CENSUS AND STATISTICS IN INDIA

S. CHANDRASEKHAR

1948
ANNAMALAI UNIVERSITY
ANNAMALAINAGAR, INDIA

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Note

The following pages contain a summary of two lectures delivered before the Economics Honours Association of the Annamalai University in January 1948.

My thanks are due to Mr. M. W. M. Yeatts, Chief Census Commissioner, Government of India, for his kind permission to make free use of his contributions to the subject.

PRINTED BY G. S. PRESS, MADRAS, MS. 97, 24–3–1948

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The idea of conducting periodical enumeration of people was not unknown in ancient times. Like other countries all the way from Greece to Great Britain, India has a Census history that goes far back into the mists of antiquity and offers a considerable variety in technique. It is but natural that in Ancient India the rulers must have resorted to some kind of rough counting of the people or their households, if only to gauge the military strength of the country and possibly for purposes of taxation. We have some evidence to this effect. Megasthenes, the Greek ambassador to India, came across about, 300 B.C., men employed by Indian rulers to collect census statistics and investigate vital statistics.[1] In Mauryan times (325 B.C.—188 B.C.) we are told that periodic enumeration of the people was common and that civic bodies regularly conducted such work.[2] There was also a system of registering births and deaths not only for the information of the Government, but also to facilitate the paying of taxes. A few centuries later, when the Hindu civilization reached its heyday under the Guptas (300—600 A.D.), census operations were not merely periodical, but had something in the nature of a permanent continuing activity.[3] And long before the British gained supreme political control in India, several attempts were made to count the people of Madras, the senior major province of India. In 1867, on the suggestion of the East India Company, which was rapidly becoming a quasi-political body, a rough computation of the number of people in the Madras presidency was undertaken. But all these pre-British attempts were irregular and devoid of scientific value. It is even doubtful whether we can call them census in the strict sense of the term. The first attempt at regular enumeration of the people, however, after the establishment of the British rule was made in 1822. This was carried out on a form devised by the famous British administrator, Sir Thomas Munro. In fact, this form was devised by him as early as 1802, and between 1813 and 1850 a three-yearly count was taken along with the determination of the land revenue. It was in 1849 that the Government of the East India Company thought of a census of the people in all their then scattered possessions in India. The suggestion was made for holding quinquennial estimates of the population, and the Madras

1. Narendranath Law, *Studies in Ancient Indian Polity* (London, 1914) p. 18.
2. & 3. Vincent Smith, *Early History of India* (Oxford, 1924) p. 134.

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Government was the earliest to adopt the suggestion and thus led the way. At least four such enumerations were carried out in the Madras presidency before the central government took up the work, and the provincial governments' work became merged in the Imperial Census. With the experience of earlier enumerations, the Madras government were quite confident of success for they reported, "There is nothing novel in the idea of a census in this presidency and there is no reason to anticipate any difficulty in carrying out the wishes of the Government of India." It is no wonder that Madras should have been able to give a lead to the rest of India in regard to the operations and the greater accuracy of her returns, particularly those relating to vital statistics. All these earlier attempts at counting the heads—the early census operations were no more than that—made whatever use they could of the existing administrative or other agencies, and this principle to a greater or lesser degree has always characterized the Indian census.

It is interesting to note that a rough census was taken in Sweden as early as 1749, and even since there has been a continuous registration and this to some extent serving many of the purposes of a genuine census. The earliest census of population, however, in its modern sense was taken in Canada as early as 1666. And this Canadian census is the first we know of in the present state of our knowledge.[4] There was no census in Great Britain till 1801, the year of the first British census. This does not mean, however, that there was no information before 1801. The registers of baptisms and burials that were kept by the parish priests by the order of Thomas Cromwell have been in existence since 1538, though these registers cannot be regarded as a census. But it was in 1753 that a private member with the support of the Government introduced into the House of Commons a bill for a yearly compulsory enumeration of the white population and especially those on poor relief. "Though opposed as being subversive of last remains of English liberty" and "as likely to result in some public misfortune or epidemical disease," it was passed by the Commons but rejected by the Lords! The Census Bill of 1800 was also introduced by a private member but was passed with little opposition.[5] In the United States of America the first census was taken in 1790, nearly half a century later than Sweden but three quarters of a century earlier than the first regular Indian census.

4. Raymond Pearl, *Medical Biometry of Statistics* (New York, 1930) p. 43.
5. G. F. MacCleary, *Population. Today's Question* (London, 1938) p. 58.

The procedure and the machinery of enumeration in India have not changed very much since the first census in 1872 except to the extent made desirable by accumulating experience that demands more and more data and in meeting the changing economic and social conditions of the country. Today the census hierarchy in India is composed of the following: first at the top is the chief census commissioner for India in the nation's capital at New Delhi; under him the superintendents of census operations in the nine Indian provinces, and seven major Indian States and two large groups of smaller Indian States (these superintendents in the provinces are drawn for the most part from the Indian Civil Service); then in descending order of importance the District officer; the sub-division or the tahsil officer; the revenue circle, the parghana; and so on, and finally the village headman or officer. Of this hierarchy only the first two groups are whole-time census officers, and the rest are either members of the already-existing administrative machinery or temporary employees. This sets out at a glance the whole principle of enumeration in India. When we come to the district, the main unit of administration in India, the census chain fits in with the administrative chain. Both authority and economy counsel this, the first because the immediate authorities recognized by the people are brought into the census as administrative heads. It follows in the administrative order of the District Collector (that is the head of the district), the Tahsildar (head of a tahsil), and so on. The second reason is that these officers serve as useful links in the census chain without any extra payment. Many of them are touring officers, who are expected to spend a certain portion of the year in travelling around the areas under their charge. Thus the census operation becomes a by-product of the existing administrative system, since the census department makes the maximum and best possible use of the tours and other activities of lesser administrative heads also. The principle of making the census chain coincide with the administrative chain is naturally extended to other fields. Thus customs and post offices are in charge of dock enumeration and postal personnel; the railway personnel furnish the census staff for railway premises; the army authorities in charge of enumerating soldiers; and so on. Special arrangements are made for the enumeration of the prisoners in jails, patients in hospitals, sanatoria, and asylums, and of travellers by boat, road, rail or air. There are a few exceptions, of course, but they affect only a very small proportion of the country's population, for example, in certain tribal areas, where administration rests lightly and no competent literate residents are found, enumerating men are sent in from outside to count the people of

such tribal areas. These enumerators are paid, practically the only enumerating personnel who are.

Thus the Indian census is a *de-facto* census. It aims at a synchronous enumeration of all the people wherever found on a particular day and at a particular time, whether they are permanent residents or transient visitors. It is thus a total count of the actual population of a given area making no separate provision for the fluctuations caused by internal migration. However, if necessary the *de-jure* population can be roughly estimated from the approximations arrived at the time of preparing the house list.

Regionally the Indian census units, in ascending order, are block, circle, charge, tahsil, district, and province. At the fourth item, as observed already, the census chain coincides with that of the ordinary regular administrative unit. Each village and town is divided into a number of blocks, each block consisting of 20 to 30 houses and sometimes more. Each of such blocks constitutes the " beat " of an enumerator. And a number of such blocks make up a " circle " which is in charge of a census supervisor. The houses in each block are numbered and visited by the enumerators, and particulars are gathered by them in reference to the categories contained in the census " schedule ".

The " circles " in their turn are combined into " charges," which in rural areas correspond to a revenue *firka*, while each urban " area " is constituted into a separate charge. The work in each charge is looked after by a superintendent. In those parts of India where the administrative system recognizes such a feature as a revenue inspector in charge of a particular area (this is so, for example, in the provinces of Madras and the Punjabs), this Revenue Inspector or *Quanungo* or whatever he is called, will be a " charge " superintendent.

Thus the district is generally taken as the unit for the census, with the District Collector (who is the administrative head) in charge. In the municipal areas the Commissioner or the Chief Executive officer is put in charge of the work. In the village, the Rural Headman (whose office is sometimes hereditary) looks after the work. Thus the Superintendent of the Census is in control of a "charge". Above him is the provincial census officer who controls the census operations in the whole province. And at the top is the census head at New Delhi, the federal capital. The whole system resembles a pyramid of which the base is the individual enumerator in his block, which often corresponds to the village (or a well-defined part of a town or city), and the apex, of course, is the chief census commissioner at New Delhi

The Indian census figures relate always to the spring of the first year in a decade, that is, the year ending in 1, so that when census figures are announced they are referred to as those of 1901, 1911, 1921, 1931, 1941 and so on. Though the whole census activity proper relates to a particular part of the year, the census operations involve a preparation of nearly two years covering the whole country, to be followed by another ten months' work in consolidating, tabulating, and analysing the results. During this long period, while the actual All India Census Report is being made ready, most of the officers who were active in the enumerating period cease to function in the department and the whole work may be said to be entirely that of the chief census commissioner, whose office and the number of assistants and the time and funds at their disposal are in no way commensurate with the area or the population of the country.

Thus the Indian Census Bureau is a bird of passage and continuity is almost absent. This continuity is important, for as Walter F. Wilcox points out, " A Census Report should explain what errors may lurk in the figures, estimate, if possible, their trustworthiness, and suggest such inferences as of more than local importance and would be accepted as trustworthy by competent students. Each successive report, like each observation of an ecclipse, should confirm or correct the interpretation put on previous reports and suggest questions which only future reports can answer."[6] This absence of intercensal continuity is not left unnoticed by our Census Authorities. For M. W. M. Yeatts points out that the Indian Census is a kind of a comet appearing once every ten years in the statistical firmament, attracting much attention at its culmination, but passing away eventually unnoticed. The present Indian Census throws only one slender beam of light on a subject that should be under the watchful observation of the eye of a cine-camera. Therefore, the primary reform from the purely statistical and demographic points of view, would be to have a permanent census body at our federal capital—New Delhi—with provincial and state branches having a large measure of administrative autonomy. Then there is the vital need for the integration of the census data and vital statistics with the ordinary work-a-day life and administration of the country; and to make this integration organic rather than sporadic, as it is today. And yet, the Census Commissioner for 1941 is opposed to this suggestion for reasons best known to himself, and has in fact recommended, to the Government of India that no

6. Walter F. Wilcox, *Studies in American Demography* (New York, 1944) p. 9.

such permanent bureau be set up—"I do not advocate and indeed discourage any proposals for a permanent Census Department as such."[7]

The lack of a large and all-year-active census administrative set-up arises out of the chief and peculiar feature of the Indian census. This lack of between-census continuity makes even the chief Census Commissioner, not to speak of his subordinates scattered all over the country, literally birds of passage.

However, the absence of intercensal continuity in India, striking in comparison with the permanent Census Bureau in Washington, D.C. for the United States and the office of the Registrar General at London for the United Kingdom, is more apparent than real. India, in fact, is not entirely without a between-census continuity. This is found at the base rather than at the apex of the census pyramid, as contrasted with the American and British systems. A thread of continuity runs through the Indian villages which embrace the major surface area and contains the majority of the population. In rural India the enumeration is entrusted to the head of the village administration—the village munsif or headman. These men maintain rough but ready registers for births and deaths and other vital occurrences within their rural limits. Since they are in charge of collecting revenue and the general administration as well, additions to and deductions from the village population seldom escape their attention. In some parts of India these rural officers are hereditary and one may have in a village the whole of the All India Census series represented in actual experience in the successive generations of the village heads.

There is no officer in the towns and cities similar to the hereditary and quasi-hereditary position of the village munsif. This does not mean, however, that there is no element of continuity, for in towns and cities the civic bodies such as municipalities and corporations look after the enumeration in the sense of recording births, deaths, and other vital occurrences. Thus these officers, beginning with the village Munsif up to District Registrar of Births and Deaths, may be said to form the intercensal link. So the lack of between-census continuity, which is so striking at first sight, is really not such a glaring drawback, though to be more efficient it would be wiser to model the Indian census operations after the American system. Even if the American system is not the best, India should create a central census office, on a permanent, albeit,

7. M. W. M. Yeatts, *India Census Report*, 1941 (New Delhi, 1943) Vol. 1, p. 18.

slim basis like the census Bureau at Washington D.C. But all such goodly proposals break, in the view of successive central governments on the bedrock of Indian financial stringency.

The actual enumeration is a very elaborate and tedious process, for, as a village enumerator put it, the aim of the census is "to catch every man and catch him once." As already observed, the Indian census figures always relate to the spring of the first year in a decade. The preliminary step is the preparation of a list of villages, and within each village a list of the houses. The village lists might be said to be almost the same, census after census. But there is always the possibility of a new house or colony springing up in a corner, and an old hut or a hamlet going out of existence. The exhaustive house-list in each village is very important, for it serves as the basis for the enumerator when he goes on his counting rounds. This house-list causes always some kind of difficulty, for the houses, in rural India especially, are neither permanent, little, independent brick-built cottages nor huge cement-and-iron apartment buildings. It may be said without exaggeration, that a mud wall and a thatched roof, or discarded jute bags and tin sheets, being all that is required to make a rural home, it is liable to appear and disappear with a frequency that is irritating to the census department. The existence of this hut, home, house, or habitation—it is called all those in census literature—is all the more uncertain when the *decennial* enumerator comes along. Even in the unchanging East and a slow-moving India, ten years is a long time. However, it is not a hopeless task, for in each village there is always the uncleus of more permanent structures, and, the rural community being compact and packed in rather well-defined geographical areas, it is seldom that residential changes escape the notice of the village enumerator, who, as we have already said, happens to be the permanent administrative rural officer. Perhaps only those—and no one knows how many thousands or millions they are—who live on the pavements and lead a parody of life escape the notice of the census enumerator.

For purposes of the census the "house" in India is defined in two ways. "Where a structural criterion is taken," says the Census Commissioner for 1921, "a house is ordinarily defined with minor qualifications as the residence of one or more families having a separate independent entrance from the common way. Where the social aspect is looked to, it is defined as the home of a commensal family with its residents, dependents and servants."[8]

8. *Census Report*: *Government of India, (New Delhi,* 1922) Definition of "house" for census purposes.

While the social definition is more important than the structural one, three major provinces still retain the structural definition. The structural definition loses its meaning especially when it is remembered that there are people in India who have no "houses" in the accepted sense of the term. They live on the pavements and sleep in the streets. They are not necessarily vagrants, beggars or bums, but in some cases cart-pullers and dock labourers. In the United States the house or "household" for census purposes is defined very elaborately as "a family or any other group of persons living together, with common housekeeping arrangements, in the same living quarters. Although ordinarily a household will consist of a head, his wife and their children, the persons in a household may or may not be related by blood or by marriage. Include a servant, a hired hand or other employee who sleeps in the house as a member of the household for which he or she works. Consider a boarder or lodger a member of the household with which he lodges, if that is his usual place of residence.

"The decision as to what constitutes a household is to be made on the basis of the housekeeping arrangements and not the relationships of the persons making up the household. For example, a couple with married children with or without children of their own living with them in one house, apartment, etc., with only one set of cooking facilities or housekeeping arrangements, comprise a single household. On the other hand, if a married son or daughter or any other person lives in a separate portion of the house that has its own cooking or housekeeping facilities, such persons constitute a household separate from that of the persons occupying other portions of the house, even though the house may have been originally built for only one household.

"Note that the household may occupy an entire house, or a part of the house, such as apartment, flat, tenement or 'rent' or a room or a section of the building devoted primarily to nonresidential purposes. Likewise a household may live in a tourist camp, a trailer, a boat, a tent, a freight car, etc. For census purposes a person living entirely alone constitutes a household."[9]

In Germany, for census purposes "a house" is defined as persons associated together for dwelling and household purposes who inhabit a separate dwelling and manage their own household. This definition of course includes single persons who dwell in separate

9. *Sixteenth Decennial Census of the United States: Instructions to Enumerators—Population and Agriculture* (Washington, D.C., Bureau of Census, 1940), pp. 37-38.

houses and manage their own household. This German census definition is also the one that is commonly adopted in most European countries. The majority of households in European countries are of course family households, but the number of single households is also considerable.

In spite of these difficulties of defining a house in India the year before the actual enumeration finds these house-lists being made all over the country from Kashmir to Travancore, the work being generally entrusted to those hardy stand-bys, the village officers, to whom sooner or later everything in India finds its way. "Every house where a human being may be found is given a number, and that number has to be whitewashed or painted on the door or displayed prominently in one way or another. Sometimes in the conical huts frequent on the coromandel coast there is no surface that will take paint or wash and in such cases a number on a ticket is given to the occupant of the house. Each enumerator is given a list of the houses entrusted to him and it is these houses that he is to visit on his beat and these alone."[10]

In the 1941 Indian census operations, each enumerator's record (answers to census questionaire) was taken down on slips supplied to him. This is a welcome departure, for in the previous censuses the enumerator had to take in all the details on a schedule, as in the United States which was later transferred to the slips. This departure saves time and labour. The enumerator is given a booklet in which instructions and questions to be asked in the enumerator's own language appear. And in the slips only the numbers of questions are printed with blank space opposite to them for recording answers. This procedure to a considerable extent minimizes the difficulties presented by the want of a single common language in India. The question of Indian languages from the point of view of Indian census will be dealt with subsequently.

When all the slips are filled up, they are sorted with indications as to their local origin. To complete this operation and minimize the enumerator's scriptory effort, a code system has been devised which is printed on the slips, and this reaches the enumerator in a permanent form. Under this code the districts within each province are arranged with ascending serial number from the figure 1 in the order of their usual citation. Similarly, within a district the tahsils are numbered, and similarly, within a "tahsil" the "charge"

10. Maurice W. M. Yeatts, "The World' Largest Census," *Asia*, (New York) February 1941. I am indebted to Mr. Yeatts and an anonymous contributor to the *Hindu* for the description of the Indian Census operations.

and within a "charge" a "circle". Every province and state in India has a "district" 1, and every district has a "tahsil" 1, and so on; and thus slips carrying a particular code number have a particular significance in every province or state in India, and the demands of every such unit can be run off at one stretch by the press.

The information gathered on the slips in the local areas are collected, consolidated, labelled, and forwarded as rapidly as possible to the headquarters, abstracts being sent in advance to enable preliminary totals being made up for publication ahead of the final reports. At the headquarters a vast establishment of copyists, checkers, and tabulators take charge of the further work as soon as all the enumerators have forwarded their slips. At suitable stages checks and supervision of the work already done are provided. When all the figures are assembled, the final report—the All India Census Report—is drafted, with not only tabulated figures but also pointers as to the nature and probable trend of the population problem. Thus the Indian decennial census drama comes to a close.

Questions in the Indian census schedule, like any other census questionnaire, elicit information on familiar points of interest: Age, sex, civil condition, means of livelihood, birthplace, mother tongue, and literacy have been the usual items on which information is sought. The latest census schedule, of 1941, has widened the field by asking 22 questions. The new additions are regarding unemployment, increase of details regarding means of livelihood, information on fertility such as the age of girl or boy at marriage, age of the mother at the birth of the first child, the number born and the number surviving. Though some village folk might and do view these questions regarding fertility as an encroachment on their privacy, such information is needed, for without accurate and reliable data of this nature neither a government body nor a private agency can approach intelligently or rationally the country's population problem or public health policy.

It is often said that statistics of Indian life are so scanty and scrappy that any undue reliance on them is bound to endanger one's conclusions. As for their scantiness it is largely unfounded, for Indian statistics are voluminous to even the most voracious statistician. But as to their scientific value and validity there is certainly room for doubt from the point of view of an exacting and cautious social scientist and statistician. As two British economists who have enquired into the nature and significance of

Indian statistics have observed, Indian statistics originated largely as "a byproduct of administrative activities" and hence remained and continue to remain "unnecessarily diffuse, gravely inexact, incomplete or misleading."[11]

But before we decide on the value of Indian statistics, let us examine some of the obstacles and difficulties that confront the census operations. While some of these obstacles arise from human, geographical, and administrative factors, which are common all the world over, there are a few which are peculiarly Indian in the sense that they are the outcome of the particular socio-economic situation that India is confronted with. The Indian people, though living in a well-defined geographical area, are not a closely-knit homogeneous people for several reasons among which the lack of adequate and rapid transport facilities with the consequent immobility of the population is the most striking. India is more nearly a sub-continent presenting a diversity in geological layout, climate, and even certain sociological differences as manifested in customs and traditions in the very people themselves, though these do not deny the fundamental political or to some extent the cultural unity of the Indian people. It is an arduous task, for instance, for the enumerator to cover the tribal tracts and hilly areas where even the most elementary features of modern civilization have not yet come to stay. Since there is no widespread network of railways or canals or express highways connecting the entire rural India, thanks to the short-sighted policy of our past government, the problem of rapid, cheap and comfortable transportation is, even today, a serious and formidable one.[12]

Secondly, in a country where literacy is still a rare privilege it is rather difficult to procure an adequate number of educated men (not to speak of women) to be enumerators especially in backward and tribal areas. It is not the dearth of educated men in all regions who know the job that constitutes the real problem. Even the educated men shrink from the job, for it carries with it, surprisingly no remuneration. Of course they cannot refuse once

11. D. H. Robertson and H. L. Bowley, *The Report of the Indian Statistics Committee*, (New Delhi, Government of India, 1934).

12. Cases have occurred of official enumerators being attacked by wild beasts. In 1931, a tiger jumped from a roadside thicket onto the car of a census officer in Bastar State while he was moving about in his car at night. While it is a relief to add that the automobile sped away with its occupant uninjured, the tiger itself was not killed. India is still the land of tigers and snakes!

they are chosen by the Government to do the job. All that the enumerators get is a *sanad* of printed matter containing a note of thankful appreciation by the Government of the work done by the enumerator. In money terms or in market value the *sanad* is not worth the paper on which it is printed and hence is a poor consolation to the enumerator. It is odd that the enumerators are not paid, but we shall revert to this fact when the cost of the census operations is touched upon. Besides this drawback, the work of the enumerator is not always pleasant. Several considerations including caste scruples, enter into his reckoning. An average "high caste" Hindu enumerator might even resent it if Harijan quarters are assigned to him for enumeration, though there is a gradual revulsion of feeling of late in this regard. A sort of social odium is attached to the work itself, especially when the enumerator's lot is thrown among the illiterate and the ignorant, the suspicious and superstitious fellow Indians. Discontent among the enumerators is not absent, but it seldom comes to a head as it did in 1911 for, according to J. M. Molony, the Census Commissioner for Madras, "a mutiny broke out among the enumerators." All credit to this band of selfless workers, but it will be a folly to expect their work to be beyond reproach under these conditions.

The travail of the census department does not end here. Occasionally the census season has coincided with some major political crisis in the country like the Non-coöperation Movement of 1921 and the Salt Civil Disobedience Movement of 1931 and the Individual Civil Disobedience Movement against participating in the second World War in 1941, all the three *Satyagrahas* sponsored and carried out by the Indian National Congress under the leadership of Mahatma Gandhi. In 1921, due to the general political discontent arising directly from Gandhi's freedom movement, enumerators withdrew from work in sympathy with Gandhiji's work in many centres. A few lost their civic conscience and destroyed the records, thus creating a situation "far more serious than the political troubles."

It is strange but true that the accuracy and percentage of error of the Indian census should so largely depend on the political condition of the country at the period of enumeration. Twice during the last twenty years the Non-Coöperation Movement launched by the Indian National Congress interferred with the census operations, though the political leaders had no idea whatsoever of interfering with or objecting to the enumeration of the people. But trouble did start in 1921 when a certain misguided Bombay nationalist newspaper suggested the boycott of the census,

since it was sponsored by the foreign British Government in India. This short-sighted view began to gather strength, but on the eve of the final enumeration Mahatma Gandhi stepped out and expressed his view that census was a matter of national utility in which all who wished might coöperate. Gandhiji rightly saved the situation and the enumeration went on peacefully.

In the same year the outbreak of the Moplah Rebellion, which broke out on the west coast of South India, created quite an alarming situation for the enumerators. One of the Madras census offices was situated in a town, Malappuram, right in the heart of the disturbed area, and the superintendent and his staff in the offices were cut off from the outside. But the people whose reason for revolt was political and economic discontent, hardly molested the census officers. After temporary suspension of the work for two weeks, the work proceeded without any trouble.

The census of 1931 coincided with a second wave of Gandhi's Non-Coöperation—the Salt March. Of this Dr. J. H. Hutton, the Chief Census Commissioner for 1931, wrote: "The march of Mr. Gandhi and his contrabandists to invest the salt pans of Darsana synchronized with the opening of the census operations. The blessing which he gave to the last census (1921) at the last minute was at this time wanting. Although the people did not consider the census so objectionable in itself, the opportunity of harassing the Government was too good to be missed." [13] It must be added in all fairness to Gandhiji that he was too busy with his celebrated march to the sea to break the salt law, to give a message to the people to coöperate with the government officials in censusing the people. The failure to secure Gandhiji's blessings on the part of the Census Department resulted in the increased responsibilities and difficulties of the enumerators. One of the commonest forms in which trouble arose was the effacement of the census numbers on houses. Ultimately it was not without recourse to the penal provisions of the law that the census work was eventually completed. The boycott of the census in Gujerat, Gandhi's native place, in 1931 resulted in 0·085 maximum error for the province and an 'estimated probable error' of 0·04 for the total population of India. In 1941 due to the individualist nature and much toned-down character of the Civil Disobedience Movement and being confined to a few thousands, it did not hinder or disturb the census operations. Despite the war conditions and

13. *Census Report*, Government of India (New Delhi, 1932), p. 82.

the political deadlock in the country between the British Government, which committed India to a European war, interference in which was opposed by nationalist India, the Indian situation was peaceful compared to the two earlier censuses of 1931 and 1921. It may be said that the country this time offered its full coöperation with the census authorities in gathering the required data.

There are certain other minor obstacles that beset the path of the Indian enumerator, which arise from the nature of the family, caste, and community life in India. To appreciate these difficulties it must not be forgotten that our society is artificially divided according to the religions the people are born in or the faiths that they profess. The religious groups in their turn are divided and sub-divided into a number of castes and sub-castes. These superficial differences and distinctions do not normally assume any disproportionate importance but for the fact that the past government in the name of non-interference with the socio-religious set-up have not only fostered this invidious system to some extent, but have sought to rule the people on that basis. This obscurantist feeling of intense communalism which is nothing but nepotism on a fantastic scale has become a battle byword in the press and on the platform. Agitation against caste and enumeration of the people according to caste has gone on for some years now, at least since the census of 1901. This anti-caste agitation started in Madras with the growth of nationalist and to a limited extent rationalist ideals which subsequently spread to Bengal and the Punjab. Certain sections of the population rightly labouring under a feeling that they were victims of an invidious system, claimed to be enumerated as Brahmins or Khashtriyas—the supposedly high castes—though they were differently regarded by virtue of their birth by the Hindu society. The common and rather justifiable reason behind this agitation against taking a record of caste in the census schedule was that "the mere act of labelling persons as belonging to a caste tends to perpetuate the system." Whether or not this agitation was really meant to kill caste as such, it at least demonstrated strong disapproval of official attempts to keep it alive. And who can say that there were never such official attempts in the past in perpetuating certain social evils in India? This agitation did not go in vain for it revealed the ways of young and progressive India. The remarkable result was that nearly two million Hindus stated that they had no caste at all.[14] This agitation assumes special importance since the administrative machinery is

14. *Census Report*, Government of India (New Delhi, 1931) p. 430.

patterned on these unhealthy lines, as for instance the communal franchise.

In 1931 the impending constitutional reforms and the prospect of an extended communal franchise led to great activity on the part of religious organizations, and their anxiety to register as many adherents as possible to their religion was not concealed. This unhealthy zeal for numerical strength for particular castes and religions was visible all over India. Disputes of a similar nature arose in the Punjab where the Depressed Classes including the Harijans claimed to be counted and classed as Adhi-Dharmis a supposedly high caste. In the heat of the controversies that arose as whether these Adhi-Dharmis should be classed as Depressed Classes or Sikhs many lost their reason and affrays were the result. It is as though the Catholic and Protestant organizations in the United States or United Kingdom vied with each other to return as many adherents as they could of their particular faiths and thus offset artificially in census statistics the real nature of religious minorities in these countries. Such a tendency will be dangerous not only because it reflects that numbers alone matter, particularly in a democracy, and secondly, census figures will then lose their scientific value.[15]

It may be that these difficulties arise in our country out of illiteracy and the want of what might be called an elementary liberal education. And the psychological gulf that this illiteracy evokes between the rulers and the ruled adds not a little to the distrust and suspicion toward any proposal that is put forward even by the present nationalist government, irrespective of merits of the proposal. Under these circumstances it is no wonder that there should exist prejudice and superstition on the part of our people as to the very aim and utility of the census operations. When the common people resent a measure they do not understand whatever might be its benevolent aspects, it is but natural for them to suspect every enumeration as a prelude to a further measure of taxation or some such necessary evil! The fear that census statistics might be used by the Government for purposes other than preparing population figures and allied information is not confined to India. That this fear persists even in the United States can be seen by the note

15. The American Census does not seek unfortunately the numerical strength of several religions professed by the population. We would like to know for instance how many millions are Protestants, Catholics, Jews and so on. Some inadequate figures on this score, however, are furnished by several religious heads.

that is printed in red ink in all the letter heads of the Bureau of Census, Department of Commerce, Washington, D.C. It affirms: "Your reports to the Census Bureau are confidential. Acts of Congress make it unlawful for the Bureau to disclose any facts, including names of identity from your census reports. Only sworn census employees will see your statement. Data collected will be used solely for preparing statistical information concerning the nation's population, resources and business activities. Your Census Reports cannot be used for purposes of Taxation, Regulation or Investigation."[16]

And then the superstition that counting the number in a household forbodes evil is still alive in India. It is true that this kind of superstition is not peculiar to India, for purificatory ceremonies after every census in ancient Rome were performed to rid them of a supposed evil. Even in the British House of Commons, as late as 1753, the fear was expressed that "a numbering of the people will be followed by some great public misfortune or epidemical distemper."[17] The United States of America fared no better. In the early stages of American census history the fear that Census forebodes evil was manifested and in certain parts considerable resistance was offered. "In the beginning there was considerable resistance and fear. In New York it was alleged that sickness followed a census operation and in New Jersey it was feared that some such penalty as that imposed on David might be repeated."[18] It must be pointed out, however, that while countries such as the United States and Great Britain have almost totally overcome these superstitious fears, parts of India are still hugging to them.

This prejudice at times takes unexpected and acute turns. On the eve of almost every census some kind of prejudice comes to the forefront. When in 1931 it was proposed to gather information about the fecundity of the people, some, instead of welcoming it, opposed it on the ground that such a departure arose out of the desire of the authorities to vilify the Indian people.[19] In the same year an attempt to collect statistics about "the educated unemployed" proved unsuccessful due to the apathy and indifference of

16. Footnote in red ink in every letter head of the Bureau of the Census, Department of Commerce, Washington, D.C.

17. G. F. MacCleary, *Population: Today's Question*, (London, 1938) p. 50.

18. H. P. Fairchild, *People*, (New York, 1939) p. 57.

19. Of course such information provides unwittingly material for indecent journalists to draw unwarranted generalizations as Katherine Mayo did in her *Mother India* and *Face of Mother India*. But this should not deter any country from gathering data on such issues for scientific purposes.

the educated unemployed themselves, who rightly or wrongly felt convinced that counting their number will not redress their grievances; of course they were not interested in the counting of their number for the statistics' sake. That these suspicions on the part of the people questioning the integrity and motive of the late British government perhaps are not totally unfounded may be mentioned later. But it is interesting to read what the Census Report has to say as to why the attempt to census the educated unemployed was abandoned. "The reasons given for the failure of the returns were various. In Burma the educated but unemployed are largely Indians and mostly to be found in Rangoon. The reason given for their failure to make the return was that they feared use would be made of it to repatriate to India those who were without employment. In Bengal the reason alleged was the fear on the part of the unemployed *bhadrolok* that all that was wanted was a list of them for the police as political suspects, while another rumour accused the government of trying to win over the unemployed from the Congress party by false hopes of employment. In Madras the attitude of the recipient was more sensible for the recipient of the unemployed schedule was described as saying: "You will not give me employment, why should I fill up your schedule?" and it seems likely that this feeling together with a dislike of admitting failure to have found employment and general apathy towards the census is to be taken as the most common cause of the schedule's failure."[20]

Despite these various difficulties and obstacles that the Census Bureau has to face, the Indian Census Report is a piece of fine work. In the face of ignorance, prejudice, and sometimes lack of coöperation on the part of the people and the limited funds placed at its disposal by the Central government, the Indian Census Department has obtained results with a pardonable degree of error. It is of course an arduous task to gather information in the face of these obstacles and the census when completed represents really a triumph in organization.

It is a piece of fine work considering especially its cost. In 1891 the total cost incurred in connection with the census operations was Rs. 2,597,161 ($800,000 in round figures). This works out at the average of Rs. 10 ($3) per mille of the population. In 1921 the expenditure approximated to Rs. 4,000,000 ($1,200,000) or nearly Rs. 12 ($4) per mille. For the whole census in 1931 India paid Rs. 48,000,000 ($1,600,000). The cost per thousand again came to only Rs. 12. This is very cheap compared to England where in 1921

20. *Census Report*, Government of India (New Delhi, 1931), p. 388.

it cost Rs. 130 ($40) roughly per mille and in the United States in 1940 where it cost Rs. 1,300 ($400) per mille of the population. Its cheapness is specially striking in comparison to the United States, for in 1940 the 16th decennial U.S. Census demanded a Congress appropriation of $53,000,000 to count 131 millions, [21] while India paid $1,600,000 to count 390 millions. The Indian census is thus the cheapest in the world despite the very large temporary staff that it employs. The number of enumerators that help in counting the people runs into hundreds of thousands. While in 1891 it required 150,000 enumerators, in 1931 the figure rose to 2,000,000. A small proportion of these were women, as in Cochin for example. As already observed, the enumerators are honorary empolyees and receive no payment. Under normal circumstances, they should be paid for their services, but even a modest remuneration to each enumerator will make up a colossal paybill. Perhaps the Indian finances cannot afford this just now. An earnest effort should be made, however, to remunerate these enumerators, for without casting any aspersion on their ability or integrity, it may be said that without payment the country has no right to expect reliable and efficient work from them. In the face of this impressive array of difficulties and obstacles it will not be an exaggeration to say that the Indian Census operations are the largest, quickest, and cheapest in the world.

But—there's always a "but" in our affairs—is it the best in the world? If not best, does it at least stand on a high level from scientific and statistical points of view? Unfortunately "yes" is not the answer. The above general description of the Indian census operations would have revealed several statistical lacunae. These defects become all the more impressive when the admirable work of the permanent Census Bureau of the Department of Commerce in Washington, D.C. with thousands of educated and efficient field workers and with its admirable battery of machines pounding out totals mechanically, is understood.

Apart from these difficulties and troublesome factors that reduce the accuracy of the figures in their cumulative effect, there was another serious defect that rested solely on the alien authorities in the past. The grave charge that was often levelled against the Census authorities in India was that in gathering, analyzing and interpreting the figures they were prompted by motives not strictly scientific. It is realised that this criticism is damaging, but the

21. This amount is not for census of population alone, but includes a census of agriculture and manufactures.

feeling persists that instances of manipulating statistics to vilify India and to help gather and arrange statistics as an aid to imperialist propaganda are not lacking.[22] An examination of this charge has only historical interest now and is unnecessary for our purpose but a single instance may be examined, if only as a warning for the present and future governments. It should be the guardian maxim of all governments to publish all true and reliable data whether they flatter or disparage the particular administrative policies of any political party in power. Any picture can be made incomplete, distorted, or tilted by the suppression of significant facts or by over or under emphasizing some nominal features of a country's social economy. The particular instance here is one of Indias' languages. In the past responsible spokesmen of the British ruling class in India contended that India is not a homogeneous, united nation but a sub-continent with congeries of dissimilar population units and nationalities, mutually antagonistic and conflicting in nature, and that this land of varied religions, innumerable cults, and hundreds of languages cannot be left to itself without the overlordship of a third party. Had this been only an argument to express reluctance to part with political power in India, it could have been overlooked. But unfortunately by constant repetition the contention that India is a land of hundreds of mutually unrelated and ununderstood languages has passed into sociological discussions and has obtained wide currency. The statement that India's "330 languages" are a major factor in her political disunity has been taken for granted all over the world.

A social scientist or a statistician must ask himself how such a statement of supposed fact could have originated? What is the truth? In most official documents and books about India there is the oft recurring famous term of India's "222 separate languages." It is easy to provide from different "authorities" different estimates of the number of India's languages ranging from 16 to 300! The past political interest behind this fantastic exaggeration is attested to by misleading statistics. The 1901 Census Report reached a total of 147 languages. If we compare this with the 1921 Census, we obtain the interesting result that, whereas the population increased from 292 millions in 1901 to 316 millions in 1921 (without any influx of new or foreign populations), the number of spoken languages increased from 147 in 1901 to 222 in 1921 (without the addition of any new or polyglot territory either).

22. A detailed and documented analysis of this point of view is found in an article on "Faked Indian Statistics as Imperialist Propaganda", *Labour Monthly*, (London), September 1930.

This is really an amazing capacity of the Indian population to proliferate new languages in scores in a single generation. But a more detailed examination will throw still further light on this heroic mythology of the "222 separate languages" which have so impressed non-Indian public opinion abroad. Of these "222 separate languages" it will be found that no less than 134 belong to the "Tibeto-Burman sub-family." What is the character of these "languages"? Here light is thrown by the fuller list of 103 Indo-Chinese languages listed in an official document.[23] In this list of 103 languages we are given the number of speakers of each of these "different languages," and we find, for example, the following figures:

Name of Language	Number of Speakers
Kabui	.. 4
Andro	.. 1
Kasui	.. 11
Bhranu	.. 15
Aka	.. 26
Tairong	.. 12
Nora	.. 2

It is clear that the philosophical conception of language as a means of communication between human beings will have to be revised in the light of Andro, spoken by one person; Nora, with a grand total of two speakers, just scrapes through!

A detailed examination which is only of value for exposing this type of misleading statistics which once served as imperialist propaganda reveals (1) that the number of "languages" of the so-called "Indo-Chinese family" rose from 92 in 1901 to 145 in 1921; (2) that these languages are not spoken in India at all, but in outlying districts in the Himalayas and the Burmo-Chinese frontier; (3) that the vast majority of these are not languages at all, but either very minor dialects or names of tribes; (4) that out of 103 "languages" included in the group, 17 are spoken by less than 100 persons; 39 by less than 1,000; 65 by less than 10,000; 83 by less than 50,000; 97 by less than 200,000. The only language in the group is Burmese.

Yet out of such materials is constructed the imposing total of 203. It is evident that some of the speakers of the languages spoken by one, two, or four persons have unfortunately died in the interval, thus having weakened by their thoughtless action the imperialist case

23. *Imperial Gazetteer of India* (Oxford, 1908) Vol. 1, pp. 390-394.

against Indian self-government. The separation of Burma from India since 1937 has caused a still heavier mortality, since the majority of the languages (128) used to prove the divisions of the Indian people belong to Burma. It is interesting to note that, in order to prove the case for separation of Burma from India the obstacle of the multiplicity of languages which had mainly been built upon the basis of Burma suddenly disappeared and gave place to insistence on the essential unity of language in Burma. "Though as many as 128 languages are distinguished in the province" (Burma) writes the Simon Commission "nearly seven tenths of the whole population—and the proportion is growing—speak Burmese or a closely allied language."[24] So elastic were empire statistics in the interests of political policy.[25] This should be a warning to every government not to fake statistics to suit current policies.

And after overcoming all these obstacles and prejudices, the figures are assembled, the editing and coördinating functions are left with administrative heads who seem to think that all statistics are for governmental and interdepartmental uses and not for public consumption. Such an assumption can be true only when the government is not of the people and no measure of any importance is placed before the public or allowed to be discussed freely with the intention of altering or preventing such measures from becoming law, as in free and democratic countries. And so the statistics are left uncoördinated and suitably edited to answer the various demands of students of economics, sociology, statistics, or government for purposes of not only adequately measuring the trends of social phenomena but also gauging the tenor of public opinion on governmental policies and programmes. The divorce between the people and the government is sometimes brought out by the fact that whatever conclusions the government authorities reach on a particular set of facts is often a justification of their specific measures or to bolster up their views and opinions, however unscientific and untenable they may be. This is a grave charge to be levelled against any government, by any scholar but such an accusation is justified and becomes necessary when social scientists discover that statistics are created and made to bow to demonstrate a particular and usually untenable hypothesis of a govern-

24. *Report of the Simon Commission*, Government of India (New Delhi, 1930) p. 79.

25. An excellent discussion on the faked number of languages in Census Reports of India is found in R. Palme Dutt's, *India Today* (London, 1940), pp. 264-265.

ment in power. The pressing into service of "facts"—themselves faked—for such unscientific ends leaves in the popular mind the erroneous notion that nothing lies like figures, and facts may be made to prove almost anything.

What about our vital statistics ?

Long before Western contact, we had a complex and a quasi-religious system of registering births, marriages, and deaths in those self-sufficing rural communities, though we do not know what use was made of such information by the State as such. Registration of births and deaths in their modern connotation was introduced in 1848 in Bombay, in 1855 in Madras, in 1870 in Bengal, and in the decade of 1870-1880 in most places that came in contact with the central political authority. Today, after half a century, though births and deaths are recorded throughout the provinces and in some large and leading Indian states like Baroda, Mysore, Hyderabad, Travancore, Cochin, etc., neither universality nor uniformity of procedure have been secured. For the Imperial Act VI of 1866 governing the registration of vital statistics does not uniformly apply to All-India. The various provinces have their own legislation outlining the procedures and delegating power to various authorities, as, for instance, the Madras Presidency Births and Deaths Registration Act III of 1889. Speaking broadly, it may be said that today there is general registration of births and deaths all over India, with the exception of certain backward and tribal areas and some small feudal states. Judging by the actual enumeration of the population and the figures arrived at by vital statistics, at least three-fourths of the population in India are registered. In the provinces alone the population under registration in 1930 was nearly 267 millions out of a total of 272 millions, or roughly 98 per cent. In 1940 the percentage of registration reached the same level. Though there is no uniform procedure in collecting vital statistics all over India, and though it differs with different provinces, the familiar pattern is as follows. This general procedure, is for the village munsif or *chowkidar* or watchman or headman to pass on the information—birth, death, or marriage, as the case may be—to some local authority like the police, who maintain regular registers. In the towns the procedure is rather easy, since registration of vital statistics comes under the routine jurisdiction of the municipalities. The sanitary departments of these civic bodies take care of this, since it is obligatory by law. At regular intervals, information from these registers is tabulated and forwarded to a higher officer in charge of the records of public health. These records are periodically checked by certain touring

officers who belong to departments that have no connection with vital statistics. The rural information and urban reports when ready are pressed into use by the District Health Officer and the District Registrar of Births and Deaths, who make up the District Public Health Report. These District Reports in their turn are forwarded to the Registrar of Births and Deaths and the Director of Public Health, who collect all the statistics and compile the Provincial Report. On the completion of all provincial records, the Public Health Commissioner with the Government of India compiles the All-India vital statistics, and draws up the annual Public Health Report for the whole of India—the only source material for the vital statistics of the nation. Most of our states adopt a similar procedure and coöperate with this effort of the provinces and the government of India. Here again the entire procedure resembles, a pyramid, and the worth and reliability of the annual Public Health Report relied entirely on the validity of the information supplied by the base, the village munsifs and the municipal sanitary departments.

This system is not without its drawbacks. The rural agency —the *chowkidar* or the village watchman—for reporting and recording vital occurrences is ill paid, often illiterate, has to attend to his permanent job of being the administrative head of the village, and then, as a rule, has to travel considerable distance to make his report. When we rely on the data gathered by the *chowkidar* we might as well pay due attention to the part played by "human nature" in these statistics. Sir Josiah Stamp writing some twenty years ago tells us that the individual source of the statistics may be the weakest link. Harold Cox for instance tells a story of his life as a young man in India. He quoted some statistics to a Judge, an Englishman and a very good fellow. His friend said : "Cox, when you are a bit older you will not quote Indian statistics with that assurance. The Government are very keen on amassing statistics —they collect them, add them, raise them to the n^{th} power, take the cube root and prepare wonderful diagrams. But what you must never forget is that every one of those figures comes in the first instance from the *chowkidar* (village watchman) who just puts down what he damn pleases".[26] While generalizations of this type are dangerous, they are true in certain instances and must be reckoned with in any calculation.

Besides, our village folk have not developed enough civic consciousness and even otherwise are under no obligation to furnish the munsif with the information. It has not, however, been proved

26. Sir Josiah Stamp, *Some Economic Factors in Modern Life* (London 1929) p. 62.

that rural returns are less accurate than the urban returns which are under the care of more enlightened municipalities and corporations of towns and cities. This, in other words, means that urban returns are equally defective. The indifference and apathy and what might be called the lack of statistical sense on the part of the people, added to the inefficient and insufficient organization, result in incomplete returns. The only way to remedy this is by the provision of a nation-wide rural and urban, public health service charged with the collection of vital statistics. There is a tremendous need for educating the public that have to willingly report, the officials that have to accurately register, and the departments that have to consolidate and analyze these vital statistics for the use of the government and the public.

This system of collecting vital statistics in India is similar to the procedure in the United States of America, for " with its federal system of government this is accomplished through a rather complex but on the whole efficient procedure, which involves the coöperation of local, state and federal officials. The details of the procedure differ in different states, but the typical routine is to have the event in question—birth, death, marriage, and so forth—recorded in the office of a local official called by some such title as Registrar of Vital Statistics. He, in turn, reports to a corresponding state official and also to the federal authorities. State officials also report directly to the officials of the federal Census Bureau, where the data for the entire country are compiled, consolidated and analyzed. In all 48 states the procedure is now followed accurately enough for the results to be accepted by the federal bureau."[27]

Though our procedure is similar to that of the United States, here the results are far more inaccurate. While it is not maintained that vital statistics in the United States are devoid of any trace of errors of omission and commission, it must be admitted that the standard of accuracy that countries like the United States, the United Kingdom, Germany, and Sweden have achieved is far above that in India, where sheer omissions frustrate all efforts at reasonable accuracy.

The vital statistical information sought by these government agencies in India includes particulars of births (live and still) and deaths by sex and religion. The records invariably contain the following particulars obtained generally from parents or guardians within a particular period of the vital occurrence. In case of births, the date of birth (sometimes according to the Hindu calendar), sex, name of the child (invariably a difficult proposition, for the

27. H. P. Fairchild, *People,* (New York, 1939) p. 111.

children are not named immediately after birth as in the West) names of parents, age of parents, and religion (sometimes caste, etc.) are recorded. And the Death Registers have name, sex, date of death, religion, age, and occasionally the cause of the death to the best ability of the informant.[28] These are the details—which in themselves are inadequate, as we shall presently show—of vital statistics that the law demands, and the municipal and rural authorities try to enforce. As for information on other aspects like sickness, employment, marital status, nubility, fertility, legitimacy, dependency, and anthropometry, nothing worthwhile is available.

Even in gathering information on the few items under the broad categories of Births and Deaths, the very important duty of recording the very births themselves, as already observed, is sometimes lost sight of. It is generally true of most countries that statistics of deaths are more reliable than statistics of births, because, in the former there is always a body to dispose of, and deaths being generally unexpected, unwelcome, and a sad event, seldom escape the notice of the community anxious to know the cause of the event, and therefore are more often recorded. As for births, they are natural and happy events, and nobody bothers to take note of them in any special sense. This general tendency is exaggerated in India, for omissions in recording births are definitely greater than the omissions in recording deaths.[29] This disparity is easily brought out by the gulf between the population forcast based on vital statistics and the actual population figures reached by the census count. The estimated intercensal population for 1930 is given by the Census Commissioner as 335,873,562, while the actual population on the completion of the census count approximated to 350 millions. In

28. In India most deaths occur outside the hospitals and when they do occur in homes they are largely unattended by doctors. In fact, the death rate is so high because of the lack of rural medical facilities. The great majority of deaths are classified under three broad categories of "fevers," "respiratory diseases," and "all other causes."! The reporting agents or the informants cannot adequately diagnose the real cause of the death. The cause is either not given, and when given is misleading. Sir Leonard Rogers found, for example, that a child who had been drowned was returned as having died of fever. The Madras Census Report refers to the recording of childbirth as a cause of death among men!

29. K. C. Ray, for instance, in his article, "A Note on Omissions in Registration of Births in the City of Calcutta," (*Sankhya, Calcutta,* December, 1938), points out how an estimate of intercensal emigration, 1921-31, related to total population change and registered surplus of births over deaths indicates approximately 21 per cent under registration of births. A discussion on the inaccuracies in an official report like that of the Bengal Public Health Report, 1934, can be found in M. Jatindra Datta's "On the Presentation of Official Statistics" in *Sankhya, Calcutta,* December, 1938.

the 1941 census, the disparity was repeated.[30] This is due not to any faulty calculations in the population forecast, but to the incomplete returns of births and deaths, particularly the registration of births, to the department of vital statistics. Here again the want of uniformity, even in a defect, leads to various degrees of error between province and province. According to the Chief Census Commissioner, the error in vital statistics for India as a whole in 1930 was about 20 per cent. While the error in Madras was half a per cent, in Mysore it was 50 per cent, and in Assam it was 60 per cent. Such enormous differences in error between region and region within India are startling. It is not known why the Madras presidency returns should be so accurate in contrast to other provinces. If the Madras procedure is the best, it is high time that other provinces follow it up, or the Central Government should make that particular procedure common to the whole of India. Regarding the varying degrees of accuracy in the different provinces, the Census Commissioner says: "In Madras province the returns are accurate enough for the Department of Public Health to prognosticate the result of 1931 census with an error (on the excess side) of not more than 2 per cent. Bengal and the United Provinces in that order are believed to be the next most accurate in respect of their returns." The need for bringing up the standard of efficiency in registering vital statistics in all provinces to a uniform higher level need not be overemphasized.

In the United States the forecast of population computed on the basis of the trend of vital statistics and the actual figures of the population anounced by the Census Bureau for 1940 agreed with such a negligible margin of error that we can call it almost exact. "A statistical drama," writes Stuart Chase, "was completed in the United States in 1940. Some people would call it a statistical miracle. When the Census Bureau finished counting the inhabitants of this great, diverse, unregimented country the tally was exactly what certain statisticians had predicted it would be. Exactly is a strong word and it is used intentionally. . . . Some years ago the

30. A few forecasts of India's population in 1941 were made before the 1941 census was taken. K. C. K. E. Raja, in his article "Probable Trend of Population Growth in India" (*Indian Journal of Medical Research, Calcutta*, July, 1935) thought that on the basis of the proportion of the married female population of India at the reproductive ages of 15-50 to the total population, India would reach 390,238,582 in 1941. He also estimated that the population in 1941 would likely be 401,422,517, if the rate of growth in British India was applicable to the whole of India. Dr. Raja in another paper "Forecast of India's Population" presented at the First Indian Population Conference in February, 1936, worked out that under certain circumstances India's population in 1941 was likely to approximate to 400 millions. Another estimate placed the probable population at 402 millions.

experts had made varying estimates of the 1940 population based on different sets of possible circumstances as to birth rate, death and immigration. Of these estimates they chose the two most probable, about 700,000 apart. That is, they gave themselves a leeway of a little more than half of 1 per cent. of 131 million. In the middle of this leeway, splitting the difference between the statisticians' two favourite estimates, lies the figure 131,650,000. Out of the Census Bureau hoppers came the figure 131,669,275."[31] In the United Kingdom the intercensal estimates published by the Registrar General of Births and Deaths in his Annual Statistical Review agree to a remarkable degree with the actual census figures. This is due to the compulsory registration of all vital occurrences and the accuracy of the immigration records of the Board of Trade[32] Such a relatively accurate forecast of the trend of the growth or decline of population based on vital statistics should not be impossible in India. But that will be possible only when the collection of vital statistics is organized avoiding errors of omission and commission and thus ensuring an acceptable degree of accuracy or at least a pardonable margin of error.

This striking failure to register births leads to another difficult and rather embarrassing problem of deciding the age of an individual. Birth certificates in India are neither demanded by the people nor easily supplied by the local governments. It is true that the practice of preparing a horoscope whenever a child is born is widespread among the Hindu population. But how far this habit is widespread among the masses of common people is open to doubt. In any case the horoscope, being primarily intended for consultation for marriage purposes, is seldom consulted for the benefit of the census enumerator and the record of the age in consequence is merely the result of guess work, the degree of error depending on the intelligence of the guess and the shrewdness of the enumerator. So the age hunt of the individual during each census count is almost amusing, were it not so tragic. The census department has devised measures to assist friendly but ignorant citizens to discover their own age. During the census period each province prepares a calendar going back to about eighty years with important landmarks that linger in the memory of the public. Well-known incidents, especially those which have local importance, like the first World War of 1914-18, the death of Queen Victoria, or the great

31. Stuart Chase, *What the New Census Means*, (New York, 1941) p. 2.

32. An interesting discussion of the merits and drawbacks of the British system of collecting vital statistics can be found in R. R. Kuczynski's "The Future Trends of Population" in *The Eugenics Review* (London) July 1937.

famine of 1880, the influenze epidemic of 1918, the Moplah 'Rebellion,' Mahatma Gandhi's Salt March in 1932, the Bihar earthquake of 1934, and the Quetta earthquake of 1935—floods, famines, and political upheavals that have burnt deep into the memory of the individual are marked out. When an individual does not know his age, he or his folks are likely to remember some important incident of local or national importance. The earliest of such incidents that he remembers gives the rough key to his probable age. Ignorance of this type, arising out of the failure of the government to provide a nation-wide service to register vital statistics, is being combatted by modern India. This difficulty does not apparently prove to be of any serious import except when the age group of the population has to be decided. But there is another serious aspect to this problem. The absence of any definite proof of the age of an individual nullifies attempts at social legislation. Children under a particular age, for instance, are forbidden from employment in factories and mines. It has been found difficult to enforce the law against offending employers and ignorant parents for want of definite evidence of the exact age of the child worker. In the indigenous cigarette (Beedis) factories of India, the employment of child labour has been a standing disgrace and nothing has been done about it until now. Again this difficulty has been brought into bold relief in recent years, when the Sarada Act (the Child Marriage Restraint Act) was being enforced. In many cases offending parents who were marrying off their children below the age of consent could not be prevented from or punished for doing so due to the difficulty of proving in a judicial court that the party accused was below the age prescribed by law.[33] The successful working of social legislation depends in India to a very large extent on the accuracy of available, if any, vital statistics.

Nor is the registration of marriages compulsory or uniform all over India. More than 80 per cent. of India's marriages are religious ceremonies often performed in the bride's home and occasionally in the Hindu temple. Even today the prospective couple do not walk into the Registrar's office and walk out after a few minutes as husband and wife, and therefore marriages do not get registered in any official sense. The absence of civil marriages for the majority of the people and the want of any official status or responsibility for the Hindu priest or the temple comparable to the clergymen and

33. The Sarada Act providing penalties for marriage of girls under 14 and of males under 18, which came into effect in April 1930, and corresponding legislation passed in certain Indian states like Baroda, Kashmir, and Mysore, led to a definite decrease in accuracy in the records of age and civil condition.

the church in western countries, leave marriages without a permanent record. It is not that the Indian marriage is a private domestic affair. In fact, it is a public and noisy ceremony in the sense that the whole community in the vicinity turns out to witness it and enjoy it, this community being the only attestation to the married state of the couple. The registration of marriages in the United States and other countries is primarily to provide a permanent record of the civil condition of the citizens for legal and quasi-legal purposes like legitimacy, succession, inheritance, divorce, etc. As social legislation in India has not developed either in value or volume these considerations have not gained importance. But they are bound to, as the cultural fabric becomes more complex and when legislation cannot be put into force without adequate data of work, wealth, and health of the people.

Apart from serving legal purposes in proving legitimacy of birth, succession, and inheritance of property and division of the estate of the deceased, the need for accurate vital statistics is felt increasingly in formulating public health programs. Unless and until it is known at what age men and women marry, their fertility, their health and ailments, their deaths and their causes, no government can intelligently formulate the nation's public health policy. The Public Health Department is severely handicapped, for want of accurate records, in their efforts to apply preventive methods, because they do not know what diseases take the tremendous toll which they are trying to control. In a word, no nation can attempt to solve what may be called comprehensively its population problem without adequate and accurate statistics on all these matters of life, work and death.

Thus the need for accurate census figures and reliable vital statistics in any demographic study cannot be overemphasized. Apart from these two specific branches, statistics of Indian life, labour, and leisure in general are meagrely collected and poorly edited. Information on economic and social conditions being gathered primarily for the inter-departmental use of a government, that is still groping its way in unessentials, their voluminous nature is devoid of scientific content to the objective student of contemporary social phenomena. Dr Vera Anstey, a British student of Indian economics, writing in 1941, points out what is a poor commentary on the British administration in India and the unhappy legacy it has bequeathed to the present national government in this respect. She admits that "even the facts of economic change are difficult to describe and impossible to measure owing to the size and density of the country, and the inadequate records and statistics. What is true of one area or section of the population is not true of others.

Statistical records are available only for recent decades and are still incomplete and unreliable. There is still no census of production and little is known of the general level of wages, in cost of living or the distribution of incomes. Reliance has therefore to be placed on generalizations from incomplete and sectional data and on circumstantial evidence. Hence, even in the descriptive sphere, the problem is largely one of interpretation.[34] We could add many more items to this impressive list of statistical inadequacies from the purely demographic point of view but it will serve no immediate purpose. The reason behind this lack of information and material on these issues is explained by Lord Keynes' apt generalization: "There is nothing a government hates more than to be well informed, for it makes the process of arriving at decisions much more complicated and difficult."

I have found it necessary to speak at length on this seemingly unimportant question of collection, compilation, and analysis of census figures, vital statistics, and other statistical data, for these are by far the most important and unverifiable sources of information. Any examination of our economic and social problems must be supported and substantiated by facts and figures from authentic, official and reliable sources. I have deemed it fit therefore to indicate the nature and worth of these documents and source material that a social scientist is perforce called upon to use. My plea to the authorities concerned to enable us to be better informed about ourselves is only to build a more substantial foundation of facts on which sound national policies in various spheres may be built. I am not advocating a slavery to statistics; nor am I enthroning statistics in the kingdom of social sciences. I am simply pleading for more and more knowledge about ourselves—a body of facts and figures that will cut across economics, sociology, anthropology, psychology, biology and other disciplines.

We are of course not unaware of the limitations of statistics. We must guard against undue and unbalanced emphasis on our statistical averages though they do serve to reduce the complex fabric of social phenomena to measurable limits and understandable dimensions. We should bear in mind that the "average man" of the actuarial tables or for that matter any other statistical data may have no more concrete existence than the *homo economicus* of the economist and the "good man" of the theologian. But just as the theologian hopes and makes his plans for a rare world of good men, the statistician measures the drawbacks and deficiencies in his world by their deviations from the norm.

34. L. S. S. O'Malley (Ed.) *Modern India and the West*, (New York, 1941) p. 258.