pattern stands out which has been largely determined by the historical development of the various activities in relation to the surface conditions, areas and transport facilities available. From a study of these facts a clear picture of the general distribution of activities within and adjacent to the community centre can be built up.

Side by side with the work of general survey individuals or groups are engaged in the study of each industry or activity. The first thing needed here is a clear, uncoloured account of the industry or activity itself. Such an account would embrace its inception, its raw materials, their source, the transportation systems involved, the conditions under which the raw materials can be purchased and financed, the transfer to the factory, the handling processes through which the material passes, the source of power, the special problems which have to be faced and overcome in connection with its manufacture, the final movement out of the factory, the special problems of marketing the product, the problems of labour and the organisation of the industry or activity as a whole, and finally, the relationship of the industry or activity to the rest of the community organism.

Every activity of a town or city or other business community is capable of being treated in this fashion and embodied in a local industrial survey.

THE MAPS OF THE SURVEY OF INDIA.

N. A. HOLDAWAY, B.Sc.

THE accuracy of the Indian Survey challenges that of the Ordnance Survey of Britain, and its maps are unequalled, for such an area, anywhere else in the world. The Survey of India proper may be said to have begun in 1802, with the measurement of the original base line at Madras. The subsequent longitude determination (1815) was more than two minutes of parallel in error, say two miles, and this was not rectified until 1905. The rectification necessarily rendered the whole of the existing maps obsolete, and the opportunity was taken to lay down a new scheme for the topographical representation of the whole country. The work begun in 1905 is gradually moving towards completion, maps produced since that date being now available for the greater part of the sub-continent, even up to a scale of one inch to the mile. The maps of the Survey of India may be described briefly as follows :—

A.—GEOGRAPHICAL MAPS.

1. *Southern Asia Series* 1/4 M.—These maps will be reduced from the 1/2 M Series mentioned below. No sheets have yet been produced.

2. *Southern Asia Series* 1/2 M (say 32 miles to the inch).—The sheets cover 8° of meridian by 12° of parallel. Political and layered editions are available. The series is designed to cover the whole of Asia south of Lat. 40° N. At present sheets covering India, Persia, Afghanistan and parts of Central Asia are available.

3. *India and Adjacent Countries* 1/M.—The sheets cover 4° of meridian by 4° of parallel, i.e., six sheets represent the same area as one sheet of the previous series. The series is planned to extend over the same region as the Southern Asia Series, and has progressed rather faster than that series. The 1/M series is also published in a binder as the Imperial Atlas of India. Political and layered editions are available. The style of the series (and that of the 1/2 M) includes contours in brown (contour interval not uniform); layer colourings from green through yellow, orange and brown to bright red; permanent snow white, with blue markings for glaciers; main roads in red; railways in black with gauges differentiated, and water forms in blue. A military edition is provided with a mesh to facilitate the use of map co-ordinates.

4. It should be carefully noted that the above series does not correspond with the 1/M *Carte Internationale du Monde*, being different in projection, extent of sheets, contour interval and conventional signs. The Indian Survey, notwithstanding the existence of their own series, have practically finished producing their sheets of the International Map, but the prescribed layer colouring and contour interval do not lend themselves particularly well to the representation of India. There is the advantage, however, of having the country available in fewer sheets.

B.—Topographical Maps.

1. *Degree Sheet Series* (Quarter Inch Scale).—The sheets extend over one degree both of latitude and longitude, and a block of 16 sheets represents the same area as one sheet of the 1/M Series. For example, the area shown on Sheet 64 of the 1/M Series will reappear in this series as 16 sheets numbered 64 A, 64 B, etc. The series has contours in brown at 250 feet V.I., grey hill shading, roads and human settlements in red, water in blue, railways in black. A few sheets have layer colouring.

2. *Half Degree Sheet Series* (Half Inch Scale).—The sheets extend over half a degree of both latitude and longitude, each representing one quarter of the area shown on a sheet of the previous series. For example, Sheet 64 $\frac{A}{N.E.}$ would represent the N.E. quadrant of the area shown on Degree Sheet 64 A. The style of the maps is similar to that of the preceding series, but the contour interval is reduced to 100 feet, and trees and cultivation are represented by green and yellow tints respectively. The maps are not layered.

3. *Quarter Degree Sheet Series* (One Inch Scale).—The sheets extend over a quarter of a degree both of latitude and longitude.

each representing one-sixteenth of the area shown on a sheet of the Degree Series. For example, the area shown on sheet 64 A of the Degree Series will reappear in this series on 16 sheets numbered 64 $\frac{A}{1}$, 64 $\frac{A}{2}$, etc. The style of the maps is the same as that of the Half Inch Scale maps, but the contour interval is 50 feet. Layer colouring is not used.

This series represents the largest scale on which the mapping of the whole of India has been attempted. Local cadastral surveys are carried out under the supervision of Local Governments, and do not come within the purview of the Survey of India.

C.—Miscellaneous Maps.

The Survey publishes maps of the chief towns and cantonments of India on various large scales from three inches to the mile upwards. It also publishes forest maps, manœuvre maps, provincial maps, district maps, outline maps of various areas, and maps of a specialised nature (cotton-growing areas, coalfields, railways, etc.). The railway map of India, revised annually, is a very useful production, distinguishing between the four gauges in use, and possessing numerous large scale insets showing railways in the great towns and in the coalfields area. The Survey also produces general maps of India on various scales, and in layered and political editions. The largest, on a scale of 32 miles to the inch, makes a magnificent wall map. Geological and meteorological maps are *not* published by the Survey of India.

The catalogue of the Survey of India (in two parts) is an elaborate and fully-illustrated production which is almost an atlas in itself. It is available in India from the Map Office, 13, Wood Street, Calcutta (price Re.1); and in England from Stanford's, 30, Charing Cross, S.W.1 (price 2s. 6d.). Students attempting the study of Asia in detail would be well advised to study specimen sheets of some of the chief series of maps. In India maps are available at the before-mentioned Calcutta office, and in most large towns; in England, at Stanford's and the India House, Aldwych, W.C.2. Fellows of the Royal Geographical Society can consult maps of all the regular series at the Society's House. It is impossible here to give details of prices of maps, but, in general, they are rather higher than those of the O.S.

The Fourth National Conference of the Council for the Preservation of Rural England will be held at Bath, October 15th, 16th and 17th. We hope all members in that region will attend. Full details can be obtained from the General Secretary, C.P.R.E., 17, Great Marlborough Street, Regent Street, London, W.1.