



CENSUS OF INDIA 1951

VOLUME II

UTTAR PRADESH

Part I-A—REPORT

BY

Rajeshwari Prasad, I.A.S.,

Superintendent, Census Operations

ALLAHABAD :

SUPERINTENDENT, PRINTING AND STATIONERY, UTTAR PRADESH, INDIA

1953

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Superintendent, Census Operations

ALLAHABAD :
SUPERINTENDENT, PRINTING AND STATIONERY, UTTAR PRADESH, INDIA

1953

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1931

BHAGWAN SAHAY

1941

FOREWORD

ACCORDING to the scheme approved by the Census Commissioner for India, the Uttar Pradesh Census Reports will form Volume II of the India series. The Volume will consist of the following parts :

Part I-A—Report

Part I-B—Subsidiary Tables

Part II-A—General Population Tables

Part II-B—Economic Tables

Part II-C—Age and Social Tables

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(1) *District Population Statistics* containing

(a) Mohalla-/Ward-wise population of urban areas

(b) Village-wise population of rural areas.

(2) *District Census Handbooks* containing for smaller units of the district the data presented district-wise in the main tables, and some additional statistics.

A few brochures on specific subjects may also be published.

2. Of the above, Part I-B, Subsidiary Tables, was published in October, 1952; Part II-A, General Population Tables, in August, 1952; Part II-B, Economic Tables, in December, 1952 and Part II-C, Age and Social Tables in April, 1953. With the publication of Part I-A, Report, the State series is complete.

3. Of the district-wise publications the *District Population Statistics* were completed in January, 1953. The *District Census Handbooks* involve colossal work and it will take at least a year to complete their printing.

RAMPUR :
December 28, 1953.

RAJESHWARI PRASAD, I.A.S.,
Superintendent, Census Operations,
Uttar Pradesh.

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APPENDIX I

INSTRUCTIONS TO ENUMERATORS, UTTAR PRADESH, CENSUS 1951

I. QUESTIONNAIRE FOR 1951 CENSUS

1. Name and relationship to head of household—After the name write :

1 for the head of the household.

Actual relationship for wife, son, daughter, brother, sister, father, mother, husband, son-in-law, daughter-in-law or brother's wife.

2 for other relatives,

0 for unrelated person (if any) living in the household and

3 for visitors enumerated along with the household, patients in hospitals or nursing homes or asylums, and inmates of jails and other such institutions.

2. (a) Nationality—Write 1 for all Indian Nationals. For others write nationality in full.

(b) Religion—Write 1 for Hindu, 2 for Muslim and 0 for those who say they do not profess any religion. For others write the answer as actually returned in words, e.g., Christian, Sikh, Jain, Buddhist, Zoroastrian (or Parsee), Jew, etc.

(c) Special groups—This is intended to record castes of some Hindus and Muslims and to enumerate the Anglo-Indians. For all others write a 'X'. Write :

0 for any Hindu who says he is not a member of any caste or tribe and

1 for any Hindu who says he is a member of one of the castes in the list given below.

Actual name of caste as returned by other Hindus.

Actual name of caste for only such Muslims as belong to the list of eight castes given below.

A for Anglo-Indians and

X for all others.

List of Hindu Castes for which '1' is to be recorded

1	Ahar	6	Bhat	11	Gaddi	16	Rajbhar	20	Taga
2	Baghban	7	Bhil	12	Jat	17	Rajput	21	Tharu
3	Balai	8	Bhishti	13	Kalwar	(Thakur)	22	Vaishya	
4	Barai	9	Brahman	14	Kayastha	18	Saini		
5	Bharbhunja	10	Faqir	15	Khatttri	19	Sainthwar		

List of Muslim Castes which will be enumerated

1	Dhuniya	5	Kunjra
2	Jhojha	6	Lunia
3	Julaha (Ansar)	7	Manihar
4	Kori	8	Murao

3. Civil Condition—Write 1 for unmarried 2 for married and 3 for widowed. If divorced, write 0.

4. Age—Write age last birthday ; that is, the actual number of completed years. Write 0 for infants below 1.

5. Birth-place—Write 1 for every person born in your district. For persons born in other districts of Uttar Pradesh ascertain the name of the district and record it. For persons born in a State other than Uttar Pradesh write the name of the State. For persons born in a foreign country, write the name of the country, e.g., Pakistan, China, etc.

6. Displaced persons—If the person enumerated is not a displaced person write 0 in both compartments. If he is a displaced person, write the date of arrival (Month/Year) in India in the first compartment and the district of origin in Pakistan in the second compartment. For children of displaced persons born after their arrival in India write 0 in the first compartment and the district of origin in Pakistan of their parents in the second compartment.

7. Mother-tongue—Write 1 for Hindi, 2 for Urdu and 3 for Hindustani. For others write the name of the language as returned in words.

8. Bi-lingualism—If a person commonly speaks any Indian language other than his mother-tongue, record it. (Do not write English for it is not an Indian language.) For those whose mother-tongue is Hindi, Urdu or Hindustani neither of these languages should be recorded in this question. But for those whose mother-tongue is other than Hindi, Urdu or Hindustani you can write either of these three languages as their secondary language, using the same contractions as prescribed in Question 7.

9. Economic Status—

- (1) *Dependency*—Write the answer in the first compartment. Write :
- 1 for a self-supporting person,
 - 2 for a non-earning dependant and
 - 3 for an earning dependant.
- (2) *Employment*—*The answer to this question is to be written only for self-supporting persons. Write the answer in the second compartment. Write :*
- × for all 'earning' and 'non-earning' dependants,
 - 1 for self-supporting person who earns his principal means of livelihood as an employer,
 - 2 for self-supporting person who earns his principal means of livelihood as an employee,
 - 3 for self-supporting person who earns his principal means of livelihood as an independent worker and
 - 0 for self-supporting person who earns his principal means of livelihood otherwise.

10. Principal Means of Livelihood—An answer to this question should be recorded on every slip. If the slip relates to a self-supporting person, record his principal means of livelihood. If the slip relates to a dependant (whether earning or non-earning) record here the principal means of livelihood of the self-supporting person on whom he is dependent. The means of livelihood which provides the largest income is the principal means of livelihood for a self-supporting person who has more than one means of livelihood. In the case of self-supporting persons having only one means of livelihood "Principal Means of Livelihood" is the same thing as "Means of Livelihood". Use the following contractions :

- 1 for a person who cultivates land owned by him,
- 2 for a person who cultivates land owned by another person,
- 3 for a person who is employed as a labourer by another person who cultivates land and
- 4 for a person who receives rent in cash or kind in respect of land which is cultivated by another person.

For all other means of livelihood, write fully and clearly what the person does in order to earn his livelihood and where he does it.

11. Secondary Means of Livelihood—For a self-supporting person who has more than one means of livelihood, write the means of livelihood next in importance to his principal means of livelihood. *If he has only one means of livelihood, write 0.*

For every earning dependant an entry in this question is compulsory. Write here the means of livelihood which provides the earning to the earning dependant. If it is the same as the principal means of livelihood of the self-supporting person repeat the entry already made in Question 10. (Do not repeat the secondary occupation of the self-supporting person on whom the earning dependant is dependent.)

For every non-earning dependant write 0. (Do not repeat the secondary occupation of the self-supporting person on whom the non-earning dependant is dependent.)

12. Literacy and Education—Write :

- 0 for a person who can neither read nor write,
- 1 for a person who can read but can not write, and
- 2 for a person who can both read and write.

If a person who can read and write has also passed any examination, note the highest examination passed, instead of writing 2.

13. Unemployment—Write :

0 for all persons below 16 or above 60 years of age, housewives, students, permanently disabled persons, who are not gainfully employed ; also for unemployed persons not seeking employment. *If either of them is gainfully employed write '1'.*

- 1 for persons gainfully employed on the date of the enumeration or on leave from gainful employment on that date and
- 2 for persons unemployed and seeking employment and give the period of continuous unemployment in years and months as follows:

"2—1 year 9 months".

14. Sex—Write 1 for a male and 2 for a female,

II. DETAILED INSTRUCTIONS ON THE QUESTIONNAIRE

Q. 1. Name and relationship to head of household

After the name write :

- 1 for the head of household.
Actual relationship for wife, son, daughter, brother, sister, father, mother, *husband*, son-in-law, daughter-in-law or brother's wife.
- 2 for other relatives,
- 0 for unrelated persons (if any) living in the household and
- 3 for visitors enumerated along with a household, patients in hospitals or asylums and inmates of jails and such institutions.

Enter first the slip for the head of the household followed by the near relatives, other relatives, unrelated persons and visitors. Enter at start the names and the relationship to the head of the household in all the slips of the household and then make other entries.

Write the full name of the person enumerated. If an infant has not been named enter the word "infant" and add the name of the father. If a lady cannot or will not give her name or that of her husband do not compel her to do so. Endeavour to ascertain the name by enquiries from others and verify the name from the lady herself.

For purposes of the census, a "house" has been defined as a dwelling with a separate main entrance. A "household" means all the persons who live together in the same house and have a common mess. In some houses there may be more than one group of persons with a separate mess. In these cases each group should be recorded as a separate household for the purposes of the census. The head of the household is a person on whom falls the chief responsibility for the maintenance of the household. You need not make any detailed enquiry about this ; treat as the head of the household any person who is actually acknowledged as such. A household may include persons (e.g., domestic servants, lodgers, etc.) who are not related to the head of the household but live together and have a common mess.

The term "head of the household" is not to be confused with "self-supporting person" in Question 9. A "head of the household" can be "self-supporting" or "dependant" or "partly dependant".

Supplementary Instructions—*In addition to writing the name of the person enumerated write also (a) husband's name in the case of married and widowed ladies and (b) father's name in the case of males and other ladies. This additional information is necessary for preparation of electoral rolls from the National Register of Citizens.*

The information regarding "relationship to head of household" is intended for a study of the composition of Indian households. It is, therefore, necessary that only persons who are normally members of the household are enumerated as such. Thus if sons, daughters or near relations are normally members of a different household and are only on a temporary visit enumerate them as "visitors" i.e., '3'.

Q. 2. (a) Nationality, (b) Religion, (c) Special Groups

(a) *Nationality*—Write 1 for all Indian Nationals. For others write nationality in full.

In order to find out whether a person is an Indian National you should ascertain whether he belongs to any of the following classes of citizens :

A. **Citizenship under Article 5 of the Constitution**—A person would be a citizen if he has his domicile in India on January 26, 1950 and if—

- (a) he was born in India (as now understood), or
- (b) any of his parents was born in India, or
- (c) he has been ordinarily a resident in India for not less than five years immediately before January 26, 1950.

B. A person who migrated from Pakistan to India before July 19, 1948, would be a citizen of India, if—

- (a) he or any of his parents or grand-parents was born in undivided India (including Pakistan), and
- (b) he has been ordinarily a resident in India since his migration.

C. A person who migrated from Pakistan to India on or after July 19, 1948, but before July 25, 1949, will be a citizen if he applied for and obtained registration as a citizen and possesses a citizenship certificate,

It should be noted that no person, whether Hindu or Muslim, who migrated from Pakistan to India on or after July 25, 1949, can be an Indian citizen without special registration.

In the case of foreigners like Chinese, British, etc., write the nationality as Chinese, British, etc., unless they have taken an Indian domicile certificate.

(b) *Religion*—Write 1 for Hindu, 2 for Muslim and 0 for those who say they do not profess any religion. For others write the answer as actually returned in words.

You must ascertain the religion of a person by actually interrogating him and record the answer as given by him.

(c) *Special Groups*—Write :

A for Anglo-Indians,

× for all non-Hindus except Anglo-Indians,

0 for any Hindu who says he is not a member of any caste or tribe, and

1 for any Hindu who is a member of one of the castes mentioned in the attached list of non-backward castes.

In all other cases write the name of the caste or tribe as returned by the person enumerated.

It will appear from the above that the caste of every Hindu will not be recorded in full in this census. Government have decided not to attach much importance to castes. The enumeration of Scheduled Castes and backward castes is necessary under the Constitution of India and so provision has been made for it. Anglo-Indians have been allowed certain privileges for a number of years under the Constitution of India. This is why they also are being enumerated.

Supplementary Instructions—It should be noted that the caste of a person is to be recorded as returned by him. Thus if *Barhais* give their caste as "Panchal Brahmins" record as such. Do not identify "Panchal Brahman" with "Brahman" for whom the contraction '1' is to be used. Likewise "Tamoli" should be treated as different from "Barai", "Kahar" as different from "Bhishti", etc.

Q. 3. Civil Condition—Unmarried, Married, Widowed or Divorced

Write 1 for unmarried, 2 for married and 3 for widowed. If divorced write 0.

This question has to be answered for *every* person. Do not omit to ask the question in respect of babies, and minor boys and girls. Not only is marriage still current among children and infants but also widowhood or widowerhood among them is not infrequent. There may be some hesitation on the part of the parents of married children and infants to give correct information. They should be assured that the information will be treated as strictly confidential and cannot be utilized for any purpose other than that of the census.

A person should be treated as "unmarried" only if he or she never married. Prostitutes, concubines and any women who have never been married by any recognised form should be entered as "unmarried" whether they are living with a man or not.

A person should be recorded as "married" if he or she has been married in accordance with any religious rite or by registration or according to any custom or form recognised by his or her community and has not been widowed or divorced. Persons who have married again should also be recorded as "married".

"Widowed" means persons widowed but not remarried. If a person marries again after being widowed he or she shall be recorded as "married".

"Divorced" means persons whose marital ties have been severed by law and custom and are free to remarry. A husband and wife living separately by mutual consent or order of a court or that of a caste panchayat should both be treated as "divorced". If a "divorced" person marries again he or she should be recorded as "married".

NOTE—If you ask widowed persons, "Are you married?" many may reply "yes" without reflecting that they are now single. Therefore, in all cases put another question, "Is your wife or husband alive?"

Q. 4. Age

Write age last-birthday; that is, the actual number of completed years. Write 0 for infants below 1.

This is a very important question and you should try to record as correct an answer as possible. Many persons are likely to find it difficult to state their age correctly. You should assist them and make enquiries from other members of the family and neighbours. One way of locating the correct age may be reference to some important event of

the past, e.g., death of Queen Victoria in 1901, the Coronation of King George V in 1911, the earthquake of 1934 or some purely local events like a flood. You should use any local calendars of such events which may have been prepared for the purpose.

Note that you have to record the number of completed years of age on or before March 1, 1950. Many persons give their running age, i. e., the would-be age at their next birthday. You should, therefore, invariably check this up by asking the question, "When did you attain this age and when will you be one year older?"

Q. 5. Birth-place

Write 1 for every person born in your district. For persons born in other districts of Uttar Pradesh ascertain the name of the district and record it. For persons born in a State of the Indian Union other than Uttar Pradesh write the name of the State (*vide* list below). For persons born in a foreign country write the name of the country e.g., Pakistan, China, etc.

The list of States included in the Union of India is as follows :

- Part A— 1. Assam 2. Bihar 3. Bombay 4. Madhya Pradesh 5. Madras
6. Orissa 7. Punjab 8. Uttar Pradesh 9. West Bengal
- Part B— 1. Hyderabad 2. Jammu and Kashmir 3. Madhya Bharat
4. Mysore 5. Patiala and East Punjab States Union 6. Rajasthan
7. Saurashtra 8. Travancore-Cochin 9. Vindhya Pradesh
- Part C— 1. Ajmer 2. Bhopal 3. Bilaspur 4. Cooh-Bihar 5. Coorg
6. Delhi 7. Himachal Pradesh 8. Kutch 9. Manipur
10. Tripura

Part D—The Andaman and Nicobar Islands

All other territories must be treated as foreign countries.

Q. 6. Are you a displaced person from Pakistan ? If so, when did you arrive in India from Pakistan, and what was your original district in Pakistan ?

If the person enumerated is not a displaced person write 0 in both compartments. If he is a displaced person, write the date of arrival (Month/Year) in India in the first compartment and the district of origin in Pakistan in the second compartment.

This question will apply only to displaced persons from Pakistan.

The definition of a 'displaced person' is as follows :—“A 'displaced person' means any person who has entered India having left or being compelled to leave his home in Western Pakistan on or after the 1st March, 1947, or his home in Eastern Pakistan on or after the 15th October, 1946, on account of civil disturbances or on account of the setting up of the two Dominions of India and Pakistan.”

Q. 7. Mother-tongue

Write 1 for Hindi, 2 for Urdu and 3 for Hindustani. For others write the name of the language as returned in words.

Mother-tongue is the language spoken from the cradle. In the case of infants and deaf-mutes give the mother-tongue of the mother.

Q. 8. What other Indian language besides your mother-tongue do you commonly speak ?

If a person commonly speaks any Indian language other than his mother-tongue record it. For others write 0. Use the contractions indicated in Question 7. Record only one subsidiary language.

Note that the language to be recorded under this question must be *Indian*. "English" can not be recorded as it is not an Indian language. The language should be recorded only if the person enumerated speaks it fluently and habitually for domestic or business purposes. Do not enter learned languages like Sanskrit. It must be a language which is used for the ordinary purpose of every day life. If a person is fluent in several Indian languages, only one in which he is most fluent should be recorded.

Q. 9. Economic Status

The Census is concerned with two economic characteristics of every individual—his economic status, and his means of livelihood. Question 9 relates to economic status and Questions 10 and 11 deal with the principal and secondary means of livelihood.

(1) *Dependency*—Write 1 for a self-supporting person, 2 for a non-earning dependant and 3 for an earning dependant. Write the answer in the first compartment.

You are asked to distinguish every person whom you enumerate as either a "self-supporting person" or an "earning dependant" or a "non-earning dependant".

A "self-supporting" person is one who is in receipt of an income and that income is sufficient at least for *his own* maintenance. To be "self-supporting" a person need not be able to support his family. All that is necessary is that he should be earning sufficient for his personal needs. *For purposes of this question the person enumerated is the unit and not the family or household.*

Anyone who is not a "self-supporting" person in this sense is a "dependant". A "dependant" may be either an "earning dependant" or a "non-earning dependant". The test is whether he secures a regular (and not casual) income, even though it may be small. Such income may be in cash or kind; it may be by continuous or seasonal employment. When the income which he secures is not sufficient to support him that person is an "earning dependant". A person who does not earn any income either in cash or kind is a "non-earning dependant".

Where two or more members of a family household jointly cultivate land and secure an income therefrom, each of them should be regarded as earning a part of the income. None of them is, therefore, a non-earning dependant. Each of them should be classed as either a "self-supporting person" or an "earning dependant" according to the share of income attributable to each. The same applies to any other business carried on jointly. The share of the income is what the head of household deems it to be.

This does not mean that every one *who works* is necessarily a self-supporting person or an earning dependant. Thus, for instance, a house wife who cooks for the family, brings up the children or manages the household is doing very valuable work. Nevertheless, her economic status is that of a "non-earning dependant", if she does not also earn an income, and should be recorded as such.

Illustrations: (1) A father in a family earns Rs.120 per mensem. The wife and children live with him but do not contribute to the support of the family and are entirely dependent on the father. The father is a "self-supporting" person. The others are "non-earning dependants".

(2) In a family a father gets a regular income from investments, one son earns a small income which is not sufficient to support him independently, and the other members do not earn anything. The father is a "self-supporting" person, the son is an "earning dependant" and the other members of the family are "non-earning dependants".

(3) In a household a father gets a pension of Rs.15 per mensem, the eldest son earns Rs.75 per mensem, the second son earns Rs.20 per mensem and the son-in-law living with them earns Rs.45 per mensem. If they say that Rs.45 per mensem is sufficient for the subsistence of a person with their standard of living, the first son and the son-in-law are "self-supporting" persons, while the father and the second son are "earning dependants" and the remaining members of household are "non-earning dependants".

(4) A child aged four has some cultivation in his name. The annual income from the land is sufficient for his own maintenance. The child is a "self-supporting" person.

(5) A street singer or beggar who earns by begging is also a "self-supporting" person.

(6) Convicts in jail, lepers or lunatics in an asylum are "non-earning dependants".

(7) Patients in hospitals and undertrial prisoners should be classified according to their original professions.

Supplementary Instructions—Take care to distinguish "self-supporting" person and "head of the household". The head of the household need not necessarily be self-supporting; he may be an earning or non-earning dependant. There can be only one head of the household but there can be several self-supporting persons in the household.

A self-supporting person is one who is in receipt of an income which is sufficient at least for *his own* maintenance. It is not necessary that this income be derived from his personal labour; only he should be receiving the income in his own right. Thus minors or old persons who do not work themselves but live on income received from zamindari or tenancy recorded in their names are self-supporting persons. Likewise a person having income from pension or from investments is self-supporting provided the income is sufficient for his own personal maintenance.

Illustrations: (1) An agricultural family consists of—

- (i) Father, aged 58, in whose name alone the occupancy is recorded but who does not work on the fields;
- (ii) mother, aged 50, who occasionally works on the fields and does domestic work in the household;
- (iii) son, aged 30, who works on the fields;
- (iv) son, aged 8, who only looks after the grazing of cattle; and
- (v) daughter, aged 7, who only helps her mother in household work.

In this family the father is self-supporting although he does not work, as the land is recorded in his name and he derives income therefrom. The mother is an earning dependant as she occasionally works on the fields. The son aged 30 is self-supporting as he works and earns sufficient for his own maintenance. The son aged 8 is non-earning dependant as grazing the cattle does not provide any income in cash or kind. If, however, he is also grazing others' cattle on wages, he will be an earning dependant or even a self-supporting person according to the income from this source. The daughter aged 7 is a non-earning dependant.

For Question 10 the principal means of livelihood of the *whole* family is Agriculture contraction '1'. (Do not write '1' only for the father in whose name the land is recorded and '2' for the rest.) If, however, persons other than family members are living in the household and sharing in cultivation, their principal means of livelihood will be Agriculture contraction '2'.

For Question 9 (2), which is to be recorded only for self-supporting persons, the father is category '0' for he is neither an employer nor employee nor independent worker. But the son aged 30 who works on the fields is an independent worker '3'.

For Question 13 the son aged 30 is '1' and so also the mother who partly works on the fields. All the rest including the father who does not work are '0'.

(2) A family consists of a husband who is a lawyer and a wife who is a wholetime teacher in a school. Both are self-supporting, though the husband alone is the head of the household.

(3) A father and an adult son both work on their shop. Both are self-supporting, though the father alone is the head of the household.

(4) Where a wife is head of a household consisting of non-earning dependants and living on an allowance sent by her husband working elsewhere, the lady herself should be treated as a non-earning dependant. This will then be a household without any self-supporting person because the bread-winner is working elsewhere.

(2) *Employment*—This question has to be answered only for "self-supporting" persons. In respect of "earning" or "non-earning" dependants, write 'X'. If a self-supporting person earns his principal means of livelihood as an employer, write 1; as an employee, write 2; and as an independent worker, write 3. Write 0 in other cases. Write the answer in the second compartment.

An "employer" is only that person who has necessarily to employ other persons in order to carry on the business from which he secures his livelihood. Thus if a person employs a cook or other person for domestic services, he should not be recorded as an "employer" merely for that reason.

An "employee" is a person who ordinarily works under some other person for a salary or a wage in cash or kind, as the means of earning his livelihood. There may be persons who are employed as managers, superintendents, agents, etc., and in that capacity control other workers. Such persons are also employees only and should not be regarded as employers.

An "independent worker" means a person who is not employed by any one else and who also does not employ anybody else in order to earn his livelihood.

It is to be noted that dependants, whether earning or non-earning are *not* to be classified under either of these three heads. In their case put a 'X' in this part. In those comparatively rare cases where "self-supporting" persons who support themselves without gainful occupation or economic activity (e.g., rentiers, pensioners, persons living on interest of securities or shares, deposits or Government Promissory Notes) put a '0' in this part.

Illustrations: (1) Doctors and lawyers are employers as they engage compounders or clerks to relieve them of part of the work.

(2) A money-lender who employs persons to realize interest is an employer.

(3) The Collector employs a number of persons for service in the Collectorate. But he is not to be regarded as an employer. He is himself an employee under government.

(4) A clerk in a government office has a few bighas of land in his name and engages labourers for doing work on it. His principal income is through government service. He should be regarded as an "employee" and not an "employer".

Supplementary Instructions—All agriculturists who work on their own land themselves are "independent workers". If, however, they engage labourers to cultivate the land, they are "employers".

All shopkeepers who work on their own shops are "independent workers". But if they engage salesmen to help them they are "employers".

Doctors and lawyers are "employers" if they engage compounders or clerks. But if a doctor or a lawyer works alone without a compounder or a clerk, he is an "independent worker".

Sweepers, Dhobis, Kahars, etc., who work for several masters are "independent workers". If, however, any of them accepts wholtime employment under one master, he becomes an "employee".

Daily wage-earners who work for different masters are likewise "independent workers". But if they accept employment under one master (e.g., a factory), they become "employees".

Beggars should be classed as '0'. Write '0' also for self-supporting persons who support themselves without gainful occupation or economic activity, e.g., rentiers, pensioners, persons living on interest of investments.

Q. 10. Principal Means of Livelihood

An answer to this question should be recorded on every slip. If the slip relates to a self-supporting person, record his principal means of livelihood. If the slip relates to a dependant (whether earning or non-earning) record here the principal means of livelihood of the self-supporting person on whom he is dependent. The means of livelihood which provides the largest income is the principal means of livelihood for a self-supporting person who has more than one means of livelihood. In the case of self-supporting persons having only one means of livelihood "Principal Means of Livelihood" is the same thing as "Means of Livelihood." Use the following contractions :

- 1 for a person who cultivates land owned by him,
- 2 for a person who cultivates land owned by another person,
- 3 for a person who is employed as a labourer by another person who cultivates land and
- 4 for a person who receives rent in cash or kind in respect of land which is cultivated by another person.

For all other means of livelihood, write fully and clearly what the person does in order to earn his livelihood and where he does it.

"Means of livelihood" of any person ordinarily means the gainful occupation from which he derives normally the income on which he maintains himself; but it is more comprehensive inasmuch as, in exceptional cases, income may be secured without gainful occupation. "Principal means of livelihood" means the same thing as "Means of livelihood" for every person who has only one means of livelihood. Where a person has more than one, that which gives him the greater part of his income is his "Principal means of livelihood". That which gives him the next most important part of his income is called the "Secondary means of livelihood". You have to record only the principal means of livelihood against Question 10. The secondary means of livelihood should be recorded separately under Question 11.

In the sense thus defined, every human being, without any exception, has a "Principal means of livelihood"—whether or not he is a self-supporting person. Every non-earning dependant is maintained exclusively by the income of some self-supporting person on whom he is dependent. Consequently, the "Principal means of livelihood" of the latter is required to be recorded as the "Principal means of livelihood" of the former. Every earning dependant is maintained partly by the income of some self-supporting person on whom he is partly dependent. So the "Principal means of livelihood" of a partly dependent person also is required to be recorded as that of the self-supporting person on whom he is partly dependent (no attempt being made to assess the degree of sufficiency of his own income or the extent of his dependence on others). Thus, the answer to Question 10 should be the same for a self-supporting person, as well as all other persons who may be dependent on him, whether earning or non-earning.

Four simple contractions have been provided which will cover most cases where the livelihood is dependent on agriculture. If you find that a person falls under two of these four categories, note that category which provides the largest income as principal means of livelihood under Question 10 and the second as secondary means of livelihood under Question 11. No note need be taken of more than two such categories in any case. The test of "ownership" is the existence of a right of occupancy in land which should be a heritable but not necessarily a transferable right. Distinction should be made between "cultivation of the land" and "performance of labour necessary for cultivating the land". There are, of course, millions who perform both functions but the functions are distinguishable and should be distinguished. The man who takes the responsible decisions which constitute the direction of the process of cultivation (e.g., when and where to plough; where and what to sow; where and when to reap and so forth) is the person who should be referred to as the cultivator, even though he does not perform any manual labour whatever. The man who ploughs, sows, reaps, etc., under the direction of someone else is the cultivating labourer and *not* the cultivator,

Thus under category 1 fall all Bhumidars, ex-proprietary, occupancy or hereditary tenants, etc., (whether they cultivate the land themselves or through hired labourers). Category 2 includes land cultivated by sub-tenants, etc. Category 3 relates to agricultural labourers. Category 4 includes zamindars or tenants who receive rent for land cultivated by another person.

In all other cases you should write fully and clearly what the person does in order to earn his livelihood and where he does it.

There are three lines provided in the slip for answering this question. Use them fully. Avoid vague and general terms. Do not merely write "service" or "labour". At the time of tabulation hundreds of professions will be separately tabulated and accounted for and, therefore, the greatest accuracy of detail in describing the profession is necessary. Some hints are given below :

1. **Trade**—In enumerating a trader, describe the articles in which he trades and state clearly whether he is a wholesaler or retailer. A retail trader sells to the public, while a wholesaler sells to retailers only. A distinction should also be made between a trader who merely sells articles manufactured by others and a trader who manufactures articles and sells them, e.g., "manufacture and sale of furniture, Lucknow".
2. **Factory workers**—Give the name of the factory together with the product it manufactures, the name of the department in which he works, e.g., "worker in such and such sugar mill—panman", "worker in such and such cloth mill—weaver", etc. Distinguish between the clerical staff and the mill-hands.
3. **Engineering works or repairing shops**—State what kind of work the person enumerated is engaged in, e.g., tram, bus or motor works ; or general engineering. Say whether he is an engineer by profession or foreman or mechanic, e.g., "mechanic in motor repairing works, Allahabad".
4. **Railway**—Mention branch of administration, e.g., traffic manager, driver, guard, porter or auditor.
5. **Small Industries**—State whether he is both maker and seller, e.g., maker and/or seller of *bidis*.
6. **Professions**—
 - (a) **Law**—Say whether barrister, judge, solicitor, pleader, advocate, mukhtar, clerk, etc.
 - (b) **Medicine**—Say whether doctor of medicine, hakeem, vaid, compounder, nurse, hospital orderly, etc.
 - (c) **Civil Service**—State specifically what service, e.g., Government service—clerk in Collectorate ; Government service—Assistant Secretary in Secretariat, etc.
 - (d) **Police**—State whether Superintendent Police, Deputy Superintendent Police, Inspector, Sub-Inspector, Head Constable, Constable, etc., if in Armed Police, say so.
 - (e) **Defence Services**—State whether Indian Air Force or Army or Navy and give the service rank.
 - (f) **Teaching**—State whether the institution employing him is a primary or secondary school or college, etc.
 - (g) **Finance**—Whether banker, money-lender, broker, etc. If engaged in Banking, state whether manager, assistant, cashier, accountant, etc.

Supplementary Instructions—Attention is invited to the following points on which errors are commonly committed by enumerators :

(i) An entry in Question 10 is compulsory in every slip and so no slip should have a blank or even '0' under this question.

(ii) While writing the agricultural occupations, use only the correct contraction. Do not write words such as "*kasht*" or "*zamindari*". Both a cultivator and a zamindar can fall in either of the categories '1' or '4'.

(iii) While writing the occupation of people in service, the recording of the word "service" alone is altogether insufficient. Write whether it is Government or Municipal service or service of some firm, etc., and also state the exact nature of the service.

(iv) While writing the occupation of workers, give the place of their work. For instance state whether a carpenter works in a motor workshop, a textile mill, in a furniture firm, or only works independently on daily wages. It is not necessary to mention the town or village where he works.

(v) While writing the occupation of traders, the recording of word "business" only is altogether insufficient. State the exact nature of business and whether it is retail or wholesale.

(vi) The principal means of livelihood of all members of a family living on occupancy tenancy is '1' although the tenancy may be recorded in the name of one person only. If non-members of a family are sharing in cultivation, their principal means of livelihood is '2'.

Q. 11. Secondary Means of Livelihood

For a self-supporting person who has more than one means of livelihood, write the name of livelihood, next in importance to his principal means of livelihood. For an earning dependant, write the means of livelihood which provides the earning. Use contractions given in Question 10.

For a self-supporting person who has only one means of livelihood, write 0. In the case of non-earning dependants also write 0.

The answer to this question must be recorded on every slip.

If a person who has been enumerated as self-supporting person against Question 9 (1) has more than one means of livelihood, enter here that occupation of his which provides him the next largest income after his principal means of livelihood.

If a person has been enumerated as an earning dependant, enter here the means of livelihood which provides his income or if he has more than one means of livelihood, the one which provides the largest part of his income. An entry must be made for each earning dependant under this question, even if the means of livelihood of the earning dependant is the same as the principal means of livelihood of the self-supporting person on whom he is dependent. Thus, if an earning dependant assists the self-supporting person in cultivation of their occupancy land, both the principal and secondary means of livelihood of the earning dependant will be Agriculture, category 1.

For both self-supporting persons and earning dependants, use the same contractions and broad descriptions of occupations as given in Question 10.

If a self-supporting person has only one means of livelihood, write '0' under this question. In the case of all non-earning dependants also, write '0'.

It will thus be seen that in the case of a self-supporting person, you should record only his most important means of livelihood against Question 10 and his next important means of livelihood against Question 11, while, in the case of earning dependants, only the most important means of livelihood should be recorded against Question 11 and his other less important occupations should be ignored.

Supplementary Instructions—Attention is invited to the following points on which errors are committed by enumerators :

(i) In the case of earning dependants, an entry in this question is compulsory. Write the occupation which provides the earning to the earning dependant. If it is the same as the principal means of livelihood, repeat the entry made in Question 10, and do not write '0'. Do not repeat for an earning dependant the secondary means of livelihood of the self-supporting person on whom he is dependent.

(ii) For all non-earning dependants write '0' only.

Points (ii) to (v) under Question 10 above apply to this question also.

Q. 12. Literacy and Education

Write:

0 for a person who can neither read nor write,

1 for a person who can read but can not write and

2 for a person who can both read and write.

If a person who can read and write has also passed any examination, note the highest examination passed, instead of writing 2.

The test for *reading* is ability to read a simple letter whether in print or in manuscript. The test for *writing* is ability to write a simple letter in any language. You are not to hold an examination, only make verbal enquiries. In cases of doubt, however, you may test him by asking him to read a simple printed or manuscript letter or asking him to write down a simple letter.

A person will be regarded as *literate* if he can *both* read and write in *any* one language.

The question is also intended to secure information on the educational level reached by each person. If, therefore, a person who can both read and write, has also passed an examination or examinations, record the highest form of examination or examinations

passed instead of writing 2 in the slip, e.g., "IV Class", "M.A.", "M.A., LL.B.", "M.Sc.," "D.Sc. (Chemistry)", "B.A., Dip. in Library Science (Calcutta)". Take care to record all the highest examinations which indicate the educational qualifications of the person enumerated. Thus if a person has passed M.A., no lower examination like B.A. need be mentioned but if he has obtained any diploma, or degree in addition, mention it e.g., "M.A., Ph.D. (Economics) (London)". It is intended to prepare tables of educational qualifications and so you should try to ascertain carefully the higher qualifications from educated persons. Such persons will be found mostly in urban areas. The importance of disclosing their diplomas and degrees in detail may be explained to them.

Q. 13. Unemployment

Write 0 for all persons below 16 or above 60 years of age, housewives, permanently disabled persons, etc., who are not gainfully employed. Write 0 also for persons not seeking employment.

Write 1 for persons gainfully employed on the date of enumeration or on leave from gainful employment on that date.

Write 2 for persons unemployed and seeking employment and give the period of continuous unemployment in years and months as follows—"2—1 year 9 months".

An answer to this question should be recorded on each slip.

From the point of view of employment, every person will fall in either of the three categories mentioned.

In the first category are all persons below 16 or above 60 years of age, housewives, permanently disabled persons, etc., who are not in the race for employment at all. Also fall in this category persons who, although unemployed, are not seeking employment. If, however, any of them is gainfully employed he falls in the second category.

In the second category are all persons gainfully employed on the date of enumeration or on leave from gainful employment on that date. A person should be deemed to be in "gainful employment" if he has an existing means of livelihood. Intermittent or seasonal break of employment should not be taken to be "unemployment". For instance, a weaver earning his living by weaving may not be having any work on the day of enumeration, but is to be treated as "gainfully employed". An "earning dependant" who earns some income by selling firewood should likewise be treated as "gainfully employed" even if on the enumeration day he is not doing the work.

In the third category are persons unemployed and seeking employment. If an unemployed person is not seeking employment, he falls in the first category.

The question is intended mainly to assess the nature and magnitude of unemployment in Uttar Pradesh.

Supplementary Instructions—If a person below 16 or above 60 years of age, housewife, student or permanently disabled person is gainfully occupied write '1' for him.

All agriculturists working on their land are gainfully employed. So also are all employees of Government, Local bodies, etc. Write '1' for them and not '0'.

For all earning dependents write '1' (except when they are not gainfully employed, e.g., pensioners and persons deriving income from investments).

Q. 14. Sex

Write 1 for male and 2 for female.

Eunuchs and hermaphrodites should be treated as *males*.

ENUMERATION SLIP, 1951

(Location code to be recorded here)

- | | | |
|-----|--|-------------|
| 1. | Name and relationship to head of household..... | |
| 2. | (a) Nationality.....(b) Religion..... | |
| | (c) Special Groups..... | |
| 3. | Civil Condition..... | |
| 4. | Age..... | |
| 5. | Birth-place..... | |
| 6. | Date of arrival of D. P. / District of origin in
Pakistan | |
| 7. | Mother-tongue..... | |
| 8. | Bi-lingualism..... | |
| 9. | Dependency | /Employment |
| | | |
| 10. | Principal Means of Livelihood..... | |
| | | |
| | | |
| 11. | Secondary Means of Livelihood..... | |
| 12. | Literacy and Education..... | 14. |
| 13. | Unemployment..... | Sex |

APPENDIX II

VITAL STATISTICS IN U. P.

By DR. A. N. DAS, M.B., D.R.P.H. (U.S.A.), *Director of Medical and Health Services, U. P.*

Brief history of the laws and procedure relating to collection of vital statistics in U. P.—In the days of Hindu and Mohamadan rulers of India there was no legislation for the civil registration of births and deaths. These were, however, noted by the temple priests and *kazis*. Among the Hindus horoscope of the new-born babe was generally prepared and a copy kept with the temple priest, whereas the birth of a Muslim babe was recorded by the *kazi*.

In the British rule matters began to improve. Birth and death registration was first introduced in 1886 on a voluntary basis being only compulsory for municipalities. In the year 1912 with the beginning of inauguration of service of Medical Officers of Health and after passing of the Municipalities Act II, 1916, a decided step towards civil registration was taken in the urban areas. Bye-laws were framed under section 298 J (b) of Act II of 1916 in order to establish a uniform system of vital statistics.

In the rural areas due to lack of above facilities reporting of vital statistics was not obligatory. The duty of collection of vital statistics was entrusted to the village chaukidar (village policeman) the lowest-paid public servant over and above his normal duties.

The advent of the popular government brought further progress in registration of vital statistics of rural areas. With the passing of the Panchayat Raj Act of 1947 and formation of village panchayats in the State, reporting of births and deaths has been made obligatory under law, as in urban areas. Under rule 143 of the Panchayat Raj Act, the work of registration of births and deaths and the reporting of epidemic diseases has been entrusted to village panchayats since January 1, 1951, and under this rule the head of the family is required to report the occurrences in the family to Secretary, President or Vice-President of the gaon sabha concerned.

Registration areas and non-registration areas—Before the integration of the states, the registration area in Uttar Pradesh was whole of U. P. excluding the states of Tehri-Garhwal, Rampur and Banaras. Now since these form part of Uttar Pradesh, the registration area has been extended to them also so that it comprises the whole of the State.

THE AGENCY FOR THE COLLECTION OF STATISTICS AND ITS LIMITATION

Urban areas—They comprise of municipalities, town areas, notified areas and cantonment areas. In whole of the urban area registration of births and deaths is obligatory by law and the first charge is on the heads of families and keepers of hotels, inns, *dharamshalas*, etc., as the primary reporter of every occurrence of birth and death in the family within three days. Then as a check against omissions, the sweepers, *dais* and midwives are also instructed to report every occurrence of birth and death that comes to their knowledge. In some of the larger municipalities, there are also *moharrirs* at burning ghats and grave yards to record deaths.

The reports of births and deaths received day to day from different reporting agencies are then compiled after the completion each month and the consolidated monthly statement of births and deaths are submitted to the District Medical Officer of Health.

Rural areas—In rural areas before January 1, 1951, the village chaukidar was supplied with two books wherein he noted births and deaths. These entries were copied at the police thana where one book was kept and the other given to the chaukidar. After a month these books were exchanged. The chaukidar being a poorly paid illiterate official was unable to write the occurrences in the books and, therefore, had to wait till someone did it for him or till he next visited the police station where the entry was made. As the chaukidar went to thana once a fortnight, he most likely forgot the number of births and deaths in the preceding fortnight. Therefore, figures were never accurate.

Since January 1, 1951, the duty of registration of births and deaths has been transferred to village panchayats. The head of the family is required to report birth or death occurring in his family within 3 days of occurrence to the President, Vice-President or Secretary of the gaon sabha and the officer on receiving the report issues receipt of the same to the reporter. In order to have a check against omissions by head of a family, the police chaukidar in the village is also required to report to the registering official every birth or death occurring in the area assigned to him within 2 days of the occurrence. The report of the informant who reports first is recorded in the register of births and deaths.

In urban areas there being better communication and more literacy among the population, registration is fairly accurate though offenders exist due to the apathy of public to get the events registered and there is still much to be desired. In rural areas registration under the U. P. Panchayat Raj Act is still in its infancy and comments on its working will be premature. The foundation has, however, been laid here also on the fundamental principle of compulsion or obligation to report birth or death as a matter of law.

SYSTEM OF COMPILATION

I—*Urban Areas*

(a) **Municipalities**—Births or deaths recorded at the municipal registration offices are reported monthly by the Municipal Medical Officer of Health where there is one and to the Secretary or Executive Officer where there is no Municipal Medical Officer of Health. The notified areas and town areas also submit their monthly birth and death statements to the District Medical Officer of Health.

(b) **Cantonments**—In cantonments these statistics are reported to the Cantonment Magistrate. Monthly summaries of all births and deaths in Cantonments are then forwarded by the Cantonment Officer to the District Medical Officer of Health.

(c) **Registration within railway limits**—All births and deaths among families of railway employees and others on the railway premises within the limit of their stations outside municipal limits are reported by the Station Masters to the gaon sabhas concerned. All births and deaths among the families of railway premises within the limit of a municipality are reported by the head of the family to the railway authorities who send a monthly return to the Municipal Medical Officer of Health concerned for inclusion of the figures in their monthly returns.

II—*Rural Areas*

The primary unit or circle of registration in the rural areas now is a gaon sabha and the President, Vice-President of the sabha or Secretary of the panchayati adalat maintains a combined register of births and deaths in each gaon sabha. There are about 36,000 gaon sabhas and 8,414 panchayati adalats in the State covering about 120,000 villages. The Secretary of the panchayati adalat maintains compilation sheets for births and deaths. He has to visit each gaon panchayat once a week for other work. During his first monthly visit to each of them he is required to copy out the figures into his compilation sheet from village registers kept by the President of gaon sabha. He was required to submit the consolidated statement of all the villages under him to the panchayat inspector by the 10th of every month. Each panchayat inspector on receipt of the Secretary's returns in his circle got them consolidated and submitted the return of his circle to the District Medical Officer of Health by the 15th of every month. In order to eliminate so many stages in the compilation, recently the Secretaries are now required to submit their statements direct to the District Medical Officer of Health where the consolidation of the district return is done.

From the monthly statement submitted to the District Medical Officer of Health by the municipalities, notified areas, town areas, cantonment authorities and Secretaries of Panchayat Raj Department as stated above, consolidated monthly and annual statements are prepared for the whole district in the office of the District Mortuary Registrar and submitted to the Director of Medical and Health Services, U. P.

Accuracy of the statistics—The vital statistics collected in U. P. and even in whole of India are far from being accurate. The inaccuracy is not only in respect of under-reporting but also in reporting of the causes of deaths. The remedy lies in developing the system of reporting by gaon panchayats.

Suggestion for improvement—There is not much to improve under the existing conditions except that to keep a watch on the working of the present system and to make changes whenever an improvement is needed. Efforts to that effect are continuously being made.

APPENDIX III

ESTIMATION OF OMISSIONS IN REGISTRATION OF BIRTHS AND DEATHS DURING 1941—50 AND 1931—40

1. Prior to 1911, the Census Superintendents regarded the reporting of births and deaths to be fairly accurate. Since then somewhat different methods were adopted by them to find out the error in registration. Sri Blunt in 1911 presumed that the population of 1901 (if we neglect migration for the time being) was equal to the population aged 10 and over in 1911 plus all deaths in the decade minus the deaths of such persons as were born after the census of 1901 and died before that of 1911. He proceeded with the assumption that registration of births was fairly accurate. In the census of 1921, Sri Edge did not adopt any statistical method but on the figures supplied by the Sanitary Commissioner, he made some conjectures about the error in the registration of deaths which was estimated to be 8 per cent. He took the birth error to be the same as reported by Health Department. A better attempt was made in 1931 for finding out the error in the registration of births and deaths and practically the same method has been adopted by us for the calculations for the decades 1931—40 and 1941—50.

2. The underlying principle in ascertaining the registration error in births and deaths is that the number of children aged 0—9 in 1951 is the number of children born in 1941—50, less roughly half the number of those who died aged 0-1 in 1941, those who died aged 0-1 and half those who died aged 1-2 in 1942, those who died 0—2 and half those who died 2-3 in 1943, and so on up to those who died aged 0—9 and half those who died aged 9-10, in 1950. These tedious calculations pre-suppose the tabulation of deaths by individual ages, but these figures are not available in the report of the Director of Medical and Health Services, U. P. In order to obtain single year age deaths the method of taking the simple average in a quinquennial group of deaths has been adopted. Supposing that the deaths in age-group 1—5 are 100, the deaths in ages 1-2, 2-3, 3-4 and 4-5 are each taken to be 100/4, i.e., 25. By adopting this method the deaths of children during 1921—30 are approximately the same as calculated by Sri Turner in 1931 (who did not record the details of his calculations). The results of the calculation for 1941—50 are given below. The figures are in thousand :

Item	Persons
Births during decade (including estimated birth of non-registrative area 1941—50)	14,922
Deaths of children calculated as above (1941—50)	3,144
Survivors aged 0—9 in 1941—50	11,778
Children aged 0—9 enumerated at Census of 1951	16,476
Difference	+4,698

This shows that there were roughly 4.7 million more children aged 0—9 years alive in the State at the final enumeration than the vital statistics would allow for. It is also possible that there might have been heavy migration of children aged 0—9 which is only a remote theoretical probability not warranted by any known facts. One difference from 1931 procedure, however, may be borne in mind. In 1931 the figures of age returns were smoothed to eliminate the prevalent bias of returning particular digits in ages. In the census of 1941 the figures of age returns as shown in the sample tables were also smoothed. In 1951 census the figures of age returns are as returned by the people. On basis of the above calculation we come to the conclusion that births have been under-recorded and that a conservative estimate of the true number of births is that number which allowing for the usual proportion of mortality among children would have resulted in 11,778 thousand children alive under 10 years of age. In other words, the underlying assumption is that the proportional increase of actual births over recorded deaths should correspond with the proportional increase of children aged 0—9 in the census of 1951 over the survivors calculated by vital statistics under 10 during 1941—50. This can be expressed algebraically as—

Actual number of births	=	Children aged 0—9 in 1951 census
Recorded births	=	Survivors calculated by vital statistics during 1941—50
Or actual number of births	=	Recorded births × children aged 0—9 in 1951 census
Or actual number of births	=	Survivors calculated by vital statistics during 1941—50
		$14,922 \times 16,476$
		11,778
		= 20,374 (thousand) persons

It should be borne in mind that the above calculations have been made for the whole State and not for its area of registration only. The figures of balance of migration of registration area in 1951 are not available separately but are only available for the State as a whole. Therefore, the births and deaths of non-registration area (Rampur, Tehri-Garhwal and former Banaras state) have been estimated by adopting the birth-rate and death-rate of the most representative neighbouring district. For Rampur, the rates of Moradabad, for Tehri-Garhwal, the rates of Garhwal and for Banaras state, the rates of Banaras district have been applied. The figures for 1951 are given below for illustration:

District	Mean population 1941—50	Birth-rate	Estimated births	Death-rate	Estimated Deaths
Tehri-Garhwal	404,708	33.4	135,172	24.9	100,772
Rampur	510,183	35.2	179,584	20.8	106,118
Banaras state	485,395	26.3	127,659	20.6	99,991

The recorded births and deaths for the registration area of the State for the decade 1941—50 are 14,479,317 and 9,664,105 respectively. With the estimated births and deaths for the non-registration area the total estimated recorded births and deaths for the State as a whole will be 14,922 thousand and 9,971 thousand respectively.

3. The result of the above calculation is that the number of births is more nearly 20,874 thousand and the estimated recorded births are 14,922. This gives an omission of 28.5 per cent. of births. The correct estimated birth-rate for the State will, therefore, be 34.86 or say 34.9.

4. When we have known the actual number of births we deduct from it the natural increase to find out deaths. For calculating the natural increase, two assumptions have to be made due to lack of reliable figures of migration:

(1) The figures of migrants for the census of 1941 are not available and, therefore, the figures of immigrants and emigrants of 1941 census have been arrived at by taking the mean of immigrants (excluding displaced persons) and emigrants of 1951 and 1931 censuses (see paragraph 34, Section 4 of Chapter I).

(2) There has been an abnormal influx of about 480 thousand displaced persons in this State from Pakistan, while there has also been an efflux of Muslims from this State following the partition of India. The figures of Muslim exodus are not available. The inflow of displaced persons has been set off against the outflow of Muslim migrants as the best possible assumption for estimating migration rate, birth-rate and death-rate.

5. The increase in natural population of Uttar Pradesh between 1941 and 1951 is equal to the excess of births over deaths in that area plus the number of immigrants who died in that area between 1941 and 1951 minus the number born in the area who died elsewhere in the period. As we have no statistics for deaths among immigrants and emigrants, we must estimate them approximately. The proportion of both immigrants and emigrants to the natural population is very small, and so any reasonable mistake we may make in this estimate will not seriously affect our calculations. The number of immigrants to the State in 1941 was 734 thousand. In 1951 it was 908 thousand excluding displaced persons. The average present during the decade may be taken to be at 821 thousand. In the same way we may take the average number of emigrants at 1,542 thousand, the figures of emigrants being in 1941, 1,548 thousand and in 1951, 1,536 thousand. The death-rate per mille among those born in Uttar Pradesh based on the reported deaths of the decade and average population of 1941 and 1951 is 165. Immigrants to this State are largely women among whom the death-rate is likely to be somewhat higher than the average. On the other hand, many immigrants are better off than the resident population and have a lower death-rate. Considering all these things, 200 may be taken as a fair figure. Deaths among immigrants were thus roughly 164 thousand. Among emigrants males preponderate but this is set off by the fact that the emigrants probably are not so well off as a class as the immigrants who came to the State. They go to all the large States and the average death-rate among them is, therefore, likely to be normal. So the death-rate is reasonable and gives deaths among emigrants in the decade to be 308 thousand. The table given below shows the increase in natural population to be 6,498 thousand. The excess of births over deaths calculated thus has been 6,642 thousand (increase in population 6,498 plus deaths among emigrants, 308 minus deaths among immigrants 164). Therefore, a closer approximation to the actual

number of deaths during the decade would be 14,230 thousand (total estimated births according to correct birth-rate 34.9 come to 20,872 minus total natural increase 6,642). The recorded estimated deaths would come to 9,971 as given before. This shows that 4,259 deaths remained unrecorded and thus the minimum percentage in recording deaths in 1941—51 is 29.9. The correct death-rate, therefore, calculates to 23.77 or say 23.8 per cent.

	Item				Persons	
Enumerated population 1951	63,216
Immigrants 1951	908
Emigrants 1951	1,536
Natural population 1951	63,844
Natural population 1941	57,346
Increase in natural population 1941—50	6,498

6. On these very lines the registration error has been arrived at for 1931—40 as follows :

	Per cent.			
Births	11.6
Deaths	15.3

APPENDIX IV

REPORTING OF VITAL STATISTICS IN THE RURAL AREAS OF U. P.*

By Dr. B. G. PRASAD, M.D. (LUCK.), D.P.H. (CAL.), D.T.M. (CAL.), *Second Lecturer,*
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Vital statistics constitute the foundation on which the preventive medicine is built. They form the yard-stick to measure the nation's health. They are indicators of the health conditions prevailing in the area to which they relate and their quantitative analysis helps to assess and define problems for health workers to solve. Vital statistics in their wider sense cover a wide range of human activities but they are usually applied to a narrower field covering births, deaths and prevalence of disease in the community. In this article it is proposed to make a few remarks on the problem of reporting of births and deaths, the two most vital happenings, in the rural areas of this State where 87.6 per cent. (by 1941 Census) of the population live. Correct maintenance of birth and death statistics is not only of immense use in the health and economic planning of the country but the records also form documentary evidence in property and insurance cases.

The extent of error—The unreliability of the figures of births and deaths reported, has been stressed from time to time by various authorities connected with this problem in India. The Royal Commission on Agriculture and the Royal Commission on Labour drew pointed attention to the defects in Indian vital statistics and laid considerable emphasis for effecting their early improvement. The Indian Economic Enquiry Committee and the Age of Consent Committee also dwelt on the lack of accurate statistics and the need for correct statistics. The matter was considered at some length at the second meeting of the Central Advisory Board of Health in 1939, which made various suggestions to reduce the large numbers of omissions in the records of births and deaths. The Health Survey and Development Committee (1946), has made detailed recommendations to improve the registration of births and deaths in India.

The Population Data Committee in their report in 1945, have calculated the range of under-estimation of birth-rate at 40 to 50 per cent. for one of the areas in India where better facilities for registration are available and in the case of death-rate the estimated range was even higher, viz., 35 to 55 per cent. (Sen, 1948). In the census report of 1931, the defect in vital statistics was estimated at about 20 per cent. (Chandrasekhar, 1950). The Annual Report of the Public Health Commissioner with the Government of India (1936) says, "For the country as a whole, the degree of error in birth statistics may be taken to be at least 20 to 25 per cent., whilst in some areas the error is almost certainly higher. In the case of deaths, on the other hand, omissions are by no means so frequent and the percentage of error in mortality statistics may be taken to be represented by a much smaller figure." Some workers maintain that this is an under-estimate and contend that it is more likely to be in the region of 33 per cent. in the case of birth-rates and 30 per cent. in the case of death-rates (Gyanchand, 1939, quoted by Chandrasekhar, *loc. cit.*; Gyanchand, 1938). This view is also borne out by actuarial calculations (Chandrasekhar, *loc. cit.*).

The question arises: what is the extent of error in the registration of births and deaths in the rural areas of this State? The following remarks of the Superintendent of Census Operations, U. P., regarding the percentage of omissions, show that since the decade 1921 to 1931, the omissions have been fairly large, mainly due to the reduction in the number of village chaukidars (watchmen):

	Births				Deaths
1891—1901	"Reporting of vital statistics has been fairly satisfactory."		
1901—1911	"As nearly as possible correct"	..	"Between 1-2 per cent."
1911—1921	"2½ per cent."	..	"8 per cent."
1921—1931	"15 per cent."	..	"22 per cent."

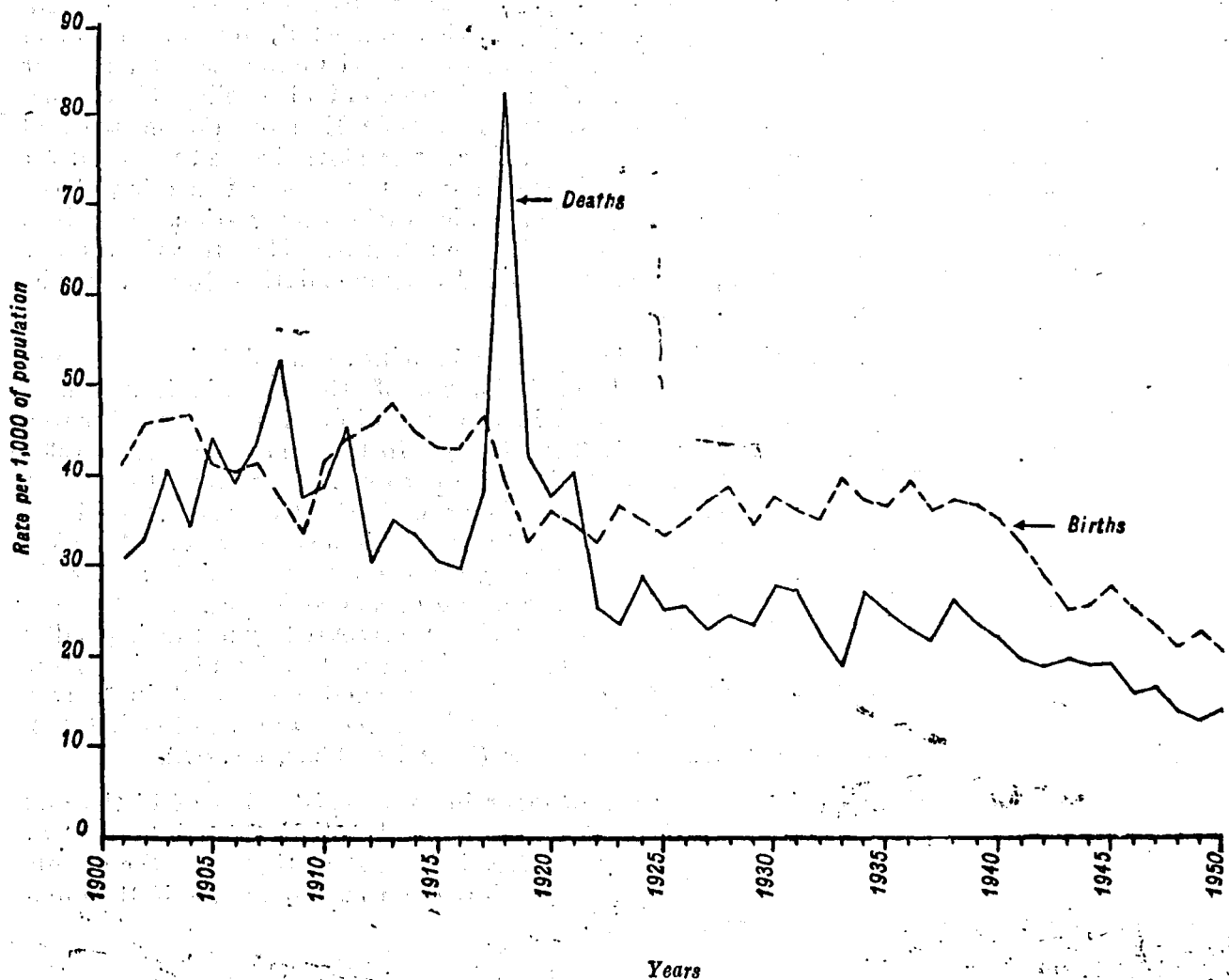
In 1922 the number of chaukidars was reduced by 35,974. Soon after this, the Director of Public Health, U. P., drawing attention to these omissions, submitted a scheme in 1932 to the Government suggesting the employment of a wholtime literate agency for registration of births and deaths, vaccination and assistance in anti-epidemic measures in public health circles of 25 square miles each. Due to financial involvement the scheme could not materialize.

* Indian Medical Gazette, April, 1952.

While compiling the annual birth and death returns for the year 1948, it was noticed that birth and death-rates which have been showing a downward tendency during the last decade had further declined to 20.6 and 13.7 respectively. Their trend during the present century is shown in the accompanying chart. The district-wise rates for 1948 were compared with the quinquennial average of 1943 to 1947 and in all those districts, forty-four in number, where birth-rate or death-rate or both showed marked variation, an enquiry* to find out whether the cause of the fall is real or due to neglect of registration was instituted through a sample survey. Five districts (Kanpur, Basti, Naini Tal, Almora and Garhwal), where the rates remained steady were excluded from the enquiry. The District Medical Officers of Health of the 44 districts were asked to get occurrences of births and deaths verified in about 200 villages in each district; 40 villages at least in each of the tehsils were to be covered by making a house-to-house enquiry between the period from Diwali 1947 (12th November, 1947) to Diwali 1948 (1st November, 1948), as the villager was likely to remember the period between the two festivals more conveniently. These were compared with the entries made in the books of chaukidars and the discrepancies

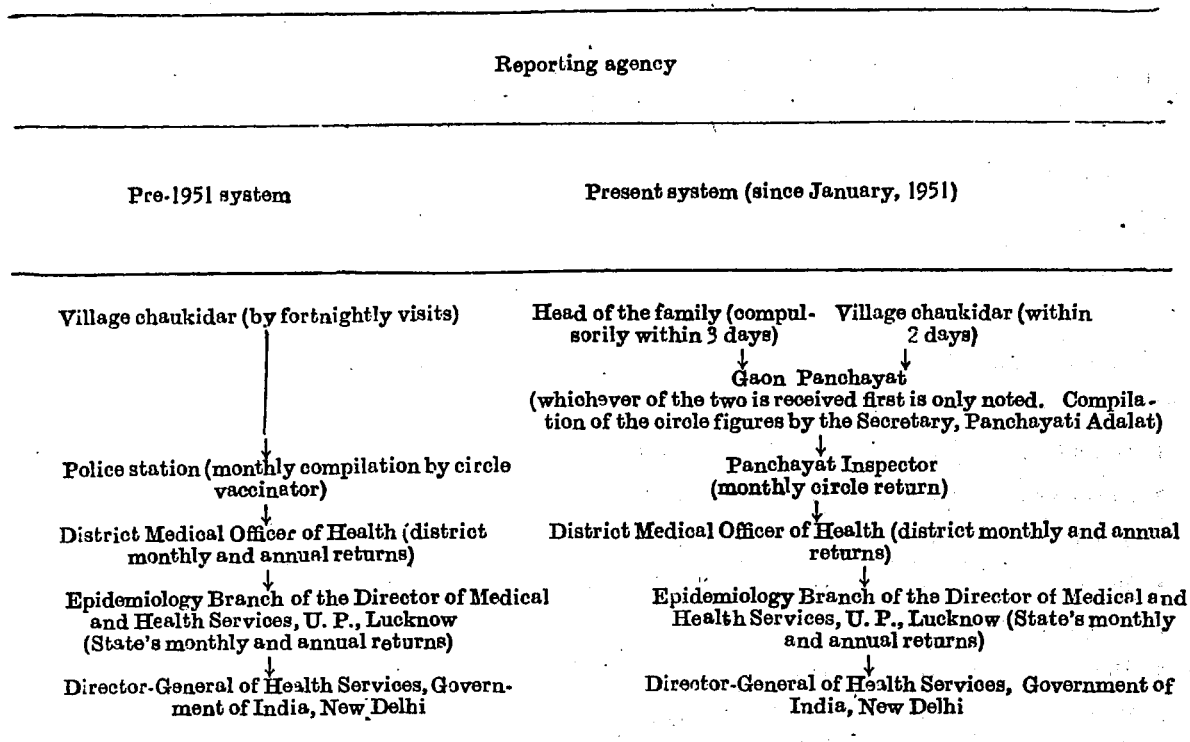
CHART

Showing birth and death rates per 1,000 of population in U. P.



during the same period were noted. District-wise result of this enquiry is shown in the table. Omissions in the case of births were 29.5 per cent. and in the case of deaths 24.3 per cent., the former being higher as is the usual experience. Out of 40 districts in which births were checked, 19 districts or 47.5 per cent. showed omissions of 30 per cent. or more. In 6 districts (Allahabad, Mirzapur, Jaunpur, Unnao, Kheri and Gonda), the omissions were more than 50 per cent. and Kheri showed as many as 71.2 per cent. Out of 36 districts in which deaths were checked, 18 districts or 50 per cent. showed omissions of 25 per cent. or more. In one district, Unnao, the omissions were about 50 per cent. and Kheri showed as many as 59.1 per cent. From the above it can be inferred that the cause of fall in the recorded birth and death-rates may not be wholly real but is partly due to negligence in registration. If the corrections on the above average omissions were to apply to the recorded births and deaths for 1948 in the State, the corrected rates work out to be 26.6 per mille in the case of births and 17.0 per mille in the case of deaths. The figures even after correction, as seen from the chart, are much below the pre-1940 figures, showing that there has been also a real fall in both the rates during the last decade as compared to the pre-War recorded rates.

* This enquiry had been undertaken by the writer in 1949 at the suggestion of Dr. A. N. Das, Director of Medical and Health Services, U. P., while working as Assistant Epidemiologist to U. P. Government.



Old system—Under the old system, reporting of births and deaths in rural area was not obligatory on house-holders. The village chaukidar (watchman) was required to make entries of births and deaths in the pocket register supplied to him as and when he came to know of these. This naturally resulted in many omissions. He reported these entries to the circle registration officer at the police station by making fortnightly visits on fixed dates. The preparation of the monthly circle's birth and death returns was done by the vaccinator of the circle who visited the police station on 15th of each month. The monthly statement prepared by the vaccinator was submitted by him to the District Medical Officer of Health by the 16th of the following month.

Further procedure was the same as is followed to-day. The District Medical Officer of Health prepares consolidated returns for the whole of his district, including the urban areas, and submits the same to the Director of Medical and Health Services, U. P., by the 21st of the following month. The State's returns as soon as they are ready are submitted by the Director to the Director-General of Health Services, New Delhi.

There were many disadvantages in the old system. Responsibility for reporting births and deaths was only that of village chaukidar, the lowest grade public servant, very poorly paid, invariably illiterate and overburdened with many other duties. This illiterate chaukidar was the foundation on which rested the primary responsibility of recording these vital events. Being illiterate he had to memorize the names of 36 various diseases of the death return and occurrences relating to them in his area. The average area of a police station is 140 square miles having some 100 to 150 villages and the average population covered by it is 64,000. So the chaukidars had to cover long distances for their fortnightly visits and had to be away for a number of days. It was, therefore, not surprising that many omissions occurred and many of the causes of deaths were wrongly diagnosed and wrongly entered in the thana (police station) register. A reference here may be made to a *kala azar* survey which the writer (Prasad, 1949) conducted in a village in Basti district. The village on investigation was found to be passing through an epidemic of *kala azar* and several deaths had occurred in the past 8 years. But the thana register and *chaukidars'* book did not show a single death from this disease. As a matter of fact the report received which led to this enquiry had stated that the village was in the grip of tuberculosis (Prasad, *loc. cit.*; Editorial, 1950). Under the circumstances it is not strange that in spite of the best efforts of the Public Health Staff and verification of these events, as far as possible, in the chaukidars' book and thana register, large scale omissions and errors in classification of the causes of deaths occurred.

New system—In order to improve matters, recording of vital statistics has now been entrusted to the village panchayats constituted under the U. P. Panchayat Raj Act, 1947, from January, 1951. Before dealing with the new change, the working of panchayats, units of local self-government in rural areas, may briefly be explained here. Villages with a population of 1,000 or more, and smaller villages situated within a radius of three miles having a total population of 1,000 to 2,000 grouped into one unit, have each a *goan sabha* (Village Assembly). The *goan sabha* elects from amongst its members a President, a Vice-President and an Executive Committee called the village or *goan panchayat*. The *goan panchayat* appoints a Secretary who should have the minimum prescribed educational qualification. The district is divided into

TABLE

Verification of births and deaths in some of the villages of the districts of Uttar Pradesh between the period from Diwali, 1947 (12th November, 1947) to Diwali, 1948 (1st November, 1948)

Name of district	Number of villages verified	Births				Deaths			
		Actual	Recorded	Omissions	Percentage of omissions	Actual	Recorded	Omissions	Percentage of omissions
1 Dehra Dun	80	557	483	74	13.3	286	240	46	16.1
2 Saharanpur	137	3,429	3,292	137	4.0	1,884	1,844	40	2.1
3 Muzaffarnagar	200	6,075	5,724	351	5.8	2,893	2,665	228	7.9
4 Meerut	240	7,216	6,461	755	10.5	3,378	2,975	403	11.9
5 Bulandshahr	144	..	..	..	..	1,551	1,128	423	27.3
6 Aligarh	319	8,432	5,212	3,220	38.2	3,658	2,698	960	26.2
7 Mathura	107	2,568	1,592	976	38.0	1,271	750	521	41.0
8 Agra	212	4,862	2,966	1,896	39.0	2,910	1,719	1,191	40.9
9 Mainpuri	200	2,537	1,931	606	23.9	1,970	1,419	551	28.0
10 Etah	200	3,830	3,027	803	21.0	2,490	1,953	537	21.6
11 Bareilly	139	..	..	..	..	2,650	2,245	405	15.3
12 Bijnor	200	..	..	..	..	1,514	1,091	423	27.9
13 Budaun	200	4,993	3,867	1,126	22.5	2,983	2,439	544	18.2
14 Moradabad	154	2,969	2,722	247	8.3	2,023	1,795	228	11.3
15 Shahjahanpur	129	2,142	1,296	846	39.5	1,395	770	625	44.8
16 Pilibhit	200	2,617	2,479	138	5.3	1,757	1,486	271	15.4
17 Farrukhabad	324	4,353	3,243	1,110	25.5	3,101	2,403	698	22.5
18 Etawah	78	1,197	781	416	34.7	664	427	237	35.7
19 Fatehpur	153	1,962	1,334	628	32.0	..	..	..	..
20 Allahabad	175	2,633	1,055	1,578	59.9	1,158	607	551	47.6
21 Jhansi	240	3,230	2,907	323	10.0	2,122	2,037	85	4.0
22 Jalaun	160	2,452	2,103	349	14.2	1,567	1,403	164	10.5
23 Hamirpur	200	3,219	2,680	539	16.7	2,768	2,362	406	14.7
24 Banda	65	843	731	112	13.3	619	569	50	8.1
25 Banaras	200	..	..	..	..	2,906	1,951	955	32.9
26 Mirzapur	205	2,773	1,369	1,404	50.6	1,600	872	728	45.5
27 Jaunpur	200	2,652	1,195	1,457	54.9	1,765	953	812	46.0
28 Ghazipur	99	1,276	1,025	251	19.7	678	599	79	11.6
29 Ballia	109	2,098	1,755	343	16.3	1,543	1,454	89	5.8
30 Gorakhpur	176	2,291	1,822	469	20.5	1,347	935	412	30.6
31 Deoria	114	1,789	1,285	504	28.2	1,269	1,026	243	19.1
32 Azamgarh	240	3,775	2,100	1,675	44.4	..	..	..	..
33 Lucknow	265	4,429	2,877	1,552	35.0	2,317	1,533	784	33.8
34 Unnao	146	2,046	822	1,224	59.8	1,219	607	612	50.2
35 Rae Bareilly	202	2,681	1,473	1,208	45.0	..	..	..	..
36 Sitapur	147	1,858	1,345	513	27.6	..	..	..	..
37 Hardoi	118	1,884	1,300	584	31.0	1,258	900	358	28.4
38 Kheri	82	2,304	664	1,640	71.2	1,589	649	940	59.1
39 Faizabad	186	2,459	1,610	849	34.5	..	..	..	..

*Verification of births and deaths in some of the villages of the districts of Uttar Pradesh
between the period from Diwali, 1947 (12th November, 1947) to Diwali, 1948
(1st November, 1948)—(conold.)*

Name of district	Number of villages verified	Births					Deaths				
		Actual	Recorded	Omissions	Percentage of omissions	Actual	Recorded	Omissions	Percentage of omissions		
40 Gonda	201	4,014	1,806	2,208	55.0	..	..	..	..
41 Bahraich	228	2,590	1,865	725	28.0	..	..	..	..
42 Sultanpur	205	2,735	1,536	1,199	43.8	..	..	..	..
43 Pratapgarh	204	2,398	1,334	1,064	44.4	1,505	1,027	478	31.8		
44 Bara Banki	193	3,257	2,512	745	22.9	2,716	2,191	525	19.3		
Total all districts ..	7,772	121,425	85,581	35,844	29.5	68,324	51,722	16,602	24.3		
Average of the middle two quartiles .. ..	..	..	..	..	28.9	..	..	..	23.8

circles so as to include usually 3 to 5 gaon sabhas in one circle for the purpose of establishing a panchayati adalat or court. Every gaon sabha in a circle elects five representatives to act as panches in the panchayati adalat of that circle, the panches so elected in a circle form a panel. All the panches so elected, elect among themselves a literate person to act as Sarpanch of the panchayati adalat. The sarpanch forms a bench of five panches from the panel for the trial of any case, suit or proceeding. There are 35,919 gaon panchayats and 8,414 panchayati adalats working in the State, covering about 120,000 villages. Their work is supervised by 439 panchayat inspectors appointed by the government. Each panchayat inspector has 15 to 20 panchayati adalats under him and a wholetime clerk. The work of panchayat inspectors is supervised by the District Panchayat Officer.

The following extracts from rules made under the U. P. Panchayat Raj Act, 1947, pertaining to reporting of births and deaths are reproduced :

142. (a) A panchayat shall undertake registration of births and deaths and the reporting of epidemic diseases and for that purpose shall comply with all orders of the Public Health Department, the District Board and Provincial Government.

(b) A panchayat shall maintain a register of births and deaths in Form D for every village situated in its jurisdiction and the President and the Secretary of the gaon sabha shall be responsible for its correct maintenance.

143. The head of the family or in his absence any other member thereof shall report birth or death occurring in his family within three days of the occurrence at the latest to the Secretary or President or Vice-President of the gaon sabha concerned and the officer receiving the report shall give a receipt of the same to the reporter. Any person who fails without sufficient cause to make a report under this rule shall be punishable by a panchayati adalat with a fine which may extend to rupee one only.

144. It shall be the duty of a chaukidar to report to the President or in his absence the Vice-President or the Secretary of the gaon sabha every birth or death occurring in the area assigned to him by the panchayat within two days of the said occurrence.

Under the new system reporting of births and deaths is obligatory on the member of the household within a specified time. The last rule (144) requires village chaukidars, as a double check, also to report these events within two days. Whichever of the two is received first is only noted in the register. The gaon panchayat and the panchayati adalat have an educated Secretary to look after this work. The President and the Secretary of gaon panchayat maintain the combined register of births and deaths for each village. To help Presidents as to what the actual cause of death may have been, notes on main symptoms of diseases have been supplied to each. The Secretary of panchayati adalat, who has on an average four gaon panchayats under him, each of which he visits once a week, compiles the monthly figures of his circle from the village registers kept by the President of gaon panchayats. He hands over the total of his circle in two forms, one for birth and other for death, to panchayat inspector whom he meets on the 10th of each month. The panchayat inspector with the help of the whole time clerk gets the consolidated monthly birth and death returns prepared for his circle, his circle replacing the thana registration circle under the old system. He posts the monthly consolidated circle return to District Medical Officer of Health by the 15th of the following month. The new system

fulfils two important recommendations of the Health Survey and Development Committee (*loc. cit.*): (1) A member of a village committee should concern himself with vital statistics and (2) the registration of vital statistics should be made compulsory and offenders should be prosecuted.

In certain backward areas of the State where panchayats have not been constituted, the new system could not be introduced.

Summary—1. Importance of correct vital statistics is stressed. The extent of error in the registration of births and deaths is discussed. Results of a sample survey carried out in 7,772 villages of 44 districts to find out the percentage of omissions in birth and death registrations are presented. Omissions in the case of births were 29.5 per cent. and in the case of deaths 24.3 per cent. one district showed nearly 70 per cent. omissions in births and 60 per cent. in deaths.

2. It is pointed out that the cause of fall in the recorded birth and death-rates during the last decade is partly due to negligence in registration and partly real.

3. Reporting agency, old and new, is described. Disadvantages of the old system and advantages of the new system of registration of births and deaths by panchayats, introduced since January, 1951, are shown. Working of the panchayats in the State is described briefly.

The writer thanks Dr. A. N. Das, Director of Medical and Health Services, Uttar Pradesh, and Dr. B. S. Yajnik, Assistant Director, Provincial Hygiene Institute, U. P. for their encouragement and for permission to communicate this paper. His thanks are also due to Dr. B. Gopal, Assistant Director, Epidemiology, for the help extended by him.

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APPENDIX V

NET CONSUMABLE GRAIN IN UTTAR PRADESH

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This note presents a statistical study of the important question as to whether the amount of net consumable foodgrains produced in the State has been keeping pace with the growth of the population from decade to decade. The main handicap in making a scientific study of the question has been the paucity of reliable data, particularly that relating to the outturn of crops. The conclusions reached in this note are, therefore, obviously subject to the limitations imposed by the quality of the available data.

2. For purposes of this study, the four quinquennia, viz., 1916-17 to 1920-21, 1926-27 to 1930-31, 1936-37 to 1940-41 and 1946-47 to 1950-51 have been considered and the average net consumable grain available during each of these quinquennia has been estimated. Instead of estimating the average net consumable grain over these 4 quinquennia, the net consumable grain for the individual census years, viz., 1920-21, 1930-31, 1940-41 and 1950-51 could have been utilized, but the former procedure of taking average over quinquennia is statistically sounder than the latter procedure in that by the former procedure, the seasonal differences are smoothed out.

3. For purposes of this study, only the seven principal food crops of this State, viz., wheat, barley, gram, rice, *juar*, *bajra* and maize have been considered. The total production for these seven food crops has been estimated, the figures of estimated production for each individual crop being taken either from the Crop Forecasts or the Season and Crop Reports for the years concerned. The estimates of average total production for the four quinquennia, inclusive of the conventional estimates of production for the hilly tracts of the Kumaon division, are shown in Table 1.

4. For estimating the average net consumable grain available for human beings during each of the four quinquennia, it is necessary to subtract from the average total production for each quinquennium the total quantity of foodgrains consumed on the following accounts :

(a) Seed ; (b) Loss in driage ; (c) Loss in storage, transit, wastage and weevilling ; and (d) Consumption by animals, e.g., cattle, dogs, fish, donkeys, monkeys, etc.

(a) *Seed*—For estimating the total quantity of foodgrains consumed for seed purposes, the average area under each of the seven food crops over each of the four quinquennia was calculated and multiplied by the normal seed-rate for the crop, as laid down by the Department of Agriculture. The total over all the crops for each quinquennium then gave the total quantity of foodgrains consumed for seed purposes during the quinquennium. In Table 2 are shown the seed-rates per acre, average area in thousands of acres and the average total consumption in thousands of tons for the four quinquennia for each of the individual crops as also the totals over all the crops. It was found that the total quantity of foodgrains consumed for purposes of seed was 6·9, 8·0, 7·8 and 8·7 per cent. of the estimated total production of foodgrains during the four quinquennia respectively ending with the years 1920-21, 1930-31, 1940-41 and 1950-51.

(b) *Loss in driage*—An allowance of 1 per cent. loss of grain due to driage has been made in the total production, although the estimated total production has been assumed to be for dry, dehusked and cleaned grain.

(c) *Loss in storage, transit, wastage and weevilling*—On the basis of the information supplied by the Provincial Marketing Officer (Foodgrains), Uttar Pradesh, Lucknow, loss of grain in storage, etc., has been taken to be 0·94 per cent. of the total production.

(d) *Animal consumption*—Owing to the absence of any reliable figures regarding cattle food or consumption by animals, the estimates of animal consumption of foodgrains made in this note are very rough and conjectural, and are based on the information supplied by the Director of Animal Husbandry, Uttar Pradesh, as modified by the information given in the note regarding the net consumable grain in Rajasthan. Animal consumption can be categorized under the following heads :

- (i) By bulls ;
- (ii) By bullocks ;
- (iii) By cows ;
- (iv) By she-buffaloes ; and
- (v) By horses, mares, ponies, etc.

It has been assumed that the consumption of foodgrains by the young stock of cattle, male-buffaloes, sheep, donkeys, camels and pigs is practically negligible. The consumption by goats, monkeys, pigeons, fish, etc., has also been taken to be quite negligible.

For consumption of foodgrains by animals listed from (i) to (v), the following assumptions have been made:

(i) *Bulls* are not at all fed in this State. They generally live on what they are able to pick up themselves from the standing crops and by grazing. Since this quantity is not included in the net production for the State, it can be ignored. However, bulls at the State and private farms, agricultural institutions and *Goshalas* do get concentrates. It has been assumed that the number of such bulls fed on concentrates is $1/22$ of the total population of bulls. It has been further assumed that, on an average, about 4 lbs. of foodgrains per head per day are consumed by them throughout the year, or about 17.7 mds. per head per annum.

(ii) *Bullocks*—Generally the working bullocks are given foodgrains and other concentrates during the ploughing and harvesting seasons. Besides, the bullocks engaged in transport work also get cereals. It has been assumed that each bullock is given 3.6 lbs. of foodgrains per day and only for 75 days in a year. Thus, the *per capita* consumption comes to about 3.28 mds. per annum. It has been further assumed that only 50 per cent. of the total population is fed on these foodgrains.

(iii) *Cows*—Dry cows are not generally given foodgrains in most parts of the State and they live on grazing and fodders. It has been assumed that a cow in milk gets on an average about 2 lbs. of foodgrains per day during the average lactation period of about 200 days in a year. Consequently, the *per capita* consumption is estimated at about 4.9 mds. per annum. It has been further assumed that only about 10 per cent. of the cows are given these foodgrains.

(iv) *She-buffaloes*—She-buffaloes are not given concentrates in Tarai areas and at those places where there are good pasturages. However, they are better cared for than cows. It has been assumed that a she-buffalo gets on an average 3 lbs. of foodgrains daily during the average lactation period of about 225 days in a year. This gives a *per capita* consumption of about 8.2 mds. per annum. Here also it has been assumed that only 10 per cent. of the total population of she-buffaloes is fed on concentrates.

(v) *Horses, mares, etc.*—Cereals and foodgrains are important for horses, mares and ponies which are used for draught purposes. It has been assumed that, on an average, a horse above 3 years gets 3 lbs. of foodgrains daily and that below 3 years only 1 lb. of foodgrains daily throughout the year. The *per capita* consumption for horses above and below 3 years thus comes to 13.2 mds. and 4.4 mds. per annum respectively.

The consumption of foodgrains by animals in each of the four live-stock census years 1920, 1930, 1940 and 1951, roughly estimated on the basis of the above assumptions, is shown in Table 3.

5. In Table 1 referred to above are shown, besides the figures of average total production for each of the four quinquennia, the average consumption of foodgrains for purposes of seed, average loss of grain by driage and wastage, consumption by animals, average net consumable grain available for human beings and the excess (+) or deficit (—) of net consumable grain over total requirements for the human population in Uttar Pradesh. It would appear from this table that whilst in the first three quinquennia, the average net consumable grain has been in excess of the total requirements for the human population, there has been a continual decline in the amount of this excess till, in 1951, the net consumable grain has actually fallen short of the requirements for the human population in the State. This is because whilst the human population in the State is continually on the increase, the total production has remained more or less stationary.

TABLE 1—Average total production and consumption of foodgrains for the quinquennium ending 1921, 1931, 1941 and 1951 in Uttar Pradesh

Items	1921	1931	1941	1951
1 Average total production for each quinquennium (in thousand tons)	10,318	9,221	9,738	9,559
2 Average consumption of grain as seed for each quinquennium (in thousand tons) ..	710	734	759	833
3 Average loss of grain by drriage and storage for each quinquennium at 1.94 per cent. of average total production (in thousand tons)	200	179	189	186
4 Consumption by animals for each census year (in thousand tons)*	895	914	936	940
5 Average net consumable grain available for human beings (in thousand tons) ..	8,513	7,394	7,854	7,600
6 Human population in each census year (in thousands)	45,375	48,408	55,021	63,216
7 Total requirements of human population @ $\frac{1}{2}$ seer per head per day for each adult .. (or 6.8 <i>chhataks per capita</i>) for each census year (in thousand tons)	6,464	6,896	7,838	9,006
8 Excess (+) or deficit (—) of net consumable grain over total requirements for human population (in thousand tons)	+2,049	+498	+16	—1,406

*The live-stock census was actually taken in 1920, 1930, 1940 and 1951 and figures for these years are shown respectively against 1921, 1931, 1941 and 1951.

TABLE 2—Estimated average consumption of foodgrains for purposes of seed in Uttar Pradesh for the quinquennia ending 1920-21, 1930-31, 1940-41 and 1950-51

Foodgrains	Seed-rate per acre	1921		1931		1941		1951	
		Average area in thousand acres	Average total consumption in thousand tons	Average area in thousand acres	Average total consumption in thousand tons	Average area in thousand acres	Average total consumption in thousand tons	Average area in thousand acres	Average total consumption in thousand tons
1 Early paddy ..	30 seers	4,627	127.48	4,618	127.23	4,642	127.89	5,074	139.79
2 Late paddy ..	10 „	2,313	21.24	2,468	22.67	2,710	24.89	3,514	32.27
3 Wheat ..	40 „	6,661	244.69	7,281	267.47	8,031	295.02	8,172	300.20
4 Barley ..	40 „	4,485	164.76	4,269	156.82	3,932	144.44	4,816	176.91
5 Gram ..	25 „	4,899	112.48	5,335	122.49	5,647	129.65	6,285	144.30
6 Juar ..	5 „	2,176	9.99	2,398	11.01	2,226	10.22	2,294	10.53
7 Bajra ..	3 „	2,565	7.07	1,991	5.49	2,204	6.07	2,620	7.22
8 Maize ..	11 „	2,232	22.55	2,053	20.74	2,045	20.66	2,164	21.86
Total ..		29,958	710.26	30,413	733.92	31,437	758.84	34,939	833.08

TABLE 3—Statement showing the consumption of foodgrains by animals in Uttar Pradesh for the census years 1920, 1930, 1940 and 1951

	Consumption rate per head per annum	1920			1930			1940			1951		
		Total population in thousands	Active population in thousands	Total consumption in thousand tons	Total population in thousands	Active population in thousands	Total consumption in thousand tons	Total population in thousands	Active population in thousands	Total consumption in thousand tons	Total population in thousands	Active population in thousands	Total consumption in thousand tons
1 Bulls	17.7	28	1.3	0.85	24	1.1	0.72	19	0.9	0.59	11	0.5	0.33
2 Bullocks	3.28	9,874	4,937	594.86	10,071	5,035	606.67	10,134	5,067	610.52	11,455	5,727	690.05
3 Cows	4.9	2,580	258	46.44	2,590	259	46.62	2,495	250	45.00	2,442	244	43.92
4 She-Buffaloes	8.2	1,635	164	49.40	1,856	186	56.03	1,930	193	58.14	2,114	211	63.56
5 Horses and ponies above 3 years	13.2	396	396	192.02	397	397	192.50	432	432	209.48	269	269	130.44
6 Horses and ponies below 3 years	4.4	67	67	10.83	70	70	11.31	74	74	11.96	75	75	12.12
Total				894.40			913.85			935.69			940.42

APPENDIX VI

EXTRACTS FROM INSTRUCTIONS REGARDING LIVELIHOOD CLASSIFICATION AND OCCUPATIONAL CLASSIFICATION

(a) Livelihood classification

The main problem is to teach the sorter how to distinguish between the four Non-agricultural Livelihood Classes. A few essentials are noted below:

(i) Where 1, 2, 3 or 4 is written against Q. 10 there is no problem. The problem arises only when a narrative description of non-agricultural means of livelihood is given.

(ii) "V—Production" always means the making of movable property of some kind or other. There is no difference between making and repairing but in it the making or repairing of immovable property, e.g., houses, roads, bridges, etc., is not included. It is "construction", a service. The generation of electricity is "utilities", also a service.

(iii) "VI—Commerce" means mostly buying and selling of movable or immovable property. It also includes lending and borrowing money (Insurance, Banking, etc.). You will frequently come across people who produce things and also sell them. Their slips go into the pigeonhole for "Production", not "Commerce".

(iv) "VII—Transport" needs no explanation. It is movement from one place to another of people or goods.

(v) "VIII—Other services and miscellaneous sources". Remember, this is a residuary pigeonhole. (If you don't take care, you will put many slips into VIII which ought to go into V, VI or VII). Therefore, think twice before you put a slip into VIII. Follow these working rules:

Firstly—If the entry (against Q. 10) shows that the work which the person earning the livelihood does, is "Production", "Commerce" or "Transport" put the slips into V, VI or VII without further thought. (It does not matter whether he is an employer, employee or independent worker).

Secondly—Even where this is not so, if he is an employee and it is clear from the entry that the factory, company or person who employs him is engaged on "Production", "Commerce" or "Transport" put the slip into V, VI or VII as the case may be. (But this does not apply to persons employed as domestic servants).

Thirdly—All other cases go into VIII. This includes domestic servants without any exception, whatever they do.

(b) Occupational classification

I—General—1. When a means of livelihood falls within a prescribed sub-division but does not go into any of the prescribed groups, you are free to form a new group after due sanction. (You cannot alter the prescribed divisions or sub-divisions or groups).

2. Where vague description such as "Cultivation", "Mazdoor" or "Service" is recorded under Q. 10, act as follows:

(i) "Service" or "Mazdoor" goes under "9·0 Service Unclassified".

(ii) The treatment of "Cultivation" depends on whether the error is "exceptional" or "general".

(a) If exceptional proceed as follows:

Find out the two most numerous classes among 1, 2 and 3 in the tract. Distribute the slips containing the entry "Cultivation" equally between the two.

(b) If, however, the error is general (e.g., affecting the majority of the slips) we should accept the point that the attempt to classify the agriculturists has failed in that tract. All agricultural livelihood classes may, in that case, be lumped under a single head "Cultivation Unclassified". A special report should be sent at once, where this course is adopted.

II—Creation of new groups—(i) *Cow-dung collectors and cow-dung-cake makers*—They should be included in "Primary industries not elsewhere specified" and allotted a specific group 0·44. In consequence, the title of Sub-division 0·4 should be changed to "Forestry and collection of products not elsewhere specified".

(ii) *Construction of buildings with bamboo or other materials*—A new group 5·14 should be opened for such cases. (They are not strictly classifiable under 5·0 which does not cover works which are classifiable as buildings; and it has been suggested that they should not be lumped within 4·60).

(iii) *Locksmith*—The classification is 3·05. If specially important locally, a group may be given.

III—Doubtful cases—(i) Speculators are not distinguishable from other persons engaged in "Commerce". They should be classified according to the commodity in which they speculate.

(ii) The instructions regarding the classification of "General Labour" as 9·0 do not apply in cases where it is clear (in relation to local usage in particular tracts) that the labour is classifiable under any specific division or sub-division. It is *a fortiori* inapplicable to agricultural labour.

(iii) *District Electrical Engineer of Railway*—The classification is 7·4.

(iv) *Driver Electric Supply Company*—He should go in Class VIII under 5·51.

(v) *Cashier in Co-operative Society*—He should go in Class VI under 6·8.

(vi) *Chhappar Chhanewale*—These should be treated as agricultural labour.

(vii) *Glass manufacturer*—Should go in Class V under 4·02.

(viii) *Prosecuting Inspector Police*—Should be classed under 8·4.

(ix) *Constable G. R. P.*—Should be classed under 8·4.

(x) *School Dispensary servant*—Should be classed under 8·10.

IV—Unproductive classes—"Wagerers" should be classified as unproductive.

APPENDIX VII

COMPARABILITY OF OCCUPATIONAL SUB-DIVISIONS AND GROUPS OF 1901—31 AND 1951

(a) Occupational groups of 1901—31 falling in more than one sub-divisions of 1951 and which, for purposes of comparison, have been treated as belonging to the italicised sub-divisions

Year	Occupational groups	Sub-division 1951
1931	.. 57 Smelting, forging and rolling of iron and other metals	3·1 <i>Iron and steel (basic manufacture)</i> 3·2 Non-ferrous metals (basic manufacture)
"	.. 81 "Others"	2·0 <i>Food industries otherwise unclassified</i> 2·2 Vegetable oil and dairy products
"	.. 89 Upholsters, tent makers, etc.	2·7 <i>Wearing apparel (except footwear) and made-up textile goods</i> 4·7 Furniture and fixtures
"	.. 90 Lime burners, cement workers, excavators and well-sinkers; stone cutters and dressers; brick-layers and masons; builders (other than buildings made of bamboos or similar materials), painters, decorators of houses, tilers, plumbers, etc.	4·0 Manufacturing industries otherwise unclassified 4·3 Cement—Cement pipes and other cement products 5·1 <i>Construction and maintenance—buildings</i> 5·4 <i>Construction and maintenance operations—irrigation and other agricultural works</i>
"	.. 94 Heat, light, electricity, motive power, etc. (gas works and electric light and power)	3·4 Electrical machinery, apparatus, appliances and supplies 5·5 <i>Works and Services—electric power and gas supply</i>
"	.. 103 Persons (other than labourers) employed in harbours, docks, rivers and canals, including pilots	5·4 <i>Construction and maintenance operations—irrigation and other agricultural works</i> 7·2 <i>Transport by water</i>
"	.. 104 Labourers employed on harbours, docks, rivers and canals	5·4 <i>Construction and maintenance operations—irrigation and other agricultural works</i> 7·2 <i>Transport by water</i>
"	.. 113 Labourers employed on railway construction and maintenance and coolies and porters employed on railway premises	5·2 <i>Construction and maintenance—roads, bridges and other transport works</i> 7·4 <i>Railway transport</i>
"	.. 116 Brokers, commission agents, commercial travellers, warehouse owners and employees	6·6 <i>Real estate</i> 7·5 <i>Storage and warehousing</i>
"	.. 117 Trade in piece goods, wool, cotton, silk, hair and other textiles	6·3 <i>Retail trade in textile and leather goods</i>
"	.. 118 Trade in skins, leather, furs, feathers, horn, etc., and the articles made from these	6·5 <i>Wholesale trade in commodities other than foodstuffs</i>
"	.. 119 Trade in wood (not firewood)	
"	.. 120 Trade in barks	
"	.. 121 Trade in bamboos and canes	
"	.. 122 Trade in thatches and other forest produce	
"	.. 123 Trade in metals, machinery, knives, tool etc.	
"	.. 124 Trade in pottery, bricks and tiles	
"	.. 125 Drugs, dyes, paints, petroleum explosives, etc.	
"	.. 138 Trade in ready-made clothing and other articles of dress and the toilets (hats, umbrellas, socks, ready-made shoes, perfumes, etc.)	6·0 <i>Retail trade otherwise unclassified</i>
"	.. 139 Trade in furniture, carpets, curtains and bedding	6·5 <i>Wholesale trade in commodities other than foodstuffs</i>
"	.. 140 Hardware, cooking utensils, porcelain, crockery, glassware, bottles, articles for gardening, etc.	
"	.. 141 Trade in building materials other than bricks, tiles, and woody materials	
"	.. 142 Dealers and hirers in mechanical transport, motors, cycles, etc.	
"	.. 143 Dealers and hirers in other carriages, carts, boats, etc.	
"	.. 144 Dealers and hirers of elephants, camels, horses, cattle, asses, mules, etc.	

Year	Occupational groups	Sub-division 1951
1931	.. 145 Dealers in firewood, charcoal, coal, cow-dung, etc.	6.2 Retail trade in fuel (including petrol) 6.5 Wholesale trade in commodities other than foodstuffs
"	.. 146 Dealers in precious stones, jewellery (real and imitation), clocks, optical instruments, etc.	6.0 Retail trade otherwise unclassified 6.5 Wholesale trade in commodities other than foodstuffs
"	.. 147 Dealers in common bangles, beads, necklaces, fans, small articles, toys, hunting and fishing tackle, flower, etc.	
"	.. 148 Publishers, book-sellers, stationers, dealers in music, pictures, musical instruments and curiosities	
"	.. 149 Dealers in rags, stable-refuse, etc.	
"	.. 150 General store-keepers and shop-keepers otherwise unspecified	
"	.. 161 Municipal and other local (not village) service	5.6 Works and services—domestic and industrial water supply 5.7 Sanitary works and services including scavengers. 8.6 Employees of Municipalities and Local Boards
1921	.. 38 Lace, crepe, embroideries, frings, etc., and insufficiently described textile industries	2.7 Wearing apparel (except footwear) and made-up textile goods 2.8 Textile industries otherwise unclassified
"	.. 41 Furriers and persons occupied with feathers and bristles, brush makers	2.7 Wearing apparel (except footwear) and made-up textile goods 2.8 Textile industries otherwise unclassified 4.0 Manufacturing industries otherwise unclassified
"	.. 72 Sweetmeat makers, preparers of jams and condiment, etc.	2.0 Food industries otherwise unclassified 2.3 Sugar industries
"	.. 75 Manufacturers of tobacco, opium and ganja	2.0 Food industries otherwise unclassified 2.5 Tobacco
"	.. 83 Cabinet makers, carriage painters, etc.	3.3 Transport equipment 4.7 Furniture and fixtures
"	.. 119 Labourers employed on railway construction and maintenance and coolies and porters employed on rail way premises	As in group no. 113 of 1931
"	.. 122 Brokers, commission agents, commercial travellers, warehouse owners and employees	As in group no. 116 of 1931
1911	.. 16 Coal mines and petroleum wells	1.1 Coal mining 1.4 Crude petroleum and natural gas
"	.. 28 Hair, camel and horse hair, bristles work, brush makers, etc.	2.8 Textiles industries otherwise unclassified 4.0 Manufacturing industries otherwise unclassified
"	.. 31 Other (lace, crepe, embroideries, frings, etc.) insufficiently described textile industries	As in group 38 of 1921
"	.. 63 Sweetmeat makers, preparers of jam and condiments, etc.	As in group 72 of 1921
"	.. 66 Manufacture of tobacco, opium and ganja	As in group 75 of 1921
"	.. 74 Cabinet makers, carriage painters, etc.	As in group 83 of 1921
"	.. 77 Excavators, plinth builders and well-sinkers	5.1 Construction and maintenance—buildings 5.4 Construction and maintenance operations—irrigation and other agricultural works
1901	.. 78 Cow and buffalo keepers and milk and butter sellers	0.1 Stock raising 6.1 Retail trade in foodstuffs (including beverages and narcotics)
"	.. 82 Ghee preparers and sellers	2.2 Vegetable oil and dairy products 6.1 Retail trade in foodstuffs (including beverages and narcotics)
"	.. 174 Palki, dandi, rickshaw makers and sellers	3.3 Transport equipment 6.0 Retail trade otherwise unclassified
"	.. 222 Harness (not leather) makers and sellers	2.8 Textile industries otherwise unclassified 6.3 Retail trade in textile and leather goods
"	.. 223 Saddle cloth makers, embroiderers and sellers	2.7 Wearing apparel (except footwear) and made-up textiles goods 6.3 Retail trade in textile and leather goods
"	.. 302 Hat, cap and turban makers, binders and sellers	2.7 Wearing apparel (except footwear) and made-up textile goods 6.0 Retail trade otherwise unclassified

(b) Comparative list of occupational sub-divisions and groups 1901—31 and 1951

Means of livelihood : Divisions and sub-divisions	Occupational groups				
	1951	1931	1921	1911	1901
V—Production other than cultivation					
<i>0—Primary industries not elsewhere specified—</i>					
0·1 Stock raising	21, 22, 23	11, 12, 13, 14	9, 10, 11, 12	25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 78	
0·2 Rearing of small animals and insects ..	24, 25, 26	15, 16	13	83, 259	
0·3 Plantation industries	9, 10, 11, 12, 13, 14, 15, 16	6, 7	5, 6	41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 216	
0·4 Forestry and wood-cutting	17, 18, 19, 20	8, 9, 10	7, 8	58, 59, 350, 351, 352, 353, 354, 356, 358, 360, 492, 493	
0·5 Hunting (including trapping and game propagation)	28	18	15	492, 493	
0·6 Fishing	27	17	14	79, 319	
<i>1—Mining and Quarrying—</i>					
1·0 Non-metallic mining and quarrying not otherwise classified	39, 41	22	18	311, 503	
1·1 Coal mining	35	19	16	146, 147	
1·2 Iron ore mining	30	21	17	—	
1·3 Metal mining except iron ore mining ..	29, 31, 32, 33, 34	—	—	309, 310	
1·4 Crude petroleum and natural gas	36	20	—	—	
1·5 Stone-quarrying, clay and sand-pits ..	37	—	—	—	
1·6 Mica	38	—	—	200	
1·7 Salt, saltpetre and saline substances ..	40	23, 24	19, 20	117, 118, 127, 365	
<i>2—Processing and Manufacture—Food-stuffs, Textiles, Leather and Products thereof—</i>					
2·0 Food industries otherwise unclassified ..	73, 75, 79, 80, 81	66, 68, 69, 72	57, 59, 60, 63, 66 (a)	76, 84, 85, 86, 95, 103, 106, 113, 114, 125, 135	
2·1 Grains and pulses	71, 72	65, 67	56, 58	87, 88, 91, 92, 96, 98, 102	
2·2 Vegetable oil and dairy products	68	61, 70	53, 61	77, 82, 89, 90, 100, 143	
2·3 Sugar industries	74	71	62	93, 94, 99	
2·4 Beverages	67, 76, 77	59, 73, 74	51, 64, 65	107, 108, 109, 110, 111, 112, 115, 116, 131, 133	
2·5 Tobacco	78	75	66	119, 120, 129	
2·6 Cotton textiles	42, 43, 49	25, 26, 27, 37	21, 22, 30	263, 264, 265, 266, 267, 268, 271, 272, 275, 277, 278	
2·7 Wearing apparel (except footwear) and made-up textile goods	52, 83, 84, 89	41, 76, 77, 79, 84	34, 67, 68, 70, 75	223, 250, 269, 270, 279, 281, 296, 297, 298, 299, 301, 302, 303, 306	
2·8 Textile industries otherwise unclassified ..	44, 45, 46, 47, 48, 50	28, 29, 30, 31, 32, 33, 34, 35, 36, 38	23, 24, 25, 26, 27, 28, 29, 31	222, 248, 249, 251, 252, 253, 255, 256, 257, 258, 260, 262, 273, 283, 284, 285, 286, 287, 288, 290, 292	
2·9 Leather, leather products and footwear ..	51, 82	39, 40, 78	32, 33, 69, 81	305, 384, 385, 386, 387, 388, 391	
<i>3—Processing and Manufacture—Metals, Chemicals and Products thereof—</i>					
3·0 Manufacture of metal products otherwise unclassified	58, 59, 60, 61, 62	47, 48, 49, 50, 51	39, 40, 41, 42, 43, 44	198, 199, 227, 229, 230, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 246, 307, 308, 313, 320, 321, 322, 324, 328	
3·1 Iron and steel (basic manufacture)	57	46	38	326, 327	
3·2 Non-ferrous metals (basic manufacture) ..	—	—	—	—	

Means of livelihood : Divisions and sub-divisions	Occupational groups				
	1951	1931	1921	1911	1901
3·3 Transport equipment	91, 92, 93	90, 91, 92	80, 82	167, 168, 169, 170, 171, 173, 174, 175, 176, 178	
3·4 Electrical machinery, apparatus, appliances and supplies	—	—	—	—	
3·5 Machinery (other than electrical machinery) including engineering workshops	190	186	166	225, 226, 232, 314	
3·6 Basic industrial chemicals, fertilisers and power alcohol	—	—	—	367, 368, 370, 373, 374, 379	
3·7 Medical and pharmaceutical preparations ..	—	—	—	378	
3·8 Manufacture of chemical products otherwise unclassified	66, 70	58, 60, 64	50, 52, 55	138, 139, 145, 361, 362, 363, 364, 375, 376	
4— <i>Processing and Manufacture—not elsewhere specified</i>	—	—	—	—	
4·0 Manufacturing industries otherwise classified ..	53, 96, 97, 98, 99, 183	42, 96, 97, 98, 100, 184	35, 76, 87, 88, 89, 91, 164	153, 154, 157, 190, 193, 194, 195, 196, 201, 202, 203, 204, 206, 208, 212, 217, 231, 312, 316, 317, 338, 348, 380, 381, 382, 383	
4·1 Products of petroleum and coal	69	62	—	140, 141	
4·2 Bricks, tiles and other structural clay products ..	64	56	48	151, 152, 155	
4·3 Cement—cement pipes and other cement products	—	57	49	160, 161	
4·4 Non-metallic mineral products	63, 65-A, 65-B	52, 53, 54, 55, 99	45, 46, 47, 90	210, 214, 330, 331, 332, 334, 335, 336	
4·5 Rubber products	—	—	—	—	
4·6 Wood and wood products other than furniture and fixtures	54, 55, 56	43, 44, 45	36, 37	197, 224, 340, 341, 342, 343, 344, 346, 347, 349	
4·7 Furniture and fixtures	88	83	74	218, 219, 220	
4·8 Paper and paper products	—	63	54	179, 180, 181	
4·9 Printing and allied industries	95	94, 95	84, 86	183, 184, 185, 186	
VI—Commerce					
6— <i>Commerce</i>					
6·0 Retail trade otherwise unclassified	119, 120, 121, 122, 123, 124, 125, 138, 139, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152	125, 126, 127, 128, 132, 138, 140, 141, 142, 143, 144, 145, 146, 148, 149, 150, 151, 152, 153, 154, 155	110, 111, 112, 113, 117, 125, 126, 127, 128, 129, 131, 132, 133, 134, 135, 136, 138	124, 128, 144, 156, 158, 159, 172, 177, 182, 187, 189, 191, 192, 205, 207, 209, 211, 213, 215, 221, 228, 233, 245, 247, 300, 315, 318, 323, 325, 329, 333, 337, 339, 345, 355, 357, 359, 366, 369, 371, 372, 377, 390, 396, 397, 398, 399, 400, 401, 406, 407, 408	
6·1 Retail trade in foodstuff (including beverages and narcotics)	126, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137	129, 131, 133, 134, 135, 136, 137, 139	114, 116, 118, 119, 120, 121, 122, 123, 124	80, 81, 97, 101, 104, 105, 123, 126, 130, 132, 134, 149	
6·2 Retail trade in fuel (including petrol)	145	147	130	142, 148, 150	
6·3 Retail trade in textile and leather goods	117, 118	123, 124	108, 109	254, 261, 274, 276, 280, 282, 289, 291, 293, 304, 389	
6·4 Wholesale trade in foodstuffs	—	—	—	—	
6·5 Wholesale trade in commodities other than foodstuffs	—	—	—	294, 295	
6·6 Real estate	116	122	107	—	
6·7 Insurance	—	—	—	393	
6·8 Moneylending, banking and other financial business	115, 189	121, 185	106, 165	392, 394, 395, 402	
VII—Transport					
7— <i>Transport</i>					
7·0 Transport and communication otherwise unclassified	—	—	—	—	
7·1 Transport by road	107, 108, 109, 110, 111	113, 114, 115, 116, 117	99, 100, 101, 102	416, 417, 418, 419, 420, 421, 422, 441	
7·2 Transport by water	102, 103	105, 107, 108, 110	94, 95, 97	423, 424, 425, 426, 428, 429, 430, 431, 432	
7·3 Transport by air	101	104	—	—	
7·4 Railway transport	112, 113	118, 119	103, 104	409, 410, 411, 412, 413, 414, 415	

Means of livelihood: Divisions and sub-divisions-	Occupational groups				
	1951	1931	1921	1911	1901
VIII—Other services and miscellaneous sources					
<i>5—Construction and Utilities—</i>					
5·0 Construction and maintenance of works—otherwise unclassified	—	—	—	—	—
5·1 Construction and maintenance—buildings	90	85, 87, 88, 89	78, 79	162, 163, 164, 165, 166	502
5·2 Construction and maintenance—roads	105, 106	111, 112	98	—	—
5·3 Construction and maintenance—Telegraph and Telephone lines	—	—	—	—	—
5·4 Construction and maintenance operations—irrigation and other agricultural works	104	86, 106, 109	77, 96	427, 500, 501	—
5·5 Works and services—electric power and gas supply	94	93	83	136, 137	—
5·6 Works and services—domestic and industrial water supply	—	—	—	—	—
5·7 Sanitary works and services—including scavengers	100	102, 103	93	72, 73, 74, 75	—
<i>Storage, warehousing and communication—</i>					
7·5 Storage and warehousing	—	—	—	—	439, 440, 442, 443
7·6 Postal services	114	120	105	433, 434	—
7·7 Telegraph services	—	—	—	—	435, 436
7·8 Telephone services	—	—	—	—	437, 438
7·9 Wireless services	—	—	—	—	—
<i>8—Health, Education and Public Administration—</i>					
8·1 Medical and other health services	169, 170, 171, 172, 173	171, 172	154, 155	466, 467, 468, 469, 470, 471, 472, 473	—
8·2 Educational services and Research	174, 175, 180	173, 174	156	451, 452, 453, 458	—
8·3 Army, Navy and Air Force	—	—	—	—	—
8·4 Police (other than village watchmen)	157	159	142	4	—
8·5 Village officers, servants including village watchmen	158, 162	160, 164	143, 147	8, 9, 10	—
8·6 Employees of the Municipalities and Local Boards	161	163	146	5, 6, 7, 121, 122, 404, 405	—
8·7 Employees of the State Governments	3, 153, 154, 155, 156, 159, 160	155, 156, 157, 158, 161, 162	139, 140, 141, 144, 145	1, 2, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 54, 55, 479, 480, 481, 482	—
8·8 Employees of the Union Governments					—
8·9 Employees of the non-Indian Governments					—
<i>9—Services not elsewhere specified—</i>					
9·0 Services otherwise unclassified	181, 191	187	167	449, 504, 505	—
9·1 Domestic services	2, 4, 186, 187	3, 181, 182, 183	3, 162, 163	56, 57, 61, 62, 63, 64, 66, 68	—
9·2 Barbers and beauty shops	86, 87	81, 82	72, 73	60, 67, 486	—
9·3 Laundries and laundry services	85	80	71	65	—
9·4 Hotels, restaurants and eating houses	127	130	115	69	—
9·5 Recreation services	182, 183, 184	101, 178, 179	92, 160, 137	71, 487, 488, 489, 490, 491, 494, 495, 496, 497, 498, 499	—
9·6 Legal and business services	167, 168, 176, 177	169, 170, 175, 176	152, 153, 157, 158	403, 455, 456, 457, 459, 460, 461, 462, 463, 464, 465, 474, 475, 476, 477, 478	—
9·7 Arts, letters and journalism	178, 179	177	85, 159	188, 454, 483, 484, 485	—
9·8 Religious, charitable and welfare services	163, 164, 165, 166	165, 166, 167, 168	148, 149, 150, 151	70, 444, 445, 446, 447, 448, 450	—
<i>Non-productive Sources—</i>					
(i) Persons living principally on income from non-agricultural property	185	180	161	510, 511, 512, 514, 515, 516	—
(ii) Persons living principally on pensions, remittances, scholarships and funds					—
(iii) Inmates of alms-houses and recipients of doles					192
(iv) Beggars and vagrants	193	189	169	513	—
(v) All other persons living principally on income derived from non-productive activities; prostitutes	194, 195	190, 191	—	506, 507, 508, 509	—

APPENDIX VIII

FOUR PER CENT. SAMPLE STUDY OF HOUSEHOLDS (SIZE AND COMPOSITION)
UTTAR PRADESH

By P. N. KAUL, *Central Tabulation Officer, India*

In the 1951 Census, the table on household (size and composition) has been prepared for all States from the National Register of Citizens. The operation consisted of taking a 4 per cent. sample of households recorded in the National Register of Citizens relating to every village and every ward of a town. The sample of households was drawn in the following manner :

The total number of households in each register was divided by 25 and 1 added to the remainder. The number so obtained was marked in the register. This was the first sample household. Thereafter, every twenty-fifth household in the register was marked for the sample. At the end there remained in most cases households numbering less than 25 in all. In such cases invariably no household was marked.

2. The attempt had been to draw out a 4 per cent. sample but actually a size in the neighbourhood of 4 per cent. has been struck. The following table gives the sampling fraction actually drawn in four selected tracts :

Tracts	Number of households		
	Total count	Sample count	Sampling fraction
<i>Rural</i>			
Mohanlalganj	33,800	1,303	3.9
Mahoba	15,256	553	3.6
Pharenda	74,482	2,679	3.6
<i>Urban</i>			
Aligarh Municipal Board	26,941	1,128	4.2

Table I appended gives the sample size and also the sampling fraction for rural/urban areas of the districts. It is observed that in Dehra Dun, Hardoi, Saharanpur, Muzaffarnagar and Budaun districts, the sample has been over drawn and the actual sizes struck are 5.3, 4.2, 4.5, 4.3 and 4.4 respectively. In the case of other districts, a sample less than 4 per cent. has been drawn. This has been mainly due to the fact that while marking the household for the sample, there remained at the end households numbering less than 25. In such cases, no household was marked. In the case of districts where the sample was overdrawn, one household was included in the sample from the households which were left over after marking every twenty-fifth in the register.

3. The Government of India also decided to undertake a sample verification of the 1951 Census count for purposes of detecting the extent of under-enumeration or over-enumeration of persons in the count. The instructions first issued by the Registrar General were that for this purpose a sample of 1 in 1,000 of households be taken from the relevant sections of the National Register of Citizens relating to every village and every ward of a town. The Registrar General later decided that for operational convenience and economy of cost, it will not be feasible to draw two different samples from the National Register of Citizens (1 in 1,000 for verification of the Census count and 4 per cent. for constructing tables on households (size and composition). He, therefore, issued instructions to all Superintendents of Census Operations that they may draw out one sample 1 in 1,000 from the National Register of Citizens for constructing the table on household (size and composition) and verification of the Census count. In accordance with these instructions, most of the Superintendents of Census Operations operated on 1 in 1,000 sample on both topics. But, however, the Superintendent of Census Operations, Uttar Pradesh, constructed the table on household (size and composition) on 4 per cent. sample and did verification of the count on 1 in 1,000 sample. He is himself interested to find out the closeness of the sample count values with the total count values and for this purpose has undertaken the cent. per cent. sorting of three rural tracts, Mohanlalganj Rural, Mahoba Rural, Pharenda Rural and one urban tract—Aligarh Municipal Board. He is also interested to find out the territorial

level at which the sample count values will be a good enough approximation* to the total count values for any given characteristic.

4. For purpose of determining the yardsticks of the sample count values and the total count values, tables have been prepared which are appended to this note and are described below :

Table II gives the number of persons per 1,000 households (or average size of households) of districts and divisions of Uttar Pradesh for the total count (Col. 2) and the sample count (Col. 3). Column 4 of this table gives the magnitude of the percentage error. The percentage error for districts varies from 0.3 to 9.6 and in magnitude is greater in urban areas of the districts than in rural areas. The following table gives the distribution of districts by percentage error :

Range of percentage error	Frequency of districts		
	Total	Rural	Urban
Below 1	10	11	5
1 to 2	14	16	3
2 to 3	3	5	4
3 to 4	4	8	3
4 to 5	8	4	2
5 to 6	7	3	4
6 to 7	2	2	2
7 to 8	1	..	2
8 to 9	1	..	1
9 to 10	1	2	3
10 and above	..	..	22
Total	51	51	51

It is observed that there are 12 districts with a percentage error between 5 to 10 and 2 districts between 8 to 10. There are also 24 districts with percentage error below 2. Considering, therefore, the percentage error to be a measure of closeness, the 4 per cent. sample has given the sample count values close to the total count values for this characteristic. But in urban areas of the districts, it is observed that there are as many as 22 districts out of the total 51 districts with a percentage error above 10 and 12 districts which have percentage error between 5 to 10. In the rural areas, however, there are 27 districts with percentage error below 2 and 7 districts between 5 to 10.

It is also observed that the sample household is smaller in size than the total count household both in rural and urban areas. The obvious reason is that, in the absence of any stratification, the smaller and medium size households, which together constitute over 75 per cent. of the total households, got a proportionately greater chance of selection in the sample than other large and very large households. The larger difference in the size of sample household as compared with the total count household in the urban than in the rural areas has been caused by the larger proportion of small and medium size households in the urban than in the rural areas.

5. Another yardstick has also been worked out and this is co-efficient of variation. Table III appended gives the co-efficient of variation for all the characteristics of the households (size and composition) table for all the four tracts where cent. per cent. sorting has been done for these characteristics. It is observed that there are 26 characteristics in all. The frequency distribution of all these characteristics for each tract has been prepared by ranges of the co-efficient of variation and the following table gives the frequency distribution :

Range of co-efficient of variation	Frequency of characteristics in tracts			
	Mohanlanganj Rural	Mahoba Rural	Pharenda Rural	Aligarh Municipal Board
Below 1	..	..	1	..
1 to 2	1	..	12	1
2 to 3	10	1	7	12
3 to 4	8	10	1	6
4 to 5	1	6	2	1
5 to 6	1	3	..	..
6 to 7	2	1	..	2
7 to 8	..	..	1	1
8 to 9	..	..	2	..
9 to 10	..	..	..	..
10 and above	3	5	..	3
Total	26	26	26	26

* Dr. U. S. Nair, Superintendent of Census Operations, Travancore-Cochin, has undertaken the India sample study based on 10 per cent. of the sample slips extracted at the enumeration stage and of the sub-sample. He has developed a theory of Indices of Approximation as a yardstick for determining the agreement between the sample count values and the total count values. The results for all States have been published as a Census of India paper.

It is observed that in tracts Mohanlalganj Rural and Aligarh Municipal Board, there are 3 characteristics (very large households, infants, males and females) where the co-efficient of variation is between 10 to 12 and in tract Mahoba, 5 characteristics namely 'large and very large households, infants males and females and widowed males' for which the co-efficient of variation is between 10 to 20. The co-efficient of variation for 20 characteristics out of 26 is below 3 for Pharenda Rural tract.

6. The accuracy of the sample count values with the total count values can be judged by noting the number of sample count values in which the percentage error is less than 3 times the co-efficient of variation. The following table has been prepared and gives the number of the sample count values for all the four tracts:

Tracts	Number of sample count values
Mohanlalganj Rural	7
Mahoba Rural	25
Pharenda Rural	14
Aligarh Municipal Board	18
Total	64

It is easy to find out that there are 40 sample count values in which the percentage error exceeds 3 times the co-efficient of variation. The conclusion is that considering the results given by these four tracts, the 4 per cent. sample has not given a good enough approximation of these sample count values to the total count values. It is also observed from the above table that there are 64 sample count values in which the percentage error is less than 3 times the co-efficient of variation and the distribution is 25, 18, 14 and 7 in the tracts, Mahoba, Aligarh Municipal Board, Pharenda and Mohanlalganj respectively. Table IV appended gives actually the sample count values in which the percentage error is less than 3 times the co-efficient of variation.

7. The following summary table gives the frequency distribution of percentage error by broad ranges of the co-efficient of variation for all the four tracts taken together:

Co-efficient of variation	Percentage error											Total		
	Below 1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10 and over			
Below 1	1	..	..	..	1	..	..	..	..	..	2	
1-2	3	1	2	3	1	2	..	..	2	..	1	15
2-3	7	5	1	2	..	1	..	2	2	1	7	28
3-4	2	3	1	1	3	2	..	2	1	..	10	25
4-5	3	..	1	1	2	..	..	1	..	..	2	10
5-6	1	1	..	..	..	..	1	..	2	4
6-7	1	..	..	..	..	..	..	..	1	..	3	5
7-8	2	2
8-9	2	2
9-10
10 and over	1	1	..	..	..	1	2	..	..	6	11
Total	..	17	10	7	8	6	6	6	1	7	6	1	35	104

The total sample count values are 104 (26 in each tract). The advantage of this table is that it is possible to locate a sample count value for a given percentage error and a co-efficient of variation. The percentage error may be large and the co-efficient of variation small for a characteristic which has been sampled. Thus there are as many as 10 sample count values with percentage error 10 and over and with co-efficient of variation between 3-4. Also it is observed that there are 5 sample count values with percentage error and co-efficient of variation below 2; and 32 sample count values with percentage error and co-efficient of variation below 4. The sample characteristics for tracts in which the percentage error and the co-efficient of variation are below 2 are:

- (1) Aligarh Municipal Board .. Persons residing in medium size households.
- (2) Pharenda .. Persons residing in medium size households; male non-adults; unmarried males.
- (3) Mohanlalganj .. Persons residing in medium size households.

Further it is seen that there are 42 sample count values with percentage error below 6 and co-efficient of variation below 4; 51 sample count values with percentage error below 6 and co-efficient of variation below 6. In other words, half the total number of sample count values of all the tracts are found in this section of the table. It is also interesting to read this table horizontally and vertically. It is thus observed that there are 35 sample count values with percentage error 10 and over for all ranges of co-efficient of variation. Similarly there are 28 and 25 sample count values with co-efficient of variation of ranges 2-3 and 3-4 respectively for all ranges of percentage error.

Age distribution—In the table on household (size and composition), all ages have been divided into three groups, infants (less than one year), non-adults (ages 1—20) and adults (ages 21 and over). For infants, it is seen that the percentage error is 44 for males and 40 for females with co-efficient of variation 10·1 and 10·3 respectively for Mohanlalganj rural tract. The percentage error for adults and non-adults is not so much, and is only 8·4 and 2·1 for males and 9·3 and 7·7 for females respectively. This is observed in all the four tracts, though not in the same magnitude in the Aligarh Municipal Board urban tract.

Civil condition—For widows and divorced persons also, the percentage error is large in all the three rural tracts both for males and females and for urban tract for males the percentage error is of greater magnitude and is 57·8.

TABLE I

Natural division and district	Sample size of households			Sampling fraction		
	Total	Rural	Urban	Total	Rural	Urban
	2	3	4	5	6	7
Uttar Pradesh	453,216	396,572	66,644	3.6	3.6	3.8
<i>Himalayan</i>	18,835	16,060	2,775	3.5	3.4	4.6
Garhwal	4,524	4,369	155	3.2	3.2	3.9
Tehri-Garhwal	2,621	2,578	43	3.1	3.1	2.7
Naini Tal	2,487	1,849	638	3.3	3.2	3.7
Almora	5,397	5,222	175	3.3	3.3	4.2
Dehra Dun	3,806	2,042	1,764	5.3	5.3	5.3
<i>East Plain</i>	115,118	105,355	9,763	3.5	3.5	3.8
Gorakhpur	14,976	13,658	1,318	3.6	3.6	4.3
Deoria	13,152	12,448	704	3.6	3.6	5.1
Basti	16,508	16,162	346	3.6	3.6	3.0
Gonda	12,938	12,167	771	3.4	3.4	3.6
Bahraich	9,929	9,353	576	3.5	3.5	3.7
Banaras	12,871	9,461	3,410	3.6	3.5	4.0
Jaunpur	9,204	8,756	448	3.4	3.3	3.4
Ghazipur	6,197	5,376	821	3.3	3.2	3.6
Ballia	6,726	6,039	687	3.4	3.4	3.6
Azamgarh	12,617	11,935	682	3.4	3.4	3.3
<i>Central Plain</i>	118,328	99,757	18,571	3.6	3.5	3.9
Kanpur	15,782	8,536	7,246	3.7	3.5	4.0
Fatehpur	6,504	6,153	351	3.7	3.6	3.8
Allahabad	13,495	11,553	1,942	3.4	3.4	3.4
Luoknow	8,849	4,742	4,107	3.9	3.7	4.0
Unnao	6,960	6,582	378	3.3	3.2	3.5
Rae Bareli	8,507	7,935	572	3.4	3.4	5.0
Sitapur	9,144	8,365	779	3.1	3.1	3.0
Hardoi	11,498	10,397	1,101	4.2	4.2	4.4
Faizabad	10,472	9,345	1,127	3.6	3.5	4.3
Sultanpur	9,541	9,397	144	3.6	3.6	3.9
Pratapgarh	7,694	7,500	194	3.4	3.3	4.0
Bara Banki	9,882	9,252	630	3.6	3.6	3.6
<i>West Plain</i>	172,180	140,056	32,124	3.8	3.8	3.8
Saharanpur	13,265	9,934	3,331	4.5	4.5	4.5
Barilly	9,926	7,608	2,318	3.8	3.6	4.3
Bijnor	7,156	5,487	1,669	3.4	3.4	3.4
Pilibhit	3,740	3,140	600	3.5	3.5	3.9
Rampur	3,976	2,797	1,179	3.6	3.5	3.6
Kheri	8,528	7,903	625	3.7	3.7	3.5
Muzaffarnagar	9,766	7,872	1,894	4.3	4.2	5.1
Meerut	15,855	12,987	2,868	3.7	3.9	2.9
Bulandshahr	10,427	8,839	1,588	3.6	3.7	3.2
Aligarh	11,092	8,880	2,212	3.7	3.6	4.0
Mathura	6,668	5,170	1,498	3.8	3.8	3.7
Agra	10,622	6,996	3,626	3.8	3.7	3.9
Mainpuri	7,279	6,641	638	3.7	3.7	4.0
Etah	7,592	6,884	708	3.5	3.7	2.5
Budaun	11,520	10,295	1,225	4.4	4.4	4.3
Moradabad	12,152	9,175	2,977	3.7	3.6	3.9
Shahjahanpur	7,962	6,675	1,287	3.8	3.6	4.6
Etawah	6,594	5,863	731	3.5	3.5	3.4
Farrukhabad	8,060	6,910	1,150	3.7	3.7	4.1
<i>Hills and Plateau</i>	28,755	25,344	3,411	3.6	3.7	3.1
Jhansi	6,947	5,246	1,701	3.7	3.7	3.8
Jalaun	4,129	3,850	279	3.8	4.2	1.6
Hamirpur	5,371	4,766	605	3.7	3.7	3.7
Banda	5,934	5,710	224	3.7	3.9	1.6
Mirzapur	6,374	5,772	602	3.3	3.3	3.2

TABLE II

Natural division and district				Persons per 1,000 households according to total count	Persons per 1,000 house- holds according to 4 per cent. sample count	Percentage error
1				2	3	4
Uttar Pradesh ..	..	..	Total	5,040	4,926	2.3
			Rural	5,068	4,996	1.4
			Urban	4,870	4,523	7.1
Himalayan ..	..	..	Total	4,646	4,506	3.0
			Rural	4,644	4,587	1.2
			Urban	4,668	4,032	13.6
Garhwal ..	..	..	Total	4,494	4,425	1.5
			Rural	4,499	4,447	1.2
			Urban	4,314	3,794	12.1
Tehri-Garhwal ..	..	..	Total	4,767	4,781	0.3
			Rural	4,778	4,806	0.6
			Urban	4,181	3,325	20.5
Naini Tal ..	..	..	Total	4,365	4,018	7.9
			Rural	4,440	4,022	9.4
			Urban	4,113	4,009	2.5
Almora ..	..	..	Total	4,724	4,607	2.5
			Rural	4,700	4,633	1.4
			Urban	5,635	3,829	32.0
Dehra Dun ..	..	..	Total	4,925	4,587	6.9
			Rural	4,943	5,009	1.3
			Urban	4,905	4,099	16.4
East Plain ..	..	..	Total	5,419	5,307	2.1
			Rural	5,453	5,361	1.7
			Urban	5,013	4,720	5.8
Gorakhpur ..	..	..	Total	5,394	5,163	4.3
			Rural	5,389	5,221	3.1
			Urban	5,450	4,565	16.2
Deoria ..	..	..	Total	5,769	5,218	9.6
			Rural	5,792	5,263	9.1
			Urban	5,196	4,416	15.0
Basti ..	..	..	Total	5,132	4,856	5.4
			Rural	5,160	4,859	5.8
			Urban	4,002	4,740	18.4
Gonda ..	..	..	Total	4,958	5,228	5.4
			Rural	5,002	5,281	5.6
			Urban	4,219	4,399	4.3
Bahraich ..	..	..	Total	4,728	5,035	6.5
			Rural	4,737	5,059	6.8
			Urban	4,574	4,634	1.3
Banaras ..	..	..	Total	5,506	5,289	3.9
			Rural	5,759	5,678	1.4
			Urban	4,711	4,209	10.7
Jaunpur ..	..	..	Total	5,523	5,443	1.4
			Rural	5,480	5,476	0.1
			Urban	6,378	4,804	24.7
Ghazipur ..	..	..	Total	6,027	6,045	0.3
			Rural	6,106	6,060	0.8
			Urban	5,456	5,945	9.0
Ballia ..	..	..	Total	6,033	6,120	1.4
			Rural	6,067	6,130	1.0
			Urban	5,722	6,038	5.5
Azamgarh ..	..	..	Total	5,660	5,580	1.4
			Rural	5,688	5,587	1.8
			Urban	5,186	5,455	5.2
Central Plain ..	..	..	Total	4,845	4,733	2.3
			Rural	4,872	4,834	0.8
			Urban	4,686	4,191	10.6
Kanpur ..	..	..	Total	4,576	4,495	1.8
			Rural	5,062	5,223	3.2
			Urban	3,929	3,638	7.4
Fatehpur ..	..	..	Total	5,091	5,061	0.6
			Rural	5,088	5,061	0.5
			Urban	5,135	5,068	1.3

TABLE II—(contd.)

Natural division and district	1	Persons per	Persons per	Percentage error
		1,000 households according to total count	1,000 households according to 4 per cent. sample count	
		2	3	4
Allahabad	Total	5,090	4,863	4.5
	Rural	4,913	4,937	0.5
	Urban	6,143	4,420	28.0
Lucknow	Total	4,916	4,481	8.8
	Rural	4,748	4,521	4.8
	Urban	5,129	4,435	13.5
Unnao	Total	4,971	4,986	0.3
	Rural	4,960	4,993	0.7
	Urban	5,174	4,873	5.8
Rae Bareli	Total	4,659	4,551	2.3
	Rural	4,672	4,528	3.1
	Urban	4,385	4,876	11.2
Sitapur	Total	4,628	4,674	1.0
	Rural	4,683	4,677	0.1
	Urban	4,048	4,638	14.6
Hardoi	Total	4,942	4,728	4.3
	Rural	4,952	4,766	3.8
	Urban	4,840	4,360	9.9
Faizabad	Total	5,057	5,098	0.8
	Rural	5,053	5,140	1.7
	Urban	5,101	4,748	6.9
Sultanpur	Total	4,885	4,803	1.7
	Rural	4,888	4,807	1.7
	Urban	4,630	4,486	3.1
Pratapgarh	Total	4,834	4,619	4.4
	Rural	4,822	4,623	4.1
	Urban	5,407	4,459	17.5
Bara Banki	Total	4,640	4,615	0.5
	Rural	4,636	4,607	0.6
	Urban	4,710	4,725	0.3
West Plain	Total	4,982	4,862	2.4
	Rural	4,990	4,900	1.8
	Urban	4,944	4,695	5.0
Saharanpur	Total	4,588	4,615	0.6
	Rural	4,635	4,678	0.9
	Urban	4,449	4,426	0.5
Bareilly	Total	4,795	4,557	5.0
	Rural	4,722	4,561	3.4
	Urban	5,081	4,544	10.6
Bijnor	Total	4,691	4,644	1.0
	Rural	4,675	4,608	1.4
	Urban	4,741	4,764	0.5
Pilibhit	Total	4,745	4,487	5.4
	Rural	4,717	4,582	2.9
	Urban	4,910	3,995	18.6
Rampur	Total	4,862	4,823	0.8
	Rural	4,674	4,773	2.1
	Urban	5,316	4,942	7.0
Kheri	Total	4,317	4,465	3.4
	Rural	4,317	4,437	2.8
	Urban	4,311	4,818	11.8
Muzaffarnagar	Total	5,391	5,089	5.6
	Rural	5,366	5,186	3.4
	Urban	5,518	4,687	15.1
Meerut	Total	5,263	5,024	4.5
	Rural	5,362	5,081	5.2
	Urban	4,934	4,765	3.4
Bulandshahr	Total	5,178	5,255	1.5
	Rural	5,303	5,250	1.0
	Urban	4,582	5,279	15.2
Aligarh	Total	5,146	5,047	1.9
	Rural	5,136	5,080	1.1
	Urban	5,188	4,914	5.3
Mathura	Total	5,107	4,957	2.9
	Rural	5,290	5,125	3.1
	Urban	4,480	4,373	2.4

TABLE II—(concl'd.)

Natural division and district	1	Persons per 1,000 households according to total count	Persons per 1,000 households according to 4 per cent. sample count		Percentage error
			2	3		4
Agra	Total	5,272	5,038	4.4	
	Rural	5,312	5,217	1.8	
	Urban	5,193	4,694	9.6	
Mainpuri	Total	5,044	4,962	1.6	
	Rural	5,080	5,010	1.4	
	Urban	4,641	4,467	3.7	
Etah	Total	5,216	5,172	0.8	
	Rural	5,256	5,191	1.2	
	Urban	4,949	4,984	0.7	
Budann	Total	4,730	4,722	0.2	
	Rural	4,693	4,710	0.4	
	Urban	5,035	4,829	4.1	
Moradabad	Total	4,997	4,789	4.2	
	Rural	4,946	4,768	3.6	
	Urban	5,170	4,855	6.1	
Shahjahanpur	Total	4,720	4,542	3.8	
	Rural	4,632	4,619	0.3	
	Urban	5,296	4,146	21.7	
Etawah	Total	5,173	4,919	4.9	
	Rural	5,237	5,000	4.5	
	Urban	4,683	4,272	8.8	
Farrukhabad	Total	5,051	4,972	1.6	
	Rural	5,072	4,964	2.1	
	Urban	4,921	5,022	2.1	
<i>Hills and Plateau</i>	Total	4,886	4,860	0.5	
	Rural	4,886	4,902	0.3	
	Urban	4,884	4,543	7.0	
Jhansi	Total	4,643	4,572	1.5	
	Rural	4,627	4,557	1.5	
	Urban	4,694	4,617	1.6	
Jalaun	Total	5,094	5,292	3.9	
	Rural	5,112	5,314	4.0	
	Urban	4,997	4,993	0.1	
Hamirpur	Total	4,600	4,835	5.1	
	Rural	4,604	4,881	6.0	
	Urban	4,568	4,469	2.2	
Banda	Total	4,862	4,793	1.4	
	Rural	4,925	4,792	2.7	
	Urban	4,189	4,817	15.0	
Mirzapur	Total	5,239	4,977	5.0	
	Rural	5,155	5,068	1.7	
	Urban	6,020	4,101	31.9	

TABLE III

Tracts →		Mohanalganj Rural				Mahoba Rural				Pharenda Rural				Aligarh Municipal Board					
Characteristics →		Total count value	Sample value	Percentage error	Co-efficient of variation	Total count value	Sample value	Percentage error	Co-efficient of variation	Total count value	Sample value	Percentage error	Co-efficient of variation	Total count value	Sample value	Percentage error	Co-efficient of variation		
Household size and composition		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Size of households	Number of households according to size	Small ..	3,645	4,520	24.01	3.66	3,731	3,816	2.28	5.41	3,314	3,315	0.03	2.74	3,347	3,094	7.56	4.20	
		Medium ..	4,277	3,907	8.65	3.21	4,497	4,466	0.69	4.60	4,352	4,419	1.54	2.20	3,999	4,415	10.40	3.65	
		Large ..	1,550	1,220	21.29	6.47	1,329	1,302	2.03	10.86	1,669	1,676	0.42	4.31	1,964	1,542	21.49	6.02	
		Very large ..	528	353	33.14	11.75	443	416	6.09	19.75	665	590	11.28	7.24	690	949	37.54	10.94	
	Persons in the households of size	Small ..	1,673	2,209	32.04	3.03	1,782	1,857	4.21	4.20	1,526	1,550	1.57	2.05	1,415	1,613	13.99	3.37	
		Medium ..	4,506	4,551	1.00	1.50	4,820	4,914	1.95	2.03	4,418	4,375	0.97	0.32	3,984	3,998	0.35	1.68	
		Large ..	2,530	2,199	13.08	2.33	2,231	2,106	5.60	3.65	2,396	2,606	8.76	1.55	2,845	2,325	18.28	2.17	
		Very large ..	1,291	1,041	19.36	3.42	1,167	1,123	3.77	5.37	1,660	1,469	11.51	1.95	1,756	2,064	17.54	2.96	
Household description	Heads of households and their wives	Males ..	1,994	2,159	8.27	2.72	1,956	2,033	3.94	3.96	1,906	1,975	3.62	1.79	1,901	1,964	3.31	2.82	
		Females ..	1,589	1,770	11.39	3.12	1,709	1,628	4.74	4.31	1,291	1,450	12.32	2.26	1,502	1,497	0.33	3.25	
	Sons of heads of households	2,178	2,142	1.65	2.57	2,128	2,098	1.41	3.76	2,099	2,116	0.81	1.69	2,241	2,011	10.26	2.54		
	Daughters of heads of households	1,477	1,411	4.47	3.26	1,520	1,528	0.53	4.52	1,490	1,482	0.54	2.08	1,544	1,624	5.18	3.20		
	Other male relations of heads of households	998	656	34.27	4.07	996	875	12.15	5.88	1,175	1,169	0.51	2.38	1,131	1,217	7.60	3.83		
	Other female relations of heads of households	1,612	1,193	25.99	3.09	1,578	1,613	2.22	4.52	1,889	1,803	4.55	1.80	1,454	1,260	13.34	3.31		
Composition of households	Infants, non-adults, and adults in households	Infants (less than one year)	Males ..	176	98	44.32	10.14	194	180	7.22	13.90	105	58	44.76	8.44	151	140	7.28	11.04
			Females ..	172	103	40.12	10.26	190	137	27.89	13.90	99	70	29.29	8.70	153	155	1.31	10.97
	Non-adults (Ages 1—20 years)	Males ..	2,364	2,562	8.38	2.44	2,383	2,274	4.57	3.50	2,539	2,515	0.95	1.40	2,656	2,694	1.43	2.27	
		Females ..	2,108	2,304	9.30	2.63	2,198	2,228	1.36	3.68	2,029	2,196	8.23	1.72	2,406	2,323	3.45	2.43	
	Adults (Ages 21 years and over)	Males ..	2,710	2,654	2.07	2.23	2,542	2,663	4.76	3.35	2,610	2,692	3.14	1.46	2,611	2,682	2.72	2.30	
		Females ..	2,470	2,279	7.73	2.37	2,493	2,518	1.00	3.39	2,618	2,469	5.69	1.46	2,023	2,006	0.84	2.72	
	Civil condition	Unmarried	Males ..	2,154	2,155	0.05	2.59	2,240	2,067	7.72	3.64	2,116	2,125	0.43	1.68	2,771	2,680	3.28	2.21
			Females ..	1,515	1,718	13.40	3.21	1,539	1,483	3.64	4.58	1,273	1,563	22.78	2.28	1,954	1,839	5.89	2.77
		Married	Males ..	2,715	2,507	7.66	2.22	2,564	2,587	0.90	3.33	2,816	2,733	2.95	1.39	2,290	2,271	0.83	2.51
			Females ..	2,463	2,199	11.99	2.25	2,578	2,637	2.29	3.32	2,760	2,613	5.33	1.41	2,187	2,166	0.96	2.58
Widowed/Divorced		Males ..	381	652	71.13	6.83	315	462	46.67	10.84	322	407	26.40	4.78	358	565	57.82	7.09	
		Females ..	570	809	41.93	5.51	764	764	0.00	6.70	713	559	21.60	3.14	440	479	8.86	6.37	

TABLE IV

Sample count values in which the percentage error is less than 3 times the co-efficient of variation

		Tracts				
		Mahoba Rural	Aligarh Municipal Board	Pharenda Rural	Mohanlalganj Rural	
Size of households	Size of households	Small	Small	Small	..	
		Medium	Medium	Medium	Medium	
		Large	..	Large	..	
		Very large	..	Very large	Very large	
	Persons in households of size	Small	..	Small	..	
		Medium	Medium	..	Medium	
		Large	..	..	..
		Very large	..	..	..
	Heads of households and their wives	Males	Males	Males	..	
		Females	Females	..	..
Composition of households	..	Sons of heads of households	..	Sons of heads of households	Sons of heads of households	
		Daughters of heads of households	Daughters of heads of households	Daughters of heads of households	Daughters of heads of households	
		Other male relatives of heads of households	Other male relatives of heads of households	Other male relatives of heads of households	..	
		Other female relatives of heads of households	..	Other female relatives of heads of households	..	
		Infants	Males	Males
			Females	Females
		Non-adults	Males	Males	Males	..
Females	Females		..	..
Adults	Males	Males	Males	Males		
	Females	Females	..	..
Civil condition	Unmarried	Males	Males	Males	Males	
		Females	Females	..	..
	Married	Males	Males	Males	..	
		Females	Females	
	Widowed/Divorced	Females	Females	

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