds and it will create an industry for making lanterns in the villages themselves. In this manner, a wide awake Government can bring about conditions which will ensure the welfare of the people.

Oil-cake is a very good fodder for cattle its use should be encouraged. In some parts of India it is made into various kinds of edible articles and it also forms valuable manure.

As in the case of paddy-husking machines and flour-grinding mills, it will be necessary to take Government action to licence power-driven oil-mills or restrict imports of oils. The raw materials of this province should not be allowed as a rule to leave the province until they have reached the consumption stage. Therefore, only oil should be exported and not the seed. If other allied industries could also be supported, it would be possible to create a great deal of employment within this province. Linseed oil is largely used in varnishes and paints. Fortunately, in this province we have also certain earth colours such as red and yellow ochres. With all these raw materials, this province ought to be able to send out paints and varnishes manufactured here. The process of converting these raw materials into such finished products will afford opportunities of employment for a large part of the population.

In addition to this, there are other industries which can also be carried on. Much of the soap consumed is being imported into this province while it is possible to produce soap even from indigenous raw materials. In the All-India Village Industries Association headquarters, soap has been produced at competitive rates from 'sajji matti' or 'papadkhar' lime and oil all of which are available here. Therefore soap manufacture can be an industry which will both create a market for the oil produced in this province, as well as give employment to a large number of people. A great many mahua trees are found growing wild in this province. The seeds are used for the extraction of mahua oil. This oil is very useful for making soap, so if its extraction can be popularized amongst the telis, then the soap-making industry will also be able to get a cheap oil for its purpose. At present import of coconut oil and use of tallon are driving mahua oil out of use in soap making.

Again, there are still other industries, such as making of linoleum, water-proofing of cloth, etc., the possibilities of which have yet to be investigated.

No one appears to have taken any pains to find out why the oil-pressing industry is languishing and in what manner it can be reinstated. If thought and attention are fixed on the need of converting available raw materials into finished products, it would be possible to increase the wealth of the people in the villages. Even as it is, in spite of the inefficient method of production, the indigenous *telis* are able to eke out a living with their antiquated instruments. In the Oil Department of the All-India Village Industries Association, certain small improvements have been made which will enable a *teli* to earn nearly three to five times his present income. These improvements are very simple and make it possible for one man to operate two *ghanas* with one bullock each; the efficiency of the instruments has also been improved by various adjustments in the construction of it. The Hindi Central Province ghani yields  $7\frac{1}{2}$  lb. of jinjli oil per day, the oil percentage being 32, while the Maganwadi ghani unit yields  $78\frac{1}{2}$  lb. of the same per day with an oil expression percentage of 45. The Varadi ghani yields 12 lb. of linseed oil per day, while the Maganwadi unit extracts 40 lb. of it. Provided the Government carry on research on these lines, it is within the range of possibility to solve the problem of unemployment for *telis*. During our survey wherever we went we found old *ghanas* which had been doing a thriving business some decades ago but are now merely relics of a dead industry. If these are to be resuscitated, it will be necessary for the Government to take drastic steps to restrict imports, to regulate the existing power mills, as well as prohibit the coming in of any fresh ones, by high licence fees. What we have already said in connection with the paddy-husking mills applies also to these power-driven oil mills which send out much of our purchasing power to buy the machinery itself, for the crude oil and such like to maintain it. The poverty of the people has been brought about in this way by allowing industries to spring up in the villages without thought or planning.

One of the great difficulties in this industry is to stock seeds. The financial position of the *teli* makes it impossible for him to store seeds. The result is that the farmer sells the seeds to the *saokar* at a very cheap rate, and the *saokar* sells it back to the *teli* in some cases and in other cases the consumer buys the seed and gives it to the *teli* for crushing. In either case the middleman makes a very much larger profit. If the Department of Industries can organize its units in different villages, it ought to be possible for it to carry out the financial and distributive functions somewhat on the lines of the Public Country Elevators of the U. S. A. It can store seeds during the harvest season and give it out on reasonable terms to the *telis* and sell the oil for local consumption or for conversion into various products as pointed out above. This may mean that Government comes very close to managing the businesses of the villages. This is a function that has to be performed in some of the industries where circumstances call for it. In the very beginning we drew attention to the fact that in India capital is scarce and labour is plentiful and therefore where the processes demand capital the Government has to step in. This has been recognised by the All-India Spinners' Association which performs this function for the carder and spinner as has been suggested for the *telis*. We recognise that it is difficult for a Government of the present type to undertake that much but

fundamental changes will have to be made if the villages are not to perish.

**4. Gur-making and Sugar Manufacture.**—A certain amount of sugarcane is grown in this province. The cane crushers were wooden ones that were being made by the local carpenters but now cast-iron kolhoos are coming into vogue. Gur itself has many nutritive ingredients which are lost during the process of refining it into sugar. Sugarcane cultivation requires good land in which wheat can be grown and it also requires intensive cultivation. On the other hand, in many parts of this province, there are jungles of sindhi trees all along the nalas and the banks of rivers, and palmyra trees in the forest areas. These trees require hardly any cultivation and they grow in lands which cannot be used for anything else. If the sweet juice from these trees can be utilized for preparing gur, valuable lands on which sugarcane is now being cultivated can be released for other food crops. Of course, preparing gur from the juice of sindhi and palm trees cannot be carried out in mills but have to be made on the cottage basis, otherwise the juice will ferment. Therefore, if necessary steps are taken to teach people to use this juice for making gur, it would be possible to supply much of the demand for sugar within this province. We have not been able to get accurate statistics of the number of trees in the province. A census should be taken of available trees and then it would be possible to say definitely how much gur and sugar can be produced. The All-India Village Industries Association has an experimental station at Segaon, Wardha district, which has been producing excellent gur from this juice.

The present Government has been following a policy of introducing prohibition in various districts of this province. This scheme of making sindhi gur must form a complementary programme to prohibition because the tappers who have been employed in extracting the intoxicants will be thrown out of employment. If this scheme is introduced immediately, they could be switched over for this purpose without any loss.

For making sugar on a cottage basis a good centrifugal machine has to be devised. One such machine is under experiment in the All-India Village Industries Association.

To obtain sweet juice, there are, at the present time, certain formalities to go through according to the requirements of the Excise Department. In the Madras Presidency and some other parts of the country, people are allowed to tap palm trees for gur-making purposes without any formality. Such rules and regulations have to be introduced in this province.

The furnaces used for boiling the juice have to be experimented with. Several types of furnaces have been suggested but we may have to devise a suitable furnace for sindhi juice boiling. There is a certain amount of prejudice against the use of gur made from palm juice. Presumably this prejudice arises out of the misconception that gur is made out of an intoxicating drink. This misconception has to be combated and people should be made to realise that gur of palm trees also possesses considerable nutritive properties.

The implements necessary are extremely simple and are usually made in the villages. The blacksmith makes the iron pan and the tapper's instruments; the furnaces are made with the local bricks. The vessels used for the juice collection and for moulds are usually of

mud. In the case of the centrifugal machine necessary for sugar, certain parts of it may have to be made on the lathe which may also involve the use of simple machines and these may not be available in the villages today. The cost of the equipment would fall within Rs. 50.

The one difficulty that is met with is fuel but as many of these sindhi and palm trees are to be found in the jungle, it ought not to be an impossible proposition to arrange for a free collection of fuel. This is an industry that can be taught to the aboriginal tribes, the Madias and Gonds, especially in the Sironcha tract.

**5. Bee-keeping and Honey Production.**—There is no organised and systematic collection of honey. People collect from the forests combs of wild bees, destroy the combs and sell the honey in an adulterated form. Honey is a valuable item of diet and has great medicinal properties. In western countries this industry is followed in a scientific way and the article collected by them is pure and hygienic. The wild bees are captured, kept in boxes or hives with brood chambers at the bottom and honeycomb on top. The bees collect their honey in the upper chambers and seal them up when full. The removable frames in the upper chamber on which the combs are built, are put into a revolving apparatus when the centrifugal force brings out the honey. In this there is no killing of the larvæ, there is no wastage of the wax by the destruction of the combs and there is no contamination. If this method can be taught to and be followed by farmers in the villages, especially along the forest areas this industry will augment their income considerably.

In some parts of America apiculture is carried on not merely for the honey but purposely for the functions that bees play in fertilizing crops. We are told that the latter are much improved where they have been visited by bees. Similarly, fruits such as mangoes, oranges, etc., are also produced better with more effective fertilization.

The necessary equipment is simple and can be made by local carpenters. A box hive would cost about four rupees and other equipment may cost at the outside about five rupees according to the results obtained at Maganwadi. A colony that is well looked after and which has the necessary pasture would produce about 12 to 15 rupees worth of honey in a year. In a province where the per capita income per annum is between 10 and 15 rupees, this is a considerable income without any further labour. It would be well if the Government would arrange for apiculturists to go round and teach people this art.

It seems to us that this industry should fall within the scope of the Agricultural Department. It is an industry that can be followed with hardly any capital and with little or no time spent on it. Even children can be taught to keep hives at school and in that way from the very beginning an interest will be created in the activities of creatures which are highly gregarious. The social organisation of the bees itself is an interesting study and will form a very absorbing subject in the curriculum of village schools.

**6. Pottery.**—Pottery is one of the most important industries of a village. It is widely based and lends itself to the finest artistic development but unfortunately it has met with evil times. Potters who are "kumbar" are themselves a very poor community. Formerly they supplied the earthen utensils necessary for

the household for cooking, eating, carrying and storing water, lamps, etc., but with the advent of cheap metal vessels this industry has come very near the brink and calls for immediate attention.

It is a cottage industry in which other members of the family take part, and are hardly able to make an income of about Rs. 6 per month. There is no equipment worth speaking about. In many places the potter makes his own wheel with perhaps a little help from the carpenter. He gets his own clay from a spot nearby and after shaping his pots and drying them in the sun, he bakes them in a kiln. For this he requires fuel for which the Forest Department makes a charge which becomes very prohibitive. Our survey shows that in a great many places the mud is taken from the lands of the malguzars. In many cases, the owners of the land are content with being supplied with mud pots free of charge in return for the clay but the tendency seems to be to charge in money. In some cases, the dues paid to the malguzars and to the forest for fuel come to over 25 per cent on their income. This is unconscionable. As is the case in many of the village industries, so in pottery also, the dues that are exacted not only by the malguzars but also by municipalities and the Forest Department, take away a large share of the earnings which should properly fall to the lot of the artisan. It is no exaggeration to say that it appears as though the triumvirate, the Forest Department, the municipality and the malguzars have conspired together to kill these industries at the very source. The dues themselves are low but the point at which they are charged is such that it reduces the capacity of the artisan to pay. For instance, at Wardha we find the octroi duty is four annas per cart-load. A potter will sell articles worth about a rupee or a rupee and a half in one bazar day. Whatever his sales may be, this duty of four annas has to be paid so that if certain pots are left unsold at one bazar and he takes them home and brings them back at the time of the next market he has to pay another four annas, no drawbacks being allowed in practice. This becomes ultimately a very heavy burden. We have already suggested that these municipal taxes have to be drastically revised and carefully scrutinised by this department. If these municipalities had set out with the definite purpose of destroying the industries that find their markets in these municipal towns, they could not have done better. Similarly, at Arvi again, the duty of two annas per cart-load is levied. A cart contains about three hundred pots and usually only about one-fourth of these will be sold at one bazar and there again a similar difficulty arises. The dues differ from municipality to municipality and from malguzar to malguzar, but there should be some uniformity in them at least within the province. Considerable care and attention have to be given in fixing these exactions before they are made.

This province is in a very advantageous position as far as this industry is concerned. A considerable number of all kinds of quarries are found within this area. China clay, quartz and other materials which are very useful in this industry are available easily. If a certain amount of scientific attention is paid to the development of this industry, it ought to be possible to be able to supply the local needs at least. Even now a certain amount of glazed ware and jam pots are being imported into this province. The potters here should be able to capture that market.

For glazing earthenware some help has to be rendered to the ordinary village potter. This

requires kilns which call for some technical knowledge and capacity to build and to gauge the temperature. This may be a little beyond the present-day potter. In such cases again, the Department of Industries should supply the need. If this art can be studied scientifically and taught, the village potter can increase his productivity several times.

The substitutes that have ruined this industry are largely aluminium, brass and german silver ware. Aluminium vessels are not considered safe for cooking purposes and brass is also an article that is largely imported into the country. It seems to us that the sale of articles of this type which come into this country should be subject to the holding of a licence, the fee of which should be utilised for the purpose of furthering the interests of this industry.

The monsoon period is one in which the potters are unemployed. It would be well to give them some occupation at which they can spend that time gainfully. Many of the potters that we saw have degenerated into crude workmen. They have the skill but not the opportunity to improve.

It does not require much capital to get the necessary equipment. Naturally their market is very limited being practically the village in which they live. This is a highly skilled industry and dexterity of the fingers is not easily acquired. The cost in this industry, apart from the dues and fuel, is largely made up of labour. Most country potters do not know glazing. This has to be taught as an addition to their art. Earthen utensils are considered very hygienic both for cooking and keeping of food articles, but owing to change in tastes, the demand for them is rapidly going down.

**7. Glassware and Bangles.**—We have noted that this province is in the fortunate position of being able to obtain practically all the raw materials needed for making block glass. But there is no place within the province where it is being made except at the glass factories in Nagpur and other big towns which consume their own production of block glass. In a few villages in some districts one finds bangle being made, the block glass being obtained from Ferozabad. This occupation forms the last remnants of what was once a thriving trade. The products are very crude and they find it difficult to compete with articles of more attractive designs, brought in from Japan and elsewhere. If these skilled men could be utilised and trained further to cater to the change in the demand for artistic wares, this industry will come more and more into prominence. The collection of the raw materials from the various parts should be organised, block glass prepared in a central unit and supplied to the village workers. This again is a function that ought to be performed under Government control. For lack of this help they are gradually decaying. Besides bangles, they can also be taught to make tumblers, chimneys and other articles of everyday use which require a little greater skill and somewhat more expensive moulds. The Government unit that supplies the block glass, can also gather in the consumable articles made by village units and after giving them the necessary test and finish, could organise the marketing. Here also, foreign products that come in to compete with these articles have to be regulated by licensing their sale. If properly organised, this should form one of the principal industries in this province because of the facilities of raw materials available.

We cannot, at this stage, make detailed recommendations in connection with the utilisation of the raw materials and the organisation that is necessary for it. They will come in the second stage of our investigation under the exploitation of the natural resources of this province.

**8. Soap-making.**—While dealing with the oil-pressing industry, we have made mention of soap-making as an industry suited to this province as indicated by the abundance of oil and limestone available here. In addition to these, at Lonar lake deposits are found from which sodium carbonate has been manufactured, but owing to the uncertainty of the deposits, large-scale production has not been possible. Ways and means have to be found of exploiting this inexhaustible source of one of the most important chemicals. This will naturally fall under the next stage of our investigation where we may have to report on the formation of key industries, chemical industries being one of them.

If it is possible to organise the supply of sodium carbonate, and caustic soda, from this lake, then soap-making would become an important industry of this province, because as we have already stated, "mahua" trees are found growing wild. Opportunity should be taken to plant along roads such trees as are found to grow without any cultivation, so that while they are affording shade to the traveller, they also contribute towards the wealth of the province. Soap-making is a very simple process which can be carried out by women and children in their homes. It is as simple as everyday cooking and it is therefore an industry which can afford a considerable amount of employment to indigent women. At present this province is still importing large quantities of soap. It should be possible for us to compete and drive out such articles. Unless steps are taken to encourage industries which are natural to the province, the people will inevitably become weaker and weaker economically.

Even now soap-making is being carried on in several places but as imported caustic soda is used, such methods only make imported articles marketable. As in the case of brass and aluminium, the bulk of the money spent on the raw materials is exported. No industry which produces articles the cost of which is largely made up of raw materials from foreign countries or from centralised products, can be useful as a permanent industry for the masses. It may provide some employment for the time being but ultimately we shall stand to lose both the industry and the skill developed in that industry, as the financing of such industries will become more and more unbearable.

Until now people have been using various vegetable cleansers such as "seeka", soap nuts, etc., but these are fast disappearing, because people demand a cleansing agent in a convenient form; therefore soap will have to be supplied to them as required. A certain amount of research has to be carried out to provide the needed technique and make it simple and suitable to the villagers.

The equipment itself that is necessary can be made in the villages out of wood, pig iron and other materials which are locally available. The cost of these will be within the means of the villagers. The capital that may be necessary will probably be only as much as is required for the trading. If even that can be organized under this department it would simplify still further the introduction of the industry.

**9. Tiles and Brick-making.**—Like pottery, this industry is also languishing. It is difficult to say when it will breathe its last. With the advent of cement concrete for building and galvanised sheets for roofing, the makers of bricks and tiles are finding it hard to carry on this industry not only in towns but also in villages. Perhaps in the latter case it is also partly due to the financial depression. Most of the houses in the villages are in a dilapidated condition. Walls are built largely of mud; the roof is thatched and owing to damage done by monkeys in many places tiled roofing seems to have gone into disfavour. There are no improvements in the designs of the tiles to meet this contingency and people are taking to galvanised sheets as the simplest way out. The Government should direct research to enable the villagers to produce the necessary roofing which will meet the situation. The bricks and tiles are often made only to order. Even here the charges made by the *malguzar*, Forest Department and the municipalities—the ever present triumvirate—are particularly heavy. In regard to bricks the firewood charges come to 44.4 per cent of the return. The municipal tax in certain places comes to about 2 annas for 200 bricks. If we take the tiles to be worth about Rs. 1-4-0 per thousand on an average, the firewood works out to 38.5 per cent of the cost and 277 per cent of the profits. No industry can flourish under these conditions. The wonder of it is, they are still there to tell their tale.

The average return the man gets during the season will be about two annas per day if he succeeds in getting orders and keeps himself busy during the whole season.

It is quite evident that nobody has ever bothered his head about the welfare of these industries. Government buildings are generally built and tiled by materials produced in large works. We have repeatedly said that the Government requirements themselves should afford a market for these village products. As long as this anomaly of getting their revenue from the villages and spending it on the towns continues, the villagers are bound to suffer. A situation will arise when the Government will be able to get no revenue from the villages. The cities from whom they can draw any revenue are few and far between.

The market for this industry is naturally local but the irony of it is that its formidable competitors come from distant places even from as far as Mangalore *via* Bombay.

**10. Cotton Ginning, Carding, Spinning and Weaving.**—About 6 lakhs of bales of cotton are produced in this province which ranks second in the country; therefore, industries connected with cotton should afford one of the main employments to the people. On the contrary over 90 per cent of the raw cotton produced is exported from this province. As we have already recommended the principle of utilising all the raw materials available in this province for the purpose of processing them into consumable articles as far as practicable and then exporting such finished goods means that all industries connected with cotton ought to be carried on in this province. We have also stated that the methods to be followed should be such as will enable the village people to obtain employment. Cotton is grown widely and therefore villages which produce cotton can follow the industry of carding and spinning.

**Ginning.**—At present raw cotton is sent to the numerous ginning mills where it is ginned, pressed into bales and sent out. The cotton seeds that are obtained from ginning mills are not satisfactory for sowing purposes. Where good seeds are necessary, people prefer to use hand ginned seeds. This means, the seeds are carried from the places where cotton is grown to the ginning factory and are again returned to the farmer for sowing. This double transport can be avoided if the cotton is ginned at the place of production of cotton.

Besides, the hand ginning machine itself is very simple and used to be made by the local carpenter and blacksmith. This is an industry in which the advantage of operation on a factory basis is comparatively little. With the wages prevailing today, one can almost say that there is hardly any difference in cost. Large numbers of women can take to it in these villages. The old type of hand gin will cost about a rupee but the improved type costs about five rupees. This latter can gin about 4 to 4½ pounds of kapas per hour. If one anna per day, which represents the return to men engaged in many of the industries carried on in villages be taken as the basis, then a woman will have to be paid Rs. 1-12-0 for ginning one khandi of kapas, while the charges of a factory are Rs. 2-8-0 for the same quantity. Therefore, at the present rate of wages it is possible to hand-gin the cotton competitively with the factory. Taking into consideration the higher prices that can be obtained for the seed with hand ginning and the extra cost of transport involved in the factory methods, even if the rate of wages paid is increased by 50 per cent there is hardly anything to choose between the ginning factory and hand ginning. Therefore, it would be very easy in this industry to take action immediately to distribute the amount of work amongst the people without in any way dislocating the present arrangements.

It becomes necessary to control the work of the existing ginning factories. As far as we can see, machine ginning has no technical advantage over hand ginning. If anything, as we have already stated, the seed obtained from the latter is preferable for sowing. If this one industry can be distributed amongst the people, over twenty lakhs of rupees, on a conservative basis, will be distributed amongst the women of our villages as remuneration without affecting the cotton industry in any way. At the present time, for all intents and purposes, the hand gin industry is dead; therefore, it requires immediate attention.

As in the case of other industries, the ginning factories have considerable amount of capital sunk largely in foreign machinery, while the hand gins can be manufactured in the villages thereby increasing the chances of employment of carpenters and blacksmiths and incidentally of those who supply the raw material of wood and iron.

The All-India Spinners' Association has produced a small ginning and carding machine which will give even better production than the hand gins, but the one disadvantage of this machine is that it costs about 80 rupees which amount of capital cannot be within the reach of the people. The introduction of this machine will curtail the opportunities for work of the very poorest without increasing the technical advantages in the industry itself. For this reason the All-India Spinners' Association is not pushing the introduction of this machine.

**Hand spinning.**—We have already referred to the All-India Spinners' Association. This organisation has done a considerable amount of pioneer work and has laid down lines on which it is possible for the Industries Department to organise spinning in the villages. Different industries require different co-ordination of the long-range and short-range view-points. In this particular industry the Spinners' Association has taken up the function that the State should follow. We do not hold that the State should function in identically the same way with all industries; it has to take up different functions in different industries according to the kind of help the villagers need in regard to technique, finance and organisation. Spinning mills, no doubt, produce yarn cheaply, but this does not help the prosperity of the country. If we produce a certain amount of yarn, we should see what amount of wealth and happiness is brought into the homes by following this industry. Spinning is an industry which can be carried on by most people in their spare time. Women, children and aged men also can be engaged in it. Besides, it reaches out to practically every human being. Everyone wears some cloth; therefore, he becomes a consumer of the articles that he produces. That ensures a very large and wide market. An industry for which the raw material is available in enormous quantities, and which has an internal market, and which has the necessary means of production within the province, must be taken up by the Government seriously to enable the people of the province to avail themselves of these opportunities of employment. As long as the mills produce yarn, it will naturally throw out of work a large number of spinners.

But by research into the implements of production, it is possible to increase the efficiency of individual producers. Here again we have to refer to the All-India Spinners' Association which, for the last twenty years, has been carrying on research in various methods of spinning and has produced some literature on the subject. A great many of the improvements made in the spinning devices can be seen in the Magan Sangrahalaya at Wardha. The spinner's efficiency has been increased from a few yards of yarn an hour to over a thousand yards on a simple village-made charkha. It is claimed that on the latest model of Magan charkha which is worked by a single man and is driven with a pedal, the worker can earn eight annas per day. This is, as far as the information gathered during our survey goes, equal to four times the ordinary income of even a skilled labourer in villages. Formerly, spinning used to be one of the most poorly paid amongst the village industries. The reason was not inherent in the industry itself but because it was done in one's spare time. Spare time industries generally do not remunerate adequately the labour of men and women employed in it. But spinning is fast becoming an industry capable of paying its workers a full maintenance allowance. Since 1935 the Spinners' Association has been attempting to bring about a minimum wage standard which will naturally place this industry on a par with other industries to be followed as a whole-time occupation. The minimum wage that has been fixed is graded according to the quality of the yarn, the quantity, and the time spent on it. If this department can organise this industry on similar lines, and at the same time use Government power to protect it by levying a heavy protective licence on the spinning mills and restrict the imports of yarn it would be possible for this industry to hold its own.

We have indicated that mill industries as a rule are able to compete with cottage industries not on their own merit but because they are obtaining various concessions and considerations from the Government. Cotton mills receive all the benefit of agricultural research; they receive facilities of transport; they have in addition organised financial resources at their back. These are ways in which the Government has to help the cottage industries. If the same opportunities are extended to them through Governmental channels, we have no doubt that they can stand on their own legs. The various handicaps that have hampered their progress are the lack of education and lack of attention paid to them by persons and institutions which should have functioned differently. In many villages we came across the work of the All-India Spinners' Association, but curiously enough their centres were located in villages where there is hardly any cotton grown locally.

**Weaving.**—Ginning, carding, spinning and weaving have been the traditional industries of our country-side. They are interrelated with the life of the farmer, the carpenter and the blacksmith, the rope-maker and innumerable other village craftsmen. With the introduction of the traditions of the west, these have been dislodged from their natural position and brought about the distress of the people. Our survey shows that excepting for the Spinners' Association work, much of khadi weaving has ceased. Other weavers require mill yarn. In the case of khadi weaving the industry remains a cottage one from beginning to end, but the moment weavers take to the weaving of mill yarn, they have ceased to be cottage or village industry workers for all practical purposes. As already pointed out, even farmers who take to cultivating raw materials for mill industries have in effect become a part of the factory. It is much more so when the raw material itself, as in the case of weavers, comes from a mill. In such a case, the lot of the weaver is intimately connected with that of the mill; nay, he has become a part of the mill itself. The weaver's function is not so much producing independently as it is to make the mill product marketable. So the industry signifies the extension of the mill yarn market as long as the weavers carry on such mill yarn weaving only. Of course, there are limited spheres within which they can reign supreme; there are designs and patterns which can only be worked out on hand-loom; there are also articles of original design which can be made only on the hand-loom. But apart from this, his function in the industry is bound up with the large-scale industry, with this added disadvantage that he has not got the financial and other backing that a large-scale industry has. Therefore, inevitably he becomes a helpless tool in the hands of financiers. Wherever we went we found the mill yarn weaving industry in a desperate state. In some cases, unfortunately, the loom had been improved to increase the efficiency of the weaver without taking care to see that the increased production of such improved looms can also find a market. The textile section of the Industries Department has not followed the broad policy of touching the industry at all points but has merely contended itself in dealing with isolated improvements here and there, with the result that its contact with the industry has not worked for the betterment of the industry as a whole. As far as we can see, the welfare of the weaver depends on the extent to which he can control his raw materials and products. That he

can do only when hand spinning is restored *in toto*. Without the resuscitation of hand spinning the weaver is doomed. The All-India Spinners' Association does not handle the problems of weavers but is limited to spinning and weaving khadi. The weaver who weaves mill yarn is much in the position of the wood-cutter who is cutting the branch under his feet. This has been proved over and over again in thousands of cases, not only in the Central Provinces, but also in other parts of India. In spite of this experience, the weavers are still in ignorance about their future. The vested interests in textile mills work with zeal to carry on propaganda to make their yarn marketable and the weaver naturally succumbs to the pleas brought forward by their salesmen, with the result that in spite of his skill and in spite of the whole family working, we find him the least among the artisans, in an industry which was once great with an ever widening market.

A weaver's income generally appears to be about fifty rupees per year. This includes the labour of his family as the womenfolk normally help the men, attending to the looms and other incidental work. It seems to us that in a country such as ours and in a province like the Central Provinces, all industries connected with the exploitation of cotton must be thriving ones. If it is proved that it is not so, there is something wrong in the organization of the industries, since raw materials and markets are available immediately in the locality itself.

We find that these mill yarn weavers are using Japanese and Italian yarn for the borders of saris and dhotis. They have gone in for this again because of the cheapness. This lack of consideration and this narrow outlook has ruined the sister industries such as sericulture, dyeing and printing, and making of dyes and colours. Of course, these considerations are not to be expected from individual weavers. They leave these duties to be performed by institutions and society and confine themselves to a limited outlook. In such cases the Government has to take steps and see what works to the financial betterment of the country itself. Though immediately a thing may appear to be desirable, ultimately it may bring about results which would be against national interests.

The Spinners' Association has produced in this province in the year 1938 three lakhs eighty-five thousand square yards of khadi, and has distributed in the way of wages one lakh and sixty thousand rupees bringing employment to about six thousand spinners and six hundred weavers, the work being organized in about 460 villages. They have, scattered within this province, about 150 workers.

When we consider the amount of work that there is to be done, the work that has been undertaken by the Charkha Sangh is a drop in the ocean. But the achievement of a private institution of this type is a demonstration of the possibilities of this system of working. We trust that the efforts of the Government will be directed to see that no cotton that is produced in this Province goes out excepting in the form of finishing articles. If we can ensure this, it will give work to a very large number of unemployed in our province.

As regards the market for the goods we do not anticipate any difficulty, because, in addition to the vast number who are underclad, the Government will itself be in the market for all of its cloth requirements, according to the principles we have suggested. Besides, as the mills will

be licensed in such a way as to bring their cost in line with that of khadi products, they will have to compete on an equal basis with khadi, which timely help will enable the latter to stand on its own legs.

Unfortunately, the textile section of the Industries Department has been trying to increase the market for the goods by improving designs and patterns. This is an effort in the direction of creating an intensive market. Today the need is not so much for an intensification of the market as for keeping the existing market and extending it. While the bulk of our population goes about without sufficient covering and in rags, it does not stand to reason that an intensification of the market is what is necessary. When all people are wellclothed it would become the duty of the Government to cultivate the intensive side. By this we do not mean that the intensive market should not exist but it should be capable of taking care of itself without governmental aid. The Spinners' Association has improved greatly the artistic side of khadi but that touches a market which should not form the chief consideration of the Government. The textile section of the Industries Department should primarily concern itself with the extensive side which alone will bring in employment to a large number of people.

As far as our information goes, the return that the mill yarn weaver gets appears to be slowly decreasing. It is but natural because as the mills find themselves on firmer ground, the lower will be the chances of the weaver surviving, until at last he will succumb. The bargaining power of the weaver is steadily going down with increased poverty. As things are, there are a number of middlemen; the weavers sell their goods to sowkars, who in their turn deal with dalals and commission agents; dalals are in touch with traders from different parts of the country who sell their goods to retail dealers and they in turn, to consumers. So whatever profit there is left, is taken up by this chain of middlemen. It is necessary to cut down this chain and make it possible for the weaver to get a larger return.

*Charitable Funds.*—In a number of markets there are all kinds of funds that have been raised presumably for helping the weavers, and for the matter of that, other industries also but we were not able to ascertain satisfactorily what was being done to these funds. Money is collected at the market place ostensibly for charitable and religious purposes. In such cases the funds should be subjected to Government audit. Again, if these funds are legally collected by public bodies they should be regulated by Government. Specially at Umrer there is a fund that has been collected but which has not yet been used for any purpose. The fund was, in the first instance, started for the benefit of the Kostis as a Paisa Fund under the patronage of the Shri Yadao Maharaj. We were not able to get to the bottom of the story. In all cases where such funds are collected, it should be made necessary for a proper registration under the Industries Department and the regulations which this will entail should include submission of reports and audited accounts.

*Finance.*—The financial arrangements of mill yarn weavers differ from district to district but generally speaking we can say that they were largely indebted to sowkars. It does not appear to us proper that an industry of this nature, which caters to one of the prime necessities of life, should

entail financial risks. We can understand agriculture being subject to very grave risks, because of its complete dependence on the natural elements, but as far as weavers are concerned there are no disturbing factors over which man has no control. If they are depressed, it is largely because of the lack of careful planning and control of the industry. Therefore, the very fact that weavers are in such dire need of finance is in itself a reflection on the Industries Department.

We are not in favour of the Government giving financial aid to industries which do not demand them by the nature of their organization. Spoon-feeding may have some function to perform at certain stages of growth, but such perpetual nursing should not be allowed and wherever possible, we would recommend that the Government should refrain from extending financial aid but help the industry functionally. We consider simple financial aid from Government as contemplated in section 6 of the Central Provinces State Aid to Industries Act, 1933, inadvisable as a general rule. An analysis of the cost of production of a weaver shows that nearly 80 per cent of the selling price represents the cost of raw material. If this is so, it indicates that the real function of financing the weaver should fall on the mills which supply him with the yarn. Now, as it is, the mills do not undertake this responsibility. If the weaving of mill yarn is to be tolerated, this function must be definitely shouldered by the mills. It seems to us that this shirking of their primary duty causes the inequitable financial strain on the weavers. After all is said and done, but for the weavers the mills will not have a market. Inasmuch as the weavers are able to sell their yarn by making it marketable and producing consumer's goods out of it, it follows that mills ought to supply the yarn to the weavers and take back the finished articles and sell them on their own responsibility. The weavers are not equipped to carry on this function. Government should also see to it that any further burden is not passed on to this hard-working skilled community. In deciding whether the natural organisation of an industry calls upon one section of that industry to undertake certain functions to help out other sections of that industry, it is necessary to see what are the functions that the different units perform in relation to the different processes in converting the raw material into consumer's goods. If raw cotton is to be processed and converted into finished marketable articles, then their cost of production should be analysed and as this cost of production shows that about 80 per cent of the selling price is made of the yarn, it is a natural deduction from this fact that the mill should be responsible for their finance.

11. Weaving of Wool.—Next only in importance to cotton, woollen goods rank as a means of protection against the weather. The industry is carried on in a very crude form all over the province by ignorant and unenterprising shepherds. They rear a flock of sheep which yields small quantities of low quality wool. There is scope for improvement all along the line. The people themselves being in abject poverty, are unable to look after their needs. Sheep-breeding is highly scientific industry which requires knowledge, time and money. The shepherds possess none of these nor can they be expected to possess them. These are functions best performed by the State. Nowhere did we

see any efforts made by the Government to improve the lot of this community. They have been breeding sheep as sheep were bred hundreds of years ago. The close in breeding has brought about deterioration in the quality of the sheep also. As far as our survey goes, it shows considerable amount of impediments placed in the way of their carrying on even this crude trade. To begin with, the forest laws and grazing laws hamper them at every turn. The charges that have been made seem to have been gradually increased in direct proportion to the increase in their helplessness and ignorance. The forms of returns they get from the sheep are in the way of their maintenance allowance and some small remuneration for the folding of their flock in cultivable fields for manure purposes..

They get two shearings in the year though the wool is of very poor quality and the yield is very low. About half a seer per sheep would be perhaps a good return. The wool is not graded nor are they even aware of such a thing. The soft wool, the medium wool and the hard wool are all mixed up in one lot in making kambals. Except for the wiry hair under the chest which they appear to waste, they use their whole stock of wool purely in making kambals. They should be also taught the various articles that can be made out of wool. The grading itself will bring in a larger income because with the softer wool they can make articles which will fetch a higher price. By mixing up different kinds of wool, the market price of the articles so produced becomes lower than the mathematical average. We found one enterprising individual at Bela, in Umrer tahsil, who had made jerseys from the soft wool, kambals from the harder wool and other forms of woollen cloth for coating from soft portions of the wool. The possibilities of making felt and namdas from waste wool should be explored. The quality of the wool here requires to be tested in regard to the different kinds of uses to which it can be put.

Not much of carpet weaving is being carried on, though here and there we came across some little work in this line. Carpet-making, specially pile carpet, is an industry which can be made to pay a reasonable return to the worker. It is an art that requires considerable amount of training. Therefore, if the Industries Department can undertake to carry out the necessary researches and establish a large number of schools, it will be possible to tackle this proposition. The blankets that are made by these people are sold in the weekly markets bringing in a return of about one and a half annas per day. They spin the wool on a heavy "takli" or a charkha without putting it through any process to soften it. After being sized with tamarind seeds, it is woven into kambals on their extremely simple loom.

12. Sheep-breeding.—This industry is one which can be developed into a dependable source of income. Mutton is rarely eaten in the villages but they do get some income from the sale of sheep occasionally. The waste wool is sometimes used for the purpose of stuffing the potter's wheel but otherwise it is altogether made no use of.

The possibilities of cross-breeding sheep have to be carefully examined with regard to the increased yield of wool of a better quality. If a way is found to do this, suitable breeding rams should be provided to the shepherds.

Under the Salt Act the Central Government has a provision by which salt used for industrial purposes is given free of duty. Sheep require salt but these shepherds have to buy edible salt inclusive of duty. Although the provision exists, by the rules that have been made thereunder by the Central Government, the application has been restricted to giving relief only to large-scale industries. A great many formalities have to be gone through. Payments have to be made for the running expenses, pucca godowns, have to be provided for storing salt and periodical accounts according to the forms laid down by the Central Government have to be rendered. It seems strange that the Government of India which has had such close association with the condition of the people in our land, is not aware of the level of education, and the financial resources of the people whom they are called upon to serve. It seems ridiculous to give concessions when under the regulations that have been drawn up, no villager can provide pucca godowns and keep accounts in the kinds of registers asked for and pay about a hundred rupees a year for excise departmental expenses. These concessions, like every other function performed by the Government, seem to be meant for those who are well able to take care of themselves. These considerations also apply to the salt required in the tanning industry with which we shall deal later on. Some of the shepherds, because of their financial difficulties, were not able to give salt to their flock and allowed them to lick up some kind of effervescent earth in forest areas but they found to their sorrow that this brought about some disease which carried them off like flies. Since then they are giving the salt they themselves use!

13. Carpentry.—No village can get along without the carpenter. This industry can almost be called one of the key industries in the village. Carpentry supplies parts of the tools and instruments of all industries in the locality. In addition to this, carpenters help in building houses and public places in the village. This primary interest in all industries is recognised by people by the way it is inter-related with the agricultural production of the village itself. This privilege is enjoyed by a few other industries of this type, viz., pottery, blacksmithy, tanning, etc. According to the village economy, these primary industries are connected up in such a way that each supplies the prime needs to the other. The carpenter gets a share of the agricultural produce calculated by units of agriculture. This is fixed in relation to the services which may be performed. In the same way, the blacksmith and the tanner are also paid a share. In return for this, the carpenter has to keep the agricultural instruments in good repair and supply such wooden articles as a farmer requires. Any extra work done is paid for separately. This is an effort to link up all the industries into one organization. Naturally, with the fall of the farmer, these other industries are also languishing. The carpenter has been done out of his due by the import of all manner of articles from outside. In the irony of things, carpenters themselves are today importing foreign tools with foreign wooden parts. The planes we have seen have British made wooden mounts. The carpenters do not realise that in doing so they are killing their own trade. By jumping at the bait offered and being guided solely by cheapness, every artisan has ruined his own trade.



Apart from this, they have also been hit hard by foreign competition calling for other adjustments in the social life and in the daily life of the village. Things that at one time used to be made in villages are coming in in the form of ready-made goods from towns. The disappearance of such industries like cotton has taken away the market for the carding machine. Similarly, the making of the charkha has also rapidly disappeared. Such looms as there are in the villages are made locally but owing to the financial stringency experienced by the weavers, they do not go in for any new looms and therefore the carpenter's work suffers.

We found the work of the carpenter at the same time is largely confined to articles which do not require much skill.

Many of them do not even understand the need for seasoning wood and they are largely using wet wood. We found several skilled men who know how to make cart-wheels. Cart-wheel-making is in itself a skilled industry but they were pursuing it in a very crude fashion. Research has to be done in this direction. Of course, the carpenters have no place where they can learn the science of their crafts. We found in the Handicrafts School in Nagpur a certain amount of this work being taught. We were glad to see that efforts are being made to turn out intelligent craftsmen who have grasped the science which they will practise. Every village which has a carpenter should have within easy reach of it a school with a research department where these elementary principles may be taught. At the least, they should be made available at the tahsil towns. Unless education on this line progresses side by side for safeguarding the industry from inroads from outside the country, it will not be possible to keep pace with the needs of the times. The advent of the bus and the motor lorry has taken away a good part of the custom for bullock carts, and this has interfered considerably with the demand for carts. We know that in certain cases other forms of transport are unavoidable but even where they could be avoided they have not been properly regulated. We shall have to refer to this matter when we are dealing with transport and therefore we shall not dwell on this any further. The carpenter has his primary items of expenditure taken care of by the "dan" system, and so he is better off comparatively. At one time when the oil seeds used to be pressed in the villages on a large scale, the making of oil presses gave employment to special classes of carpenters, who have almost disappeared now. The import of oil has invaded the villages also so that many of the villages have gone down financially. The carpenter is definitely tied up with the welfare of the other industries in the village.

14. Blacksmithy.—This is another of the industries closely allied to agriculture. Blacksmithy is an industry which along with carpentry, shares the key position in a village. Many of the blacksmiths, we found, were skilled enough to temper village razors and other cutlery but unfortunately, the demand for these has fallen with the coming in of foreign articles. The workmanship itself is very crude and requires much improvement. Usually at present the village blacksmith carries on only repair work. He gets a certain share of the agricultural produce for keeping the agricultural instruments in good repair. Any additional articles bought from him by the farmer are separately paid for

under the "dan" system. Therefore, his subsistence is guaranteed and whatever he earns outside is an additional income. Like the carpenter, the blacksmith is comparatively well off but even so their trade has to face the onslaught of substitutes from foreign places and imported manufactured articles. At one time he used to manufacture all the implements necessary in a village. Today these are made by companies which smelt ore and produce iron. Crow bars, spades, etc., were made by him from raw materials but now they come in ready-made. This competition from large scale industries has pretty well reduced him to the position of a repairer. His condition is growing worse every day. No doubt, the iron and steel industry is considered a key industry, but as soon as such industries step out of their position of key industries and prepare articles for direct consumption they become ordinary trading concerns. As we have stated before, if this competition from large scale industry is allowed to take place under an unbalanced system such as prevails today, the blacksmith's profession will be gone before long.

The import of such manufactured goods into this province has to be regulated by licensing the sellers of these goods. A visit to a hardware shop will indicate immediately the depth of degradation to which this industry has fallen. Even the crudest of articles are made elsewhere and brought into the village. Nails, hinges, bolts, "sigris", cooking utensils and all manner of simple articles are imported into the village. A number of blacksmiths were turning out good locks at one time, but today the shops are full of cheap flimsy German and Japanese locks. The more articles of every-day use that find their place in such shops, the less is the opportunity for employment in our own country. There is no reason why these needs of the village should not be supplied by the local blacksmith. As long as he is capable of producing such articles, the Government should see that no extraneous circumstances take away opportunities from him. This Governmental function of safeguarding the interests of the villager has been lacking in this as in other industries with the result, as we have stated, that the village shops are over-flowing with imported goods. If this department were functioning properly, then such a condition should not exist. Foreign articles should be rarities rather than commonplace ones. When we wished to see the articles which have been produced by the local blacksmith, we had to ransack old accumulations and after laborious search, a few were brought out. These were crude enough but they tell a tale of past greatness. Many of his own tools were also imported. When a workman of the type of a blacksmith has descended to a level where he has to purchase his own tools, he is no workman at all. The knowledge of the science of his craft has been denied to him. It is not his fault. It is the Government which should provide facilities for his learning the art. Many of these men had learnt what little they knew from their own parents. Generally the blacksmith's wife helps him in blowing the furnace with a pair of goat-skin bellows. The draught is not constant. In one or two cases we came across a fan or a blower which gives a continuous draught, devised and made by the blacksmith himself. All his implements and tools are of the simplest nature and can be made by himself if the requisite steel and iron are made available to him in a convenient form. This latter is

definitely a key industry which should be controlled or carried on by the Government, especially in this province, as it is fortunate in possessing ores of various kinds with an admixture of manganese. It is said that stainless steel was once produced near Jubbulpore. There is no reason why it should not be again produced in this province if proper steps are taken to exploit the natural resources to their fullest capacity. It is not necessary for us to dwell upon this point at the present stage. It will naturally fall into the next stage of our survey.

One of the blacksmith's important customers was the bullock cart owner. The blacksmith put on the iron tyres and supplied the axles. At any rate, in this province we did not come across many bullock carts with pneumatic tyres though we have seen a few in Nagpur city. This is becoming a menace in many of the other provinces. These are signs of desolation which should be banned from the country. It brings unemployment to our carpenters and the blacksmith and brings about a situation which tells upon the bullock also. A considerable amount of false propaganda is being carried on by interested companies, which, by plausible arguments, have induced people to go in for this type of equipment. Apart from registering our disapproval of pneumatic tyred bullock carts, it is not necessary for us to go more fully into the scientific aspect of this type of cart as the problem has not reached an acute stage and is hardly present in the villages.

A province that supplied high class steel to the world at one stage has now to depend upon scrap iron and old springs for its stock of raw materials for blacksmiths in the villages.

**15. Sericulture.**—Not much attention has been paid in this province to the possibilities of manufacturing silk. We visited a few villages which produce tusser silk cloth from naturally found cocoons. In some places a royalty is paid to the Forest Department for obtaining these cocoons. This industry is not carried on on a scientific basis because today there is a lack of scientific equipment. There are no disease-free layings and no guarantee in regard to the quality of the eggs. Though it is altogether in a very crude form, it contains the seeds of a promising industry, but if things go on as they have done in the past, it will amount to nothing. If it is to be developed, a great deal of pains will have to be taken to exploit the possibility scientifically. As it is, today even the small market that is available in the form of yarn for borders of saris and dhotis woven by the village weavers, is being killed by imported silk yarn from abroad. At one time the silk for this purpose was obtained from Malda and other places in India but now it comes largely from Japan and Italy. Thus, more and more unemployment is being brought into the country by the callous policy followed by the Government. Unless some kind of direction is given to the village weaver, it is not proper for us to expect that he would be able to realise the damage that might come to his fellow-beings miles away. Therefore, preaching to him to buy silk yarn from Indian producers, will be in vain. We have to direct his actions in the right channels by controlling his environment. This can be done by licensing the sellers of such yarn and levying taxes or dues. We would recommend the Government developing this industry to the fullest possible extent because it is now necessary for India to produce her quota of silk. Not only here, but in

other parts of India also, excepting perhaps in the case of Mysore and Assam, this industry has been steadily going down. Very little scientific silk rearing is carried on in India on a fairly large scale. The extension of the production of tusser or kosa demands Government attention.

**16. Mat-weaving.**—Mats supply one of the most elementary needs of people. They are made out of leaves of sindhi trees, reeds from river beds, bamboo strips and coarse grass and sometimes from strings of sann-hemp. They do not find distant markets but are used by the people locally. The equipment used often consists merely of a crude knife, but where mats are woven on a warp of sann-hemp strings, a very simple loom is made of bamboo poles. All of these are manufactured by the people themselves and cost next to nothing. In many cases the articles do not even leave the village, but if there is a nearby market, they find their way there. They are sold at very low prices and the mat weavers make hardly an anna or so per day. In some places where the grass for making mats is obtained from fields, a royalty is paid to the malguzars or to the patwaris even for this article which grows as a weed. Grass obtained from the forest is paid for to the Forest Department. As we have repeatedly pointed out, placed at this point of production, these exactions are destructive however small they may be.

The product itself is very crude and has hardly any art in it. In large towns, mats are coming in even from Japan. If this industry is properly organised and the people are given designs and facilities for printing them in the form of dyes, etc., and if the art itself is taught as an industry, it will form a means of livelihood and will supply a fairly steady market. Sann-hemp string can be made use of much in the same way as coir is used for making door rugs and carpets and it will lend itself to designs being printed on it. Therefore, if the necessary initiative and imagination are supplied, this industry can be developed to a large extent.

Apart from using the mats on the floor, people use them also for roofing and for making partitions. They are commonly used to roof bullock carts.

**17. Rope-making.**—Rope-making like all other industries, has received no attention or help from the Government. Rope is an article that is largely used in most village industries and, therefore, it is also consumed within a small radius.

The equipment used is simple and crude. The rope is mostly made of sann-hemp, moonj grass, sisal fibres, etc. It may be possible to introduce more effective methods much on the lines of the coir rope-making. Instruments for twisting the rope and the processes also, in the case of some of the materials, are not unlike the process used in preparing coir. Sann-hemp is cultivated but the revenue that is charged appears rather excessive in comparison with the yield from the article. We are not here arguing on the question of land revenue. Whatever arguments may be advanced for or against it, from a business point of view one has to see that these levies are in some reasonable proportion to the yield expected. In percentages the land revenue charged comes to over 35 per cent. of the net yield. In all such cases, where raw materials for industries are produced, we feel that the taxes and levies of various kinds should be fixed only

after consulting the Industries Department, and if the villagers find it heavy, it is up to this Department to safeguard the villager. We are not suggesting this purely from a humanitarian point of view, but as a matter of a business proposition, because, if the exactions are high and the industry suffers thereby, ultimately the Government itself will have to feel the burden of it. This aspect of the question we have already dealt with in the earlier part of this report.

The long fibres of sisal hemp make excellent ropes, carpets, door mats, etc., the short fibres can be made into paper and the residual pulp, obtained while decorticating makes good substitute for cattle-dung as manure.

There is a considerable amount of competition from imported ropes. When we visited the bazaars we found them stocked full of imported articles. As far as strength and utility go, it is possible to stand this competition, but the methods of making ropes here are so crude that as things are at present it is not possible to compete with them; the raw material itself is strong enough and good enough to stand any competition. This industry like every other, affords work for the whole family, men and women, and the capital that is needed is little. A person working at it earns about Rs. 1-8-0 per month or a little less than an anna per day. Necessary steps have to be taken, in this connection, to licence the sale of Manila coir and other imported ropes. As we have repeatedly pointed out, at the present time Government, such as that of this province, have no other power to safeguard their own interests other than this regulatory power. The constitution may be examined to see in what other ways these functions may be performed by the Government.

It appears that the fibre of linseed stalk is at present not being utilised. This is a valuable fibre which can be turned into ropes and it is being used for making paper at Maganwadi, and if such uses for these materials now wasted are found, it will help to increase the return to the cultivator. Some of the other materials that are little used can also be exploited for this purpose. Aloe fibre lends itself to use for ropes as well as other articles that can be made out of fibrous materials. Similarly, from the bark of the mohar tree and from some creepers ropes are made for local use in villages adjoining the forests.

18. Tanning.—A glance at the statistics of this industry will reveal that more and more raw hides are going out and more and more finished articles are coming in. This is a tendency which calls for control immediately. When we realise that nearly 30 per cent of the world's supply of hides and skins comes from our own country (and we may point out here that these do not include the available materials we have from horses, mules, goats, dogs, and other animals which are largely wasted), any small loss will have the cumulative effect of losing a fortune.

Tanning is a wide-spread industry which requires a certain amount of organisation and it produces an article which is in universal demand. Side by side with it, the disposal of carcasses should also be developed as an industry. The people who follow this as a calling are amongst the most-down-trodden communities of the country. They are illiterate; they have no influence; they are poor and they are at the mercy of everybody else in the village. It, therefore, follows that

any help to them from the Government is long over-due because they are comparatively helpless to help themselves.

The Government should do everything in its power to conserve and husband the resources of the country even if it cannot increase its wealth. Conservation of the resources in itself is a valuable function. In connection with the paddy-husking industry we have drawn attention to the fact that even the nutriment at the disposal of the people is not availed of to the fullest extent. In the same way, in this industry the value of the hides and skins is considerably lowered by mishandling the carcasses of the dead animals. When the carcasses are dragged about and roughly dealt with, the skin is damaged as far as its market price is concerned. If Government can teach the people proper methods of flaying and preserving the skin, by this one step we can almost double the returns that can be got from this industry. Another process that is much neglected in this province, is the curing of the hide as soon as it is flayed. If the hide is not immediately salted, putrefaction begins to set in and a partly putrefied skin does not make first class leather. The salting of the hide requires certain concessions from the Government to make available to these people salt at cheap rates. There is a provision in the Salt Act to supply salt duty-free for industrial purposes. This section appears to be almost unused in this province, and even where concessions are given, such concessions are nullified by the rules that the Government have made. Persons who need these concessions are required by the rules to provide pucca godowns and to pay the Government Rs. 100 towards the inspection charges. These regulations are evidently made by persons who have not the slightest knowledge of village conditions nor the requisite imagination to frame rules to fit into the condition prevailing. Even for dwelling purposes these Chamars have no pucca buildings and one hundred rupees is a fortune to them. So by their very regulation, the Government nullify the functioning of the principle. Only large units of production which are capable of looking after themselves are given this facility and such large units are generally in towns and cities. Of course, it will make it possible for them to utilise the skins of slaughtered animals. But unfortunately about 80 per cent of the hides available are those of cattle that die in the villages. Cattle do not have a choice of the place of death which are scattered all over the place. If salt is not available to Chamars in remote places in small quantities as needed by them free of duty, Government becomes a party to the destruction of the available wealth.

We are aware that Salt Duty is a monopoly of the Central Government, but the Provincial Governments, if they have the welfare of their people at heart, should move heaven and earth to get these regulations modified. These regulations are not made in heaven that they should be unchangeable. It is because of the callousness of the people to whom the welfare of the Chamars is entrusted, that the rules granting these concessions have not been so framed as to make them really effective and carry out in practice, the spirit beyond such concessions.

Perhaps next only to the cotton industry, this industry should form a major industry in this province. The financial weakness, the cultural backwardness and the social disabilities of the Chamars, mark out in definite lines the service that

the Government should render to this industry. The industry requires the nurturing care of a paternal Government as it involves the exploitation of such an enormous source of wealth of the province. In many cases the Chamars know the processes of tanning, and they also know that no short-cuts can be taken with impunity but still because of their financial weakness they are unable to put through the proper process the hides that come into their possession, with the result that they do not get proper returns for even the little work they do. For a properly tanned leather the process may extend to several months and in case of very good leather well over a year but no Chamar in this country can afford to carry on such industries. The longer the process takes the more the capital that will be necessary. The part that Government should play in an industry, will depend largely on the processes involved. We cannot have a cut and dry programme which the department can follow in the case of all industries. If the department is to be effective, it has to adjust itself to the needs of the industries it handles. In the case of the Chamars, therefore, it becomes obligatory on the Government to take up the burden of the financial needs of this industry. It may do so by evolving a system by which it collects the skins and hides at central depots after they have been properly cured, salt being supplied free of duty either through the department itself or through local officials in the villages; and carries out the tanning process in the best way possible, departmentally exporting from the province only the best of leather.

The Government itself is a large consumer of leather goods in the form of boots, shoes, harnesses and other equipment for its forces and servants. It should be able to supply all its own needs besides good leather to mochis for production of foot-wear for public consumption.

It may perhaps be necessary under the present conditions to bring in legislation to vest the property in the carcasses of dead animals in the Government. At present the customs that prevail, give it to the Chamar who is in a position to deal with this source of wealth satisfactorily.

This part of the tanning industry should, therefore, become a key industry because it undertakes the conservation of a source of wealth which is otherwise likely to be wasted in private hands.

At the present time tanned leather is coming from outside and even shoes manufactured by foreigners find a ready sale in remote villages. These are anomalies which should be handled in such a way as to produce more wealth and employment for the people of this province.

As regards tanning materials, we have considerable facilities in this province. Myrobalan, babul bark and various other tanning substances are available in abundance. About ten lakhs of maunds of myrobalan are exported. If tannin is extracted from myrobalan and exported in that form, that in itself will add an industry but as things are, most of the available raw materials are exported in a crude form, thus depriving the people of this province of employment. This has a tendency to increase considerably unimprovement in industries and to cause a great pressure on the land bringing about the impoverishment of the province. Besides bark tanning, chrome tanning is being tried at the Nalwadi tannery and as far as their experience up to now goes, it has been very encouraging. Other than

bark, lime which is used in large quantities, is also available within the province in considerable quantities but these limestone quarries are yet in private hands and should be made available, by Government control, freely and reasonable rates.

On the whole, we feel that this is an industry which needs the careful and close attention of the Government. We have merely indicated the broad lines on which the Government may proceed but it requires a much closer study to work out the details. The magnitude of the industry will justify the labour that the Government may spend on it, and incidentally to the conservation of the wealth of this province, it will also be helping to uplift financially, socially, and culturally one of the most depressed communities in India. The leather substitute articles that come into this province have to be studied and necessary steps taken as indicated in other cases to regulate this competition.

**19. Disposal of Carcasses.**—We have already dealt with the question of preparing leather from the hides and skins of animals. This is not the only commercial product that can be obtained from the carcasses that are available in this province. The Gosewa Charnalaya at Nalwadi is carrying on experiments in the rational utilisation of carcasses. As soon as the carcass is brought to them they flay it and send the hide to be tanned. The intestines are cleared of their contents for manurial purposes. The bone and flesh are boiled to extract the fat which is sold for the preparation of lubricants. The horns are removed to be made into various articles of everyday use like combs, boxes, spatulas, etc. The tendons and intestines are taken out for purposes of gut-making. The boiled bones and flesh when free from fat are powdered and made into bone-meal and meat-meal manure. From the fleshings glue is made. In this way all possible uses are made of the carcasses. Somewhat on this line the Government unit should function in localities near villages.

**20. Pisciculture.**—This province abounds in springs and streams. Though they may be dry in summer, they still produce considerable amounts of fish during the season. In a diet which consists largely of rice, fish is said to be necessary to balance the deficiency. Therefore, this industry has a definite place in the scheme of things. We find there have been heavy exactions by malguzars who own tanks. In some cases, they auction to others the right to fish in their tanks. The fishermen generally are a very poor class of people; although they have other industries to supplement their income yet, generally speaking, they are ill-fed and down-trodden.

Their nets are made from mill yarn. It takes them six months to a year to make a good-sized net but it is generally knitted during their spare time.

In addition to fishing, these people, generally, occupy themselves at other seasons in preparing puffed rice (murmura), puffed gram (phutana), daliya, pressed rice (poha) and lahi. They also gather singada (water-nuts) from the tanks and sell them. With all this they find it difficult to get an income of about two annas per day. The Government itself has done nothing in the matter of breeding fish or improving the type and variety of fish. If possible Government should arrange to culture varieties of fish that feed on mosquito larvae.

**21. Poultry-Rearing.**—Nowhere do we find poultry-keeping as an industry. Villagers do keep a few fowls. They use the eggs themselves. Help may be given in breeding better types of birds and research carried on in this connection. But we should like to say that the introduction of foreign birds into our country has not been found satisfactory elsewhere. They are not disease-resistant as the country birds are, and easily succumb to epidemics, bringing financial loss to the already oppressed villagers. We should not advise this being carried on as an industry for commercial purposes for the reason, that, as long as poultry-rearing goes to improve the diet of the villager, it is good but the moment the farmer embarks on this as an industry, he steps into difficulties of finding a market and ultimately, our experience shows, he finds himself in the hands of the middlemen who reduce the returns from this industry in proportion to the ignorance of the poultry-keeper and his inability to find a market. We found in the dairy-farm at Nagpur a few birds of very good breed but as those were foreign varieties we do not think we can commend this experiment.

**22. Dairy-Farming.**—It is not necessary for us to emphasise the importance of this industry which is generally carried on side by side with agriculture. It is a well-recognised fact that milk holds a very important place in any diet and a very essential one in a vegetarian diet. In the United States of America per capita consumption of milk is 20 ozs. while in this province it is 0.08 oz. per head. Milk and milk products have to be carefully made and distributed. While these articles are nutritious, by that very fact they are also attracted by disease germs of various kinds. If the dairy industry is to be carried on especially in a climate such as this province enjoys, extreme care is necessary. There is hardly any dairy worth speaking about in the villages in this province. There are some in towns and cities but these do not represent, on the whole, our land.

Merely having a large number of cattle does not signify that we have been able to meet our demands because most of our cattle are very poor milkers. Attempts have been made to bring in foreign bulls and cross-breed but the efforts have proved useless in the third and the fourth generation. Therefore, if any permanent improvement is to be effected, it will have to be on the lines of carefully selected breedings amongst our own animals. Very little has been done in this way though here and there one finds a good stud bull. As a rule, hardly any village can be said to possess satisfactory breeding animals. The problem has not yet been tackled in all earnestness. Breeding operations with the purpose of improving the milk yield have to be carried on over a long number of years with correct records kept of every generation. Therefore, it is not possible to entrust this work to private individuals. We are aware that a few dairy farm here and there are carrying out this kind of work but spasmodic efforts are not going to solve this problem. We need a well-conducted far-flung organisation and a determined effort to solve this problem within a reasonable period of time.

One great difficulty that the dairy farmer finds is of grazing lands. Although we have a large number of cattle we have very little grazing land per head of cattle. In the United States of America there are twelve acres of grazing land per head of cattle, in New Zealand 8 acres and in

Japan 6.7 acres, while here we have hardly three quarters of an acre. Government should find ways and means of allotting much greater area for grazing lands at reasonable rates and we suggest that immediate steps should be taken to prevent the diversion of communal lands for cultivation. Unless this is done, it is next to impossible to expect healthy cattle. As the rights of the villagers over the village forests and waste lands are not clearly defined the malguzars often exclude the village cattle from these or charge exorbitant grazing fees. The fodder available to the country cattle is also very defective. The animals are not given what may be called a properly balanced diet. They do not get sufficient concentrates and their fodder arrangements leave much to be desired. Under these circumstances, naturally their productivity is very low.

We were glad to find some efforts being made to organise cow-herds into some kind of a co-operative body at the Telankheri Dairy Co-operative Society, Nagpur. Though the organisation seemed to claim that the cow-herds were getting good returns, even there we found that the cows were very much in need of proper feeding. Many of them were but skin and bones. It may be that they have not had time to improve the cattle as it is only a matter of few years within which they have been able to achieve what they have achieved. However, we should like to see such efforts in every village. Not merely district towns and tahsil towns but the remotest of villages should have organisations somewhat on those lines.

With the advent of mill oil-pressing and cotton-ginning factories the cattle do not get the quantity of oil-cake and cotton seeds that they should as the seeds are taken away to the factories leaving the villagers without this necessary article for their animals and the oil-cakes available in the village have become smaller in quantity and are considered less nutritive as the cakes from mills contain less percentage of oil. Apart from this, the per capita income of the villager himself has gone down; therefore he finds it difficult to feed himself properly and much more so his animals.

In cities the organisation of the milk supply leaves much to be desired. This department should, as we have indicated, control the purity of food products, standard of quality and rates of price. There is hardly any effort made today to maintain the quality of food-stuffs. Adulteration in ghee, milk, butter as well as other food articles, is a common feature. Dairies should be subject to license.

At one time an experiment in trying to distribute skimmed milk to the villagers, was made by the All-India Village Industries Association. It was found that the people did not take kindly to it because the idea was novel, although the price at which it was distributed was practically nothing. Skimmed milk contains all other ingredients of milk excepting fat. Therefore, the nutritive value remains intact and the fat that is removed can be substituted by cheaper oils which the villagers use. It was for this reason that the experiment was carried out, but as Maganwadi is situated in a good-sized town, Wardha, probably it was difficult to break the custom. If this experiment is tried in villages it might be more successful as it promises to be at Segon, Wardha.

The problem of milk supply in the city is somewhat different from the problem of the dairy in villages. In the towns, people do not seem to give any thought to the animals themselves. They are kept as long as they are necessary and disposed of, but in the village they fit in definitely into the rural economy. A good many animals are imported into the Central Provinces from Nizam's Dominions, Malwa and other places. There is no reason why the needs of the province cannot be taken care of within itself.

We find that there was hardly any veterinary help available to villagers excepting in the tahsil towns or district places. This is also a part of the scheme of improvement in cattle.

**23. Dyes-making.**—India held at one time the premier place in vegetable dyes. We produced fast colours and a large range of shades. With the advent of synthetic dyes from Germany, this industry has practically died out. Since lac is to be found in our province in such large quantities it should be possible for us to produce the lac dye. Scientific research should be directed towards this end. A few of the old dye-makers are still to be found; if they can be made to divulge their secrets, it should be possible for us to depend on ourselves for the dyes. Strangely enough, even khadi dyeing and printing is done with foreign materials. In every walk of life the opportunities of employment have been cut down. The exploitation of raw materials with which we were occupied formerly has been taken away. Amongst these dead industries dye-making is not the least, and as cotton and woollen industries come into their own, it will become imperative for us to develop this industry also side by side.

We saw in some of the villages very crude printing being done. These people were merely artisans rather than artists. Artists of first rank should be encouraged to devote themselves in creating fashions and designs to adorn cloth.

**24. Brass and Metal Wares.**—From time immemorial brass and bronze have been produced and shaped into all kinds of vessels used in temples and in houses. Formerly, these metals were made from the copper mine within the country, but now a large supply of the metal comes from Germany or Great Britain or Japan. An analysis of the cost of articles that have been produced shows that 87½ per cent of the cost goes to the raw materials and nearly 12½ per cent remains within the country. This is a serious state of affairs. It seems to us that it ought to be possible for us to explore ways and means of producing either stainless steel from titaniferous or manganiferous iron and utilise that material for purposes of making utensils, or find some other substitute for it, because an industry of this kind drains the country of its purchasing power out of all proportion to the service it renders.

Bell metal also is a side industry which uses in addition to imported metals scrap metal available inside the province. The worker gets hardly about 3 per cent profit, after the taxes and the middlemen's profits have been taken away. In spite of the fact that this industry involves very heavy work, the average earning capacity of a tamera is barely annas 4 per day. Where, apart from the process, the raw material forms the bulk of the cost of the consumer's goods produced by an addition of labour to such raw material, the principle should be the producer of that raw

material finances the industry. We have referred to this principle in connection with the mill yarn weaving industry. In the same way, in the brass metal industry also the financing is very bad in principle, and therefore, a large number of the brass metal workers find themselves in the hands of the saokars. This is a matter which should draw the attention and care of the Industries Department. Unlike most of the village industries, there is still a considerable amount of the skill of the artisan left. Therefore, we shall be saving for posterity this asset if we take steps immediately before this industry also dies out.

**25. Tools and Implements.**—In connection with black-smithy and carpentry we had pointed out that a great many of the tools today are imported and that local artisans have become only repairers. Unfortunately, Government departments themselves, in an unthinking way, have been advocating imported implements. But we saw in many of the villages that the village craftsmen were quite capable of turning out good work. They know how to make with high tempered steel bansalas, chisels, planes, etc. Even razors are tempered by a blacksmith but unfortunately for him he has no opportunity of working up new material. We have also mentioned the high quality steel produced in the neighbourhood of Jubbulpore in the past. If this industry can be revived again and it can be made the rule that no imports of finished products should come into this province, it would enable the local blacksmiths to produce all the village implements that are necessary. It is true that the policy that we have advocated all through for working the local industries will put up the prices of articles; but this is not anything to be avoided, because the higher price leads to a greater circulation of money and prosperity of the people, especially when we safeguard the chances of employment by not allowing the raw materials to leave the province. Tool-making is the real test of craftsmanship. Workmen who use foreign tools do not know their job. We were glad to notice that at the Handicrafts School, this factor is at least recognised. We would suggest that in the Handicrafts School no foreign implements should be allowed to cross its threshold; although they were attempting to make their own tools, still many of the instruments used by them were foreign.

**26. Toy-making.**—All over the civilized world toy-making is an industry which requires a considerable amount of knowledge of child-psychology. In the west, the best brains are switched on to this industry, but unfortunately instead of developing the imagination of the child, the toy-makers have tried to reproduce more and more realistically the life of grown-ups.

In our own country, toy-making was once a very progressive art but today we see only its relics represented by crude figures of all kinds cut out of wood or moulded in clay. This industry can be pursued profitably by carpenters, potters, tailors, lac producers, bamboo and cane workers, paper-pulp makers and glassware manufacturers. Therefore, when these other main industries have been launched out, it would be possible for us to develop also toy-making.

A look into the village shop will disclose the tremendous onslaught Japan and Germany have made into this industry. Import of these articles is a sign of the poverty of our capacity to meet the demand in this line.

Toys represent a field of education by which we develop our culture and pass it on to our children. In this most important field, to allow foreigners to have a place is as good as employing foreign governesses to bring up our own children. The underlying ideals and culture of the toy-makers of Japan and Germany are not the same as those that prevail in India. Therefore, this is an industry which should be kept as a close preserve for our own manufacturers if we have any value for our culture. The culture of a country can be gauged from the toys that are produced for her children. We should therefore very jealously guard this field and develop it and put into it the best brains possible.

27. Goldsmithy.—Wherever we went, in the villages in many parts of the country we found the goldsmiths were sitting idle before the ashes of a dead fire, with their instruments before them. When we inquired about the industry we were told repeatedly that each village was importing gold about seven or eight years ago, but since then they have been exporting large quantities with the result that goldsmiths themselves were left high and dry, without any work. A goldsmith, in a country like ours, is an indicator of the prosperity of the people. Ornaments represent the investments and the wealth of the people, and therefore, when gold comes into the villages it is a sign of prosperity but when gold is constantly going out it is a sign of distress. The latter has become almost the normal state of affairs in the villages at the present time. It is evident that there is no gold for even industrial purposes in these villages, otherwise the goldsmiths would not be idle. Fortunately for themselves, everyone of the goldsmiths happen to possess a certain amount of land, the income from which seems to be supporting them.

28. Paper-making.—As the country progresses in literacy and in culture, the use of paper is bound to increase; but up to now no definite efforts have been directed towards developing its manufacture within the province.

This province has many raw materials which are ideal for making it. Paper-making as a cottage industry is carried on even to this day in several parts of the country, but nothing worthwhile is being done in this province except for the experiment carried on at the headquarters of the All-India Village Industries Association at Maganwadi.

Hand-made paper is superior in many ways to mill-made paper. Parchments are made of it and valuable documents are written on it. At one time the hand-made paper manufacturers near Madras (Amjikare) had almost the monopoly of the supply of paper to the High Court for documentary purposes, but today all such needs are filled by imported hand-made paper. Paper-making in itself is an ideal cottage industry because all members of the family can take part in it. There are certain heavy operations such as reducing fibrous materials to pulp, a few moderately hard tasks such as sizing and glazing, and some very simple operations like preparing stationery. All these can be done by various members of a family. In other parts of the country, the hand-made paper industry is still being kept alive largely by Marwaris who require hand-made paper for their account books. Because hand-made paper lasts for generations, these merchants prefer the use of such paper to mill-made paper.

At Maganwadi, the materials used are not fresh raw materials. An attempt is made to utilize the waste of villages such as rags, broken bamboo baskets, used up old sann-hemp ropes and rejected gunny bags. Besides these, the fibres of the cotton and linseed stalks can also be used. Straw is largely used along with a variety of grasses. The fibre of the plantain tree makes excellent raw material because it is easily reduced to pulp and the paper made is white. The equipment is not expensive taking into consideration the nature of the industry. The Denki, the beater, the tanks and the paper-lifting mats are all made either by the carpenter or by the paper-makers themselves. A paper-making unit will cost about Rs. 25 to Rs. 30 in equipment. At Anji in Wardha district, one of the old students from Maganwadi is carrying on a small unit and making paper out of tailor cuttings. He employs in his unit about nine labourers and his rag paper costs Rs. 6-8-0 per ream. The cost of raw materials is 12 per cent, chemical and sizing materials 4 per cent, labour forms 60 per cent, rent and depreciation 8 per cent and management 16 per cent. From this distribution of the cost it will be seen that the industry is a very good industry from our point of view, since it distributes wealth as it produces. The question of market need not yet arise. The Government itself consumes tremendous quantities of paper in all its departments and the institutions under its influence such as schools, colleges and universities. If the Government made up its mind that it will spend the local taxes for the benefit of the people, it can organize ideal paper units in different parts of the province, making use of the waste of Government departments, schools, colleges and universities and of the villages by converting it into a valuable article on which it has to spend lakhs of rupees every year. If all the Government supply of paper can be made in the villages, that in itself will form a life-giving stream to the poor villagers. At the present time, all the supplies come from outside the province and a good deal of it is from outside the country. As we have suggested in other cases also, the Government should make up its mind that its expenses shall be directed only in such channels as will bring employment and profit to the villages.

29. Transport.—This is a subject which is not properly considered by most people. Some look at it from the point of view of saving of time; some look at it from the point of cheapness; others merely from the point of their own convenience but transport is an item which should fit into a well-defined place in the scheme of industries for a province. We have to consider the merits of different methods of transport from the point of view of the welfare of the people, taking into consideration whether the transport itself is performing any particular function in the conversion of the raw material into finished goods. Besides, we should keep in mind the general principles that we have already enunciated. *viz.*, that every industry should fit into the general economy of all other productive forces in the province. Again, apart from the mode of transport, we should also consider the cost of transport relative to other commercial goods.

Railways have a place for themselves and it will serve no purpose in a provincial economy discussing this item at great length. They are not purely commercial propositions but have other functions also to perform—strategic and

control of the movement of raw materials and finished products. Besides, it is difficult to get complete information on this subject, but with the limited information at our disposal we know that the railway rates are not designed to keep the raw materials within the province. There is always the temptation for the raw material producers to send them abroad because railway rates are so framed that it is cheaper to do so than to move them inland. Similarly, the rates are so devised that it is easier to get finished goods within the province than send them abroad. This is reflected in the history of this province if a study is made of the statistics that are available.

Motor transport is growing into greater and greater prominence as days go by. In some places it is definitely working on competitive lines with the railways. The advent of the motor traffic has increased the competition still more with the bullock-cart traffic. We have already indicated that any innovations in our village economy without considering the setting may prove ruinous. The introduction of motor traffic into our economy is one in point. The lorries themselves are expensive and their up-keep also results in large drain of wealth for petrol and other requirements. Generally speaking, the only thing that benefits the province from the motor transport is the up-keep of the driver and the cleaner. If the motor traffic serves any definite economic purpose, it should be to the advantage of the villager. For instance, if fish or some such perishable article can be transported over a distance of many miles quickly, then it may enable people to get their food-stuffs without much deterioration. Then of course the time factor becomes an essential item, but without that merely to shorten the time has no meaning. Here we may cite the instance of the motor transport competition with the bullock-cart in the transport of timber from the forest. In this province timber is not seasoned at all. Seasoning timber requires time and therefore in the transport of timber from one place to another, reduction of time does not come in as a determining factor, on the other hand, increasing the time taken between the felling of the tree and its reaching the consumer may even be an advantage. The Government at present employs about eight lorries and two trailers in the transport of timber. These can carry about one lakh and 82 thousand cubic feet of timber. The cost of the lorries and the trailers work out to about Rs. 38,000. This amount goes out of the country and their up-keep amounts to Rs. 13,500 for petrol which, but for the duty paid to the Government, is also an item of export. In employing these lorries for the transport of this timber the province itself benefits to the extent of finding work for about 25 persons. On the other hand, the cost of 861 bullock-carts needed to transport the same quantity of timber, with the bullocks would come to about Rs. 68,000, but all this will form a part of village economy. This sum of Rs. 68,000 will be distributed amongst 861 cartmen, a great many blacksmiths and carpenters who built these carts, all the women who go out to get fodder for these bullocks and in the sale of cotton seed, oil cakes, etc. The charge that the lorries make over the transport for this quantity of timber will work out to well over Rs. 45,000, the bulk of which, as we have said, goes to foreign countries; while the charges that are paid to the cartmen for the same quantity of timber will work out to Rs. 57,000, every pie of which will be spent on the villagers. In the case of the cart, it will naturally

mean a little extra expense but when the difference between the effect of the expenditure on lorries and that on the expenditure on the carts is looked at in relation to the life of the people in this province, it can be easily seen what enormous wealth in the way of human happiness the employment of the cart brings as against the employment of lorries. As we have said, in the case of the transport of fish, employ the lorry; but in the transport of wood, employ the bullock cart. In the same way, at every step we should consider the question from the larger issues involved. It is a pity that the Government has taken to transporting wood in this province with the help of motor lorries. They are, therefore, creating unemployment for about a thousand people while they give employment to about 25, in addition to all the evils that we have already referred to. We do not here deal with the question of road repairs and road conditions, but we may mention that the cost that we have already brought out will show that there will be much heavier expenses connected with the upkeep of roads when motor lorries are used. This item has not entered into our calculations. Therefore, in this connection we are not in a position to lay down hard and fast rules by which one method of transport can be preferred to another without going into various considerations, but we have to indicate the line on which such choice must be made.

**30. Lac Industry.**—India holds a very prominent place in the supply of this product and this province has great possibilities which have not yet been adequately tackled. Industrially lac is coming more and more into prominence, and although to a great extent the trade depression and the substitutes have affected this industry, yet if we can take to exploiting the possibilities of lac, it is one which will lend itself to considerable improvement.

Formerly, lac was used as filling for gold and silver ornaments but later there was a very large export trade amounting to nearly three lakhs of maunds when the price of lac reached a peak, but subsequently it has gone down considerably. At the present time, excepting for collection of natural deposits there is not very much done on a scientific basis for producing lac. This can be taken up, as it forms an important ingredient of polishes and varnishes.

Lac culture can form a very good occupation for the people living in the neighbourhood of the forest. Lac insects themselves use as host trees—Palas, Ber and Kusum. These trees are not of much use in other ways.

The skill that is required is very little. Village people can work the collected lac into shellac in their own cottages, men and women working together to form a unit for production. The equipment that is needed is very simple and can be made by the villagers themselves. With the spread of the use of electricity lac can be used in manufacturing of insulators and other electrical accessories. Therefore, its commercial possibilities are great. As things stand, the forest dues and taxes amount to over 40 per cent of the cost of production. Here again the industry, because it reaches down to the unsophisticated people, requires a considerable amount of organisation from this Department.

There is a large amount of bamboo and bamboo work going on here. There is no reason why some kind of lacquer work should not be started.



In addition to other commercial uses this will give to the industry an artistic touch to draw in people who are so inclined.

The daily earnings of people collecting lac is only about two annas. As things are at present we understand a great deal of damage is done by the lac being collected before it reaches maturity resulting in very low prices because people have not the economic stability to wait till the lac matures. These are damages that are caused owing to conditions which can be easily controlled. This industry stands in need of immediate attention as the chances are that it will soon be dying out.

Foreign countries which import lac use it as an ingredient in the making of gramophone records and all manner of articles as bleached lac, sealing wax, moulding compositions, etc.

If the sal tree which is found in abundance in the forests of this province can be exploited for the production of resinous materials, then the use of lac can be extended for the production of paints, etc.

Even now a certain amount of the crude lac is used in making bangles.

If the Industries Department could organise the production of lac, we have no doubt that it will form a very important industry of the province in future.

**31. Bamboo.**—Bamboo provides the raw material for a very large number of articles manufactured by hand by people who have little or no capital. This material again like most others is very heavily taxed at the very source. The royalty alone is several times the income of the bamboo-maker, while to add to this, the railways put up freight rates which work out to over 150 per cent of the cost of production and 250 per cent of the profits that the villager gets. These are conditions which require to be remedied as early as possible. Railways are meant for helping local production, and they should not stand in the way, even if they cannot help in the development of industry; but as things are now, improvements of the industries in the villages do not get the attention of the powers that be, with the result that ultimately they are crushed to death. As far as the equipment is concerned, it costs next to nothing. The labour in some of the articles is highly skilled and yet the return the bamboo workers get is very low, being barely enough to make both ends meet. Because of their poverty they are not even able to buy the stock directly from the forest but they buy them from stockists in the bazaars, who charge them also a higher price than they need have to pay if they went to the forest themselves.

The collieries are getting a large number of baskets from outside the province. If the Basods who do bamboo work can be organised to supply these, it would be a good industry with a good steady market. The collieries pay for these baskets brought from outside about Rs. 10 per hundred after these baskets have paid railway freight of about five rupees per hundred. We understand the cost price of imported basket is in the neighbourhood of three rupees per hundred. Therefore, this industry, if properly organised, will be able to supply the collieries at a very much lower price and yet have a fair margin for itself.

As yet, nothing has been done in this province to prepare bamboo pulp for paper-making.

This province does not grow very good canes but it does grow a few species of reeds which can be used much in the same way as canes for making chairs, etc. Because these lack the finish that Singapore canes have, these chairs do not find a good market. With the development of lac industry we should be able to produce sprays which give a beautiful surface to these reeds. If reed chairs are given such a finish by spraying, there would be a good market for them.

**32. Match-manufacture.**—The Central Provinces forests are full of raw materials which can be used for match-making, such as Salai and Semul trees. There are only three privately owned match-making factories but there is no effort made in this direction by the Government to supply our needs in matches.

Apart from the wood available, this province is exporting very large quantities of bone, which can be used in the preparation of phosphorus. Bones form the principal source for obtaining this chemical, therefore, if its manufacture is taken up as a key industry, we shall be able to obtain an ingredient of the needed composition.

Although a certain amount of protection has been given by the Government of India, for this industry, it is not possible to develop this industry on a cottage basis because the concessions that are given are practicable only to factories and organised units. As we have pointed out in connection with the drawback of salt duties on salt used for industrial purposes, the excise rules in the manufacture of matches also operate only to lighten the burden of much larger units. As far as cottage units are concerned, there is no concession available in practice. Matches can easily be manufactured on a cottage basis and compete with even the imported foreign variety commercially, provided it is given exemption from excise. In May last the Central Provinces Government had asked the All-India Village Industries Association to train students in match-making. Technically the Association was prepared to take it up, but commercially until this excise policy of the Central Government was changed it was not possible to launch on this industry.

With the exception of the necessary fire proof building, the expenses connected with the manufacturing process itself, are within the means of the villagers. Of course, if the walls are built of mud and the roof is tiled it may be possible to bring even the building in line with the village hut.

This industry has been taken up on a cottage basis by the Khadi Pratisthan at Calcutta and the Government there has given the licence to manufacture matches, but the difficulty is for the cottage units to be able to obtain these concessions on their own merits. As this Government itself recognises that this industry "will be a great boon to the people of not only this province but also Bombay and Madras", we hope that immediate steps will be taken to get the necessary permission and alterations in rules to make this possible. It appears as though even the Central Government finds itself helpless against the inroads made into this industry by Swedish concerns, which have crushed both Japanese and Belgian competition. In our own country this industry has started and has progressed considerably in some parts. It seems to us that the Central Provinces have very great

chances of taking a leading part in this industry if it could be organised on a cottage basis giving the industry the needed protection.

**33. Bidi-making.**—Bidi manufacture is a very lucrative but a harmful industry in this province. The Government auctions its right to collect tendu leaves. There are certain local taxes on these and the industry is organised by merchants who do a thriving trade in these. Naturally, as other industries are not available to those who are willing to work, this industry attracts labour at very low rates considering the subsistence level of wages. At all events they are able to make two and a half annas to three annas a day, which, as wages go in the villages today, is high. There is not much tobacco grown in this province excepting a little in Berar, a good deal of it is imported from Gujrat and Nipani in Belgaum.

The habit of smoking bidis is spreading rapidly. The tobacco habit is one which does not deserve the least Government support, and therefore we have no recommendations to make. Of course, Government has taken steps to introduce prohibition in various districts. This is also a habit-forming industry that exploits the tendency in human beings to become addicts to certain habits which ensures a steady market and freedom from fluctuation of demand. In a poor country where even subsistence is hard to obtain encouraging habit-forming articles is to allure the ill-nourished people to part with that which is life for that which is harmful. Because habits are inelastic consumption based on it should not be allowed to reach down from the comfort standard to that of necessities.

**34. Miscellaneous—Kunkum.**—In a few villages we found people busy preparing kunkum for sending outside the province, especially to Bombay and places on the west coast. They used turmeric and some other local products.

**Rusa oil.**—In Ellichpur and Betul and one or two other places rusa oil was prepared from *Tikadi* grass by a very crude process. This was at one time a flourishing industry, when the prices were very high, but the distillation of this oil requires cheap fuel and as prices of fuel went up, this industry has gone down.

Similarly, in the Pagara jagir the bark of menda trees is used as an ingredient in the making of *udbattis*. It would appear also that *udbatti*-making would form a good industry in these forest areas.

**Marble.**—Semi-precious stones are found in Jubbulpore district which abounds in marble and quarries of red ochre, steatite, iron ore, etc.

**Coal.**—The Central Provinces occupies the third place in the production of coal in India.

**Iron Ore.**—We are told that the ore available in the neighbourhood of Jubbulpore produced steel which was superior to the imported metal. Even now this art is known, though the furnaces that were working have almost disappeared.

Since industries connected with the exploitation of mineral and forest resources will fall into the next stage of our survey, we shall not deal with these industries exhaustively at present.

**NOTE.**—In regard to the figures given above, we have to remind ourselves that these figures were obtained during the course of conversations and they are not intended to be perfectly accurate but we are satisfied they indicate the general conditions and things, because they have been borne out by statements from several districts. In some cases we have worked out the percentages on these figures only to show us the trend of the state of things we were discussing.

J. C. KUMARAPPA, *Chairman.*

CHATURBHUJ BHAI JASANI.

V. V. SUBHEDAR.

K. P. GHIARA.

R. N. JHA.

\*A. N. KAPPANNA.

WALTER DUTT.

C. C. DESAI.

S. ITTYERAH.

E. R. MAHAJANI.

\*K. P. SAGREIYA.

\*R. S. THAKUR, *Secretary.*

*Dated the 17th March 1939.*

\*Subject to my note appended herewith.

## NOTE BY DR. R. S. THAKUR

Nobody will be happier than I if this province could maintain itself successfully and stand *vis-a-vis* against the rest of the country and the other parts of the world by adopting methods of production on a cottage basis. These were efficient in their own way before the Industrial Revolution and served us well. Did not also other countries follow similar methods of production at that time?

The rural population would not have been so badly off as it is to-day but for the inability of the country to adapt itself to changed conditions after the Industrial Revolution and development of modern means of transport. For this the Government must bear its share of the blame. Again, the main economic problem before the country is the rapid increase of population and any solution of this must be based on trying to increase our *planned production* at a higher rate than the population.

The changes brought about by the progress of science, engineering and chemical engineering, by the increasing use of modern means of communication and transport, by the trade relations between the different countries and their implications, have been very far reaching and have transformed the Middle Ages to the present age. The lack of strength in our country to defend its economic policy against the rest of the world armed to teeth and the events in China and elsewhere have also to be given their due place in our considerations. Hence the world is to be taken as it is organized to-day and not as what one would like it to be. So far as this province is concerned, the power of the Local Government is limited in many respects. It would be idle to ignore that it has no control over, nor even a voice in, the framing of railway freight, currency, tariff and taxation policies, the significance of which needs no repetition here.

The policy and schemes should, therefore, be such that they can be attempted under the existing circumstances without waiting for the foregoing desiderata to be fulfilled.

The purpose of this survey should be to collect relevant, accurate and unbiassed information and statistics in order to frame a correct policy of industrial planning and not necessarily to support any pre-conceived notions and policy already fixed. This information should be available to the Government, to entrepreneurs, to those who are concerned or interested in the industrial development of the province and to "students" who wish to advocate any particular policy from its study. Among other things, this information will enable us to divide our needs into those which should be met by production within the province and those which are of all-India importance, the latter being of significance for national planning when it comes about. Knowing the present and estimated needs of the province, the decision of the question whether the goods to be supplied from provincial production should be turned out in modern factories or in cottages should depend on the nature of the commodity and other circumstances. For certain things, individuality of design is necessary; for others uniformity. This is

one of the grounds for decision for a thing to be produced on a large scale or in a cottage.

It cannot be accepted that factory production or private enterprise should always be discouraged or even suppressed for the encouragement of cottage industries at any cost. Whenever it is possible to develop a cottage industry economically, it should certainly be done. But this requires more thorough investigation into the economy of various such industries than has been done during the present survey.

The province produces raw materials greatly in excess of its requirements and this will have to be exported in one form or another. The policy of not allowing raw materials of this province to leave the province until they have reached the consumption stage would have been quite satisfactory, if it could be assured that these things would find a market outside at the consumption stage, specially when produced by cottage industries. To prevent the export of raw materials, like cotton, lac, oil-seeds, etc., without regard to existing conditions will mean utter ruin to the producers of raw materials. Internal demand will not be able to keep up prices even to the present level. It is difficult to agree that the country has suffered under the present conditions by the introduction of commercial crops like cotton, jute, oil-seeds, etc.

In the early stages of our industrial development, the necessary machinery will have to be imported. It is, however, a *sine qua non* to this that attempts should be made without delay to manufacture machinery in the country. The engineering skill should be utilized and further developed, as in addition to making machinery for industrial purposes, it will forge our weapons of defence.

It is obvious that the goods produced should be such that they can find a ready market in the province and that the production is so adjusted that it is not in considerable excess of the requirements of the province, unless on account of special facilities they could be sold in other parts of the country. The province should not depend for the prosperity of its industries on an uncertain outside market; thus will it be able to avoid the fate which is befalling Lancashire.

*Village Industries.*—In view of the improved communication between the villages and the towns, the influx of foreign goods into the interior has been greatly facilitated and will continue to be on the increase as time passes, on account of the greater contact of the rural population with the townspeople and of its changing tastes. To attempt to force the villagers to consume what is produced in the village in preference to what is produced elsewhere will not only be resented by the villagers but may involve the province in conflict with other provinces and other countries. If this policy is sound and is followed all over the country, tariff barriers will come up not only between different provinces but also between different districts of the same province, nay, between different villages in the same district. Nothing worse can be wished for India even by her enemies.

To make villages self-sufficient is neither feasible on account of the modern advancements nor is it an economic proposition. The aim should, therefore, be to provide some auxiliary work to the farmer and his family during the slack period which would enable him to turn out goods that are ordinarily required in the family or that would add to his income by selling them.

Favourable marketing facilities for the sale of agricultural and dairy produce should be offered to the villagers, though it may mean some expense to the Government. Left to the individual or to private enterprise, it will always work to the disadvantage of the farmer.

The dream to convert agricultural villages into industrial hamlets, the products of which would not only meet the needs of the villagers but also those of the townspeople, thus giving an added source of income to the agriculturists does not seem to be a realistic one, as it ignores the present trends of production and distribution. By all means improve the agricultural and dairy produce in quality and quantity and make the dairy industry an indispensable or even compulsory auxiliary to farming to provide against lean years. You can even give the work of assembling of parts required in the making of any article to the village, the parts themselves having been turned out in an urban factory or any type of work which requires individual attention as hand-painting, carving, or the industrial arts which require great care and craftsmanship. It is necessary that the other industries are not hampered by Government with a mistaken belief that it will help the cottage industries of the villages. Such action will destroy what little we have without helping anything more to grow.

I think that the occupations followed in a village should be such as would suit its environments. These should be mainly agricultural, pastoral and sylvan—

- (1) Raising of crops.
- (2) Preparation of manure for the fields. Making of *bunds* or embankments round the fields.
- (3) Cultivation of fruit trees and vegetables.

- (4) Growing of fodder for the cattle.
- (5) Rearing of sheep and goats for milk, wool, and for supply to the slaughter-houses.
- (6) Poultry farming.
- (7) Dairy farming including the production of milk, butter and ghee. Breeding of better type of cows, buffaloes, bullocks.
- (8) Pisciculture and apiculture.
- (9) Milling of corn.
- (10) Sawing of wood; making of charcoal; planting of trees to supply fuel-wood to stop the use of dung cakes as fuel.
- (11) Cultivation, collection and working up of forest produce of industrial or economic value.
- (12) Carting or transporting of produce from the villages or forests to market places.
- (13) Production of any hand-made goods for which the village is particularly suited.

In addition to the above, certain crafts may be taught to the inhabitants of the village but this should be only a secondary source of their income, the principal part coming from agricultural produce.

There can be no doubt that statistical analysis of our present position in regard to our resources, their potentialities and our present and future needs will help us considerably in basing a scheme of planned production on facts as revealed by the survey rather than on "what we think". I consider it, therefore, premature to make recommendations at this stage. Similarly, the considerations about the re-organization of the Department of Industries could be deferred till we are in a position to define its functions and relations with regard to all classes of industries, viz., large scale, semi-large scale and cottage.

R. S. THAKUR,  
Member—Secretary,  
Industrial Survey Committee,  
Central Provinces and Berar.

## NOTE BY MR. K. P. SAGREIYA

**General Observations.**—I do not profess to be an economist, but as a person of average education I have given a certain amount of thought to economic problems. My observations on the economic portions of the report should, therefore, be taken as subject to these limitations.

I find myself unable to subscribe to the economic doctrines that form the basis of the report. I believe that it is an entirely wrong approach to the problem, and feel that some of the conclusions have been influenced more by sentiment than by logic.

In my opinion the wholesale condemnation of machinery is unjustified. Mechanised production is a modern phenomenon. In the West it has superseded the old cottage industries, whose decay is not peculiar to our country. In the transitional period, from the cottage to the factory stage of production, there has been no doubt a certain amount of misery. No country has escaped this 'necessary evil' of industrialisation.

The proper policy is not to discourage mechanisation—because India alone among the nations of the world cannot afford to remain static or mediæval—but the formulation of a proper industrial plan by which friction and misery during the transition period can be reduced to a minimum.

It is not altogether correct to assert that machinery causes unemployment. On the contrary, in a large number of cases, it has opened wider fields for the labourer to earn a good wage. In the case of a new industry, like film production, for instance, Society actually gains by the increased scope for employment not only in the making of films but in other ancillary occupations also. Besides, machines increase the efficiency of the labourer and enable him to earn a higher wage with less effort.

The report appears to disapprove of international trade and advocate pure economic nationalism, which I understand many leading economists regard as responsible for retarding industrial recovery after the last economic crisis. As imports are paid for mostly by exports and as India needs certain essential imports, I do not see how it can ever achieve economic self-sufficiency. This is not to suggest that we should not exploit our abundant natural resources to the fullest possible extent. But I believe there is good authority for holding that economic nationalism is unsound in theory, and when carried to excess lowers the standard of living, as has happened in Italy and Germany. If this is correct, it seems suicidal to attempt to make the village an autonomous economic unit.

Even an advocate of pure economic nationalism will not perhaps object to the import of machinery in the early stages of development.\* The money spent in the purchase and upkeep of foreign machinery is not so much money taken from the Indian producer without an adequate return, because the machines are used as adjuncts of production and their cost is more than offset by the benefits derived from them, both in the quality of goods produced and in the shape of higher returns on the capital invested.

I believe that the place of cottage industries in a planned economy for India is to provide subsidiary occupations to the underemployed peasantry and not to displace mechanised industries which can supply the basic needs at a cheaper cost of human labour and material. If this view is accepted, our efforts should be directed not towards reviving those industries, whose decay is due to mechanisation but towards fostering occupations which can be justified on purely economic considerations.

**Department of Industries.**—The general observations in the report that '*as it is organized today, the department is not equipped to direct industries; it is nothing but a glorified inspectorate, etc.*' come as a surprise to me, but I refrain from commenting on these observations because I feel that as they have been endorsed by the Director of Industries himself, my views may be considered as uncalled for.

**Village Survey and Procedure.**—For the purposes of survey of economic conditions, villages were not selected on any ascertainable principles. Therefore, it is not possible to say how far the results of the survey can be considered to be a true index of the conditions of the rural population of the province. Nor is it possible to accept the results obtained by inexperienced and untrained investigators as even an approximation to the true state of affairs. For instance, the report asserts that the *per capita* income is Rs. 12 per annum. The most pessimistic estimate arrived at by trained economists is about Rs. 50. In the absence of reliable evidence to the contrary it is difficult to accept such a low figure of Rs. 12.

The first meeting of the Committee was held to draw up a questionnaire for the preliminary village survey referred to in the previous paragraph and to discuss the arrangements for collecting information. After this information had been collected, as far as I am aware, none of the members were given the opportunity of examining it. Instead, at the second meeting of the Committee a draft report, prepared by the Chairman and circulated to members just a day

... until a country is already industrialised to a considerable extent it cannot easily produce for itself the instruments required for its industrialisation, however abstinent its citizens are prepared to be. It must, unless the pace of growth is to be extraordinarily slow and its method extraordinarily uneconomic, at least begin by acquiring from more advanced countries, which possess the technique of making such things, a considerable quantity of the more complicated instruments of production which it is setting out to install. Even if it proposes to make its own machinery, it must begin by importing foreign machine-making machinery in order to get a start. Where the necessary imports cannot be acquired on loan, by the investment of foreign capital, they will have to be paid for by exports of such goods as the country has to offer. These will be, in such a case, mainly raw materials and foodstuffs; and it will be possible to speed up the pace of industrialisation only by either exporting foodstuffs which are badly wanted at home, or diverting labour from producing foodstuffs to producing raw materials for export, or of course by combining both methods."

before the meeting, was discussed. As members desired that more time should be given to them to study the report, its adoption was deferred till the next meeting. At the next meeting the report was slightly amended, though the frame work has remained unchanged. I was prevented from attending this meeting; therefore, I sent a short note showing what modifications I would like to be made. As all the proposals made by me have not been incorporated in the final report I am signing it subject to this note.

**Specific Observations and Recommendations.**—As one of the Group Leaders I was entrusted with the survey of typical 'forest villages.' Besides the replies to the questionnaire, I have submitted a general note based on the information collected by me not only during the actual survey but also in the course of my work as a forest officer. This note contains my recommendations for the better utilization of some of our forest resources through cottage industries, and will, I presume, be published at a later stage. I therefore confine myself now to correcting certain misleading statements appearing in the final report about the policy pursued by the Forest Department in regard to the supply of firewood and provision of grazing facilities.

The report accuses the Forest Department of charging prohibitive rates for the supply of firewood. It has not been realized that in certain areas head-loads of firewood can be removed free and in other areas only a nominal charge of one or two pice per head-load is levied. This I venture to suggest is anything but an 'exaction.' The royalty charged is a small fraction of the transport cost and a still smaller fraction of the cost of production of the commodities mentioned in paragraphs 6 and 9. If for instances in a particular village the potter cannot pay even this infinitely small proportion, then this industry in that locality is not economically justified.

As regards the provision of grazing facilities the report asserts that *the one great difficulty the dairy farmer finds is of grazing lands* and therefore recommends that *Government should find ways and means of allotting much greater area for grazing lands at reasonable rates*, without which it is impossible to expect healthy cattle.

These observations and recommendations are based on incomplete study. Already 90 per cent of the area of reserved forests is open to grazing and the remaining area has to be closed in rotation in the interest of regeneration of forests and for the improvement of pasture. The rates charged for agricultural cattle are nominal and are very much lower than those charged by owners of private grazing grounds. We cannot usefully compare the area available per animal in the province with the figures for other countries like the U. S. A., New Zealand or Japan without at the same time taking into consideration the total area and the proportion of cattle and human population. Even if the entire province were converted into a pasture and no land reserved for cultivation, forests or habitation, the incidence of grazing will still be heavier than one animal for every

five acres! Actually, on an average, only two acres of very poor pasture per animal are available, and there is no other area which could be allotted for the purpose. In certain easily accessible areas the incidence is as heavy as four animals to an acre.

The number of cattle is far in excess of the optimum number necessary for agricultural work and for supplying milk, etc., provided they are properly nourished. The throwing open of larger areas of reserved forests or reducing the existing low rates will not in any way ease the situation. This will only encourage the keeping of larger herds of uneconomic cattle and thus make the problem more acute. The weeding out of the inefficient live-stock, the improvement of the breed and the extension of stall feeding to supplement grazing are the obvious requirements. One method of eliminating the surplus cattle is to gradually increase the grazing rates for them, keeping the rates for the essential cattle low.

When it is realised—

- (1) that there are as many as thirteen million cattle in the province (area 98,500 square miles; population 15 million) and a very considerable number of them underfed and inefficient, the retention of which will be uneconomical if the market rates were to be charged for grazing;
- (2) that as the private grazing grounds deteriorate the cattle of the province must increasingly depend for grazing and for cut grass on the reserved forests;
- (3) that the minimum area under forest considered absolutely necessary for a progressing country is 20 per cent, while barely 10 per cent is actually tree clad in the province and that it does not carry the optimum growing stock on account of grazing;
- (4) that there are nearly 8,000 square miles of grazing grounds in the reserved forests which are being licked bare and at best serve as exercising grounds for the cattle,

and when it is further realised that for the improvement of the pastures and the breed of cattle, lakhs of rupees will be necessary, which the Government can ill-afford to raise by direct taxation, the enormity of the problem and the force of my argument will become obvious.

It is for these reasons that I do not agree with the suggestion that for the betterment of our live-stock greater area should be made available for grazing. I have instead suggested a more practical and humane remedy of discouraging the keeping of surplus and useless cattle by gradually stiffening the rate, and then utilising the extra revenue for increasing the fodder yield and improving the breed of our cattle.

K. P. SAGREIYA,

Member, Industrial Survey Committee,  
Central Provinces and Berar.

NAGPUR:

The 30th March 1939.

## NOTE BY Dr. A. N. KAPPANNA

The draft report, Part I, Volume I, was written by the Chairman after a whirlwind survey of a number of villages by parties of college students headed by group leaders. The Chairman made it clear during our discussions that the introductory chapters laid down the principles which would govern the entire work entrusted to us. A few alterations were made in the draft while it was discussed for acceptance and the other members of the Committee felt that the report did not require any further additions or alterations. I was given the option of appending a note on the points where I differed from the contents of the report on general considerations.

The business of the Committee is indicated in the terms of reference. I interpret the terms of reference to mean, in a broad sense, that the Committee after taking stock of the industrial situation in the province, should suggest ways and means of improving the position. The province has abundant natural resources, coal power and man power, and yet is very poor. While a few large scale industries have come into existence, the village industries have all deteriorated leaving the villager, today, in a miserable plight. The report correlates the increase in poverty in the country and the decay of village industries with the growth of large scale industries, increase in the use of power-driven machinery for purposes other than agriculture and increased facilities of transport. This is true to a great extent, but there are other and not less important causes for this poverty and if these are not taken into account simultaneously with those enumerated in the report, the conclusions at which we arrive and the remedies to be suggested are bound to be somewhat different.

The development of heavy industries is a matter that has not yet been taken up for consideration by the Committee. I shall, therefore, confine myself in this note to what I consider to be the correct way of looking at the problem of the village, viz., the man, industries, unemployment, and growth of wealth in the village.

Ninety per cent of the population in the province live in villages and agriculture has been the main industry with which other industrial activities in the villages are associated. Agriculture in this country has always paid and will always pay. A quarter of a century ago the agriculturist in this province was comparatively rich. Today he is in a sad plight. The Great War brought about a tremendous increase in the prices of agricultural products and few, if any, failed to benefit by it. The old practice of storing a little of the produce for the rainy day, and seed for the next year was abandoned to secure all the money that could be had by selling it. Larger amounts of money that came to be handled by the villager during the years of boom brought about a dramatic change in his outlook and habits and he became extravagant. In a

large number of cases, the agriculturist began even to employ hired labour on the land where such was not necessary before (the members of the family having been enough for the work). Prices were such that even this change did not materially affect his income from the land. This period of prosperity, it should be mentioned, coincides in this province with the period of maximum litigation, prosperity of the legal profession and maximum excise revenue to the Government. Litigation continued long after the boom but expenditure on it was incurred on the same scale as before. This and the increased expenditure on social functions like marriages cast the villager, who did not realise that a reaction in prices had set in, into the deplorable state of indebtedness when the Great Depression came. Takavi loans, Co-operative Credit Societies, Debt Conciliation Boards have been, consequently, of little avail in bringing relief to the agriculturist whose ignorance of the state of world affairs, limited outlook owing to want of education, absence of a sense of thrift, want of initiative and ability to adapt himself to varying conditions have been the prime causes, among others, in throwing him into his present position.

Some years ago Dr. Harold Mann "was struck by the significant absence from a Bombay village of youths between the ages of 14 and 20". This was due to their migration to neighbouring towns either for education or in search of employment. I have made detailed enquiries about the state of affairs in Central Provinces and I have been informed by a large number of our students who took part in the survey and others that that is not so in Berar and only partly true in the case of the northern districts. This fact, taken together with the large increase, 25-30 per cent, in the rural population during the past quarter century should mean, naturally, a definite fall in the average income per head in the village. Population has increased but area of land under cultivation has remained practically the same with this important difference that owing to continuous deprivation of its treasures, the land, today, yields less per acre than before. The extent and nature of unemployment becomes appallingly clear when we consider the existence of about 30 per cent superfluous population together with the fact that one person in every twenty-five or thirty in the country belongs to the category of beggars and vagrants, the raw material of crime and disease.

There is scope for employment in the province, though it may not be described as ample, but it is a different matter if everybody wants to work in the village only, constituted as it is today. I will give just one instance. It has been pointed out in the report that the village carpenter, although he is better off than others, has not got enough of work. For an artisan a very natural thing to do would be to migrate to a place where

ne can get more work and better wages. In the bigger towns of Central Provinces, a carpenter of average ability earns about twelve annas while a clever carpenter earns as much as Rs. 1-8-0 a day. There are many carpenters in the villages who live in a miserable way, but they would not move to the towns where work is available. We find in all the bigger towns of Central Provinces large numbers of Punjabi carpenters doing flourishing business. Most of the domestic servants are from outside the province (these constitute about 1 per cent of the total population). Most of the masons and coolies engaged in the construction of buildings are from outside the province. In certain ranks of Government service, e.g., the police constabulary, the employees are from outside the province. One would almost feel tempted to infer from all this that the Central Provinces villager has such a high standard of living that he looks down upon these occupations and does not consider pursuing them worth his while. The fact is that the average villager is lazy and apathetic to the extent of being indifferent to his own interests. Today, when his credit has all run out, he looks in all directions for external help.

The average villager is an excellent worker when his work is supervised and properly directed and this has to be done if anything more is to be expected from the village. Tendering him advice, doing propaganda on his behalf, passing laws more favourable to his industries will all go the same way as the establishment of co-operative societies and debt conciliation boards in the present state of the villager.

It is well to realise that the villager, today, lives in the old country but in a new world atmosphere, an atmosphere that has changed rapidly and radically owing to disturbances created by the advent of mechanical power and its application to industry. It is now a period of struggle for adjustment and the future of industry in our country will entirely depend upon whether we equip the villager with the technique necessary to enable him to live in equilibrium with the new atmosphere or we try to do the impossible in attempting to clear the atmosphere of the disturbances referred to above.

I do not suggest that no efforts should be made to ameliorate the position of the village worker and improve his industries, until he is sufficiently educated to understand the implications of a daily worsening situation. On the contrary, I agree that the suggestions for improvement embodied in the report are such that many of them, being fairly widely known, are likely, if given effect to, to improve the income per capita, and find employment for some more people or adequate employment for those already in industry. These measures, I contend, are at best palliatives. While the village and its industries are believed to have been thriving in good old days, when people had no facilities for quick transport, all that we can visualise today by trying to simulate those conditions either in their entirety or with improvements is a village of the same type. The village, in our country, will continue to

function as an important entity for all time to come, whatever changes in its conditions and appearance may take place, and if any suggestions are to be made for the improvement of its industries, I plead, they have to be made in consonance with the trends of advancing civilization.

In spite of the fact that India exports a certain proportion of its food produce it is well known that the millions in our country could usefully consume much larger quantities of food materials than we produce at present. There may be unbalanced distribution of cultivated area over different crops but surely there is no over-production. People engaged in agricultural research in this country are realising the importance of finding industrial outlets, for our agricultural produce. There is ample scope for further production of food and other materials, if only the production could be made on right lines. What we need most urgently today is the production of more wealth in our country, if the average income and the standard of life, in a sense not merely economic, are to go up. The production of more wealth, with which only the question of its distribution arises, is inextricably associated with power, whether manual, animal, coal, oil or electricity. If our object is not merely to exist but to develop ourselves into an industrial power, we have to adopt, for our travel in that direction, the methods successfully adopted in other countries which have come to occupy enviable positions in the industrial world. All countries which have advanced to political and economic power have done so through the agency of more and more power, e.g., America and Japan.

I am not suggesting here that capitalists who can afford to buy power-driven machinery should be encouraged and benefited at the cost of the worker in a scheme of development where power is employed on a large scale. The report very advisedly advocates State control, whether grain elevators or other clearing houses in villages or key industries have to be established. It is increasingly realised that without State aid, control and guidance nothing very much can really be done by way of a general elevation in the industrial position of the country. If this position is clearly accepted, I would suggest that the State should take up the industrialisation of the country with village construction as the first plank in its programme on a basis and a scale not envisaged in the report.

Central Provinces and Berar has 14.2 million acres of land belonging to the category of culturable waste other than fallow. Could this not be utilised for production with the help of the surplus 30 per cent of the population, who today, are more parasites on overburdened land? I assume that the State undertakes the work, that it has the necessary skill and resources at its disposal. It is absolutely possible, by the joint efforts of the departments of Forest, Agriculture and Industries, to select sites for the construction of new industrial villages. The construction of these new villages will be based on the best possible plans, varying in



accordance with the special facilities that different localities may offer for particular crops and industries, consideration being paid to the inclusion of the best features that should characterise all phases of village industry. These villages should serve as models for the rest of the country both in the methods of intensive production as well as in the handling and processing of raw materials. It is a fact that it costs less to construct a new house than to repair a dilapidated one. I suggest the construction of new villages because there are both scope and necessity for them. It will take a few years for a plan like this to materialise and yield results and profits, but I have no doubt about the success of the plan under strict State control. Since the State owns all the property in such villages, it may be pointed out that the people recruited to work and live in them would be just in the same position as labourers or factory workers. Even so, they would be paid assured and good wages in accordance with a definite standard, but it is possible to work out a scheme whereby in the course of a certain number of years the property may be made to pass gradually into the hands of the workers by suitable financial adjustments as in insurance schemes. These will be the best centres for the practice of principles of village self-government and co-operative production and sharing of wealth.

Simultaneous efforts under State control in the existing villages should be made towards planned production on a large scale, the land owner and the Government entering into a kind of partnership in the entire scheme. Unless this or something like this is undertaken and the State directs the entire work of its working population for some years, and educates them in the proper methods of production and life, I am unable to see any early solution of our industrial problem.

This type of effort would require more funds than any other scheme ever undertaken by the State in this country, except probably for financing war measures. It requires, of course, more courage and skill to fight and root out poverty, than to carry on a war against another country. But the money invested in this scheme will not only remain and circulate in the country, but could all be recovered by the State in the course of years with interest.

In all circumstances, it should be possible to start work in a certain number of centres every year, and the scheme progressively put into operation over the whole province.

I have merely stated the solution, as I understand it, without going into details, to indicate where I differ from the general outlook and considerations of the report. The working out of the details, however, I am sure, is not a difficult matter.

The extreme low level to which our country has sunk requires drastic measures to be adopted, if definite advances are to be made, and we should take, as emphasised in various parts of the report, a "long range" view of the matter. To many, a scheme like this, may strike as bordering on the practice of a type of tyranny, but situated as our rural population are, we are constantly reminded of the famous words of Mazzini "Humanity never does anything good except under compulsion".

A. N. KAPPANNA,  
Member, Industrial Survey,  
Committee,  
Central Provinces and Berar.

APPENDIX A

Questionnaire for Village Survey

INSTRUCTIONS TO LEADERS

I. A district or an area of that type will be allotted to each leader of the group, with about ten helpers, to be called surveyors selected as far as possible from colleges or educational institutions.

II. The Deputy Commissioner of the respective districts have been requested to suggest suitable villages for the survey. Therefore, the leaders should get themselves in touch with these officials on arrival and get their help during their stay under their jurisdiction. Where possible, some one of the district officials will be detailed off to be with the party.

III. The party will disperse in groups of two villages allotted to them and devote not more than two days to a village.

IV. They will obtain what food and shelter the villagers can afford to offer. They should not allow themselves to be entertained, but should be content with sharing the ordinary fare of the people. This is an important part of the scheme and so should be fully observed.

V. Where the chosen villages are in close proximity, the helpers may meet their group leader in the evenings; if not, they should get into touch with him whenever possible. They should all gather together on the 6th February at an appointed place and submit their work to the leader.

VI. The leaders should submit their written report to the Chairman by the 15th February 1939

VII. As at present arranged, the Committee will meet on the 1st March 1939 to consider the preliminary report.

Group Leader..... Surveyor.....

Name..... Address.....

.....

Name of village..... district.....

Names of persons giving information—

- (1)
- (2)
- (3)
- (4)
- (5)

I.—GENERAL INFORMATION

Population of the village.....  
Occupations..... Number of literate persons.....

- Area under cultivation (in acres)—
- (i) Nearest post office— miles.
  - (ii) Nearest hospital— miles.
  - (iii) Nearest school— miles.
  - (iv) Nearest veterinary aid— miles.
  - (v) Nearest trunk road— miles.
  - (vi) Nearest railway station— miles.
  - (vii) Nearest market town— miles.

What is being done with night soil and farm yard manure?

Is there a good water-supply all through the year?

Total revenue and taxes paid to Government/Local Body annually?

Information in regard to any other duties (octroi, excise, etc.) leviable in the village or at the market town.

Popular financial resource (bank, Government or money lender) and rates of interest charged.

General indebtedness per head.

Where do the Harijans live?

Are there any drink or drug addicts in the village?

(Note down your general impression of the village and its home in regard to sanitation, hygiene and economic condition. Go inside some of the houses and see the state of things for yourself. Visit the Harijan quarters.)

II.—AGRICULTURAL

(a) What are the food crops raised? Quantity in maunds; where sold?

(b) What are the money crops? Price? Where are these processed into consumable articles; and in what way? Why cannot these processes be carried out here?

(c) Has there been a change in the crops within the last fifteen years? If so, what are the causes?

(d) Are any payments in kind made to the artisans—carpenter, barber, chamar, blacksmith, etc., and, if so, how much?

(e) What crops are irrigated? Is sufficient water available? What is the source—(canal, river, well, tanks, etc.)? What are the dues payable for water?

(f) What is an average holding in the village?

(g) What fruit trees are grown?

(h) How many palm trees are there, and what uses are they put to?

(i) For what period during the year the people are not busy with agricultural operations?

### III.—INDUSTRIAL

1. What are the industries and occupations commonly carried on in this area?

2. Name of industry?

(a) History: Conditions in the past and present situation. Is there any competition from foreign products by way of substitution? Is there a change in the demand of the people for the product? Have there been improvements in the processes of production in the past few years? What is the finished product used for?

(b) Community or caste engaged in it and number of persons. Skilled and unskilled. Annual earnings of skilled and unskilled.

(c) In what stage of manufacture does the article leave the village? Are there other processes of manufacture to be undergone before the article becomes consumable? If so, why cannot these processes be carried out here?

(d) What is the raw material and where is it obtained from? Is it available for the collecting or has a price or royalty to be paid or is it supplied by merchants? Is there any tax or duty to be paid on the raw material?

(e) Labour: For one working unit how many persons are required, skilled, unskilled and family members?

(f) What is the capital required for equipment? Are the tools complicated or simple? Can these be made locally?

(g) What is the percentage difference between cost and selling price? Does it include commission to middlemen?

(h) Who carries the stock of produce?

(i) What are the finances available—Government loans, moneylenders and merchants?

(j) Is this article capable of being made on a mass scale by machinery? Do the villagers in this place use the product? If so, are the sales out of a surplus or do they sell them for financial considerations?

(k) Where is the market for these goods? Is it merely an exchange market for sending it to other countries or is it a market for consumers?

(l) If the cost of the finished article can be analyzed, give the percentage cost going to raw materials, labour, middlemen, transport, etc.

(m) Is there any tax levied on these articles at the market in the form of octroi duty or other municipal taxes or stall fees? If so, what percentage does this bear to the cost price?

(n) If the demand is increased by better marketing facilities and if the processes of production can be improved, can the prices keep up and can production be proportionately increased?

(o) Is the finished product made available to the consumer in a hygienic and attractive form? Or do the finish of the article leave much to be desired?

(p) Can the raw materials now used in this industry be used for any other purpose?

(q) Are there any subsidiary industries to this arising out of waste materials in the process and by-product?

(r) How long will it require for a person to acquire the art that is required in this industry?

If possible give a short description of the process of manufacture.

(s) Do you know of any one who has made a study of this industry and has carried on any experiments in it? If so, state name and address?

(t) What suggestions have you for increasing facilities in regard to finance, eliminating of middlemen and affording sales facilities?

### IV.—DEAD AND DYING INDUSTRIES

1. Within living memory what industries have been carried on in this area which are either extinct or are languishing? Can you give the reasons for change? Is there any shortage of raw materials or the demand taken up by foreign substitutes or is skilled labour being attracted to other better paying industries? Or is it caused by the introduction of new production? Or has there been any tax or freight rates which have made the industry not paying?

2. How many were occupied in these industries? What were their earnings?

3. Where have the displaced artisans gone? What are the possibilities of revival and improvement? Are you in a position to give further information regard to raw materials, equipment, finances, other particulars in regard to this industry as required under section III (if so, these may be taken down)?

### V.—TRANSPORT

What is the usual method of transport? Are the roads available to the market? Are there tolls or other levies on the road? If the transport is taken up by buses, railways, etc., what were the earnings of cart owners in this business formerly? Is the article to be transported perishable? Or one in which quickness of transport is essential? Who are benefited by the present methods of transport—people within the locality or outside?

### VI.—CONSUMPTION OR DEMAND

1. What articles are imported into the district from outside and from abroad.

2. Can these be produced locally and on cottage basis? Or can satisfactory substitutes be made locally within the price? Can such competing articles from outside be prevented from coming in by means of Governmental measures? Are there greater sales facilities afforded for imported articles?

3. Prepare a list of articles in everyday use in the village which are not produced within the village such as locks, lamps, hinges, bolts, pots, pans, cooking utensils, food products, mats, kamb articles of apparel, knives, ploughs, shoes, ropes, pieces of iron for shoeing bullocks or horses, such like. If any of these are obtained from outside from where and in what state?

4. During the last few years what new articles of daily use have the people got accustomed to? If possible give an estimate of the annual expenditure on such in the village?

## VII.—DIET

1. What are the main articles of diet? (Grain, vegetables, fruit, milk products, etc.) Give their quantities (in their raw state) used for an average meal. Are all these articles obtained locally? If not, from where?

2. Do people know about the nutritive value of different methods of cooking?

3. Are there any oil mills and rice mills in the vicinity? What would you consider a reasonable standard of living should include by way of clothing, shelter, food, education, medical needs and incidentals?

4. Is it possible to have a rough idea of the annual income for an average family in this village?

*Industries on which Information may be obtained.*

- (1) Paddy-husking.
- (2) Flour-grinding.
- (3) Oil-pressing.
- (4) Sugar manufacture and Gur-making.
- (5) Bee-keeping and Honey Production.

- (6) Pottery.
- (7) Glassware and bangles.
- (8) Soap-making.
- (9) Tiles- and Brick-making.
- (10) Cotton Ginning, Carding, Spinning and Weaving.
- (11) Weaving Wool.
- (12) Sheep breeding.
- (13) Carpentry.
- (14) Blacksmithy.
- (15) Sericulture.
- (16) Mat-weaving.
- (17) Rope-making.
- (18) Tanning.
- (19) Disposal of Carcasses.
- (20) Pisciculture.
- (21) Poultry Rearing.
- (22) Dairy Farming.
- (23) Dyes-making.
- (24) Brass and Metal Wares.
- (25) Tools and Implements.
- (26) Toy-making.
- (27) Goldsmithy.
- (28) Paper-making.
- (29) Transport.
- (30) Lac industry.
- (31) Bamboo.
- (32) Match-manufacture.
- (33) Bidi-making.
- (34) Miscellaneous.

## APPENDIX B

## Information regarding villages surveyed

Period of Survey—23rd January to 6th February 1939.

Serial No.	Name of district	Members in charge of the survey parties	No. of students	No. of villages surveyed	Expenses incurred by the group leaders			Population	Revenue
					Ra.	a.	p.		
<b>Nagpur Division</b>									
1	Nagpur	Sjt. J. C. Kumarappa, All-India Village Industries Association.	9	29	59	0	6	112,693 (b)	1,03,076 (b)
2	Chanda	Miss Sarahamma Ittyerah } Smt. Sitadevi Kumarappa.*	13	31	174	4	9	114,789 (b)	1,41,143 (b)
	Sironcha tract	Sjt. Gajanan Naik,* All-India Village Industries Association.	..	7	35	0	9	3,498 (c)	600 (c)
3	Wardha	Sjt. Nathmal Seth,* Commercial Agent, Department of Industries.	10	25	118	6	6 (a)	105,112 (b)	65,590 (b)
4	Chhindwara	Sjt. S. K. Benarji,* I.C.S., Chhindwara.	9	19	70	2	3 (a)	60,615 (b)	9,768 (b)
	Chhindwara (colliery area).	Sjt. K. P. Ghiara, Central Provinces Syndicate.*	4	11	..	..	(d)	9,012 (c)	3,539 (c)
	Seoni Sub-division.	Sjt. Puranchandra Vedalan- kar,* All-India Village Industries Association.	7	24	82	4	3	38,989 (b)	16,607 (b)
5	Betul	Sjt. J. P. Patel,* All-India Village Industries Association.	12	35	122	3	3	27,931 (b)	39,433 (c)
<b>Jubbulpore Division</b>									
6	Jubbulpore	Mr. Walter Dutt, Bar-at-Law, Nagpur.	3	19	43	2	0	166,690 (b)	14,030 (b)
7	Saugor	Sjt. J. K. Atal,* I.C.S., Saugor	20	25	312	13	0 (a)	118,958	24,305 (b)
	Damoh Sub-division.	V. V. Subedar, M.L.A., Saugor.							
8	Mandla	Dr. R. S. Thakur, Nagpur.	11	33	109	8	6 (a)	29,961	21,248 (b)
9	Hoshangabad	Sjt. N. K. Verma,* Department of Industries.	8	27	109	2	0	69,838	33,582 (b)
	Narsinghpur Sub-division.	Professor Y. M. Pathak,* Wasudeo Arts College.	8	22	177	15	3	26,063	21,202 (c)
10	Nimar (Khandwa).	Professor J. S. K. Patel,* Hislop College, Nagpur.	14	19	212	12	9	34,859	57,291 (b)
<b>Chhatisgarh Division</b>									
11	Raipur	Sjt. R. P. Mishra,* Extra-Assistant Commissioner, Raipur.	9	25	108	12	0 (a)	37,489	15,995 (b)
12	Drug	Sjt. C. L. Gupta,* Deputy Director of Industries, Nagpur.	8	24	88	10	3	21,382	18,246 (b)
13	Bilaspur	Sjt. M. B. Manda,* Textile Expert to Government, Central Provinces and Berar.	..	29	..	..	(a)	96,501	39,993 (b)
14	Bhandara	Sjt. A. P. Verkhedkar,* Government Inspector of Factories.	8	29	85	8	6 (a)	109,852 (b)	16,757 (c)
15	Balaghat	Sjt. T. B. Bhatt,* All-India Village Industries Association.	10	49	153	4	0	36,054 (c)	18,281 (c)
<b>Berar Division</b>									
16	Amraoti	Sjt. E. R. Mahajani, Managing Director, Laxmi Oil Mills, Akola.	12	31	..	..	..	106,943 (b)	2,15,663 (b)
17	Akola	Sjt. R. N. Jha, Secretary, Berar Chamber of Commerce, Akola	12	24	..	..	..	73,452	1,00,369 (b)
18	Buldana		11	24	861	6	0	104,066	98,933 (b)
19	Yeotmal Forest villages	Sjt. K. P. Sagreiya, I. F. S., Sylviculturist, Central Provinces and Berar.	9	28	..	..	..	51,783 (b)	51,172 (b)
			..	7	..	..	..	..	..
Total			207	606	3,024	4	6	1,556,530	11,26,823

\* Co-opted members.

(a) Exclusive of the expenses of the group leaders.

(b) Figures not quite complete.

(c) Figures very incomplete.

(d) Borne by the group leader.

(e) Not submitted yet.

## APPENDIX C

*Statement showing the Revenue and Expenditure of the Government of the Central Provinces and Berar (1936-37 accounts).*

	Income (in thousands of Rs.)		Expenditure (in thousands of Rs.)
<i>Heads of Revenue—</i>		<i>Heads of Expenditure—</i>	
Land Revenue ..	2,54,46	Cost of collection of revenue ..	68,29
Provincial Excise ..	63,80	General Administration ..	69,86
Stamps ..	50,22	Administration of Justice ..	27,15
Forest ..	47,64	Jails and Convict Settlement ..	8,88
Registration ..	4,94	Police ..	61,07
Receipts under Motor Vehicles Taxation Act. ..	3,96	Scientific Department ..	14
Other taxes and duties ..	3	Education ..	52,55
Income from Administration ..	20,15	Medical ..	15,19
		Public Health ..	3,67
		Agriculture ..	9,47
		Veterinary ..	5,00
		Co-operation ..	2,52
		Industries ..	2,83
		Miscellaneous ..	1,12
Total ..	<u>4,45,20</u>	Total ..	<u>3,27,74</u>
Irrigation, Debt services, Civil works, Deposits, Advances, Debts, etc. ..	11,453	Irrigation, Debt services, Civil works, Deposits, Advances, Debts, etc. ..	27,706
Opening balance ..	4,780	Closing balance ..	273
Grand Total ..	<u>60,753</u>	Grand Total ..	<u>60,753</u>

## APPENDIX D

Statement showing imports in the Central Provinces and Berar during the years 1936-37 and 1937-38.

Name of article (1)	1st April 1936 to 31st March 1937 (2)	1st April 1937 to 31st March 1938 (3)
Sheep and goats (in number)	.. ..	3,969
	Mds.	Mds.
Bones	.. ..	13,245
Coal and coke	.. ..	8,345,318
Cotton twist and yarn (foreign)	.. ..	5,323
Do. (Indian)	.. ..	65,468
Cotton piece-goods (foreign, in bales)	.. ..	4,207
Do. (foreign, in boxes)	.. ..	5,067
Do. (Indian, in bales)	.. ..	343,822
Do. (Indian, in boxes)	.. ..	4,657
Dyes and tans (myrabolans)	.. ..	6,477
Glass	.. ..	39,324
Grain, pulse and flour (gram)	.. ..	258,857
Do. (jowar and bajra)	.. ..	214,328
Do. (rice with husk)	.. ..	9,945
Do. (rice without husk)	.. ..	131,382
Do. (wheat)	.. ..	566,777
Do. (wheat flour)	.. ..	136,995
Do. (other sorts)	.. ..	448,024
Hemp, Indian and other fibres (excluding jute)	.. ..	5,809
Hides, raw	.. ..	4,484
Skins, raw	.. ..	6,877
Hides and skins, tanned and leather	.. ..	3,473
Gunny bags and cloth	.. ..	349,433
Iron and steel bars, sheets, girders and other commercial forms of iron and steel.	.. ..	690,070
Lac and shellac	.. ..	7,130
Manganese ores	.. ..	20
Oil cakes	.. ..	10,164
Oil (kerosene)	.. ..	1,146,868
Oils (vegetable)	.. ..	375,799
Oil seeds (castor)	.. ..	471
Do. (cotton)	.. ..	4,207
Do. (groundnuts)	.. ..	30,005
Do. (linseed)	.. ..	41,393
Do. (rape and mustard)	.. ..	8,409
Do. (til or jinjili)	.. ..	79,712
Ghee	.. ..	4,267
Sugar	.. ..	1,055,415
Sugar (gur, rab, molasses, jaggery)	.. ..	1,154,820
Tobacco, raw	.. ..	198,37
Wood and timber (teak)	.. ..	8,435
Do. (other timber)	.. ..	372,775
Wood, raw	.. ..	180
Salt	.. ..	2,560,865
Cotton, raw (kapas—unginned cotton)	.. ..	3
Do. (baled and loose ginned cotton)	.. ..	137,705

## APPENDIX D—concl'd.

Statement showing exports in the Central Provinces and Berar during the years  
1936-1937 and 1937-1938

Name of article (1)	1st April 1936 to 31st March 1937 (2)	1st April 1937 to 31st March 1938 (3)
Sheep and goats (in number)	..	23,084
	Mds.	Mds.
Bones	..	226,379
Coal and coke	..	363,45,769
Cotton twist and yarn (foreign)	..	133
Do. (Indian)	..	239,935
Cotton piece-goods (foreign, in bales)	..	435
Do. (foreign, in boxes)	..	16
Do. (Indian, in bales)	..	202,213
Do. (Indian, in boxes)	..	6,953
Dyes and tans (myrabolans)	..	1,189,363
Glass	..	19,497
Grain, pulse, and flour (gram)	..	576,156
Do. (jowar and bajra)	..	256,895
Do. (rice with husk)	..	443,649
Do. (rice without husk)	..	4,699,654
Do. (wheat)	..	1,227,446
Do. (wheat flour)	..	74,959
Do. (other sorts)	..	2,682,806
Hemp, Indian, and other fibres (excluding jute)	..	125,926
Hides, raw	..	53,403
Skins, raw	..	44,963
Hides and skins, tanned and leather	..	5,695
Gunny bags and cloth	..	28,209
Iron and steel bars, sheets, girders and other commercial forms of iron and steel.	..	120,106
Lac and Shellac	..	240,256
Manganese ore	..	20,060,745
Oil cakes	..	757,324
Oil (kerosene)	..	11,716
Oils (vegetable)	..	37,833
Oil seeds (castor)	..	19,464
Do. (cotton)	..	1,142,802
Do. (groundnuts)	..	36,100
Do. (linseed)	..	945,436
Do. (rape and mustard)	..	430,068
Do. (til or jinjili)	..	216,718
Ghee	..	39,306
Salt	..	12,239
Sugar	..	9,163
Sugar (gur, rab, molasses, jaggery)	..	4,106
Tobacco, raw	..	8,624
Wood and timber (teak)	..	351,080
Do. (other timber)	..	2,245,540
Wood, raw	..	543
Cotton, raw (kapas—unginned cotton)	..	..
Do. (baled and loose ginned cotton)	..	..



## APPENDIX E

*Statement showing the area and outturn under different crops (1937).*

Name of crop		Area (in acres)	Outturn (in tons)
Rice	..	5,683,879	1,780,600
Juar	..	3,863,507	1,014,600
Cotton	..	4,088,282*	805,100
Til	..	466,413	37,800
Wheat	..	2,586,237	599,600
Arhar or Tur	..	485,044	85,700
Gram	..	874,366	209,500
Linseed	..	1,097,614	87,800
Sugarcane	..	32,229	50,600
Masur	..	351,660	51,400

\*Includes figures of cotton and juar mixed.