



MYSORE CENSUS 1951

SAMPLE VERIFICATION OF  
THE 1951 CENSUS COUNT

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## P R E F A C E

By the very nature of things, no Census can be a hundred per cent correct. Though this has always been recognised, every Census in the past has claimed to be better and more accurate than its predecessors. This claim might have had some justification, for every Census Superintendent had the experience of many fore-runners to guide him clear of pitfalls and towards ways of improvement. But it has never been put to test or demonstrated in figures. Even when the count had been obviously vitiated as, for instance, at the 1931 Census when Census-taking was hampered by the non-co-operation movement of the National Congress, no objective determination of the defect in the count was attempted.

The 1951 Census of India makes a departure from this practice. Following the recommendations of the United Nations Organisation, the Registrar-General, India, formulated a scheme to ascertain scientifically, through the investigation of a random sample of households, the degree of error in the 1951 Census count. The scheme was adopted in this State after incorporating what the Registrar-General was pleased to term as "procedural improvements" and under the sponsorship of the Government of Mysore. In the pages that follow is presented a review of this Sample Verification.

So far as Mysore was concerned, an objective verification such as the one proposed by the Registrar-General was most desirable and even necessary, because the latest count had registered such a staggering rise in the State's population during the previous decade that, understandably enough, a good part of the increase was suspected to have been due to wilful inflation of numbers. Even the Registrar-General would not accept the State's population figures till he was convinced of the accuracy of enumeration by actual spot enquiry conducted by himself, in and around Bangalore. Now that a systematic and State-wide verification has been carried out, it is possible to dispel all suspicions and to know exactly how close we are to the ideal of a perfect Census.

BANGALORE  
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## CONTENTS

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|   | PAGE |
|---|------|
| Introductory                                  | 1    |
| Selection of Sample Households                | 1    |
| The Procedure of Verification                 | 2    |
| The Disadvantages                             | 3    |
| The Advantages                                | 3    |
| The Ghosts                                    | 4    |
| The Period of Verification                    | 4    |
| The Verification Officers                     | 4    |
| The Field Operation                           | 5    |
| The Unverified Households                     | 5    |
| Quality of Verification Work                  | 6    |
| The Fate of the Ghosts                        | 7    |
| Errors in the Verification Reports            | 7    |
| The Results                                   | 8    |
| Erroneous Treatment of Absentees and Visitors | 9    |
| Fictitious Entries and Clear Omissions        | 9    |
| Check of the three nearest houses             | 10   |
| Conclusion                                    | 12   |

### ANNEXURES

|  |    |
|--|----|
| 1. Statement of Results  | 14 |
| 2. Effect of non-verification on average size of Sample Households | 16 |
| 3. The Cost of Sample Verification                                 | 16 |
| 4. Forms and Instructions  | 17 |
| 5. Registrar-General's Memorandum                                  | 20 |
| 6. Government Orders and Circulars                                 | 21 |

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# SAMPLE VERIFICATION OF THE 1951 CENSUS COUNT

## INTRODUCTORY

The Scheme of Verification consisted in re-visiting a perfectly random sample of households drawn from the total mass of households enumerated at the Census, in order to see whether, and if so, how far, the total population actually enumerated in the households deviated from the population entitled to be enumerated there. A second object of the enquiry was to see how many households, if any, completely escaped the enumerator's notice.

The Registrar-General laid down the broad outlines of a uniform Scheme of Verification for All-India (*vide* Annexure 5). This scheme prescribed a sample size of 1/1000 but allowed State Governments the discretion to reduce the size to 1/2000 generally or in specific areas. It also spelled out the procedure for selecting the sample households. The Samples were to be drawn in two stages, Sample Blocks being selected in the first stage from lists of villages and Town-wards and sample households being drawn in the second stage from the National Register of Citizens of each Block. The Scheme also prescribed the hierarchy of the Verification Organisation and in particular laid down that the officers who actually carried out the

verification should in every case be Magistrates. The selection and marking of the Sample households devolved, under the Scheme, on the Tabulation Office.

According to the Registrar-General's scheme, again, the actual verification had to be done on the original National Register itself, which the Verification Officers were expected to carry with them to the sample households. The Verification in each household consisted of ascertaining the total number of persons who were actually present in the household at the time of Census enumeration and enquiring whether the three houses nearest to the household have been covered by the Enumerator. As a result of the Verification the Verification Officer prepared a statement showing the facts discovered by him, in his area. These statements were to be compiled at the District level before being passed on to the Central Office.

In applying this Scheme to Mysore, several changes of procedure were made and the arrangements finally adopted were as under :

## SELECTION OF SAMPLE HOUSEHOLDS

A rate of 1/2000 was used for drawing samples in the Rural area. For the Urban area, where enumeration errors were expected to be more numerous, the higher of the two rates allowed by the Registrar-General, *viz.*, 1/1000 was adopted. For the first stage of the sampling, *viz.*, Block within each Charge or Tract, a fraction of 1/50 was adopted for Urban areas and 1/100 for Rural areas. Accordingly the fraction for the second stage (households within each Block) was 1/20 uniformly for both Rural and Urban areas. The number of households within each Block was generally so small (even in the Urban areas) that the possibility of employing a smaller fraction at the second stage was ruled out.

The Charge Lists and the Circle Summaries constituted the lists of villages and town-wards from which the sample blocks were selected. Charge Superintendents had been asked to give a single unbroken serial for all the Blocks in their Charge, and Census Supervisors had been told to quote these Serial Numbers in their Circle Summaries. If these instructions had been followed scrupulously, the casting of the Samples in each Charge would have been a very simple matter. Actually, however, the serial numbers in many of the charges were defective. In some, there were gaps in the serial. In others a large proportion of Blocks were given sub-numbers instead of regular serial numbers. Tail-end serial numbers made

incursions into the early serial numbers in many charges. Uninhabited villages were dealt with differently in different charges. Wherever any of these defects were found, the serialling of Block numbers had to be done afresh. This was done by carefully adding up the total number of Blocks, first Circle-wise and then by Charges, and striking progressive sub-totals. As soon as the serial number of a Sample Block was known, its location was immediately obtained from these sub-totals and the name of the Sample Block was simply read off from the Circle Summary or the Charge List.

The sampling procedure prescribed by the Registrar-General said : "Strike the total number of Blocks for the Tract and divide it by the reciprocal of the sampling fraction (50 or 100 as the case may be) Add 1 to the remainder. This is the serial number of the first Sample Block. To get the others, take every 50th or 100th Block thereafter." Since the Tracts in Mysore were rather small, the District was substituted for the Tract. Within each District the Taluks in the Rural area and the Towns in the Urban area were placed in the alphabetical order to ensure strict randomness. The total number of Blocks in the District was struck separately for the Urban and Rural areas and these totals were used to determine the first Sample Block. Thereafter every 50th or 100th Block was taken into the Sample. In

the case of the Rural area the residuary Blocks were found to be so numerous (594 out of a total of 25,094 Blocks) as to cause a substantial divergence between the theoretical and actual sampling fractions. They were therefore listed in a separate serial and sampled in the usual way.

As soon as the first-stage Sample was drawn, a list of the villages and town-blocks falling into the sample was prepared which also gave the number of households enumerated in each Block as per the Circle Summary. The additional information about the number of households proved to be a very useful check against improper identification of the Blocks, since considerable confusion and error was likely to have been caused by the similarity of village-names and wrong transcription of village-names from Kannada to English. A special team of workers then picked out the National Register of Citizens of the Sample Blocks from the Record Keeper's stock.

Instructions issued to the Enumerators who wrote the National Register of Citizens required each Enumerator to give a running serial number for all the households entered in the Register. But these instructions had not been followed carefully enough in an important number of cases. For instance, house numbers were repeated in the column for the household serial numbers and sub-numbers were given to households in spite of specific prohibition of such a procedure. Non-residential places were sometimes given household serial numbers though, of course, no one was enumerated against them. So in every case the household serial number in the National Register of Citizens had to be thoroughly overhauled. While doing so, the institutions and houseless families included in the household serial were carefully eliminated.

At the end of the overhaul, a page-wise statement of the number of households enumerated was pre-

pared for each Sample National Register of Citizens. This was carefully checked by the supervisory staff and the precise number of households enumerated in each Block was struck.

The drawing of sample households in each Block followed exactly the same procedure as the drawing of sample Blocks. The first sample household (obtained by dividing the total number of households by 20 and adding 1 to the remainder) being determined, the rest of the Sample households (*viz.*, every 20th household after the first) were spotted out with the aid of page-wise progressive sub-totals. Considerable supervisory effort was demanded at this stage to make certain that the sampling procedure was adhered to most rigidly and strict randomness maintained. The sample households were marked in the National Register of Citizens with several bold rubber-stamp "S"s.

A word of explanation is necessary here regarding rejections. In the first stage of the sampling, Blocks were rejected only if they were uninhabited. In such cases the Block nearest to but preferably next after, the rejected Block was chosen as substitute. In the second stage, the entire Block was rejected if the total number of households was less than ten. There was no substitution for such blocks. If the number of households in the Block was ten or more but less than 20, the quotient obtained by dividing the total number of households by 2 was taken as the serial number of the first sample household (as per instructions in Registrar-General's letter No. 3-10-50—RG, dated 2nd August 1951). This happened in ten Blocks (all Rural) or 4% of all Rural Blocks in the sample. The actual sampling fraction in the Rural area resulting from such rejections was one in 105.4 as compared with the theoretical sampling fraction of 1 in 100.

## THE PROCEDURE OF VERIFICATION

The Registrar-General's Scheme required each Verification Officer to carry the original National Register of Citizens itself with him to the sample household. This was completely altered (with the Registrar-General's prior consent) in applying the Scheme to Mysore. An extract of the National Register of Citizens relating to each Sample household was prepared, furnishing only the following particulars, apart from full details of the location of the household: (i) the name of the head of the household, (ii) the name of each person enumerated in the household, (iii) the name of father or husband and (iv) sex. As a part of his enquiry the Verification Officer was asked to find out and record the relationship of each person to the head of the household.

A separate extract was prepared for each household. The form devised for this purpose was called the Household Verification Schedule. The extracting of

information into the Schedule from the National Register of Citizens was done in the Tabulation Office.

Alongside of the form, new instructions were drafted in regard to the manner of filling it up, whose basic content, however, did not differ in any way from the specimen instructions received from the Registrar-General. In addition, the Sample Verification Form devised by the Registrar-General was altered in appropriate places and called the Verification Officer's Summary, which is what it really is. Brief instructions were also drafted on the manner of filling up the Summary.

As a consequence of this change, the procedure for verifying whether the original enumeration covered the "three nearest houses" to the Sample Household had to be altered. In the original scheme the

check-up was very simple. The Verification Officer went to the "nearest" house, saw its house number, looked through the National Register of Citizens and said "yes" or "no". Since in the new procedure there was no National Register of Citizens, the Verification Officer was asked to pick out the three nearest houses and write down the Census House Numbers as well as the names of the household heads living in them. Separate space had to be provided for this purpose in the Schedule.

### THE DISADVANTAGES

The decision to give each Verification Officer only an extract of the National Register of Citizens instead of the Register itself brought other problems in its train. In the first place, if errors crept into the Schedules in the process of copying, they would introduce a set of spurious errors into the Enumeration record which would burden the Verification Officers' inquiry unnecessarily. So extra care had to be taken to keep down copying errors. Secondly, a lot of scriptory work devolved on the tabulation office, which was avoided in the Registrar-General's Scheme. There was also a considerable increase in the burden of supervisory effort at the stage of sorting and packing the records for despatch to the field. This was because, instead of merely sending a National Register of Citizens or two to each Verification Officer, a varying number of Schedules and Summaries had to be despatched, and care had to be taken to see that every sample household in every Sample Block had a Schedule corresponding to it.

Likewise the work of analysing the results of Verification was enormously greater and somewhat more complex in the revised procedure. To take one instance, to arrive at the number of "nearest" houses not enumerated, the original Scheme required the mere addition of a number of "no" entries; whereas, in the Mysore procedure, the Tabulation Office had to search all the sample National Registers for all the nearest houses reported.

### THE ADVANTAGES

But the advantages of the revised Scheme definitely outweighed all these disadvantages. Most important of all, the revised scheme was proof against dishonest verification. In the very nature of things absolute honesty was the *sine qua non* of an investigation such as this. The entire Scheme could be dismissed as mere whitewash if the absolute impossibility of false verification was not placed beyond all doubt. This was all the more likely since, inevitably, a portion of the old Enumeration Organisation had to be used for the verification. No price was therefore too heavy to pay for a demonstrable guarantee of absolute honesty among Verification Officers such as was provided by the new procedure.

In the original Scheme it was very easy for a none too scrupulous verifier to certify a household as correctly enumerated without even as much as stirring

from his desk. All that he was asked to do was to say "yes" or "no" to the question "is the original record correct?" and to furnish particulars only if the answer was "no". Only his conscience stood between a false answer of "yes" and the truth. The Mysore Schedule on the other hand carried a positive precaution against prevarication. Since the verifier had to enter the relationship to the head of the household in each case, he had, in effect, to conduct a re-enumeration of the household. There was thus absolutely no way of avoiding a visit to the house. Whatever else he could do, the verifier simply could not furnish a certificate out of his fancy.

Moreover, the revised procedure was capable of a refinement which was impossible in the original Scheme. This additional safeguard consisted of fictitious names deliberately introduced into the Schedules while making extracts from the National Register of Citizens. All Verification Officers were told that such "Ghosts" were being smuggled into the record and were warned that here was a sure trial of their veracity. The number of cases in which these "Ghosts" were not discovered at all through inadvertance provided a measure of the inefficiency of verification. Besides, the mere presence of the Ghost entries was complete insurance against a false report being palmed off as authentic.

Besides, there were other advantages in the Mysore procedure. For one thing, the Verification Officer did not have the last word in declaring whether or not a certain person was wrongly enumerated. In the original plan all that the Tabulation Office got was an abstract report of the Verification Officer's conclusions. But with the introduction of the Schedules, the Tabulation Office had the means to scrutinise and counter-check those conclusions. Since we were dealing only with a small Sample it was more than ever necessary to see that every case of apparent mis-enumeration was properly judged. Considering how easy it was to jump into wrong conclusions in an enquiry such as this, every device by which cases of genuine error in enumeration were separated from those of a spurious nature was very welcome. The Schedules and the double scrutiny implied in them, provided just such a device.

Again, the enquiry into the relationship question prescribed in the revised procedure has definitely improved the quality of the Verification Officer's investigation. If the whole National Register of Citizens were furnished to the Verification Officer he would be left to his own devices to know where to begin. With all the names as well as all other particulars of the household already given, the temptation is usually strong to believe that the enumeration is correct. The absence of a prescribed line of enquiry would greatly add to that temptation, and would thereby increase the chances of the investigation not going deep enough. This is where the relationship question made its contribution. It compulsorily focussed the Verification Officer's attention on the structure of the family and therefore increased the chances of his detecting errors of enumeration. It



gave him a ready made gambit with which to open his moves. The relationship was something positive from which he could work out his way, in contrast to the negative question "has the household been correctly enumerated?" It is possible to argue of course that nothing prevents the Verification Officer from investigating the relationship question even in the other procedure. But experience has shown that a question which is already answered is seldom asked.

## THE GHOSTS

Incidentally, the introduction of Ghosts into the Schedules proved to be a tricky, though highly amusing, operation. Though the alteration of the original record could have been made as well by eliminating persons as by introducing imaginary new persons, only the latter type of Ghost was used. But these creatures of the imagination, if they had to serve any purpose, had to have such names (and father's

names) as would camouflage them completely from the gaze of the sharpest-eyed Verification Officer. Moreover, one had to study the pattern of enumeration within the household to ensure that the Ghost's position in the schedule did not give away its fanciful origin. In consequence, the creation of these bodiless persons devolved on the Census Commissioner's Assistants and cost considerable effort. The Ghosts they produced were so true to life, however, that in as many as 4 out of 35 cases, they turned out to be real, in the sense that their name and relationship exactly corresponded to those of real persons.

In all 35 Ghosts were introduced into the schedules at the rate of roughly one for the Urban area and two for the Rural area of each of the 9 districts, 3 for the Bangalore Corporation and 1 each for the 2 other Cities. The households to be inhabited by them were picked up at random from the lists of sample households with the aid of random numbers.

## THE PERIOD OF VERIFICATION

Theoretically there was no need for simultaneity in carrying out the verification in different parts of the State. In fact there would perhaps have been some advantage in taking the Districts in succession, since by so doing the experience gained in one District could be applied to the next. But it was extremely important that in each area the enquiry once commenced should be completed in jig time. For if the householder was forewarned of the Verification Officer's approach, all would be lost. The householder could, if he was so minded, confront the Verification Officer with flesh and blood substitutes for the imaginary persons counted in his house at Census time or bring in an array of "Clear Omissions". It was essential to take the household completely by surprise. Each Verification Officer was therefore allowed the bare minimum period necessary for the work in his area. This was just one day in the

case of Verification Officers who had only one Town to verify and three days in the case of those who had several Towns or Villages to visit. To make assurance doubly certain, the partially filled-up schedules to be actually used by the investigation officers were mailed so as to reach them on the very date set for commencing the work. Further the verification was carried out simultaneously all over the State, a certain amount of local adjustment being allowed, however to suit the convenience of Verification Officers.

In the result, with the exception of two districts (which conducted their enquiry in the period 27th to 29th August 1951) and the Bangalore Corporation (which commenced and completed its work on the 29th August 1951) all the District and Cities in the State carried out their Verification in the period 29th to 31st August 1951.

## THE VERIFICATION OFFICERS

The Registrar-General's only requirement in regard to Verification Officers was that all of them should be Magistrates, preferably of the First Class. Under the ideal arrangement, all the Magistrates would be drawn exclusively from the ranks of those who had nothing whatever to do with the original enumeration, *viz.*, the Judicial Department. But, the 300 and odd Blocks coming into the Mysore Sample were scattered over 80 Taluks (Rural area) and 36 Towns apart from the three Cities and it was evident from the start that the Judiciary could not provide enough Magistrates whether of the First Class or Second Class to go round for our purpose, and that we would have to draw on the large body of *ex-officio* Magistrates in the State, even though all of them had been associated with the original count. Even in this widened field there were too few Magistrates of the First Class for our purpose and it was necessary to recruit a number of Second Class Magistrates

also. And in the three Cities (Bangalore, Mysore and Kolar Gold Field) the available Magistrates, regular and *ex-officio*, First and Second Class were so few that non-Magistrates also had to be employed.

The number of Magistrates that could be drawn from the Judicial Department was automatically restricted by the fact that these officers could not be expected to move out of their headquarter towns without an intolerable dislocation of their other work. A perusal of the list of Sample towns showed that, apart from the 3 Cities, there were 14 places in which judicial officers could be employed. Accordingly, the permission of the High Court was sought to use the services of these 17 Magistrates in the Verification set-up. The High Court demurred at first but was eventually persuaded to accord the required permission.

That left 22 towns out of a total of 36 towns in the Urban Sample. Since the Urban areas had registered more abnormal variations in population than the rural area and therefore demanded more careful verification, it was decided to entrust all these places exclusively to the First Class Magistrates, *viz.*, the respective Revenue Sub-Division Officers. But in the case of the Cities, on account of the paucity of Magistrates already mentioned, the 19 Charges remaining out of an aggregate of 22 were given to the former Charge Superintendents in each case, who invariably were non-Magistrates. In the rural area too, the verification was carried out by Officers who were the Charge Superintendents at the time of Enumeration. But these were all Magistrates of the Second Class, being the Amildars of Taluks.

Thus there were 129 Verification Officers in all, 17 of them being regular First Class Magistrates of the Judicial Department, 13 being *ex-officio* First Class Magistrates and 80 *ex-officio* Second Class Magistrates, the last named category being confined entirely to the rural area. The remaining 19 Verification Officers were non-Magistrates and these operated entirely in the three Cities.

Of the 112 Verification Officers not belonging to the Judiciary, 13 had come into their present position by transfer from Departments which took no part in the original Enumeration. Another 16 Verification Officers had been transferred from the posts held by them at Census time and so were called upon to verify work which was not their own. Only the remainder, numbering 63 and forming almost exactly

half the total, verified their own work, or rather the work done by Enumerators under their superintendence.

However the work of all Verification Officers throughout the State has been of a uniformly high order and the fact that some of them were formerly associated with the compilation of data they were verifying made no difference whatever to the quality of their work. In fact the performances of the different categories of Verification Officers reveal no differences of quality *inter se*, which is only to be expected since all of the investigators were, without exception, officers holding positions of considerable responsibility. Schedules from all areas bear evidence of a high degree of conscientiousness. The excellent performance of the Magistrates of the Judiciary, notwithstanding their unfamiliarity with the original enumeration and its techniques needs special mention. On the total, I am thoroughly satisfied that the entire verification organisation has carried out its task with unimpeachable honesty.

A word is necessary here about the Chief Verification Officers. Making a slight modification of the Registrar-General's Scheme which proposed that each District Magistrate should have several Chief Verification Officers under him, the Deputy Commissioners and Municipal Commissioners of the Districts and Cities were themselves designated as the Chief Verification Officers of their respective areas. The comparatively small size of our Districts and Cities made this change desirable; the modified set-up was also in line with past practice in Mysore.

## THE FIELD OPERATION

The Scheme of Verification was launched into the field with the passing, by the State Government, of their Order No. M. 8186-98/Census 4-51-2, dated 7th August 1951, in which they outlined the objects and the method of the enquiry. This Order was followed by another Government Order (No. M. 9109-20—Census dated 17th August 1951) in which Verification Officers were told, on the lines indicated by the Registrar-General, of the scientific and objective nature of the enquiry and the immunity, from praise and blame alike, extended to Verification Officers. I issued two Circulars in all (No. 2885-2896, dated 17th August 1951, and No. 4075-91, dated 25th August 1951, addressed only to the Verification Officers of the Judiciary) mainly of a general nature. The instructions as to the actual manner of Verification were embodied in the printed matter accompanying the Schedules. For purposes of training, one set of printed instructions and one set of blank forms were sent to each Verification Officer a week or so in advance of the Verification dates prescribed for his area. This became necessary because the actual forms to be used by the Verification Officers were mailed to

them so as to reach on the very day on which Verification commenced.

It is gratifying to state here that all Verification Officers, without exception, completed their work on the dates prescribed. There was a little delay in some areas in the despatch of completed forms to my office, but in no case was the delay more than 10 days from the completion of the Verification. There was no instance of schedules not reaching the Verification Officer in time or of schedules lost in transit. Everything went on in apple-pie order.

The Census Commissioner and his two Assistants checked the work of Verification Officers in four out of the 9 Districts and in one City. The Commissioner inspected the work in Kolar Gold Fields City and in the bulk of the Verification areas in Kolar District. The First Assistant toured in Bangalore District and the Second Assistant in Chikmagalur and Hassan Districts. The Chief Verification Officers also carried out inspections of their own.

## THE UNVERIFIED HOUSEHOLDS

The total number of households selected for Verification was 1,036. Of these as many as 41 were not

verified, 14 in the rural area and the rest in the urban area. Since more households were selected in the

urban area than in the rural, the proportion of unverified blocks in the urban area is even more than appears at first sight. While the rural area lost only 2% of its households by non-verification the loss in the urban area was nearly 8% the contribution of the Cities to this proportion being 9.6% and that of the non-City-urban area being 6%.

Both in the rural area and the urban area there were only two reasons for non-verification. The more common reason was that the family was part of an itinerant cooly camp (toddy tappers, construction workers, estate coolies, etc.) which had since shifted, lock, stock and barrel. The second reason was that the families had moved out from their original *locale* in the usual course, for no ascertainable reason and to some place unknown to the neighbours. Naturally, the former cause has had more effect in the rural area and the emphasis in the urban area has been on the latter. However, the number of missed households would have been even greater had not Verification Officers taken the trouble to ascertain the present whereabouts of the family from its erstwhile neighbours. In nearly half a dozen instances, the peripatetic families have been tracked down to their new location, often in an altogether different village, and verified there. In a few instances where the absent family consisted merely of one or two persons, the verification has been carried out ex-parte on the carefully checked evidence of the neighbours. For the entire State there was only one case in which the Verification Officer reported his inability to trace the sample house. Even here, the house number carries a sub-number, indicating that it refers to one among several families in a big house, and this might have put the Verification Officer off the scent.

There is no concentration of unverified households in any district in each stratum such as would affect the representative character of our sample. This being so, the non-verification of a part of our sample does no more than alter the sampling fraction, and

if the fraction is reduced thereby, increase the sampling error. Taking only verified households the actual sampling fraction is 1 in 1,986 (as against a theoretical 1 in 2,000) in the rural stratum and 1 in 1,111 (as against 1 in 1,000) in the urban stratum. It is thus seen that a reduction has occurred only in the urban area.

The question therefore is whether the increase in the sampling error in the urban area on account of the reduction in the sample size is such as to invalidate our conclusions. The answer to this question is in the negative since our original sample itself is so small as to result in high sampling errors. Annexure 2 to this review illustrates this point. It shows the sampling errors for a characteristic which is ascertainable for both the verified and the unverified households, *viz.*, the number of persons per household. Taking the household itself as the sampling unit, calculations have been made for the State as a whole, separately for rural and urban, first using all selected households, then for verified households and lastly for the unverified households. It is seen that the change in sampling error is of no significance since the error itself has such a high value. But the figures in the column for unverified households demand notice. It is seen that the average size of the unverified household is much smaller (3.5714) than that of the selected sample (5.2243), this divergence being more accentuated in the rural area than in the urban. The standard deviation of this part of the sample is also smaller than for the whole sample. This indicates that, generally speaking, only the smaller families have escaped verification, a conclusion which could also be deduced *a priori* from the causes of non-verification since the larger the family the less likely it is to change its location and the families in cooly camps tend to be small in size. But the number of unverified households is so small that it is unnecessary to conclude from this that our verified sample has lost its representative character.

## QUALITY OF VERIFICATION WORK

Without doubt every Verification Officer has visited the households entrusted to him. There is also no question that investigation carried out by Verification Officers has been as careful as could be and that the householder has not been allowed any quarter in covering up past prevarications. (One typical instance may be mentioned here as an illustration. The householder in one house was supposed to be living with a concubine and two nephews. A rum combination such as this naturally roused the Verification Officer's suspicions. He found that both the nephews were real persons who were students. He thereupon asked the man to show the room in which his nephews studied every day. When the entire household showed not the slightest trace of even a single book, he concluded that the nephews were both—in verification terminology—fictitious entries. Actually it turned out that they were living with a less prodigal uncle in a nearby village.) The relation-

ship column has been filled up in every case with perfect clarity.

But the Verification Officer was often forced to conduct his enquiry at second hand, since he had the same difficulty as the Enumerator in securing the presence of the head of the household during his visit. But while the Enumerator could return another day and run the householder to earth, the Verification Officer had no such facility; he had to complete his enquiry on a single day. So, frequently he got answers from one of the members of the family, very often one of the children sometimes the housewife and sometimes some other stay-at-home relative. This has not affected the verification in the large majority of sample households, but in a small proportion of cases the Verification Officer has been misled. But even when the Verification Officer was misled, internal inconsistencies in the verified

schedules enabled the Tabulation Office to work out the true position. However in three cases the Verification Officers were asked to re-investigate households to explain discrepancies in their reports. In one instance a little daughter had been declared as a clear omission, but the Verification Officer had mentioned her age as 5 months. Re-investigation confirmed that the baby was born after the reference date of the Census. In another case, a man was declared as a clear omission on the ground that he died on 4th March 1951. But the Enumerator had written his name in the N.R.C. and then struck it off in red ink, clearly indicating that the man was dead on 1st March 1951. The basis of the Verification Officer's report, it was explained on enquiry, was an entry in Birth/Death Register of the village. Considering the well-known deficiencies of this Register, the man was regarded as not a clear omission.

In a third instance the head of the household himself was reported as a clear omission but there was

evidence that the Enumerator had omitted the man from the Census count on purpose, probably because he was absent from home throughout the Enumeration Period. This was pointed out to the Verification Officer who on re-investigation reported that the conjecture was partly true and that the man should be regarded as an Absentee Erroneously Omitted and not as a clear omission. But it would be wrong to generalise from just three examples that when the Verification Officer got his information from some one in the household other than the household head, he always ran the risk of being misled. It is common experience that more often than not such second-hand information is extremely reliable. The teen-agers of a family for instance may be depended upon to give us details about the family which the head of the household may be unwilling to divulge. The best verification is probably that in which the Verification Officer has cross-checked the Enumerator's record as well as the householder's replies with information secured behind the householder's back.

### THE FATE OF THE GHOSTS

One indication of the quality of verification work is the way the Ghost entries introduced into the schedules have fared in the field. Reference has already been made to the objects behind placing them in the Schedules and the procedure by which this was done. Out of 35 such fictitious persons, one unfortunately fell in a household which was not verified. Out of the 34 entries which proved effective, the verification officers had no difficulty in exposing 31, including one case in which the Ghost became a Visitor Erroneously Counted and another in which it turned to be real but was balanced by a fictitious entry in the same household. The remaining 3 Ghosts which managed to get past the Verification Officer deserve special mention.

A fact of some significance is that in 2 out of these 3 cases the Verification Officer was a Magistrate of the Judiciary, that in the third being an *Ex-officio* First Class Magistrate. All three cases thus occurred in the Urban area.

In the first case, found in Mysore City, the Ghost had turned out to be a nephew of the head of the household. When the schedule was referred back to the Verification Officer for further investigation, he found that he had been misinformed by the householder's wife on the earlier occasion. There was no person, least of all a nephew, corresponding to the Ghost. But there was no ascertainable explanation why the wrong information was given by the wife—it was, as the Verification Officer put it, a case of "sheer mistake". In the second instance, the Ghost had become a servant in a large household. On re-investigation of the household the Verification Officer reported that there was a real servant having the

name as well as the father's name of the Ghost but that the servant had left his job over two years ago and was not working with the family during the Census. But the surprise in this case is that the Ghost should have been given, quite by chance, the name and father's name of a real person. Here again, the Verification Officer had been misinformed on the earlier occasion by the person who answered his questions in the absence of the head of the household. But the fact that a servant of the right name had worked in the household at some time, although long before enumeration, was urged by the Verification Officer as extenuating his previous report.

But the Ghost in the third case was the worst offender. She was masquerading as the sister of the head of the family until re-investigation of the house threw light on her—when she turned out to be the mother! The lady however had an *alias* in her name and this might have caused the confusion. The householder's wife who answered the Verification Officer's questions on the first occasion could not speak Kannada or English and this must have made confusion worse confounded.

But these three instances are useful only as illustrations of the type of difficulty that investigating officers had to face and of the dangers that lurk in facts gathered at second hand. But they do not warrant any general conclusions about the efficiency or otherwise of the work of Verification Officers. On the other hand, the fact that in 9 cases out of 10, Ghosts have been scotched without any trouble provides enough proof that verification has been carried out with thoroughly reliable information.

### ERRORS IN THE VERIFICATION REPORTS

However, in displaying their discoveries a large proportion of Verification Officers have shown great

confusion. While more than half the investigators have filled up their schedules in the manner intended,

the rest have been prone to exaggerate what they found. This was undoubtedly in the right spirit, for what could augur better for an enquiry of this nature than that Verification Officers should vie with each other in exposing errors of enumeration? The fact that such a thing has happened may be taken as an indication that the investigation has been perfectly thorough. But the tendency to make mountains out of mole-hills has had the unfortunate result of introducing a large crop of spurious errors into the Verification Officers' reports. This would have been ruinous if the reports had to be taken at their face value, as contemplated in the original scheme. Fortunately, our procedure required a meticulous screening of the Verification Officer's conclusions at the Tabulation Office, which consisted of a careful comparison between the verified schedules and the National Register of Citizens. The screening was a complex and slow operation which had to be carried out by top-drawer staff. Every entry in every schedule came up for searching scrutiny and full use was made of every information in the National Register of Citizens (especially age and marital status) before final conclusions were drawn. I am personally satisfied that the weeding out of pseudo-errors has been carried out in the Tabulation Office in a spirit of absolute impartiality and has been perfectly exhaustive.

The most common type of exaggeration was to declare an error in the name or relationship (and very rarely, in the sex) as a combination of one fictitious entry and one clear omission. In one extreme instance the Verification Officer had taken offence at a slight error in one of the initials in the father's name. Out went the person as a fictitious entry. Correspondingly a person of the same name but with the right initials in the father's name was recorded as a clear omission. Such extreme instances, however, were few. Often, the distortion in the name was so great that the Verification Officer could almost be pardoned

for his verdict. And such distortion was not even the fault of the Enumerator. Errors in the Tabulation Office in copying names from the National Register of Citizens and in transcribing names from Kannada to English produced some of the worst examples of mutilation. Quite frequently the change of name had a *bona fide* origin, the person himself being called by several different names, one of which was furnished to the Enumerator and another to the verifier. The relationship of the person was also subject to similar vagaries. As is well known, cousin brothers and sisters are regarded loosely as brothers and sisters; and nephews as sons. Occasionally a daughter-in-law becomes in common parlance a daughter. The enumerator might possibly have failed to probe the niceties of relationship, but not so the Verification Officer whose main job it was to investigate relationship and who had enough time to do so.

Of course Verification Officers were not wanting who regarded these variations of name and relationship in their true light, as defects in the quality of enumeration. But there were others who took them as errors in the total count, in an unholy anxiety to discover more and more fictitious entries and clear omissions. Such errors could not but be rejected as spurious.

Another source of exaggeration was the tendency to declare a whole household as fictitious merely because the house was vacant during verification or was occupied by a different household than that mentioned in the Schedule. The number of clear omissions was often unwittingly exaggerated in the Verification Officer's reports because, the Verification Officer regarded as omissions persons who were enumerated during the Census as a separate household in the same house or as part of a nearby household. Reference to the National Register of Citizens placed these omissions in their true light.

## THE RESULTS

When all the spurious errors were eliminated from the reports from the field, the total number of enumeration errors in the different categories, in the different districts was as shown in Annexure 1. Since the State as a whole forms a single Natural Division no regional grouping of these Districts is possible. But it is necessary to consider the rural and urban strata separately for the reason, among others, that different sampling fractions have been employed in the two strata.

The total number of persons in respect of whom the verification was done was 5,303. Of this 1,790 were in the urban area (City 956, Non-City 834) and the remaining 3,513 in the rural area. Since the non-household population was outside the scope of the verification scheme, these figures must be compared with the total household population in the State which is 21,46,593 in the urban area and 68,75,479 in the rural area. The size of the non

household population itself, consisting of houseless persons and inmates of institutions, is microscopically small, being 52,900 for the whole State or a little over  $\frac{1}{2}$  per cent of the total population. The proportion of the household population that came into the sample was thus 1 in 1957 in the rural area (as against a theoretical fraction of 1 in 2,000) and 1 in 1,199 in the urban area (as against 1 in 1,000).

The nett error in the Census count was compounded of cases of clear omission (making for under-enumeration) fictitious entries (making for over-enumeration) and erroneous count or omission of visitors and absentees (making for over- and under-enumeration respectively). The treatment of visitors and absentees was expected to reflect the consequences of the longer period of enumeration adopted in the 1951 Census. We may deal with this first before we take up a consideration of fictitious entries and clear omissions.

## ERRONEOUS TREATMENT OF ABSENTEES AND VISITORS

The total number of errors in the enumeration of visitors and absentees tending to over-enumeration was 8 of which 3 occurred in the rural area and 5 in the urban area. Errors contributing towards under-enumeration numbered 5 for the whole State, 1 of these being found in the rural area, and 4 in the urban area all of which were contributed by the Bangalore Corporation. This means that in both the rural and urban areas, visitors and absentees were more apt to be erroneously counted than erroneously omitted; and (considering the proportion of the resultant over-enumeration to the total verified population) that the tendency to do so was about the same in the two areas. However it is not possible to declare either that the erroneous count of a visitor or an absentee must have resulted in double-enumeration or that the erroneous omission of such a person must have resulted in the complete

loss of the person from the enumeration record. To this extent therefore our results should be regarded as inconclusive. The very small number of errors of this type in our sample makes it risky to analyse the figures any further. The situation in Bangalore Corporation illustrates this point. The four absentees and visitors who have been erroneously omitted here (and who make up the entire contribution towards under-enumeration of the whole State's Urban area) have no compensating cases of over-enumeration. Further, in the rest of the State's Urban area there is no under enumeration of visitors and absentees at all but only over-enumeration. It is quite evident from this that the sample in Bangalore Corporation has given a lop-sided version of realities. But, for the State as a whole, there seems to be no harm in accepting the contribution of this source to the total over-all under-enumeration.

## FICTITIOUS ENTRIES AND CLEAR OMISSIONS

Turning now to the fictitious entries and clear omissions, the total number of cases of fictitious entry for the State was 57 and of clear omissions 97. The over-all defect in the head-count from these two sources therefore is one of under-enumeration; the total number of persons in the verified households being 5,303, the extent of under-enumeration is only three quarters of 1 per cent (0.7543). But, as already stated, to arrive at the total enumeration error due to mis-enumeration in households we must also take into account the effect of the erroneous treatment of visitors and absentees. Item 8 of Annexure 1 (Part A) shows the nett number of cases of wrong enumeration (which happens to be under-enumeration) for each area. From this has been derived the estimated number of persons not enumerated in households, which is shown as item 11. It is easily seen from these figures that although in absolute figures the contribution of the rural area (24) to the State total (37) is greater than that of the urban area (13), the proportion of under-enumeration to the total verified population in the two areas is very nearly the same (rural 0.633%, urban 0.726%). In terms of the number of persons escaping enumeration, the rural area has lost 46,972 persons from its count and the urban area 15,590 persons. For the whole State an estimated 62,562 persons have slipped through our net within individual households.

One noticeable feature in the urban area is the behaviour of Bangalore Corporation which has contributed 13,019 persons to the total of 15,590 persons estimated to have escaped enumeration in the entire urban area. This means that in the entire remainder of the State's urban area—including two Cities and all the non-Cities—the loss of persons by under-enumeration is only 2,571 or 16% of this total, although this area holds nearly 70% of the total urban population. In other words, if we exclude Bangalore Corporation, the urban area has taken a remarkably accurate Census of persons within house-

holds, the percentage of nett under-enumeration being hardly one-fifth of one per cent.

The Districts and Towns of the State are comparatively so small that the sample, even at the District level invariably contains too few sampling units to provide significant conclusions. I have therefore considered it not worthwhile to exhibit in Annexure 1 details of the estimated number of persons not enumerated and the percentage of under-enumeration, separately for each District. The sample can at best be regarded as significant at the level of the stratum; perhaps even the consideration of the urban stratum separately under the City area and non-City area is beset with dangers. I have, however, exhibited all figures for the Bangalore Corporation, which being the largest urban area in the State, deserves special treatment.

Besides, the diminutive size of the sample restricts our conclusions to generalities. To draw further inferences from our present results we would first have to take a closer look at the causes behind errors of over-enumeration and under-enumeration. One fertile source, of course, is the prevalence of Rationing and the propensity for prevarication that it is supposed to encourage amongst the population. This, however, is expected to contribute only fictitious entries and such other errors of over-enumeration. The other sources of error in enumeration are the ones that have had free play in varying degrees in all Censuses. They should all be regarded as inadvertent errors on the part of the Enumerator. They were assumed to—and in fact oftentimes and in restricted areas, they did—cancel among themselves. Instances of such error are not hard to imagine. If an enumerator in the rural area, supremely confident of his own knowledge of the households in his village, writes the enumeration record without bothering to visit the households and make the enquiries prescribed by the questionnaire, errors both positive and negative are bound to creep into his return. This

is probably the largest source of error in the rural area. In the urban area, errors could arise, for instance, by the enumerator not being sufficiently patient with the householder or sufficiently perseverent in getting a complete account of each household. In congested localities errors may creep in on account of the fact that members of different families are often mixed in each house and the enumerator does not bother to sort out the persons into different households. These, are only illustrations. It is possible to conceive of many an other situation where inadvertent errors of enumeration could arise. By and large, therefore, errors could be considered under two groups, errors born of rationing, which are exclusively errors of over-enumeration and inadvertent errors.

It would be interesting to see what part each category of error plays in the rural and urban strata. One method of doing so would be to eliminate from the total number of persons wrongly enumerated the number of cases in which over and under-enumeration cancel each other out within the same family. For, if we have both over-enumeration and under-enumeration in the same family, obviously Rationing could not be the source of error. Annexure 1 shows the number of such instances in each area (item 9). The total number of cases of such balanced error for the whole State is 16, 11 of them occurring in the urban area and 5 in the rural area. Setting these figures against the total number of instances of over-enumeration in these areas, we can at once see that approximately one-fourth of all cases of over-enumeration are not attributable to Rationing, and remarkably enough, in the case of Bangalore Corporation, contrary to our expectations, nearly three-fourths the number of fictitious entries and erroneous counts are set off within the family. Of course, while we can see that the matched errors are definitely due to extra-rationing causes, the reverse does not hold true in the case of the remaining errors. It is not possible to say that when errors do not match in the family, Rationing is the sole cause. All that we can gain from the study of these figures is an approximate idea of the influence of the two different sources of mis-enumeration already mentioned. Our conclusion then is that the influence of factors that have nothing to do with Rationing is much more than what we were led to expect and that in Bangalore, more than in any other area, the contribution of Rationing to over-enumeration is remarkably low, being only 30 %.

These conclusions, however, should not be asserted with too much confidence; for, after all, we are dealing with a very small sub-sample. If we had a larger sample we could have explored this line of thought to the full. But then we need not have stopped there. An adequately large sample would open before us an immense field for exploration and we could investigate all conceivable sources of mis-enumeration. Based on our assumptions about the causes that lead to error, we could first draw a series of conclusions and then test them against our results. If, for instance, our hypothesis is that the prevarication resulting from Rationing is at the bottom of all over-enumeration, we should reasonably expect to find all, or most, fictitious persons and persons erroneously counted to be above the minimum age prescribed by the Rationing authorities. The proportion of children below this age among the fictitious entries would then be a test of our hypothesis. (A summary compilation of the State's figures shows that a surprisingly large proportion of fictitious entries in both rural and urban areas are children below 8 years but I am loth to draw any conclusions therefrom for fear of walking into statistical traps). We could carry the idea a step further and expect to find these bogus persons to be, more often than not, distant relatives of the householder rather than near relatives. The relationship of fictitious individuals therefore could be a valuable object of study. Similarly, in the case of inadvertent errors, we can see what relation the occupation of the enumerator and the fact whether he is or not familiar with the area he is called upon to enumerate, has to the number of errors returned. We can also see if, and if so how, the number of errors of different kinds increases or diminishes with varying distances from the capital of the State. For, it is possible to imagine that in places which are farthest removed from Bangalore, the unity of the village and the efficiency of the administrative set-up are least likely to be impaired by exposure to the corrupting influences of the metropolis. (A study of the total number of families in the State in which mis-enumeration has occurred (item 4 of Annexure 1), as distinct from the total number of persons wrongly enumerated, in fact shows some such trend; but I have refused to be convinced.) And so forth. A tremendous vista of possibilities opens out before us as soon as we begin to think of the causes that lead to errors of enumeration. But with the modest sample we have on hand, we can do no more than indulge in conjecture about these causes. The value of conjecture being what it is, I do not propose to take the analysis of Mysore's results any further.

### CHECK OF THREE NEAREST HOUSES

Under-enumeration could also occur by the failure of the Enumerator to visit households. An estimate of the error from this source was sought to be obtained by investigating whether the three houses nearest to the Sample house were covered during Enumeration. As already indicated, the Verification Officer was asked to report the house numbers of these three

nearest houses as well as the names of the heads of households living in them. When the schedules were all received, these numbers and names were searched for in the concerned section of the National Register of Citizens. The object was to see how many of them did not figure in the National Register of Citizens at all.



The results of the investigation are shown in Annexure 1 (Part B). The total number of occupied houses reported by Verification Officers for the whole State was 2,989 (Rural 1,993, Urban 996). If three houses had been reported for every selected household, we should have had in our sample 3,108 houses (3 times 1,036). There is thus a shortfall of 119 houses from our expectation. There are two main reasons for this. In the first place, some Verification Officers have reported only one or two nearest houses or none at all where they should have reported three. A few others have reported temples, cattle sheds, cycle shops, etc., instead of occupied houses and these house numbers had to be regarded as not reported at all. However, if we take only the total number of *verified* households (995) into our calculation, the short-fall is actually converted into a small excess of 4. This is because, fortunately, nearest houses have been reported even in respect of some of the unverified households.

The hunt for the nearest houses in the National Register of Citizens turned out to be very much more difficult than expected. The principal difficulty was that the house numbers did not occur in the National Register of Citizens in the proper serial order but were listed in the order in which the Enumerator visited them during Enumeration. Besides, the search had to be carried over to the National Register of Citizens of several neighbouring Blocks whenever there was a suspicion that the house number reported did not belong to the Sample Block. In fact this extra scrutiny proved very successful, since in nearly a dozen cases it helped the discovery of houses which would otherwise have been regarded as not covered at all. The advance house-list prepared prior to Enumeration came in very handy during this check; it was indeed fortunate that these lists were available in the Tabulation Office. In cases where through carelessness vacant houses were reported although only occupied houses should have been checked, a further difficulty arose from the propensity of some Verification Officers to enter the name of the owner of the vacant house in the column for the head of the household. This was quite a pain in the neck because the entry of the name put the Tabulation Office completely off the track and only the house-list could come to the rescue. Another difficulty was that, often, the term "head of the household" was understood differently by the Verification Officer and by the Enumerator with the result that the names reported by Verification Officers had to be searched for not only among the heads of households but also among the other members of each household.

Out of the 2,989 houses reported, there were only 13 cases in the entire State in which both the house number and the name reported by the Verification Officer could not be identified at all in the National Register of Citizens. Of these, 9 were in the Urban area and 4 in the Rural. Compared with the total number of houses checked in each stratum, the proportion of houses not identified was 0.207% in the Rural stratum and 0.904% in the urban

stratum. For the entire State, this yields an overall under-enumeration of houses amounting to 0.435. The estimated number of persons escaping enumeration from this cause is 13,799 for the rural area and 19,397 for the urban area (4,452 for Bangalore Corporation) working out to a total of 33,196 persons for the whole State.

The degree of under-enumeration is thus gratifyingly small. But it must be pointed out here that even this result is, in all likelihood, an over-estimate. For it cannot be asserted conclusively that all the unidentified house numbers were not covered at all during Enumeration. No doubt in every such instance the Tabulation Office has referred to the house-list and made certain that the house concerned was an occupied dwelling house. But this only means that, at the time the house-lists were prepared, that is, some time in the last quarter of 1950, these houses were inhabited. All that the Verification Officer has discovered is that these houses were inhabited at the time of his own enquiry. But it is possible that the house could have been temporarily vacant in the interim, at Census time, and this might be the reason why it did not find a place in the National Register of Citizens. Our conclusion that the house has completely escaped the enumerator's notice though occupied is thus not fully warranted. The degree of under-enumeration indicated by our figures should therefore be accepted with some reserve. The loss of coverage during the Census from this source could indeed have been very much smaller than what our results, as they stand, indicate.

Here again, the size of our Sample is so small and the number of units in the Sample so meagre that it is unwise to break down the over-all results any further. We must content ourselves with the generalities revealed by the Sample. We could say for instance that for the State as a whole and in the rural area the extent of under-enumeration due to loss of coverage is much smaller than that due to mis-enumeration within the house-holds, although in the urban area it is greater. We could also assert with confidence what is evident even *prima facie*, viz., that coverage of houses is poorer in the urban areas than in the rural. Even these conclusions however are subject to the exaggeration mentioned in the previous paragraph. Nevertheless, in the absence of more complete information, the contribution of the un-enumerated houses to the total under-enumeration has been fully taken into account in all the calculations exhibited in Annexure 1.

While on the subject of coverage of households in a Census, it would have been interesting if we could have investigated the effect of preparing an advance list of households on the efficiency of coverage. It is possible to argue that such an advance list tends to blinker the Enumerator and prevent the coverage of houses which might have been inadvertently omitted in the list or come into existence after the list was prepared. We in Mysore have taken elaborate precautions against such a contingency and most of our house-lists carry evidence of the Enumerator's



efforts to rope into his enquiry every household in his beat whether listed or not. But whether this was done by every enumerator in the State, and if not, what degree of error has thereby been intro-

duced into our enumeration record are topics worth examination. But obviously a much bigger sample than what we have on hand is required for that purpose.

## CONCLUSION

The total estimated number of persons in the State who were not enumerated through both under-enumeration within households and by the omission of the Enumerator to cover entire households came to a little under one lakh (95,758) yielding a percentage of overall under-enumeration of a little over 1% (1.0552%). The contribution of rural and urban areas to this figure is 60,771 and 34,987 persons, respectively; the corresponding rates of under-enumeration being 0.8812% and 1.1469%. Allowing for these losses, the "real" population of the State comes to 9,170,730, of the rural area to 6,957,016 and of the urban area to 2,213,714. The "real" population of the Bangalore Corporation comes to 796,448 which is 17,471 (and 2.24%) over the enumerated figures.

It is thus seen that there has been generally speaking more mis-enumeration in the towns and cities than in villages. This is according to expectations. But the single most important result of the verification is that the nett error is one of under-enumeration. This belies the prevalent expectation that the State's population was inflated artificially by enumeration errors born of the psychological effects of food rationing. That expectation has received support from the phenomenal rise in population registered by the State during the last decade. The present enquiry, again, owes its genesis mainly to that expectation, and was undertaken with the specific object of seeing by how much the Census count has been distorted by the errors in taking it. Enough material has been presented in the preceding pages to show that the impartiality of this enquiry is above question, that the data gathered through it are completely accurate and that at least so far as the whole State is concerned the conclusions we can draw are perfectly valid. Such an enquiry has shown that the common expectation is unjustified and that, though there is some distortion in Census figures it has neither the direction nor the degree which we expected it to have.

This makes it harder for us to explain the huge growth of the State's population, but that is beside the point. One clear result of the Sample Verification is that that growth cannot be attributed to any artificial inflation of Census figures. The increase would have to be explained in terms of other factors. I would rather not discuss this question here any further since, in any case, it will form one of the main topics of investigation in the 1951 Census Report. All that I would say here is that a substantial part of the increase in population could be attributed to an unusual influx of people into

Mysore from the neighbouring States. An increased survival rate resulting from the tremendous growth in the activity of the State's Medical and Public Health Departments in the post-war period will probably take the blame for another large chunk. Perhaps other causes will come to light as analysis of Census figures progresses further. But I cannot conceal a distinct feeling that in the last Census under-enumeration has had greater play than we imagine. It is within my knowledge that in several areas, especially in medium-sized towns, the Census failed to reach a surprisingly large number of persons. In fact even at the time I prepared estimates of the 1951 population prior to the Census, this feature of the 1941 operation was urged sharply upon my notice by many of the field officers, but at that time I declined to accept it without more definite information.

I am convinced that the 1951 Census has witnessed a great change in the attitude of the populace towards the Census. In 1951, people, especially in the urban areas were positively anxious to get themselves enumerated. I myself have received representations from more than a dozen persons who wished to make sure that their names were entered in the enumerator's record. In Bangalore City I have heard of Enumerators being threatened with physical violence if they showed even slight reluctance to enumerate. This situation was in complete contrast to that in 1941 when the population sat, as it were, on the side-lines watching the Census game. Rationing, more than any patriotic feeling towards the First Census of Free India is perhaps at the bottom of this change. But whatever its origin, the altered attitude has definitely played a part, which has been to narrow down the customary gap between the actual population and its underestimate furnished by the Census. Rationing in Mysore State thus has improved population data by instilling a desire into the population to get itself enumerated. It might have encouraged public prevarication also, but such prevarication has left Census figures untouched.

However, whatever else may be controversial, that the enumeration staff have done a magnificently accurate job in 1951 cannot now be denied. That I am able to assert this result with complete confidence in its impartiality, is entirely due to the devoted efforts of the entire Verification Organisation. I would like to close this review with an expression of sincere thanks to all the officers who took part in this pioneer adventure in statistical sampling, and to the Government of Mysore for providing facilities for this most interesting study.

## ANNEXURES

## STATEMENT OF THE RESULTS

| Particulars   | STATE     |           |           | URBAN               |                       |                |                   |                    |                    |                |
|---|-----------|-----------|-----------|---------------------|-----------------------|----------------|-------------------|--------------------|--------------------|----------------|
|   | Total     | Rural     | Urban     | Bangalore<br>Corpn. | Bangalore<br>District | K.G.F.<br>City | Kolar<br>District | Tumknr<br>District | Mandya<br>District | Mysore<br>City |
| A   |           |           |           |                     |                       |                |                   |                    |                    |                |
| 1. Total number of sample households selected for verification.                   | 1,036     | 682       | 354       | 124                 | 16                    | 27             | 19                | 14                 | 11                 | 37             |
| 2. No. of households verified .. ..   | 995       | 668       | 327       | 114                 | 16                    | 27             | 17                | 13                 | 10                 | 29             |
| 3. Total number of persons in verified households.                                | 5,303     | 3,513     | 1,790     | 647                 | 87                    | 137            | 76                | 82                 | 48                 | 172            |
| 4. No. of families reporting enumeration errors.                                  | 105       | 51        | 54        | 20                  | 2                     | 4              | 3                 | 5                  | 3                  | 2              |
| 5. No. of fictitious entries .. ..  | 57        | 24        | 33        | 10                  | 2                     | 2              | 1                 | 5                  | 1                  | 1              |
| 6. No. of clear omissions .. ..   | 97        | 50        | 47        | 17                  | ..                    | 3              | 2                 | 1                  | 3                  | 1              |
| 7. Erroneous treatment of absentees and visitors.                                 |           |           |           |                     |                       |                |                   |                    |                    |                |
| (i) No. of cases tending to over-enumeration.                                     | 8         | 3         | 5         | ..                  | ..                    | 1              | ..                | ..                 | 1                  | ..             |
| (ii) No. of cases tending to under-enumeration                                    | 5         | 1         | 4         | 4                   | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 8. Nett number of cases of under-enumeration [6+7 (ii) — (5+7 (i))]               | 37        | 24        | 13        | 11                  | —2                    | ..             | 1                 | —4                 | 3                  | ..             |
| 9. No. of cases in which over and under-enumeration match within the same family. | 16        | 5         | 11        | 7                   | ..                    | ..             | ..                | ..                 | 2                  | ..             |
| 10. Enumerated household population ..  | 9,022,072 | 6,875,479 | 2,146,593 | 765,749             | 134,374               | 158,449        | 119,032           | 102,695            | 76,189             | 239,440        |
| 11. Estimated number of persons not enumerated.                                   | 62,562    | 46,972    | 15,590    | 13,019              | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| B   |           |           |           |                     |                       |                |                   |                    |                    |                |
| 12. Total number of occupied houses in the State.                                 | 1,533,341 | 1,228,136 | 305,205   | 82,954              | 21,307                | 26,894         | 19,918            | 17,535             | 12,641             | 35,002         |
| 13. Enumerated household population ..  | 9,022,072 | 6,875,479 | 2,146,593 | 765,749             | 134,374               | 158,449        | 119,032           | 102,695            | 76,189             | 239,440        |
| 14. Average number of persons per house ..  | 5.8839    | 5.5983    | 7.0332    | 9.2310              | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 15. No. of houses reported by V. Os. ..   | 2,989     | 1,993     | 996       | 344                 | 47                    | 79             | 53                | 40                 | 32                 | 97             |
| 16. No. of houses out of (15) not found at all in the N. R. C.                    | 13        | 4         | 9         | 2                   | 1                     | ..             | 1                 | 2                  | ..                 | ..             |
| 17. Estimated total number of houses not covered.                                 | 5,223     | 2,465     | 2,758     | 482                 | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 18. Estimated number of persons in the houses not covered.                        | 33,196    | 13,799    | 19,397    | 4,452               | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| ABSTRACT  |           |           |           |                     |                       |                |                   |                    |                    |                |
| 19. Enumerated population .. ..   | 9,074,972 | 6,896,254 | 2,178,727 | 778,977             | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 20. Total estimated number of persons not enumerated.                             | 95,758    | 60,771    | 34,987    | 17,471              | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 21. Percentage of under-enumeration ..  | 1.0552    | 0.8812    | 1.1469    | 2.2428              | ..                    | ..             | ..                | ..                 | ..                 | ..             |
| 22. Estimated real population .. ..   | 9,170,730 | 6,957,016 | 2,213,714 | 796,448             | ..                    | ..             | ..                | ..                 | ..                 | ..             |

Note—In the case of items 11, 17, 18 and 20, the figures in Col. 2 (State Total) have not been derived independently for the State, but have

URE I

OF SAMPLE VERIFICATION

| URBAN           |                 |                       |                  |                      | RURAL     |         |           |         |         |         |              |         |             |  |
|-----------------|-----------------|-----------------------|------------------|----------------------|-----------|---------|-----------|---------|---------|---------|--------------|---------|-------------|--|
| Mysore District | Hassan District | Chik-magalur District | Shimoga District | Chital-drug District | Bangalore | Kolar   | Tumkur    | Mandya  | Mysore  | Hassan  | Chik-magalur | Shimoga | Chital-drug |  |
| 27              | 16              | 16                    | 29               | 18                   | 104       | 102     | 99        | 49      | 99      | 72      | 28           | 47      | 87          |  |
| 27              | 14              | 16                    | 26               | 18                   | 102       | 102     | 98        | 48      | 97      | 71      | 23           | 45      | 87          |  |
| 119             | 92              | 88                    | 148              | 94                   | 535       | 544     | 569       | 210     | 459     | 392     | 95           | 246     | 463         |  |
| 2               | 4               | 3                     | 5                | 1                    | 16        | 9       | 11        | 2       | 6       | 3       | 2            | ..      | 2           |  |
| 2               | 6               | 3                     | ..               | ..                   | 8         | 5       | 3         | ..      | 3       | 5       | ..           | ..      | ..          |  |
| 1               | 2               | 3                     | 9                | 3                    | 14        | 9       | 11        | 4       | 4       | 4       | 2            | ..      | 2           |  |
| ..              | ..              | ..                    | 3                | ..                   | 1         | ..      | ..        | 2       | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | 1       | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| -1              | -4              | ..                    | 6                | 3                    | 5         | 5       | 8         | 2       | 1       | -1      | 2            | ..      | 2           |  |
| 1               | ..              | 1                     | ..               | ..                   | 1         | 1       | ..        | ..      | 1       | 2       | ..           | ..      | ..          |  |
| 120,369         | 85,750          | 65,724                | 145,233          | 133,589              | 1,210,367 | 848,420 | 1,042,251 | 638,633 | 917,137 | 626,121 | 348,932      | 513,059 | 730,559     |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| 18,487          | 14,472          | 10,929                | 23,404           | 21,662               | 204,813   | 157,087 | 179,623   | 98,892  | 173,617 | 119,679 | 68,114       | 93,060  | 133,251     |  |
| 1,203,369       | 85,750          | 65,724                | 145,233          | 133,589              | 1,210,367 | 848,420 | 1,042,251 | 638,633 | 917,137 | 626,121 | 348,932      | 513,059 | 730,559     |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| 78              | 45              | 48                    | 80               | 53                   | 300       | 301     | 294       | 147     | 293     | 213     | 72           | 137     | 236         |  |
| ..              | 1               | 1                     | 1                | ..                   | 1         | 1       | ..        | 1       | ..      | ..      | ..           | ..      | 1           |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |
| ..              | ..              | ..                    | ..               | ..                   | ..        | ..      | ..        | ..      | ..      | ..      | ..           | ..      | ..          |  |

been obtained by adding Columns 3 and 4 (State Rural and State Urban)

## ANNEXURE 2

## EFFECT OF NON-VERIFICATION OF HOUSEHOLDS ON ESTIMATED AVERAGE SIZE OF HOUSEHOLD

|                      | Average number of persons per household |                     |                       | No. of unverified households | Estimated Sampling Error ( ±σ ) |                     |                       |
|----------------------|---|---------------------|-----------------------|------------------------------|---------------------------------|---------------------|-----------------------|
|                      | Selected households                     | Verified households | Unverified households |                              | Selected households             | Verified households | Unverified households |
| Rural .. ..          | 5.2243                                  | 5.2590              | 3.5714                | 14                           | 3.1909                          | 3.2033              | 1.9498                |
| All Urban .. ..      | 5.4152                                  | 5.4628              | 4.7778                | 27                           | 2.6811                          | 2.7236              | 1.9672                |
| Non-City Urban .. .. | 5.3133                                  | 5.2930              | 5.5555                | 9                            | 2.5521                          | 2.6135              | 0.9558                |
| City-Urban .. ..     | 5.5053                                  | 5.6235              | 4.8889                | 18                           | 2.7875                          | 2.8200              | 2.2265                |

NOTE—The estimated sampling error ( $\sigma$ ) is given by the formula

$$\sigma^2 = \frac{\sum (x-m)^2 - nm^2}{n-1}$$

Where  $x$  = Number of persons in the Sample Household,

$m$  = Mean size of the Sample Household,

$n$  = Number of Sample Households.

## ANNEXURE 3

## THE COST OF SAMPLE VERIFICATION

The entire cost of the Scheme consisted of (i) the cost of printing (and despatching) the schedules and forms; (ii) the cost of having the schedules filled up and (iii) the cost of analysing and compiling results after the field operation. The number of Household Verification Schedules printed was 2,000 of which 250 were used for purposes of training and 1,500 used for the actual verification. The number of Verification Officer's Summaries printed came to 500 of which half was used as training material and the other half during verification. The cost of printing the forms was about Rs. 100. The cost of the instructions, Circulars and other matter came approximately to Rs. 40 and the total expenditure under postage amounted to Rs. 160. The total of all these items is Rs. 300.

The operations preliminary to the field operation involved the following expenditure:—

|                                  | Sorter<br>days | Supervisor<br>days | Cost<br>Rs. |
|----------------------------------|----------------|--------------------|-------------|
| 1. Selection of Sample Blocks .. | 40             | 10                 | 155         |

|                                      | Sorter<br>days | Supervisor<br>days | Cost<br>Rs. |
|--------------------------------------|----------------|--------------------|-------------|
| 2. Selection of Sample Households .. | 20             | 4                  | 110         |
| 3. Making of extracts ..             | 40             | 8                  | 195         |
| Total ..                             |                |                    | 460         |

After verification the expenditure was as under:—

|   |    |    |     |
|---|----|----|-----|
| 1. Check of Schedules<br>N. R. C. to check relationship, search for 'nearest' houses, etc. .. | 35 | 35 | 220 |
| 2. Compilation of Tables ..   | 10 | 5  | 45  |
| Total ..  |    |    | 265 |

The total cost of the enquiry is thus about Rs. 1,025. This works out almost exactly to one rupee per sample household.

ANNEXURE 4

FORMS AND INSTRUCTIONS

HOUSEHOLD VERIFICATION SCHEDULE

Districts .....  
 Revenue Circle/ML. Dn .....  
 Description of Block .....

Census House No. ....  
 Name of Head of Household .....

Taluk/Town .....  
 Block No. ....  
 Verification Officer's Name:—  
 Designation .....

| Sl. No. of persons in the household | Name | Name of Father or Husband | Sex | Relationship* to the head of the household (to be entered by Verification Officer) | Is this person Correctly Enumerated, or a Fictitious Entry, or an Absentee Erroneously Counted or a Visitor Erroneously Counted? |
|-------------------------------------|------|---------------------------|-----|--|--|
| 1                                   | 2    | 3                         | 4   | 5  | 6  |
|                                     |      |                           |     |  |  |

PARTICULARS OF OMISSIONS IN THIS HOUSEHOLD

| Clear omissions, i.e., of persons who are members of this household and were actually present during the Enumeration Period |      |                           |  |     |     | Erroneous omissions of absentees |      |  |     | Erroneous omissions of visitors |      |  |     |
|---|------|---------------------------|--|-----|-----|----------------------------------|------|--|-----|---------------------------------|------|--|-----|
| Sl. No.   | Name | Name of Father or Husband | Relationship* to the Head of Household | Sex | Age | Sl. No.                          | Name | Relationship* to the Head of Household | Sex | Sl. No.                         | Name | Relationship* to the Head of Household | Sex |
| 7   | 8    | 9                         | 10                                     | 11  | 12  | 13                               | 14   | 15                                     | 16  | 17                              | 18   | 19                                     | 20  |
|   |      |                           |  |     |     |                                  |      |  |     |                                 |      |  |     |

(\* Write the relationship in full without abbreviations. If not related, write "Unrelated").

PARTICULARS OF THE THREE NEAREST OCCUPIED HOUSES

| First House |                   | Second House |                   | Third House |                   |
|-------------|-------------------|--------------|-------------------|-------------|-------------------|
| House No.   | Head of Household | House No.    | Head of Household | House No.   | Head of Household |
| 21          | 22                | 23           | 24                | 25          | 26                |
|             |                   |              |                   |             |                   |

.....  
 Signature of Verification Officer

Date.....

## HOUSEHOLD VERIFICATION SCHEDULE

### INSTRUCTIONS

The headings of the Schedule and columns 1, 2, 3 and 4 will have been filled up in the Census Office. You, as Verification Officer, are required only to fill up the rest of the Schedule in accordance with these instructions. You should visit the household yourself and make all the enquiries personally.

Please note that bogus names have been introduced here and there, in only some of the Schedules, and unless these are picked out by the concerned Verification Officers the record will stand self-condemned.

Census instructions regarding the enumeration of the population of each household were as follows:—

- (a) During the period of twenty days allowed to you, visit every house in your Block or Village. In each house, first enumerate all persons who normally reside in that house and who are also present at the time of your visit.
- (b) Then enquire whether any normal resident of the house is absent at the time of your visit. If the answer is 'yes' and the absentee has left the place after the 9th February 1951, or is expected to return before 1st March 1951, include him also in your enumeration. If on the other hand, he has left the place before the 9th February and is not expected back before the 1st of March you need not include him.
- (c) After absentees are enumerated, enquire whether there is any visitor in the house. If the answer is in the affirmative, ascertain when he left his normal residence and when he expects to go back there. If you find that he has left his home before the 9th February 1951 and has not already been counted anywhere else, then enumerate him at the house you find him in. Do not count him if you find that he had left his house on or after 9th February or expects to be back there before sunrise on 1st March 1951.

\* \* \* \* \*

*Final Check.*—You should revisit every house in your Block or Village during the first three days of March. The object of this second visit is to bring your Enumeration up-to-date, *i.e.*, up to sunrise of 1st March 1951. During this visit you should—

- \* \* \* \* \*
- (c) Enumerate new arrivals who have not been enumerated elsewhere during the period of enumeration."

NOTE.—The period of 20 days from 9th February 1951 to sunrise on 1st March 1951 was called the "Enumeration period."

Column 2 of the Verification Schedule gives you a list of persons actually enumerated in the household

according to the above instructions. For each person, the name and sex as well as the name of father or husband are furnished.

It is your duty *first of all* to ascertain the relationship of each one of these persons to the head of the household and enter the information in column 5 of the Form. In doing so you may find that one or more of the persons on the list never existed. You should strike off the names of such persons and write "Fictitious entry" against their names in column 6.

Your *next duty* is to enquire and examine whether all the real persons found in the list, (*i.e.*, all those other than these fictitious entries) were entitled to be enumerated in this household.

In doing so, first take the members of the household, as distinguished from the "visitors". If you find by enquiry that any of the members of the household did not reside in the household at all throughout the Enumeration Period, you should strike off his/her name and mark "Fictitious entry" against it in column 6. If any of them was moving about during the period of enumeration and the dates of his/her arrival and departure were such that, according to the Census instructions, that person *should not* have been enumerated in the household, enter the words "Absentee Erroneously Counted" against his/her name in column 6.

Next, find out in the case of each one of the 'visitors' whether he or she did actually visit the household during the Enumeration Period. If in any case you discover that the person did not visit the household at all during this period, strike off his/her name and write "Fictitious entry" against it in column 6. If the visitor was moving about during the period of enumeration and the dates of his/her arrival and departure were such that, according to the Census instructions that person *should not* have been enumerated in this household, enter the words "Visitor Erroneously Counted" against him/her in column 6.

For others, *i.e.*, persons on the list who have been correctly enumerated you should enter the words "Correctly Enumerated" in column 6.

Your *third duty* is to enquire if any person not found in the list was actually entitled to be enumerated *in this household* according to the Census instructions.

Here again, consider the members of the household first and then the visitors.

If any person who is a member of this household was actually present in the house during the Enumeration Period and was not enumerated (*i.e.*, is not found in the list) he or she is to be regarded as a "Clear Omission". A list of all such persons (with particulars of age, sex, name of father or husband and relationship to the head of the household) should be recorded in the space provided for the purpose in the Schedule (Columns 7 to 12).

Again, you must enquire if any person who is a member of this household was moving about during the Enumeration Period and was not enumerated though the date of his arrival and departure were such that according to the Census instructions he *should have been* enumerated in this household. You must record the name and sex of each such person under "Erroneous Omission of Absentee" in the space provided for the purpose (Column 13-16).

**NOTE.**—Take special care not to miss persons who were alive at the time of the enumeration and who are dead now.

Enquire similarly if there is any case of "Erroneous Omission of Visitors". Record the particulars of all such cases in the space provided (Column 17-20).

This completes the Verification of the Sample Household.

Your *last duty* is to ascertain, in respect of the three occupied houses which are *nearest the* Sample house, (1) the Census house-number and (2) the name of the head of the household residing there (if there is more than one household in the house, take the first). Enter these particulars in space provided for the purpose in the Schedule (Columns 21-26). (If any or all of these three occupied houses have not been numbered at all, write "not numbered" in the column "House Number". Note that the name of the head of the household should be entered even in such cases). *The Verification Officer should not concern himself with any house other than the three nearest occupied houses and should not ascertain the number of persons in such houses.*

### VERIFICATION OFFICERS' SUMMARY

District.....

Verification Officer's Name .....

Talukà Town.....

Designation .....

| Serial No. | Census Circle No. | Census Block No. | Census House No. | Number of persons actually enumerated in the Household |   |   | No. of cases of Fictitious Entry |   |    | Absentees Erroneously Counted |    |    | Visitors Erroneously Counted |    |    | Cases of Omission. |    |    |    |    |    | Remarks |    |    |    |
|------------|-------------------|------------------|------------------|--|---|---|----------------------------------|---|----|-------------------------------|----|----|------------------------------|----|----|--------------------|----|----|----|----|----|---------|----|----|----|
|            |                   |                  |                  | P  | M | F | P                                | M | F  | P                             | M  | F  | P                            | M  | F  | P                  | M  | F  | P  | M  | F  |         |    |    |    |
| 1          | 2                 | 3                | 4                | 5  | 6 | 7 | 8                                | 9 | 10 | 11                            | 12 | 13 | 14                           | 15 | 16 | 17                 | 18 | 19 | 20 | 21 | 22 | 23      | 24 | 25 | 26 |

P-Persons, i.e., Total, M-Males, F-Females

Date..... Signature of Verification Officer

### INSTRUCTIONS

The heading of the Form and Columns 1 to 7 will have been filled up in the Census Office. Figures for columns 8, 9 and 10 should be obtained by totalling the number of cases of "Fictitious entry" recorded in column 6 of the Household Verification Schedule. Note that the totalling should be done by sexes, as recorded in column 4 of the Schedule.

In exactly the same way, columns 11, 12, 13 (Absentees Erroneously Counted) and 14, 15, 16 (Visitors Erroneously Counted) should be filled up by totalling the appropriate entries in column 6 of the Household Verification Schedule by sexes.

Columns 17, 18 and 19 (Clear Omissions) should be filled from column 11 of the Household Verifi-

cation Schedule. Again, the totalling up of items should be by sexes.

Columns 20, 21 and 22 should be filled up by noting the number of entries found in column 16 of the Household Verification Schedule under sex. Likewise, columns 23, 24 and 25 of the Summary should be filled up by totalling the number of entries in column 20 of the Schedule under each sex.

In the Remarks column (column 26)—or separately, if you so prefer—you should write a brief report on the work you have done, indicating the manner in which the verification was carried out and the significance of the results; and describing any notable features of your enquiry which in your opinion require special mention.



## ANNEXURE 5

Memorandum No. 2/26/51—R.G., dated 31st March, 1951 from the Registrar-General, India, New Delhi

### 1951 CENSUS COUNT—SAMPLE VERIFICATION

1. *General.*—The 1951 Census Count will be verified throughout India by an enquiry conducted on a random sample basis in the manner explained in this memorandum. The scope of this enquiry will be strictly limited to determining the percentage of error, if any, which is present in the Census Count, either in the form of under-enumeration or in the form of over-enumeration. This enquiry will be limited to the ascertainment of the identity of persons, and will not be concerned with the accuracy or otherwise of answers to any of the census questions.

2. *Selection of Sample Households.*—(i) In rural tracts, one *village census block* will be chosen out of every 100 blocks; and in each of the selected census blocks, every *tenth* household will be chosen. In urban tracts, one *town census block* will be chosen out of every twenty blocks; and in each of the selected blocks, every *fiftieth* household will be chosen. Thus, in every tract (whether rural or urban) the sample chosen for verification will represent approximately one in one thousand of the total.

(ii) Selection of blocks on the foregoing basis will be made from lists of census blocks; and selection of households from each census block, will be made from that section of the National Register of Citizens which relates to the census block.

(iii) The Officer-in-charge of each Census Tabulation Office will be responsible for selecting the sample households for every tract in his region. Detailed instructions for ensuring the random character of the selection are appended.

3. *Sample Verification Forms.*—The Officer-in-charge of the tabulation office should mark (with his initials) the selected households, as entered in the section of the National Register of Citizens which relates to the census block. He should prepare a Sample Verification Form (specimen appended) for each census block, in accordance with instructions given at the back of the form. As soon as all the forms relating to a Verification Area are completed he should attach each form to the related section of the National Register, and despatch all the forms or sections to the Chief Verification Officer concerned. (*Vide* next para).

4. *Verification Area, Chief Verification Officers and Verification Officers.*—Where a district is divided into a number of sub-districts, each constituting the territorial jurisdiction of a Sub-divisional Magistrate, each sub-district will constitute a Verification Area; and the Sub-Divisional Magistrate concerned will be the Chief Verification Officer for such Area. In other case, the entire district (or such part thereof, as may be specified by the Head of the District) will constitute the Verification Area and an Officer specified by the Head of the District (who should be either a Sub-divisional Magistrate or a Magistrate of the First Class) will be the Chief Verification Officer of the Area.

The Chief Verification Officer may appoint any officer as the Verification Officer in respect of any part of his Verification Area. Such officer should ordinarily be a Magistrate of the First Class, and may (where this is unavoidably necessary) be a Magistrate of the Second Class.

5. *Duties of Chief Verification Officers and Verification Officers.*—(i) It will be the duty of the Chief Verification Officer to distribute the work among Verification Officers, to instruct them and satisfy himself that the instructions have been correctly carried out and to return the verification forms together with the related sections of the National Register to the Tabulation Office, duly filled up; and also to submit a brief report on the manner in which the verification was carried out and the significance of the results.

(ii) It will be the duty of each Verification Officer to visit every household as specified in the Sample Verification Form personally, make all enquiries necessary for the purpose of ascertaining whether there are any cases of "clear omissions", "fictitious entry" or "Erroneous count of visitors and absentees" in each household, fill up the verification form in accordance with instructions at the back of the form, and return the papers to the Chief Verification Officer together with a brief report. If, on visiting a Sample household, it is ascertained that the householder has left the house permanently that fact should be noted against the household in the Sample Verification Form. The household, in question, will be excluded from the Scope of Verification.

(iii) The foregoing will complete the verification of enumeration of individuals in households. It is necessary also to verify whether any occupied houses in the block escaped enumeration. For this purpose the Verification Officer should (as soon as he has completed the verification of a sample household) ascertain the house number of three occupied houses which are nearest to the sample house, and make sure that they find a place in the relevant section of the National Register. If he finds any occupied house to be omitted, the fact should be noted in column 18. If all three houses find a place in the National Register he should note "Nil" in column 18. *The Verification Officer should not concern himself with any house other than the three nearest occupied houses and should not ascertain the number of persons in such houses.*

6. *Tabulation of Results.*—After the figures in the forms have been filled up they should be compiled and tabulated district-wise for each Tabulation Region in the form appended. Copies of these tables should be submitted to the Superintendent of Census Operations concerned as well as the Registrar-General, India, for consolidation for the State and All-India.

## GOVERNMENT ORDERS AND CIRCULARS

Government Order No. M. 8186-98—Census 4-51-2, dated 7th August 1951

## READ—

Correspondence ending with letter No. 2727—Census 1951, dated 3rd August 1951, from the Census Commissioner for Mysore, forwarding proposals regarding the successful implementation of the scheme of Sample Verification of the 1951 Census Count in Mysore State.

Order No. M. 8186-98—Census 4-51-2, Bangalore, dated 7th August 1951

For successfully conducting the Sample Verification of the 1951 Census Count in the Mysore State, the Census Commissioner has suggested the following procedure :—

(a) *Verification Procedure.*—Instead of handing over to the Verification Officers the entire National Register of Citizens, relating to the Block selected for investigation, it is proposed to furnish only an extract of the Register and make the Investigating Officer fill up the gaps deliberately left out in this extract. Two forms, viz., “*The Household Verification Schedule*” and “*The Verification Officer's Summary*” have been devised for the purpose.

(b) *Size of the Sample Verification.*—Having regard to the expectation that the Rural Areas will show a comparatively smaller margin of enumeration error, it is proposed to take a sample of 1 in 2,000 from Rural Areas and of 1 in 1,000 from all Urban Areas (City as well as non-City) and that in order to conserve time, sample blocks on the above basis have been chosen by the Census Commissioner in anticipation of the approval of Government.

(c) *Verification Organisation.*—This organisation will consist of Chief Verification Officers and Verification Officers. The Deputy Commissioners of Districts, the Municipal Commissioners of Bangalore and Mysore, and the President, K. G. F. Sanitary Board, would be the Chief Verification Officers within their respective areas. As regards Verification Officers, the services of the undermentioned officers of the Judicial Department are proposed to be utilized for verification duties within their own respective headquarter towns with the least possible disturbance of their normal works. This is however subject to the approval of the High Court of Mysore. In the remaining areas the Revenue Sub-Division Officers and Amildars (and in the Cities of Bangalore, Mysore and K. G. F. the former Census Charge Superintendents) will be the Verification Officers, the former (i.e., Revenue Sub-Division Officers) being assigned exclusively to the Urban Areas in each District which call for special investigation.

1. Munsiff-Magistrate, Dodballapur.
2. Special First Class Magistrate, Chikmagalur.
3. Munsiff-Magistrate, Tarikere.
4. Special First Class Magistrate, Chitaldrug.

5. Special First Class Magistrate, Davangere.
6. Special First Class Magistrate, Hassan.
7. Special First Class Magistrate, Chickballapur.
8. Special First Class Magistrate, Kolar.
9. Special First Class Magistrate, Mandya.
10. Special First Class Magistrate, Shimoga.
11. Special First Class Magistrate, Madhugiri.
12. Special First Class Magistrate, Tiptur.
13. Special First Class Magistrate, Tumkur.
14. Special First Class Magistrate, Bhadravati.
15. Second City Magistrate, Bangalore.
16. Second City Magistrate, Mysore.
17. Special First Class Magistrate, K.G.F.

(d) *Verification Period.*—The last week of August (i.e., from the 26th August to 1st September 1951 inclusive) will be the Verification Period, the Chief Verification Officers being empowered to fix the three most convenient consecutive days for the actual verification, the first of those three days being the dates earmarked for all urban areas and the first batch of rural blocks. The verification dates fixed by each Chief Verification Officer apply uniformly to all the Verification Officers under him and the dates so fixed should be intimated at least 10 days in advance to the Census Commissioner. The Census Commissioner will arrange to despatch the schedules to be used for the enquiry direct to verification officers, so as to reach them on the very dates prescribed for them by their Chief Verification Officers.

The High Court of Mysore, Bangalore, who were addressed in the matter of permission to draft the Judicial Officers specified above for the verification work have expressed that since this work would seriously interfere with the normal judicial work of the officers, the *Ex-officio* Magistrates for the areas concerned may be entrusted with the verification work.

The Census Commissioner who was apprised of this has since suggested that pending a decision on the question of appointing officers of the Judicial Department as Verification Officers, the other arrangements proposed by him may be approved and a directive issued to the Chief Verification Officers on the lines indicated above.

The proposals of the Census Commissioner are approved with the exception of the one relating to the drafting of the Magistrates referred to above.

The Deputy Commissioners of Districts, the Municipal Commissioners of Bangalore and Mysore and the President, K. G. F. Sanitary Board, who are Chief Verification Officers for this purpose are requested to take immediate necessary action in the matter as per procedure described above in consultation with the Census Commissioner.

They are also requested to instruct the Verification Officers to complete their work within the prescribed dates promptly and carefully and in accordance with the procedure laid down above.

This work devolving on the officers of the Verification Organisation is extra and in addition to their normal duties and no special expenditure shall be incurred in this behalf.

*Letter No. M. 9109-20—Census dated the 17th August 1951 from the Secretary to Government, Medical and Public Health Departments, to all Chief Verification Officers*

*Subject—1951 Census Count—Sample Verification*

In continuation of Government Order No. M. 8186-98—Census 4-51-2, dated 7th August 1951, on the above noted subject, I am directed to state that this work of Sample Verification, is a purely scientific enquiry designed to secure a statistical determination of the degree of error present in the overall Census count of the country as a whole and broad population

zones therein; and that nothing in the nature of praise or blame for the performance of individual officers or individual districts is intended.

I am however to request that as this is the first occasion when a verification of this kind is undertaken every endeavour should be made to ensure the successful execution of this operation.

*Circular No. 2885-2896—Census 1951 dated 17th August 1951 addressed to all the Chief Verification Officers and copied to all the Verification Officers*

*Subject—Sample Verification of the Census Count*

I refer you to G.O. No. M. 8186-98—Cen. 4-51-2, dated the 7th August 1951.

2. The fact that the Registrar-General has asked for a verification of the Census count may lead you to imagine that he is not satisfied with the way Enumeration was carried out. Therefore, at the outset, I want to assure you, and all those under you who have worked for the Census, that there is no such feeling; and that, on the other hand, the Registrar-General, no less than the Government of Mysore, is eminently satisfied with the conduct of the 1951 Census in Mysore and deeply appreciative of the whole-hearted effort put forward by Census workers at all levels. At this opportunity, I want to place on record my own gratitude to all Census Officers, high and low, for their unstinted labour during Enumeration.

3. The present verification is intended entirely as an objective enquiry designed to secure a statistical determination of the degree of error, if any, involved in the Census count. There is absolutely no intention of apportioning anything in the way of praise or blame for the performance of individual officers or individual charges as a result of the verification. Even if short-comings on the part of individual citizens, Enumerators, Supervisors or other Census Officers are brought to light by enquiries in the sample households, there is a guarantee that no prejudicial notice will be taken of them. (This exemption, of course, does not apply to any maladroitness in Verification work.)

4. In past Censuses, it has been the practice to regard the Census count as free from error, on the assumption that the number of instances of over-enumerations was exactly off-set by those of under-enumeration. This assumption was perhaps close to actual

fact; but it was never put to a test. This time, however, we want to have a scientific determination of the truth. Since this is the first check of its kind ever undertaken in India, it is necessary that we should establish the proper traditions and set ourselves high standards of honesty and accuracy. If this enquiry is regarded as just one more addition to an already over-burdened routine, the effort and expense involved in it would be merely wasted. It should be impressed on all Verification Officers that they would bring into their performance a spirit of scientific experimentation and that their objectivity should be uninfluenced by the fact that the work now under verification is one with which they were, at one time, very closely associated. I have no doubt that they would measure up to our high expectations. But prudence demands that we should guard against possible fudging by a not very conscientious Verification Officer. Therefore, in order to discourage investigating officers who may be tempted to be perfunctory or indifferent, a few "ghosts" have been introduced, here and there, in the Verification Schedules (but not in all areas nor in all the Schedules of one area) for being "discovered" during enquiry. The honesty of Verification Officers is thus on test.

5. The enquiry to be conducted by each Verification Officer is, as can be readily seen, extremely simple. The columns of the Verification Officer's Schedule and the Verification Officer's summary are practically self-explanatory and even such questions as may arise are fully answered in the instructions. Even so, however, I would call upon all officers to study the material most carefully and to see that they use every effort and skill to obtain the most complete and accurate answers from the sample households. I would like to remind them that this verification is being conducted on an All-India basis and that the work of our Verification Officers will be compared with the best produced in

other States. Besides, the processing of the Verification Records will be carried out at Delhi and it would reflect great discredit on all concerned if our verification record should show any lack of integrity. I would request you therefore to take steps to see that all officers under you are properly advised in this behalf.

6. The Blocks and Households coming up for investigation have been selected by a strict application of the scientific principles of randomisation, and it is absolutely imperative that investigating officers should adhere to them implicitly. Under no circumstances should any other Block or Household be substituted for the ones chosen. If, for any reason, any household is not capable of verification, a special report should be made to that effect to me and further instructions awaited.

7. The Chief Verification Officers should provide each of their Verification Officers with a formal order

*Circular No. 4075-91—Census 1951 dated the 25th August 1951 addressed to all the Verification Officers drawn from the Judicial Department*

1. I enclose herewith a copy of G.O. No. M. 9497-507—Census 4-51-7, dated the 23rd August 1951 in which Government have approved of my proposal to utilise your services as a Verification Officer. You will see from the preamble to this Order that it has been issued with the consent of the High Court of Mysore. I have also attached herewith a copy of G.O. No. M. 8186-98—Census 4-51-2, dated the 7th August 1951 sanctioning the Scheme for the Sample Verification of the 1951 Census Count, for your ready reference. A formal order appointing you as a Verification Officer will be issued to you (if it has not already been issued) by the Chief Verification Officer of your area, but if this does not reach you in time, you need not wait for it, since the G.O. of 23rd August 1951 will itself be your authority to function as a Verification Officer.

2. As Verification Officer you are expected to visit a few households selected absolutely at random from the mass of households enumerated during the Census in February—March 1951 and investigate how accurate the original count was in regard to the total population enumerated in these households. The selection of these random households has been carried out in my office. You will be furnished with full details of their location, as well as the names and a few other particulars of the persons found in them during the original count. You will also be provided with printed instructions as to the manner in which you are expected to proceed with the verification. The exact form of the questions you have to ask

*Government Order No. 9497-507—Census 4-51-7, dated the 23rd August 1951 enclosed with Circular No. 4075-91—Census 51, dated the 25th August 1951*

READ—

Government Order No. M. 8186-98—Census 4-51-2, dated 7th August 1951 approving the proposals of the Census Commissioner for Mysore, regarding the

of appointment, under intimation to me. A complete list of Verification Officers, arranged Districtwise, is attached herewith for your reference. Please observe the special note in regard to officers of the Judicial Department. If orders concerning these officers are not received from the High Court well in time, the Sub-Division Officers concerned should carry out their job.

8. I am sending you, under separate cover, a sufficient number of complete sets of *specimen* forms and Instructions for distribution among your Verification Officers. These specimen forms will provide all the training necessary for the work of Verification. I shall arrange to have the filled-up schedules sent direct to Verification Officers on the dates fixed for the Verification Programme of your area.

9. Copies of this letter are being sent to all Verification Officers. Kindly take immediate action.

and the strategy of investigation you have to adopt in each household, would have to suit conditions on the spot and cannot obviously be laid down from here. On the basis of your enquiry you are expected to fill up two forms, *viz.*, the *Household Verification Schedule and the Verification Officer's Summary*. The forms to be used by you during the enquiry (which will have been partially filled up in my office) will reach you a day in advance of the commencement of the Verification.

3. I also attach herewith a copy of the Circular which I have issued to all Verification Officers (before you were appointed as one) explaining the objects of the Verification Scheme. I would invite your particular attention to the fact that "Ghost" entries have been introduced into some of the Schedules and that the honesty of Verification Officers is on trial. It is imperative that Verification Officers should personally visit the households to be investigated and conduct the enquiry themselves, in a thoroughly objective frame of mind.

4. One reason why Judicial Officers have been recruited for verification work is the fact that they are impartial officers who have had nothing to do with the preparation of the original enumeration record. Their work will therefore provide a standard against which the performance of the rest of the Verification Organisation could be judged. I have no doubt that your work will fully justify my high expectations in this regard.

sample verification of 1951 Census Count in the Mysore State, with the exception of the proposal relating to the drafting of the Magistrates, referred to therein, for verification duties.

2. Correspondence ending with letter No. R.O.C. 457-51-52, dated 21st August 1951 from the Registrar, High Court of Mysore, Bangalore, stating that the High Court has no objection to the Government utilising the services of the undermentioned seventeen Judicial Officers as Verification Officers of the 1951 Census Sample Count and stating that the Government may direct the Census Commissioner for Mysore and the Deputy Commissioners of the several Districts to afford the Judicial Officers referred to above, all facilities in this behalf and to see that the Office work relating to this item is attended to by the Revenue Offices concerned.

1. Munsiff Magistrate, Dodballapur.
2. Special First Class Magistrate, Chikmagalur.
3. Munsiff Magistrate, Tarikere.
4. Special First Class Magistrate, Chitaldrug.
5. Special First Class Magistrate, Davangere.
6. Special First Class Magistrate, Hassan.
7. Special First Class Magistrate, Chickballapur.
8. Special First Class Magistrate, Kolar.
9. Special First Class Magistrate, Mandya.
10. Special First Class Magistrate, Shimoga.

11. Special First Class Magistrate, Madhugiri.
12. Special First Class Magistrate, Tiptur.
13. Special First Class Magistrate, Tumkur.
14. Special First Class Magistrate, Bhadravathi.
15. Second City Magistrate, Bangalore.
16. Second City Magistrate, Mysore.
17. Special First Class Magistrate, K.G.F.

ORDER No. M. 9497-507—CENSUS 4-51-7, BANGALORE,  
DATED THE 23RD AUGUST 1951

1. The proposal of the Census Commissioner to utilise the services of the Magistrates specified above as Verification Officers within their respective Head-quarter towns in addition to their normal duties which is agreed to by the High Court of Mysore is sanctioned.

2. The Census Commissioner for Mysore and the Deputy Commissioners of several Districts are requested to afford the Judicial Officers all facilities in this behalf and to see that the office work relating to this item is attended to by the Revenue Officers concerned.