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HOUSING CENSUSES AS A STATISTICAL TOOL  
FOR THE ESTABLISHMENT OF HOUSE-BUILDING  
PROGRAMMES

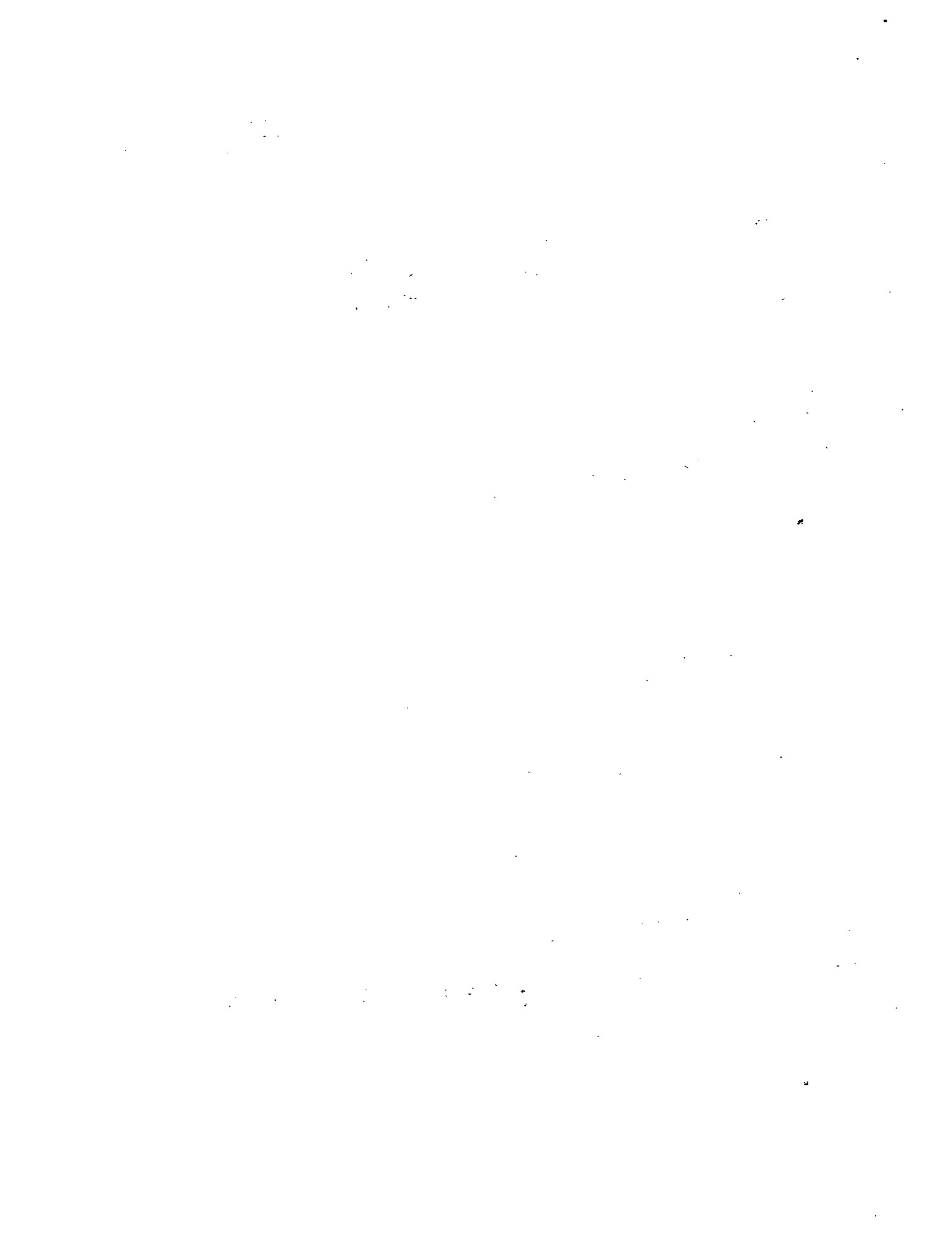
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## I. INTRODUCTION

1. The purpose of this paper is to discuss housing censuses as a statistical tool for the establishment of house-building programmes. The fact that a housing census provides a statistical description of the present housing situation does not imply that it should only provide the data necessary for the calculation of present housing requirements. As future development always emerges from the present situation, a certain amount of data necessary for the calculation of future housing requirements must also be provided. This paper will therefore deal with the demands made on housing censuses by the calculation of both present and future housing requirements. The General principles for a housing census published by the United Nations (ST/STAT.SER.M.28) are used as background material.
2. Housing censuses are not designed exclusively to serve as a basis for the establishment of house-building programmes; their aim goes much further. Hence this paper should not be regarded as dealing with housing censuses in general, since it deals only with the particular problems related to their use as a basis for house-building programmes.

## II. THE BASIC UNITS

3. The basic units dealt with in housing censuses are the "housing unit" and the "household". As has been indicated at length in connexion with items 4.1(b) and (c), for an adequate calculation of housing requirements it is of decisive importance that both notions should be defined separately i.e. without being interrelated.
4. Definitions fulfilling this requirement are laid down in the United Nations "Principles" and "Recommendations" for housing censuses. The definitions of the basic concepts as given there should not, however, be regarded as mandatory. They need to be expanded, made more detailed and adapted to local conditions before they can serve as operational tools for national housing censuses. It need hardly be said that an important factor in this adaptation is the intended use of the data for the calculation of housing requirements.

/A. The housing

A. The housing unit

5. A housing unit is defined in the above-mentioned Statistical Paper M.28 as a structurally separate and independent place of abode. Of the housing units intended for habitation conventional dwellings and rustic housing units should be included in all cases, whether they are occupied or vacant (except when they are fully in use for non-residential purposes); mobile, improvised, and collective housing units and housing units not intended for habitation should only be included when occupied.

Since a housing unit as defined above may be an occupied or vacant house, apartment, independent room or series of rooms, or an occupied hut, cabin, trailer, hotel, institution, camp, barn, mill, cave or any other shelter used as living quarters, it is necessary to classify the housing units into various categories in order to analyse housing conditions.

6. For such a classification the United Nations General principles for a housing census recommend ten broad categories;<sup>1/</sup> not all of them of equal importance. In some countries certain of the categories may not need to be considered separately and may be grouped together, while in others it will be convenient to subdivide the broad categories into smaller groups. It must be stressed here that in the latter case it is of decisive importance to keep each of the categories to be distinguished as homogeneous as possible from the point of view of the fitness of the housing unit for human habitation. This will enable the housing units to be arranged according to their degree of fitness for human habitation, thus providing a workable basis for a programme of replacement of the unfit units. Or, to put the matter the other way round, the intention to establish a replacement scheme on the basis of housing census returns may induce countries to subdivide the recommended categories of housing units into smaller groups, so as to indicate more clearly the suitability of the various types of housing units for the purpose intended.

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<sup>1/</sup> See Statistical Paper M.28, paragraph 302.

7. In this connexion a warning should be given against the tendency to go too far in the establishment of separate groups. The classification of housing units should be based on the type of structure of the units rather than on their amenities. It may, for instance, be advisable in a particular country to distinguish between rustic housing units which are built to last for more than ten years and those expected to last less than ten years. There is no point however, in distinguishing as separate categories conventional dwellings with and without water supply as long as this criterion does not affect the structure of the housing unit itself.<sup>2/</sup>

8. Summarizing the foregoing, it is recommended that each country should adapt the classification of housing units recommended in the United Nations General principles for a housing census in such a way that its own housing stock can be divided into two broad categories:

- (a) Housing units that can be regarded as being fit for human habitation for the next ten or twenty years;
- (b) Housing units regarded as being at present or likely to be in the immediate future unfit for human habitation.

It should be clearly understood that the category referred to under (a) need not necessarily coincide with the type of housing unit referred to as a "conventional dwelling".

B. The housekeeping unit

9. The basic criterion for the separate definition of a household as recommended in the United Nations General principles for a housing census is that the persons who constitute a household share the principal meals and have common provisions for basic living needs. This implies

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<sup>2/</sup> See also paragraph 41 below.

/that a

that a household need not necessarily occupy the whole of a housing unit but may occupy a single housing unit jointly with another household.

This introduces in practice the difficulty of ascertaining in respect of each housing unit whether the occupants constitute one single household or more than one. It will be clear that the decision cannot be left to the people concerned but should be the responsibility of the enumerators. The task is easy, however, since a separate household is involved whenever:

- (a) A separate living room is used by a separate person or group of persons (even when more than one room of this sort is found in one housing unit); or
- (b) A separate person or group of persons do the cooking separately (even when the cooking is done in a kitchen also used by others); or
- (c) Both the situations mentioned under (a) and (b) exist together.

10. For countries where it is not feasible to distinguish between housing unit and household it has become clear already from the discussion of item 4.1 (b) that the best way of approaching the housing situation is to start from the housing unit as the basic concept and to define the household as the entire group of persons jointly occupying the housing unit. As in these circumstances no direct information is provided on the number of housekeeping units, it may be desirable to identify at least the number of "potential households" by introducing the concept of "secondary family", as recommended in the European programme for housing censuses.

11. It may be recalled that in this connexion "family" should be understood as meaning the family in the strict sense, i.e.:

- (a) A married couple without children;
- (b) A married couple together with their unmarried children living with them; or
- (c) A father or a mother with his (her) unmarried children living with him (her).

/As these

As these types of family can in practice be very easily identified, identification need not be an objection when taking a housing census. However, for practical purposes it should be remembered that here a distinction is necessary between primary families and secondary families, only secondary families being regarded as additional (potential) households. The primary family (i.e. the family whose head is at the same time the head of the household in which the family lives) may not be regarded as an additional potential household, since it is already counted as representing the household in which it lives.

12. The use of the secondary family concept need not necessarily be reserved for the case in which the "dwelling-household" concept is applied. It may, as set out in the paper concerning present housing requirements (item 4.1 (b)) also be effectively introduced when separate concepts are adopted. In that case it is necessary to identify the secondary families in the households of the main tenants as well as in those of the sub-tenants.

13. Paragraphs 9 to 12 inclusive concern private households only. As far as collective households are concerned it should be borne in mind that this type of household is not to be found only in collective housing units, and further, that in collective housing units private households also may be enumerated. In dividing households into private and collective units, in practice many borderline cases will occur. The guiding principle should be that each unit requiring a separate dwelling should as far as possible be regarded as a private household.

14. Summarizing the foregoing, it is recommended that:

- (a) Each country should adopt the definition of the household given in the United Nations General principles for a housing census;
- (b) When it is not feasible to adopt that definition the "dwelling-household" concept is to be preferred, if possible combined with application of the "secondary-family" concept;
- (c) In distinguishing types of households the guiding principle should be that each unit that might be regarded as requiring a separate dwelling should be enumerated as a private household.

## III. TECHNICAL PROBLEMS INVOLVED IN THE USE OF SEPARATE CONCEPTS

15. The use of separate concepts raises some special problems in the mechanical processing of the census which are worth dealing with separately. The situation is simpler where a housing census is not combined with a population census than where the two types of censuses are combined. These special problems are connected with the fact that in the former case, two enumeration units are involved, and in the second case three. If two, or three, separate sets of punch cards are necessary, a considerable increase in the processing costs is involved as compared with the situation in which only one enumeration unit is used. This however, as shown below, is not necessary.<sup>3/</sup>

A. Housing census not combined with population census

16. In a separate housing census, in principle two enumeration units are used: the housing unit and the household. If the definitions for these two units are interrelated, only one type of punch card is necessary, since this can carry data covering both the units. The number of punch cards will in this case equal the number of housing units, and each punch card will carry data on the housing unit concerned and on the "household" living in it.

17. When, however, the definitions of the basic units are not inter-related, provision should be made for cases where one housing unit is occupied by two, three or even more households. It will be clear that this cannot effectively be done by punching the data concerning all the households involved on a single punch card which already carries the data concerning the housing unit.

A simple way of solving the problem is to divide the punch card into two parts, the first carrying the data on the housing unit and the second part those concerning the household.

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3/ It should be noted that there are many different methods of processing housing census data and of combining the data with population census data; these may vary according to the circumstances which exist in the countries, the resources available and the kind of processing equipment to hand, etc.



The same type of punch card could then be used for occupied as well as vacant dwellings, and for households of main tenants as well as for households of sub-tenants.

Punch cards of which only the first part was punched would then represent vacant dwellings. Those in which both parts were punched would represent occupied housing units, carrying on the household side the data of the main tenants' household only while those in which only the second part was punched would represent households of sub-tenants.

For housing units occupied by three households three punch cards would be necessary - under this system - one for the housing unit, representing at the same time the household of the main tenant, and one for each of the two households living as sub-tenants in the housing unit. This implies that, in contrast with the system where the housing unit and the household coincide, additional punch cards are necessary only for the households of sub-tenants.

18. Likewise in housing censuses not combined with population censuses, it is necessary to know the number of persons enumerated. Clearly this number cannot be obtained by card count, but should be derived directly or indirectly from the size of the households as punched on the cards recording individual households.

B. Housing census combined with population census

19. When a housing census is taken jointly with a population census three enumeration units are involved - the housing unit, the household and the individual member of the population.

20. In principle, for mechanical processing in this case, the same solution may be applied as in the case dealt with under A. The only difference is that here the punch cards should be divided into three sections which might carry respectively:

- (a) Data concerning the housing unit;
- (b) Data concerning the household; and
- (c) Data regarding the individual members of the population.

/The same

The same type of punch cards could then be used for dwellings, households and persons.

Punch cards of which only the first part was punched would represent vacant dwellings. There would be no punch cards in which the first and the second parts were punched. Cards in which the first, second and third parts were punched would represent occupied housing units, the second part carrying the data of the main tenants' household and the third part the personal data of the head of that household. Punch cards of which only the second and third parts were punched would represent a sub-tenants' household, the third part carrying data concerning the head of that household. Cards of which only the third part was punched would represent individuals not being heads of households.

In this system the number of each of the enumeration units can be obtained directly by card-count, as follows: the number of punch cards of which the first part is punched equals the number of housing units; the number of which the second part is punched equals the number of households; and the number of which the third part is punched equals the total population.

21. It will be clear that when applying this system no more punch cards are necessary than for a population census not combined with a housing census.

22. In the above cases no attention has been given to the "secondary family" concept. Obviously when this is introduced it can be treated as a third, or fourth, enumeration unit and consequently the punch card can then be divided into three, or four, parts, etc. However, since this gives rise to difficulties in the processing of the size of the households and the size of the secondary families, the latter being comprised in the former, it is recommended that separate punch cards should be made for secondary families, to be handled separately from those of households.

/23. The system

23. The system described in this part is reproduced in a schematic way in annex I to this paper. The diagrams show clearly that the method described provides a simple solution to the problem in question. To understand the diagrams fully it should be added that:

- (a) Punch cards 2A and B can only be distinguished if the classification of the unit is punched on the housing unit side; and
- (b) Punch cards 3A and B can only be distinguished if the type of housing unit is also introduced on the household side (see also para. 26).

#### IV. MINIMUM PROGRAMME FOR A HOUSING CENSUS

24. A minimum programme for a housing census as emerging from the need for data for the elementary calculation of housing requirements may be formulated on the basis of the discussions on item 4.1 (b) and (c). As the drawbacks of using the "household-dwelling concept" as well as the "dwelling-household" concept are unduly great, a minimum programme for housing censuses will be formulated only on the basis of separate definitions of the basic units. It will be quite easy for the countries using one of the other approaches to derive a minimum programme to suit their own purposes from the one given below.

##### A. Present housing requirements

25. The data necessary for the elementary calculation of present housing requirements are given in tabulation No.1 of annex 2A to this paper. From this tabulation it will be seen that an elementary calculation of present housing requirements is assured provided the housing census covers the following items:

- (a) Type of housing unit;
- (b) Type of household;
- (c) Size of household;
- (d) Tenure status.

/26. In view

26. In view of what has been said above, only (d) needs further comment. As has already been indicated in paragraph 23, it is necessary to introduce on the household side the type of housing unit. This can be done in many different ways, but it is recommended that it should be done by combining the type of housing unit with the tenure status, e.g. as shown below.

Household of the owner living (alone or) as main tenant in:

- (a) A conventional dwelling;
- (b) Another housing unit;

Household living (alone or) as main tenant in a rented:

- (c) Conventional dwelling;
- (d) Other housing unit;

Household living as sub-tenant in:

- (e) A conventional dwelling;
- (f) Another housing unit.

By main tenant should be understood the (household of the) owner if living in his own dwelling, or when the housing unit is rented, the household responsible for the payment of the rent of the entire housing unit to the owner. By sub-tenant is to be understood the household that has sublet a part of a housing unit, the rent being payable exclusively to the household of the main tenant.

27. It will be clear that if only this very restricted programme is followed, the problems involved in the enumeration itself and in the manual and mechanical processing will be negligible. Nevertheless the results obtained will give very useful information that will reflect the real situation better the more fully the recommendations emerging from section II of this paper are applied.

/28. Still more

28. Still more realistic results may be obtained by organizing the census in such a way that secondary families also are identified. This will make it possible to estimate, in addition to the shortage to be calculated, the number of units that may split off from existing households and place themselves in the market for a separate conventional dwelling.

B. Future housing requirements

29. To make it possible to calculate future housing requirements in an elementary way, only two items will have to be added to the minimum programme as outlined in the foregoing paragraphs, namely:

- (a) The sex of heads of households:
- (b) The marital status of heads of households (i.e. simply whether married or unmarried).

If secondary families have been identified, the same data should also be included for the heads of the secondary families. This will make it possible to compute tabulation No.2 of annex 2A, which gives, together with such data on the sex and marital status of total population as may be derived from the population census, the basic material for the calculation of rates indicating what part of the married and unmarried population respectively is in the market for a separate dwelling.

30. It need hardly be said that for the calculation of future requirements the total number of households in the market for a separate dwelling should be taken as a starting point, i.e. including households not possessing a separate dwelling on the census date. Hence, in tabulation No.2 of annex 2A no distinction is necessary between multi-person households living as main tenants and those living as sub-tenants nor between multi-person households living in conventional dwellings and those living in other housing units.

## V. ELEMENTS OF MORE ELABORATE PROGRAMMES

31. For a more highly developed method of calculating housing requirements, of course, a more elaborate programme, for the housing census is necessary, which means that the latter should include all those elements that are comprised in the method adopted.

### A. Present housing requirements

32. Tabulation No.1 of annex 2A does not give enough insight into the housing situation to enable the more advanced methods for calculating present housing requirements described in the paper on item 4.1 (b) to be applied. Hence this tabulation should be worked out on the lines of tabulation No.1 in annex 2B, which comprises all the elements dealt with in section VII of the paper on "Present housing requirements". The footnotes to the tabulation indicate the way in which present housing requirements may be derived from it. It may be added that dwellings for seasonal and/or secondary use, whether vacant or occupied at the census date, should be excluded from the tabulation.

33. It will be clear that the tabulation given is intended only as an example of how to derive the necessary data from a census. According to the situation in the country and the decisions taken as regards the methods to be used, one or more of the elements may of course be dropped. Nevertheless it is important to note that all the elements concerned can be brought together in one single tabulation.

34. From tabulation No.1 of annex 2B it may be inferred that to arrive at such a tabulation no new items will have to be introduced in the housing census as compared with the minimum programme described in section IV of this paper. It is only necessary to take more specific measures in classifying the housing units and dealing with the households as enumeration units. Thus, for example, the households of the  
/keepers of

keepers of hotels, pensions, etc., should be distinguished separately.

This may be done in several ways:

- (a) The premises of these households may be treated as a separate category of housing units, as is done in tabulation No.1 of annex 2B;
- (b) The households themselves may be treated as a separate category of households. If this system is chosen, the households concerned should be distinguished separately in the heading of the tabulation. (In this connexion it should be remarked that such a separate category could be made mechanically by combining household data with data concerning the occupation of the head of the household and distinguishing the households of keepers of hotels, pensions, etc., who occupy conventional dwellings from those who do not. This can easily be done when the housing census is combined with a population census.)

35. At the foot of tabulation No.1 of annex 2B there is an indication that the housing shortage might include the estimated number of dwelling-requiring units hidden in collective households. To avoid the necessity for estimates in this respect, enumerators might be instructed as far as possible to distinguish these dwelling-requiring units (e.g. on the basis of a special question or of any objective characteristic or even on the basis of their own observation) as separate private households. This will in many cases prove to be a better approximation than an estimate.

#### B. Future housing requirements

36. For the calculation of future housing requirements in the paper concerning item 4.1 (c) the headship-rate method has been recommended. This implies that a housing census should provide data concerning the age and/or marital status of the dwelling-requiring heads of households. The model of such a tabulation is given as tabulation No.2 in annex 2B.

/37. It should

37. It should be stressed here that the proposed tabulation should be restricted exclusively to those heads of households that require a separate dwelling. Although this seems to be quite easy, in practice many difficulties arise in this connexion. After all, not all households are in the market for a separate dwelling, and those households that are not in the market cannot be accurately assessed but should be eliminated on the basis of an estimate. Hence the recommendation in paragraph 35 to avoid estimates as far as possible when dealing with the dwelling-requiring units in collective households.

For lodgers, secondary families and households in mobile housing units it will be much more difficult to establish in an objective way (e.g. on the basis of a special question) the proportion requiring a separate dwelling. In practice a direct estimate of the proportion will be the only acceptable solution, which implies the impossibility of including that proportion in tabulation No.2.

38. In practice there are two ways of solving this problem:

- (a) The headship-rates to be calculated may be restricted to heads excluding all lodgers, all heads of secondary families and all households in mobile housing units. Application of these rates for the future will underestimate future housing requirements. Therefore a correction will have to be made, introducing approximately the number of dwelling-requiring units excluded when calculating present headship-rates. This may be done on the basis of a constant number or a proportion of the units excluded as well as on the basis of rising or declining numbers or proportions.
- (b) Apart from the headship-rates referred to under (a), separate rates may be calculated for all lodgers, all heads of secondary families and all households in mobile housing units. If these rates are corrected first for units not requiring a separate dwelling, the corrected rates could be added to the ones dealt with under (a), thus giving total rates enabling future housing requirements to be calculated right away without the necessity for subsequent correction.

/C. Replacement needs



### C. Replacement needs

39. In the calculation of housing requirements provision should be made for the number of existing sub-standard conventional dwellings and for the number of conventional dwellings that will become sub-standard during the period of the house-building programme. As has already been indicated in connexion with item 4.1 (b) for several reasons present sub-standardness in the dwelling situation cannot possibly be registered on the basis of a general housing census. Nevertheless a general housing census can provide figures on the basis of which an estimate of the number of sub-standard dwellings could be worked out.

40. It may be remarked that "sub-standardness" is defined here only from the point of view of the dwelling and not from the social point of view; where it is determined by the use of the dwellings (over-crowding, etc.) it may be removed in many cases without removing the dwelling units themselves. It will be clear that in a general housing census an approximation to the sub-standard dwelling situation on the basis of penalty marks is impossible since enumerators are not technically skilled personnel.

41. An approach may, however, be made using objective data which throw some light on the quality of the housing units. In this respect the following items are important for inclusion in the housing census:

- (a) Year of construction;
- (b) Rent paid;
- (c) Number of rooms;
- (d) Availability of piped water;
- (e) Toilet installations;
- (f) Cooking facilities.

/If an

If an adequate classification is used for each of these items, the relevant data in combination could indicate the numbers of dwellings that according to established norms should be replaced. For example, it may be assumed, that all dwellings built before 1900, for which low rents are paid and which have a small number of rooms and no toilet, piped water supply or cooking installations, should be replaced as soon as possible. It is obvious also that using this type of approach a scale may be worked out on the basis of which the degree of sub-standardness may be indicated.

This method can be further improved by introducing also data concerning the state of repair or dilapidation. Although subjective in character, such data in combination with the more objective data mentioned above can furnish a fair estimate of the number of sub-standard dwellings to be replaced at present and in the near future.

42. If the method described in paragraph 41 is regarded as not being valid, sub-standardness will have to be worked out on the basis of sample surveys or the like. Here again it will be important to aim so as to calculate present sub-standardness as well as the number of dwellings expected to become sub-standard during the period of the house-building programme.

43. If no attempt is made to deal with present sub-standardness it will nevertheless be necessary to deal with future sub-standardness. As indicated in the paper concerning item 4.1 (c), a simple method in this respect may be worked out on the basis of data concerning the year (or period) of construction. Therefore a housing census should in any case include this item.

## /VI. SUMMARY AND

## VI. SUMMARY AND CONCLUSIONS

44. This paper has pointed out the decisive importance for the establishment of a house-building programme of applying in housing censuses non-interrelated definitions of the basic concepts "housing unit" and "household".

45. These basic units should preferably be defined in the way recommended in the United Nations General principles for a housing census. A valuable guide to the adaptation of these recommended definitions to local conditions is the intended use of the data for calculating housing requirements.

For housing units the guiding principle for classification should be the fitness of the unit for human habitation; for housekeeping units the question whether the unit concerned may be regarded as requiring a separate dwelling.

46. It is further recommended that the census introduce, if possible, the secondary family concept, as this will make it possible to identify, in addition to the households, the potential number of dwelling-requiring units hidden in them.

47. The technical problems involved in the use of two or more enumeration units in one census would seem to be of minor importance. The same is true of the increase in the costs involved.

48. The minimum programme for a housing census as emerging from the need for data for the establishment of a simple house-building programme is of a very restricted nature. The calculation of present housing requirements is assured once the housing census includes the items: type of housing unit, type of household, size of household and tenure status (main tenant or sub-tenant). For the calculation of future housing requirements the items: sex and marital status of heads of households should be added.

/49. For a

49. For a more elaborate programme it is necessary to take more specific measures still as regards the classification of the basic units. The data concerning sex and marital status of heads of dwelling-requiring units should be cross-classified.

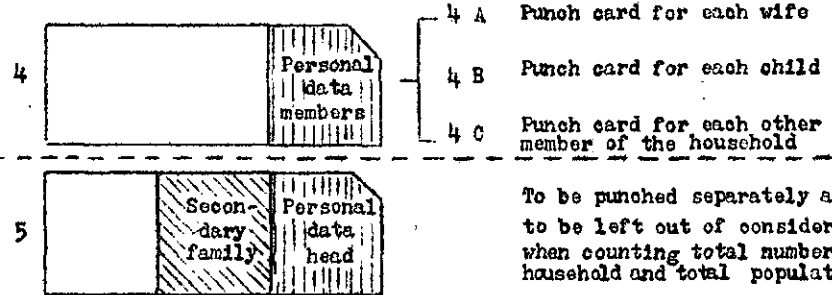
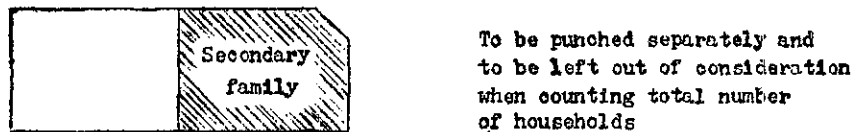
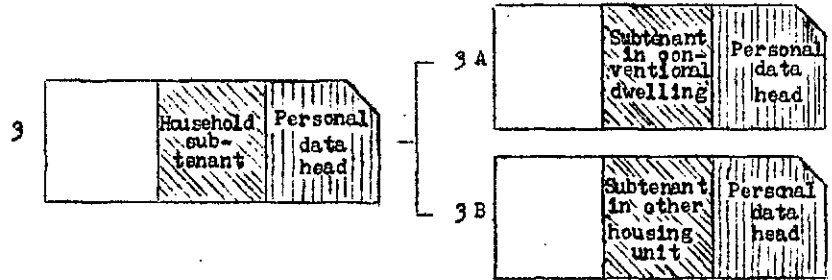
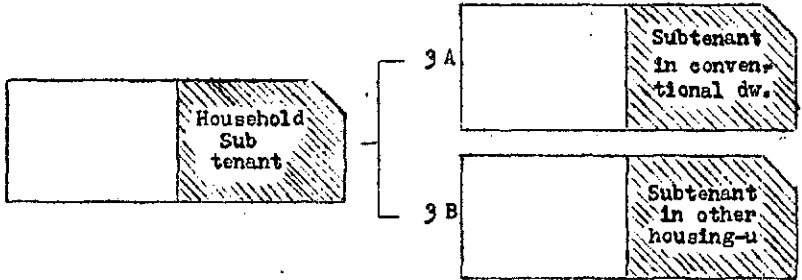
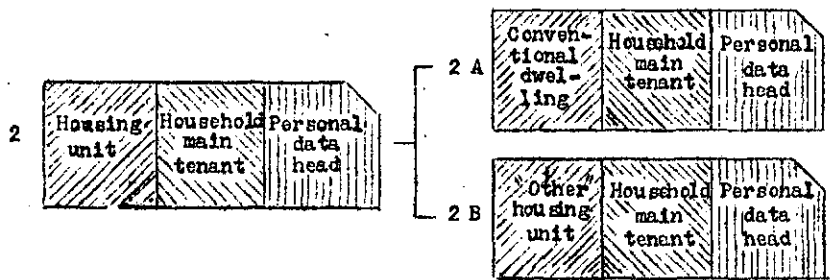
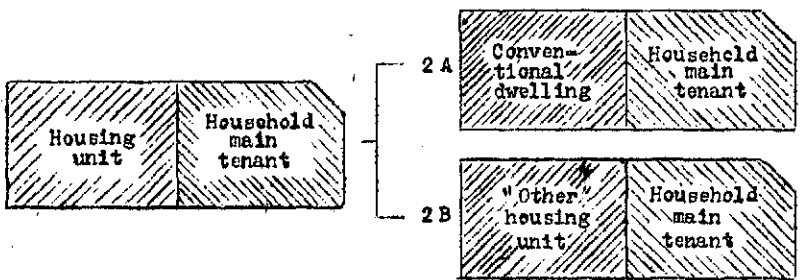
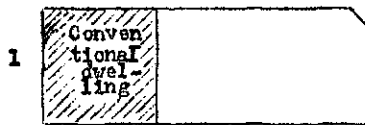
For the calculation of replacement needs it is recommended that the following items be included in the census programme: year of construction, rent, number of rooms and toilet and cooking installation, and that data regarding these items be used in combination. The method may be further improved by including the item: state of repair or dilapidation.

50. The conclusion that may be drawn from this paper is that the use of non-interrelated definitions for the basic concepts of housing unit and household is an essential prerequisite for housing censuses serving as a basis for house-building programmes. If such definitions are chosen a housing census is an ideal basis for the calculation of housing requirements, and can without much trouble be turned into a very valuable tool for the establishment of house-building programmes.

MECHANICAL COUNTING OF BASIC UNITS IN HOUSING CENSUSES

A. Housing census not combined with population census

B. Housing census combined with population census



To be punched separately and to be left out of consideration when counting total number of households

To be punched separately and to be left out of consideration when counting total number of household and total population

- A. Total housing units
  - of which: occupied conventional dwellings
  - vacant conventional dwellings
  - other occupied housing units
- B. Total households
- C. Total population
- D. Total secondary families

- Total of punch cards 1 and 2
- Total of punch cards 2 A
- Total of punch cards 1
- Total of punch cards 2 B
- Total of punch cards 2 and 3
- Total of punch cards 2, 3 and 4
- Total of punch cards 5

\* Total population = To be derived from size of households punched on cards 2 and 3

Annex 2A

TABLATIONS FOR CALCULATING HOUSING REQUIREMENTS (MINIMUM PROGRAMME)

Tabulation No.1. Households and housing units

| Housing units                 | Households | Private households |                 |                 |                 | Collec-<br>tive<br>house-<br>holds | Number<br>of<br>housing<br>units | Number<br>of<br>secondary<br>families<br>in<br>private<br>house<br>holds |
|-------------------------------|------------|--------------------|-----------------|-----------------|-----------------|------------------------------------|----------------------------------|--|
|                               |            | Multi-person       |                 | One-person      |                 |                                    |                                  |  |
|                               |            | Main<br>tenants    | Sub-<br>tenants | Main<br>tenants | Sub-<br>tenants |                                    |                                  |  |
| Occupied housing units        |            |                    |                 |                 |                 |                                    |                                  |  |
| Conventional dwellings        |            |                    | 1               | } 5             |                 |                                    | 6                                |  |
| Other housing units           | 2          | 3                  | 4               |                 |                 |                                    |                                  |  |
| Vacant conventional dwellings |            |                    |                 |                 |                 | 7                                  |                                  |  |
| Total                         |            |                    |                 |                 |                 |                                    |                                  |  |

Housing shortage - Total of the figures mentioned in squares 1, 2, 3 and 4.  
- Adding if possible an estimated proportion of the figures in squares 5 and (an estimated proportion of) the figures in square 6.

Present reserve of dwellings - Figure mentioned in square 7.

Tabulation No.2. Heads according to sex, marital status and tenure status

| Heads of                     | Married |         | Unmarried |         |
|------------------------------|---------|---------|-----------|---------|
|                              | Males   | Females | Males     | Females |
| Multi-person households      |         |         |           |         |
| One-person households living |         |         |           |         |
| as: main tenants             |         |         |           |         |
| sub-tenants                  |         |         |           |         |
| Secondary families           |         |         |           |         |

Annex 2B

TABULATIONS FOR CALCULATING HOUSING REQUIREMENTS (MORE ELABORATE PROGRAMMES)

Tabulation No 1. Households and housing units

| Households<br>Housing units            | Private households |             |       |              |             |       | Collective households | Number of housing units | Secondary families |
|--|--------------------|-------------|-------|--------------|-------------|-------|-----------------------|-------------------------|--------------------|
|  | Multi-person       |             |       | One-person   |             |       |                       |                         |                    |
|  | Main tenants       | Sub-tenants | Total | Main tenants | Sub-tenants | Total |                       |                         |                    |
| Households in private housing units    |                    |             |       |              |             |       |                       |                         |                    |
| Occupied housing units                 |                    |             |       |              |             |       |                       |                         |                    |
| Conventional dwelling .....            |                    | 1           | } 2   | } 3          | } 4         |       |                       | } 7                     |                    |
| Rustic and improvised units            |                    |             |       |              |             |       |                       |                         |                    |
| Units not intended for habitation      |                    |             |       |              |             |       |                       |                         |                    |
| Mobile housing units.....              |                    |             | 5     |              |             | 6     |                       |                         |                    |
| Vacant conventional dwellings.....     |                    |             |       |              |             |       |                       | 14                      |                    |
| Households in collective housing units |                    |             |       |              |             |       |                       |                         |                    |
| Hotels                                 |                    |             |       |              |             |       |                       |                         |                    |
| Hotel keepers premises.....            |                    |             | 8     |              |             | 9     |                       |                         |                    |
| Other premises.....                    |                    |             |       |              |             |       | 10                    |                         |                    |
| Institutions                           |                    |             |       |              |             |       |                       |                         |                    |
| Premises of personnel.....             |                    |             | 11    |              |             | 12    |                       |                         |                    |
| Other premises.....                    |                    |             |       |              |             |       | 13                    |                         |                    |

Housing shortage - total of the figures mentioned in squares 1, 2 and 3.  
 - adding an estimated proportion of the figures in squares 4, (5 + 6) and 7.  
 - adding the estimated number of households requiring a separate dwelling in the collective households mentioned in squares 10 and 13.

Present reserve of dwellings - figure mentioned in square 14.

N.B. Number of households mentioned in squares (8 + 9) and (11 + 12) to be regarded as not requiring a separate dwelling.

Tabulation No 2 Households requiring a separate dwelling according to sex and marital status of the head a/

| Age of head | Marital status of head | Single |         | Married |         | Widowed |         | Divorced |         | Total |         |
|-------------|------------------------|--------|---------|---------|---------|---------|---------|----------|---------|-------|---------|
|             |                        | Males  | Females | Males   | Females | Males   | Females | Males    | Females | Males | Females |
| 20          |                        |        |         |         |         |         |         |          |         |       |         |
| 20 - 24     |                        |        |         |         |         |         |         |          |         |       |         |
| 25 - 29     |                        |        |         |         |         |         |         |          |         |       |         |
| 30 - 34     |                        |        |         |         |         |         |         |          |         |       |         |
| etc.        |                        |        |         |         |         |         |         |          |         |       |         |
| Total       |                        |        |         |         |         |         |         |          |         |       |         |

a/ Might also be computed separately for lodgers, secondary families and households in mobile housing units.

