SOCIAL INDICATORS AND GEOGRAPHIC RESEARCH: AN EXPLORATORY STUDY OF SPATIAL VARIATIONS IN THE PROVISION OF COMMUNITY SERVICES AND ACCOMMODATION FOR ELDERLY PEOPLE IN NEW ZEALAND

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STEPHEN GRAHAM BRITTON

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CHAPTER 1

INTRODUCTION

Social Research and Social Learning:

The operation of the welfare state system in New Zealand has undoubtedly shaped the national character and influenced at least implicitly, national socio-economic values. [1] While several writers have documented the tangible benefits this system has offered to the nation as a whole and various social groups in particular (Baker 1955, Condliffe 1959, Scott 1955 and Sutch 1971) the welfare state concept as practiced in New Zealand has never been geared to actually anticipate or cope with any socio-economic problem outside its limited frame of application. While the Welfare State system originated in the depression era and gained strength into the 1950's, social demands today are increasingly less concerned with what Dunn (1971 : 183) has termed "deficit motives". What is now more worthy of consideration is a system of social organisation and administration that meets the human development motives of an affluent and dynamic society - demands that are not usually considered in the realm of national and political decision making.

The need for a shift in the socio-political responsibilities of government was officially recognised in New Zealand at the 1969 National Development Conference, (N. D. C.). The various N. D. C. bodies identified vague and general areas of social concern outside

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[1] "A Welfare State is a state in which organised power is deliberately used (through politics and administration) in an effort to modify the play of market forces in at least three directions - first by guaranteeing individuals and families a minimum income irrespective of the market value of their property : secondly by narrowing the extent of insecurity by enabling individuals to meet certain "social contingencies" (for example: sickness, old age and unemployment) which lead otherwise to individual and family crises: and thirdly, by ensuring that all citizens without distinction of status or class are offered the best standard available in relation to a certain agreed range of social services". (Briggs : In Jones 1973 : 65).

of those issues confronted by the Welfare State system as being worthy of inclusion in Government responsibility. The National Development Conference also revealed to New Zealand government administrators that virtually no action was possible to remedy undesirable states, even if government was prepared to respond, simply because so little was known about the social phenomena in question, and only inadequate information was available on the existing states of New Zealand society. Moreover, there were few documented guidelines to suggest the future trends in New Zealand society and, indeed, what direction New Zealanders might prefer their society to take. New Zealand decision-makers and researchers were lacking in the fundamental tools for planning current and future states and coping with dysfunctions in many social fields. Data deficiencies are further exacerbated by the absence of any background of social inquiry outside of the economic sphere of national and social planning.

Government involvement in economic and social aspects of planning has rarely embodied what Sutch (1973 : 337) calls a "national design sense". Government actions thus often appear to be directionless in terms of explicit socio-economic policy goals. This short coming has made it difficult for governments and research establishments to formulate comprehensive plans on current social issues and to consider alternative futures for the nation.

The issue of what sort of society New Zealanders want in the short term and medium term must, however, be confronted before social planning is undertaken. A consideration of this issue raises questions about the "quality of life" New Zealanders desire.[2]

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[2] It is only in the short term and medium terms that effective planning is considered practical i.e. : anywhere from 2-5 to 20-40 years. Most future planners would agree that there is a short-term period within which the future is more or less determined by current policy decisions, and a long term period in which it is more or less completely obscure. Most future orientated forecasting, being concerned with the relationship between values and technological constraints, is likely to be chiefly concerned with that time range when values may show observable shifts comparable with the present pattern, that is, probably 20-40 years into the future.

Gardner (1971 : 8) provides a useful definition of the quality of life: "That collection of situations, objects or events which are held to be good for the individual living in a community having been realised" and where the avoidance of the "bad" is taken as being implicit in the meaning of "good". Hence, quality of life can be taken to refer to the amount and distribution of impure public goods and services. As Hall (1973 : 6) states

> in this formulation, there is an important category of goods and services (including some things that are conventionally regarded as "bad", such as pollution) which are provided in one way or another by public action rather than through the market place, but which nevertheless have a definite distribution i. e. : they are not freely available. This category includes goods as diverse as the availability of health, education and welfare services; protection against crime; regulation of water, air and noise pollution; the preservation of fine landscapes and historic townscapes; the quality of transportation services available and many other things."

The same recognition can be given to the availability of so-called private goods since they are often affected by the distribution of public goods. The quality of life may, therefore, include those particular mixed private-public goods such as the availability of jobs on the labour market, housing types and their availability, and the availability and accessibility of supermarket services that are conditioned as much by the transportation network as by the supermarkets themselves.

In New Zealand, as in most other countries, the distribution, level of provision and quality of many public and private goods in the past has been determined by the fixing of fairly arbitrary standards: for example, housing densities, smoke emission, water quality, public education and so on are often not related to any clear index of what the public actually wants. The public are usually given no opportunity to trade-off different quantities or qualities of impure

public goods: there is thus an imperfect mechanism for determining how much of each is wanted. This is a particularly difficult issue because there is no necessary reason to think that the preferences of professionals, or of those middle-class local political leaders who make final decisions, are necessarily those shared by the general public on whose behalf decisions are made.

Present practices in the field of social policy formulation then, do not meet the requirements for a means of monitoring social demands that is both sensitive to actual and perceived public needs and at the same time is flexible enough to cope with changes in present demand and alternative futures that are forthcoming from the public, planners and researchers alike.

Values and ideas of what constitutes the good life vary, at least in detail, with practically every individual. The ramifications of this for "quality of life" determination by national agencies is

> "that the quality of life (concept) is meaningless unless it is defined by the people who experience it. But since their own perceptions are so dependent on previous experience and conditioning we require a research method that both extends and focuses experience. We need a research tool that educates through the use of imagination and which puts the researcher and the respondent in a mutual learning situation" (Hall 1973 : 8).

Researchers must also be aware that future states may render previous knowledge of the social system inadequate or obsolete in its usefulness as a tool in coping with future demands.

Arguing a similar view-point Dunn (1971 : 30) states that "An important part of social change - indeed the most important part - is the product of an open process of creative learning", he stresses that this requirement is fundamental to any research methodology having the capacity to experiment and to explore new learning situations with the view of creating, accepting or rejecting, future social system goals and policy objectives.

The crux of present and future research and policy making to meet real world contingencies is summarised as a methodology of

"...prediction as hypothesis and planning as experimental design as the fundamental form of prediction and planning out of which social knowledge and environmental contact will evolve" (Dunn 1971 : 135). Continuing this line of thinking, Dunn goes on to say that

> When faced with the reality of the social learning process and work under its metaphor, it becomes evident that since social systems are frequently temporary systems, less emphasis needs to be given to the nature and design of optimum transfer networks and more to design of adaptable networks - systems that can more easily be adapted to the requirements of new social goals and controls. If this could be done, a contribution would be made to reducing the capital costs of change. More important, we become aware that the communication that serves the reconciliation of social goals and those of the human components of the social system, and that serves the process of social learning itself, is not a monologic or one-way transfer process (from decision makers and government agencies, down to the public). It is a two-way dialogic process. Social science needs to concern itself with the theory of dialogic communication and the design of dialogic social organisations and processes"
> (Dunn 1971 : 247).

Research to this end should therefore, start by asking how people live their lives now and what their expectations and objectives are regarding future change. We also need to know about what changes they would like to see and the changes they expect to see. The objectives and values of the public must also be understood, from the general and abstract, to those firmly based on the concrete reality of their everyday lives. It is the answers to these questions that should be linked to the social learning methodology so as to build up a series of plausible and consistent pictures of the future which can be used for more precise tests of people's preferences.

Adequate data collection is an obvious prerequisite for this form of social monitoring and social learning process.

> What is needed is information about social system goals and controls that will reveal the degree to which the systems response to environmental signals is goal satisfying. The identification and definition of social problems require the ability to judge the consistency of social system goals and controls. Once the problem areas are identified and the need for boundary revisions established, information is needed about the behavioural options that are candidates for formulating a developmental hypothesis. Once a developmental hypothesis is formed, one needs political information concerning the systems human constituents necessary to the formulation of a consensus. Once the social experiment is performed, one needs information that measures goal convergence and hence, is necessary for reality testing"
> (Dunn 1971 : 254).

General purpose information devised primarily for the book-keeping administrative needs of government is usually not adequate for such a task. Increasingly, informational demands are of a special purpose kind. This shift in information requirements generates problems of monitoring the behaviour of complex dynamic social systems. Information should therefore be directly tied to what it is we want to measure, and it should measure any social phenomonon accurately and validly.

Social Indicators

At the present time of writing, there appears to be one approach to data generation that would reasonably comply with these demands. This approach is that of "social indicator" development. While social indicator research has been undertaken independently on the lines of thought presented in this paper, there are grounds for justifying the merging of the two. It will be seen from the following discussion that social indicators fulfil several important functions of the social learning metaphor. Indicators are devised not only to be compatible with a social goal or experimental hypothesis but are designed to measure the social phenomona under study as validly and

accurately as possible. Social indicators are used for problem solving as well as the essential function of monitoring existing states in society. They are not as yet designed to establish the actual values and trade-off preferences of individuals and social groups.

The definition of social indicators as used in this thesis is that of Olson's (1969). He defines social indicators as statistics which have two defining characteristics. They are first measures of direct normative interest, that is, measures of "welfare" and "illfare". Most existing government statistics are not of this type because a large proportion of existing statistics are measures of government or other institutional activity, produced as a by-product of accounting or administrative routines. The second defining characteristic is that it should fit into a systematic scheme of classification or aggregation which would make possible a balanced assessment of socio-economic progress or retrogression in some social field, as well as a disaggregated study of particular problems. It is implicit that if an indicator shows a trend in the "right" direction, then things will have been improved in the social system, or people will be "better off." Thus statistics on the number of doctors or policemen would not be social indicators, whereas figures on health or crime rates could be.

Social indicators, therefore, should

> 1) measure the state of and changes over time in 2) major aspects or dimensions of 3) social conditions that can be judged normatively as 4) part of a comprehensive and inter-related set of such measures embedded in a social model and 5) their compilation and use should be related to public policy goals"
> (Smith 1973 : 54)[3]

The Contribution of Social Indicators

An important ingredient in the social indicator movement is that through planning, improvements in the performance of the social system are achieved in terms of stated goals. There is also

the feeling that social phenomona should have the benefit of something like the statistical measurement, the theoretical development and the institutional arrangements that have facilitated public policy concerning economic phenomona. Other proponents of social indicators and social accounts argue that they should help remedy what has been termed the "economic philistinism" resulting from the predominance of economic criteria and perspectives used by government policy makers and advisors - what Gross and Springer (1969 : 16) call the "paradox of a poverty of perspective in the midst of a growing abundance of data".

Smith (1973 : 56) has explicated the ideal end product of such thinking:

> Ideally societal goals or objectives would be set up that would involve the maximisation of some quantitative indicator, or set of indicators, embodying all the variables and elements impinging on social well-being, or more generally on the quality of life. Then the functional societal mechanism or systems that give rise to the magnitude of the conditions would be identified with its variables, parameters and inter-relations specified. The system would be closed about a critical set of interacting endogenous variables and the major exogenous variables that act as inputs to the system would be identified".

Such a social monitoring system, when provided with accurate and appropriate data would provide policy makers and researchers with a mechanism for monitoring the social system just as the economic system is currently monitored. The role of social indicators within

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[3] The use of social indicators proposed here does not include the construction of aggregative indicies to form a single index of the social well being of a community, but rather the special purpose social goal dependent social statistics. Several authorities have in recent years challenged the ability of social indicators to achieve their more ambitious claims. Sheldon and Freeman (1970) for example, argue that it is unreasonable to develop a system of social accounts in view of the lack of a social theory capable of defining the variables of a social system and the interelationship between them.

such national social planning procedures is shown in Figure 1. Bauer (1969 : 70) suggests that this type of system could perform a four-stage process of societal management - the stages are: 1) the detection of the state of affairs, or management of system outputs; 2) evaluation, or determining whether this is the desired state; 3) diagnosis, or finding the origins of the detected state as it arises from the social causative mechanism; and 4) action to remedy an undesired situation, arrived at from knowledge of the operation of the system and of their inputs to it. Other important functions could be the projecting of alternative futures or future specific social states that will be the consequences of different courses of action and a means with which to resolve conflicting claims for limited resources by identifying the programmes with maximum potential goal impact. When complemented by social survey research on social values, attitudes and objectives, the social indicators, by providing measures of existing states and alternative futures, can be used to evaluate the degree to which current social system organisation is consistent with devised social goals and objectives.[4]

Organisation of Thesis

The aim of this thesis is to evaluate an existing state in New Zealand society with reference to a desired social goal. To this end a precise procedure is carried out whereby the requirements for adequate provision of community services and accommodation for elderly people are explicitly stated in terms of a social goal and planning objectives. A set of social indicators are then devised to monitor the

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[4] Issues that must be faced to make application of the methodology practical include the following:

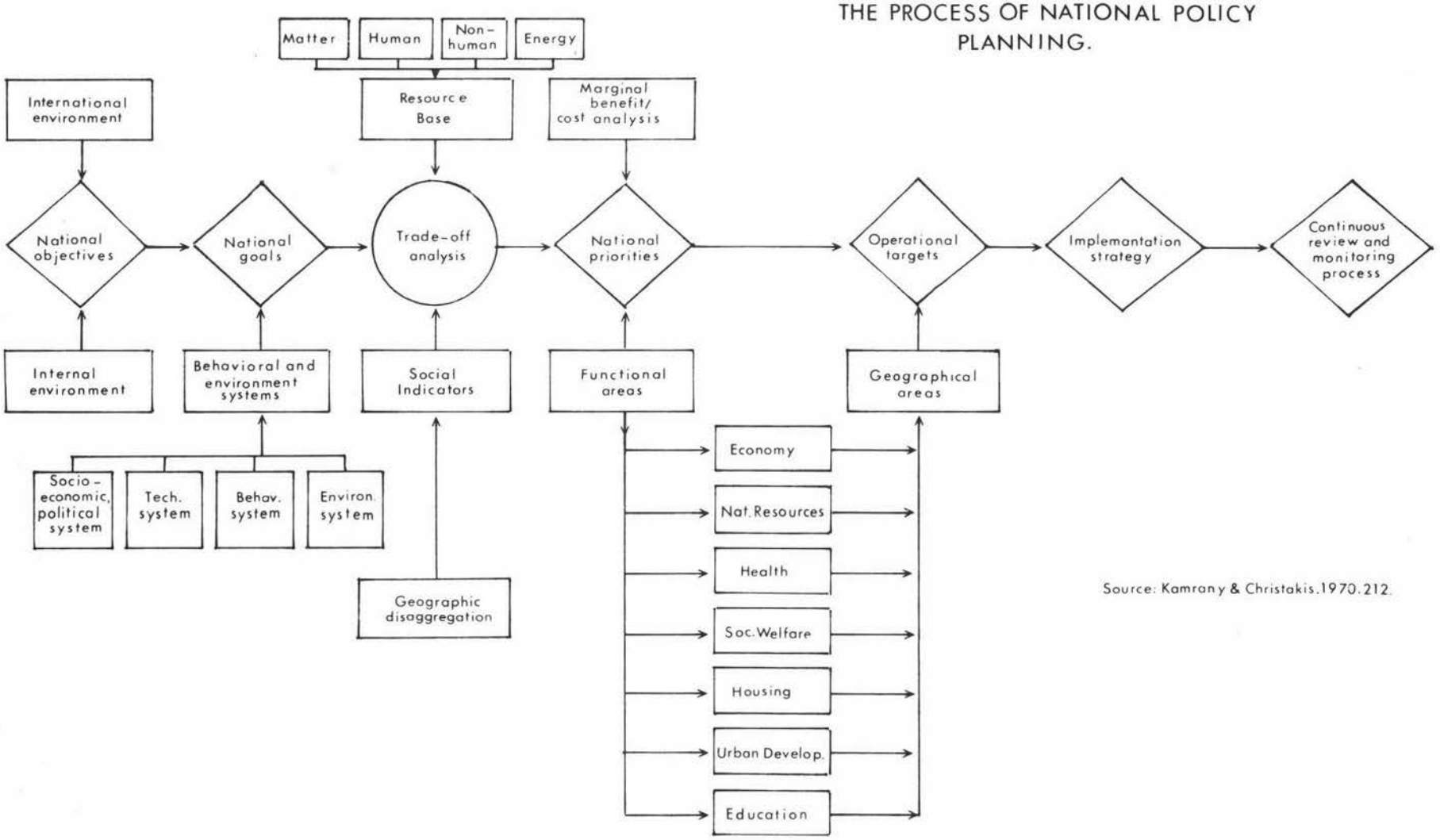
1. A definition of the quality of good life, setting up standards and units of measurement, methods of measurement, strategies and the implementation of policies, as well as the organisational framework necessary for such a process.

2. Devising the organisational and institutional framework for such a research system.

3. Development of methodology to accurately estimate the costs of our short-falls as well as the costs and anticipated benefits of actually fulfilling goals and objectives.

FIGURE 1.

THE ROLE OF SOCIAL INDICATORS IN THE PROCESS OF NATIONAL POLICY PLANNING.



Source: Kamrany & Christakis, 1970, 212.

existing state of society in terms of the stated goal and objectives. Attention is focused on how geographic perspectives may be used to further understanding of the New Zealand social system. The empirical research section of the thesis demonstrates how the social learning and social indicator methodologies may be used to monitor spatial variations in the social well-being of elderly people.

Chapter two of the thesis looks at the problems associated with developing a research methodology that will permit decision makers to identify, monitor, predict and modify trends occuring in society that are of a problematic nature or require periodic appraisal.

The latter half of the second chapter deals with geographical issues associated with any future use of the social learning methodology and social indicators. It is argued that the identification of the geographical component in social problems is a necessary prerequisite to making judgements about for example, how far social performance diverges from desired states. It is important to know how social problems manifest themselves spatially. It is also necessary to establish how far people may be discriminated against on the basis of location, or how far their levels of "social well-being" can be attributed to location in space.

Throughout the thesis it is assumed that there is a dimension of human existence called "social well-being". While there is no general agreement as to the exact meaning of this term, it is sufficient to say that it relates to income in its broadest sense, physical health and state of mind - three fundamental components of individual well-being. There is also frequent reference to "the quality of life" which again has not been specifically defined. Because of the difficulty in defining these terms, the discussion in the following chapters concerns itself only with the material and tangible aspects of social well-being and quality of life - variables that can be planned for in the physical sense.

Chapter three deals with the setting out of the framework within which the empirical research is carried out. Relevant social goals, planning objectives and social indicators are made explicit at this

stage.

The fourth and fifth chapters deal with the application of a geographic approach to monitoring two specific social situations - the provision of community services and the provision of accommodation for elderly people in New Zealand. These chapters identify components of social well-being and investigate whether people living in a specific area can be meaningfully differentiated from those living in other areas with respect to their level of well-being.

The last chapter considers some of the implications of the findings associated with the application of the monitoring procedure.

CHAPTER 2

CONCEPTUAL AND METHODOLOGICAL ISSUES IN OPERATIONALISING SOCIAL MONITORING

This chapter deals with two major conceptual and measurement issues encountered in the application of the social indicator approach to the task of appraising aspects of social and economic well-being in New Zealand. The first issue dealt with is the possibility that a paradigm shift is a necessary condition for the successful implementation of the social indicator approach to measuring societal problems. The second issue concerns the importance of a clear appreciation of the role of measurement in the formulation and construction of social indicators.

The sections on these two issues are followed by a detailed discussion of the spatial dimension of social planning and research.

The Necessity of a Paradigm Shift

Following the arguments of Dunn, one may suggest that in New Zealand, as elsewhere, the thinking and purpose of various institutions are getting out of phase with socio-economic reality. This applies not only to the institutions being out of phase with the values and objectives of the public, but also with the institution's own ideas and values in relation to the accelerated rate of advances in technology. The incorporation of behaviour modes and options derived from technological advances may well require shifts in social organisation and perception. Their impact possibly surpasses anything that can be encompassed by current problem-solving methodology. In other words, the rapid rate of change in our material, symbolic and social environments can only be met with a series of appropriate paradigm shifts by those vested with the power to control and direct society. What is required is

> the necessity of finding a state consistent with a process - i.e. : developing forms of social organisation and a humanistic-

> ethic based upon a human science that can be used to organise the process of social learning in the service of the process of human development" rather than the more usual attempts to find "process consistent with states - i.e. : reordering activities to serve established goals and controls more efficiently"
> (Dunn 1971 : 217)

But upon what paradigm set or social value set should we base proposals for social reorganisation? Dunn (1971 : 185) offers one general proposition. Social systems, he says, must serve the higher order goal "that is consistent with, and fundamental to, the evolutionary process - providing the meaning and framework for the development of human potential". Such high order goals, however, are less the concern of the researcher and policy-maker than they are of the social philosopher. What does concern researchers and policy-makers are the components or subsidary social goals derived from high order goals such as those proposed by the Social Council of the N.D.C. (See Appendix 1)

Any attempt at social system reorganisation must be guided by underlying goals. Not only do these determine what objectives are to be achieved, and what variables are to be considered in achieving change and therefore exactly what has to be measured, but they provide the only valid measure against which the policy implementation can be evaluated.

> In so far as the technical aspects of programme construction and evaluation are concerned, unless the goal is capable of being translated into quantifiable terms, and is in fact so translated, it is neither possible to carry out the appropriate research to determine goal achieving processes and factors (which means that the programme structure must be based on guesses) nor to evaluate the effectiveness and efficiency of a programme in achieving its goal (which means that it is impossible to prove the worthwhileness of the activity). Further we are even unable to prove whether a programme is necessary. This is only possible when the difference between the actual state existing in society and the level set by the objective

is able to be measured"
(Gardner 1971 : 6)

The role of stated values and objectives in the planning process can be seen in Figure 2.

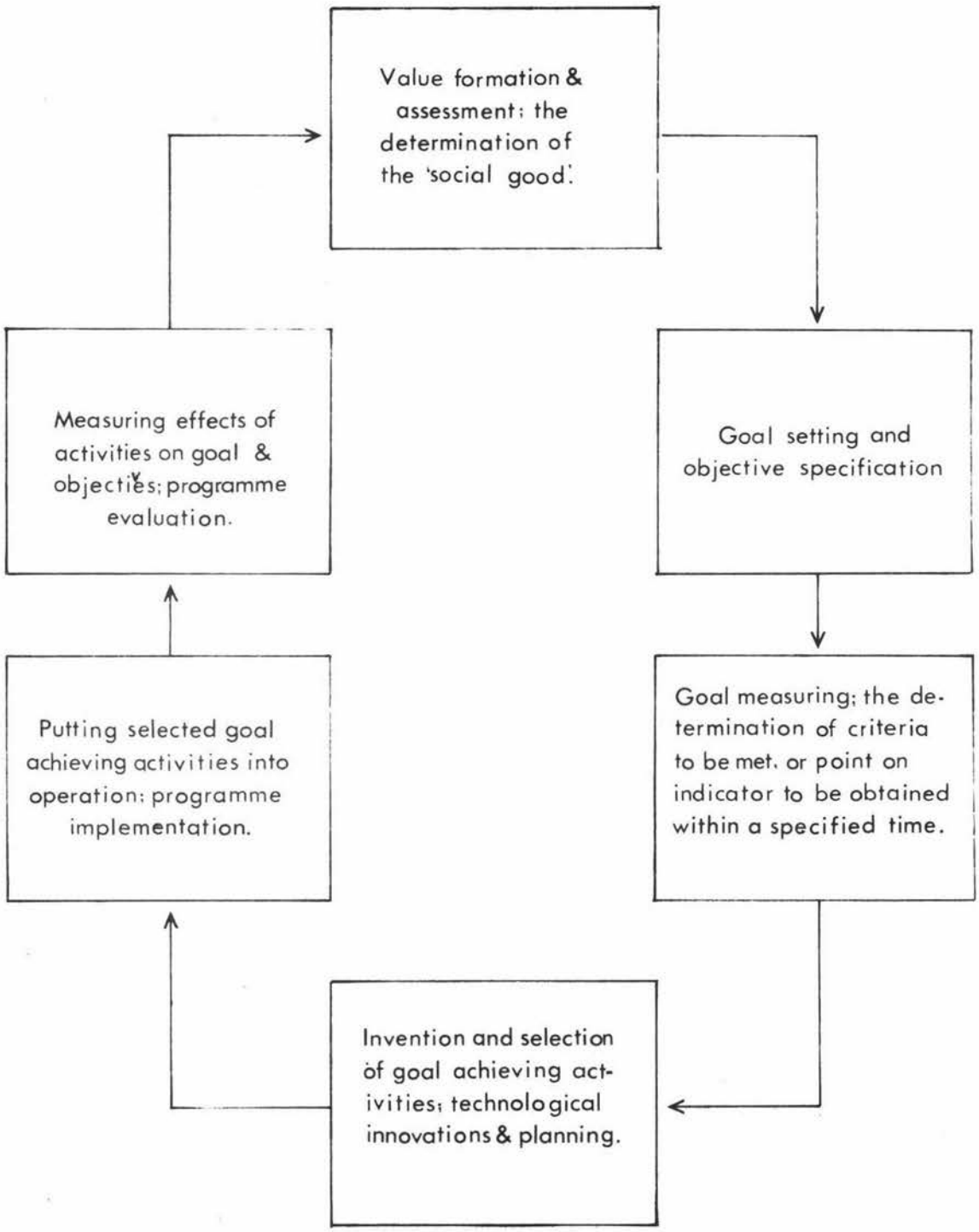
While general agreement can be reached on the need for the explicit definition of social goals, and that urgent attempts should be made to find out public values, aspirations and utilities which should be suitably formulated into social policies and decision-making, it is particularly difficult to come to some sort of consensus about social goals for society as a whole. This is particularly critical for social change orientated planning and decision-making. As Cazes (In Hall 1973 : 8) has argued, clear social indicators can be devised only in areas where the concept of progression or regression is the subject of fairly general consensus and these usually come down to concrete terms such as more houses, more income and so on. As Hall (1973 : 8) says "most people are neither well versed in, nor very interested in, abstract qualities".

Referring back to Gardner's (1971 : 8) definition of quality of life, that "collection of situations, objects or events which are held to be good for the individual living in a community having been realised", several important points emerge that will directly effect decision-making in this context.

Such a definition implies that all individuals in the community must be consulted in evaluating the merits of any one value and that the community as a whole is responsible for operationalising the rights and values and the extent to which they have been realised. The responsibility for the realisation or upholding of the values adopted as making up the quality of life of the community lies with those governing that community.

It is also inherent in this definition that the search for social values and objectives must finally be evaluated within the cultural and environmental context within which they are being considered for adoption. This is because if systematically designed schemes are to have the chance of being implemented and successful, the

FIGURE 2. THE PLACE OF VALUES AND OBJECTIVES IN THE SOCIAL DEVELOPMENT PROCESS.



Source: Gardner. 1971. 5.

goals which they persue must be culturally and environmentally meaningful and attained through acceptable means.[1]

But even drawing up a relatively uncontroversial set of many vague and general objectives does not get away from sub-group variations within the population.[2] These social values have to be operationally defined if they are to be acted upon and implemented.

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[1] Two critical issues are posed by these last paragraphs. If a community as a whole is to decide which values are to be implemented there is the possibility of not only being unable to reach a consensus or being unable to define any one value satisfactorily, but of values being operationalised that are either of low priority or directly contradictory to a long-term community well-being. Hall (1973 : 7) gives examples of this where he states that "possibly few working-class families saw the case for universal compulsory free education in the nineteenth century or for cleaner air in the twentieth century, however once provided with these things, they too will become staunch defenders of the status quo. In this argument, taste leaders are needed to stimulate the demand for better environments just as much as for deep-freezers or stereo players; in the long run everyone will find that they like these things." A similar argument could be said of current debates in New Zealand over regional planning, compulsory superannuation, limiting population growth and providing genuine assistance to developing countries. None of these issues are held up by a majority of New Zealanders as being vital to our well-being. Yet in the longer term, each could well be seen as essential for maintaining or improving our quality of life.

[2] In a programme designed to reduce what would appear to be undesirable housing densities, for example, studies of territorality show that the cultural perceptions of space by different ethnic groups may vary greatly: Southern Italians and Arabs, for instance, appear to feel happy at high densities in a way that Northern Europeans would not. In New Zealand there has been very little, if any, research into the space perception differences between Pakehas, Maoris and other Polynesian groups. Perceptions of noise and of visual intrusion - by urban freeways for instance, vary significantly according to socio-economic groups and psychological "types" : for example, a research group in South Wales sought to measure the impact of an elevated freeway in an industrial town and found that perceptions of it were weak, or even favourable because existing environmental standards were already so low.

Social Indicator Measurement

Assuming the problems so far mentioned can be overcome, little progress can be made in helping society to meet the challenges of social change and improving well-being if researchers and policy-makers have to rely on scant, inappropriate and poor quality data. It is essential that a wide range of statistics be available and that this data be appropriate to the problems to be solved. In respect to this need, discussion on the following pages covers general measurement problems in relation to social phenomena.

Possibly the most critical area of measurement has to do with "internal validity." This refers to the extent of correspondence between a social science concept and its operational definition.

In the pursuit of greater accuracy, there often develops a disparity between a social concept as theoretically formulated and the operational definition by which it is empirically measured. Three significant problems arise from this situation, i) fractional measurement ii) indirect measurement and iii) formalistic - aggregative measurement of collective attributes. Each will be discussed here in turn.[3]

i) Erroneous accounting and hence misbased strategies in social planning becomes likely when it is assumed that a concept is measured in its entirety, when in fact, only a fraction of it is measured - an important consideration when multi-dimensional concepts are measured by one statistic. As a general rule "any measurement of a social science concept that relies on a single indicator should be viewed as dubious" (Etzioni and Lehman 1969 : 48). While simply adding more indicators is of little value if they measure the same dimension, drawing on two or more indicators of different dimensions provides at least partial insurance against fractional measurement. The combination of indicators to form an index can also be misleading since in the pursuit of a single score the internal variation among the dimensions

[3] See Etzioni and Lehman (1969) and Lehman (1971) for a fuller discussion of measurement issues.

that are covered by the index will be ignored.

Another aspect of fractional measurement is that all too often dimensions of a qualitative nature are ignored more frequently than quantitative dimensions. The tendency to give preference to a quantitative dimension increases when there is for example, political pressure for a project to show immediate and tangible results. In such situations, quantitative dimensions are focused on, since they are frequently more "visible" and lend themselves more easily to direct and rapid measurement. "Such a procedure is often less costly in terms of time, effort and resources but may be more costly in its broader implications, notably in its misleading effects on policy." (Etzioni and Lehman 1969 : 49)

Distortions may also arise when measurement tends to pick out means of achieving a policy objective rather than the components of the goal itself. The measurement of means involves the measurement of the human and non-human resources which are applied to achieve the goal as well as the activities geared to acquisition and allocation of resources. Goals in contrast are less tangible, that is, they are not part of the social structure but are desired states of affairs which the society attempts to realise. Goals therefore are intended outputs.

The temptation to substitute the measurement of means for the measurement of goals increases the more intangible the goals are, so that the number of doctors, police and church goers tends to substitute for community health, safety and religious salvation. This problem is similar to that of qualitative measurement though if anything, more difficult since the measurement of goals implies measuring future states of affairs.

"Concept reduction" is another related problem. This occurs when in attempting to avoid fractional measurement, the researcher defines the social concept as only that which is measured by the operational definition - in the way that the I.Q. score was assumed to represent "intelligence". To do this is a questionable procedure

since there is no necessary complete correlation between the operational definition and the concept with its established content and institutionalised technical and theoretical formulations. The short comings of the I.Q. score technique illustrates an extreme example of this problem.

> At least two general rules for avoiding concept - reduction can be suggested. First ... operational definitions should adequately cover as many different dimensions of a concept as possible. Second, if fractional measurement is inevitable, the reader or client should be appraised of the extent of incongruity between the concept and operational definition
> (Etzioni and Lehman 1969 : 54)

ii) A major cause of indirect measurement is that so many social science concepts and phenomena are measured by secondary data, that is, they use data originally collected for purposes other than the study at hand.

The problems that plague fractional measurement are therefore made worse when measurement is also indirect. Not only is the full range of dimensions ordinarily not covered in this way, but often those that are covered are only fractionally measured. The basic dilemma is that so much of our existing data that is available frequently does not permit adequate coverage of any one of the essential dimensions of the concept. Even when several indicators are available on a concept it may be difficult to combine them into a single index because frequently various measures are not comparable.

iii) Two major problems exist with the measurement of collective attributes. The first of the pitfalls is when the measurement of formal units is substituted for the measurement of real ones. The methodological problems of this are commonly associated with the "ecological fallacy", that is of attributing aggregate characteristics of areas to individuals or groups living in them.

The second pitfall is when aggregated data are used to measure a collective property for which a global measure would be more appropriate.[4] Global dimensions very often tend to be qualitative terms and thus lend themselves less directly to statistical manipulation. As a consequence aggregated data again is used to substitute for qualitative data. Because of the basic referents of aggregated data are more concrete, the meaning of such statistics seem more immediately evident, therefore more useful. The problem is that if global data are ignored, the very components of a social phenomena that need to be identified to effect a desirable change may go unrecognised.

Another measurement problem that should be mentioned here is the one of aggregation. Aggregation can be particularly useful and is compatible with the use of the same data in disaggregated form. The trouble is that the weights needed for aggregative indexes of social indicators are not available as a general rule. For example, there is at present no way we can compare an improvement in health to decreases in social mobility.

Even where aggregation is possible, it is of the utmost importance that aggregation should not be attempted over too broad a range of phenomena, that is, indexes must be conceptually homogenous. What is needed (and social theorists will tell us we are far from this stage at present - Sheldon and Freeman 1970 : 102) is a set of statistical categories that have the following properties:

> 1. Each category is conceptually homogenous, so that all phenomena in it are comparable and can thus be aggregated or represented by a single index.

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[4] Aggregated data here refers to data based on statistical manipulation of attributes of the members or of attributes of their relationships. Global measures are data characterising the collectivity itself, apart from its members. Thus an education system may be identified by the number of Ph.D. graduates or whether it is centralised or decentralized.

2) The set of categories must be mutually exhaustive so that together they cover the whole problem.

3) The categories must be mutually exclusive so that they do not overlap each other and lead to double-counting or over weighing of certain aspects of a programme.

While it is recognised that not all problems of objective measurement have been covered here, the basic requirements of valid and reliable social indicators have been mentioned.

Though the inadequacies of measurement techniques are daunting enough, Hagerstrand (1971) has summarised the equally inadequate nature of much of our actual statistical data. Statistics frequently lie in a vacuum between national sectoral planning in economic terms on the one hand and local planning in a physical tradition on the other hand. There is no intermediary set of data. These statistical information systems are characterised by: 1) not being the outcome of overall comprehensive planning. They are the result of a historical development step by step generated by scattered needs of the past; 2) The data is therefore collected on the basis of various claims of many ad hoc bodies with their own concepts and operational definitions. 3) Because traditionally data generation has been linked to the allocating activities of governments, the data content of national censuses is mostly highly aggregated and has a conceptual structure more derived from book-keeping, than from a scientific understanding of socio-economic processes. 4) Data is based on static structural cross-sections. Therefore data on flows and linkages is a very weak component. 5) The censuses have serious short comings in their limited possibilities of spatial disaggregations and their insufficient amount of data on inter-local and inter-regional flows. 6) Since statistical information and map formation by tradition are believed to belong to entirely unrelated

conceptual realms, it has come to be very difficult to connect data from the two systems into synoptic pictures of spatial variations. 7) Many sectorial statistics are broken down regionally, but they are too often based on the special districts of the agency in question which do not necessarily coincide with the districts of other agencies. Therefore cross-sectional regional data is difficult to find.

Hagerstand's conclusion about this state of affairs is that

> there is hardly any doubt that very much could be gained in economy and efficiency if a considerable degree of basic data standardisation were to be introduced; barriers between families of information flows could be broken down; time-lags reduced; and the spatial dimensions given at least as much attention as the time dimension
> (Hagerstand 1971 : VIII)

Spatial Aspects of Social Indicator Measurement

With regard to spatial aspects of planning and regional policies New Zealand governments have been markedly equivocal and ambiguous in the specification of their objectives. Two reasons can be given for this ambiguity. First is the possibility of adverse political consequences which may result from being too specific about a statement of objectives. And second, is the immense problems, both theoretical and technical, that must be faced in ~~educating~~ elucidating a workable policy.

Poole (1970 : 312) has identified three subsets that are part of the necessary, though very difficult, decision set that forms the basis of any spatial policy:

1. The operationalisation of the "welfare" concept
2. The width of spatial welfare disparities
3. The choice of spatial units

Operationalisation of the Welfare Concept:

The operationalisation of the welfare concept involves a

decision on what "welfare" means and what are to be the operational definitions of this welfare concept. David Harvey (1971 : 287) suggests a useful approach to the operationalisation of the welfare concept. He advocates a weighing of individual's intensity of feeling towards various values. In other words, creating a ranking of values that in effect states individuals trade-off preferences. These individual scores can then be used to determine an aggregated welfare function. Immediately however, one comes up against the situation where not every group or individual in society has the same preference ranking over a set of alternatives. This situation could lead to one or other of the following situations:-

a) bargaining between two groups which have completely different utility functions

b) groups not being able to perceive the same alternative choices or potential outcome which, because each group has its own action space, conflict may arise as neither group can see or understand the action space as perceived by the other, and

c) groups may not be able to agree on the 'rules of the game', therefore the heterogeneity in social and cultural values may make it impossible for groups to get in a 'valid' negotiating position.

Importantly, these 'outcomes' may vary spatially and this may have implications for operationalising a welfare concept. For example, a situation might arise where allocation of resources for improving the quality of life would have to accommodate spatially variable value clusters of various social groups. The existence of spatially diverse social value clusters originates from the various cognitive experiences of groups and individuals in diverse environments. Values and perceptual processes will to a large extent be determined by one's environmental experiences. Under

such conditions it is tenable to argue that particular sub-populations within society will develop to a certain degree cognitive skills in response to various environmental types. It is quite plausible, therefore, that researchers may find values common to individuals from rural or densly populated metropolitan environments and different perceptions from immigrants, Maoris, Pakehas, Niueans, labourers, professionals, males and females of the same rural or urban environments. Thus a West Coaster may have a different preference ranking from Aucklanders, Maori farmers from Maori city dwellers and shop assistants from school teachers.

Because of this situation, any welfare function or quality of life concept spatially must involve cross-cultural and cross-regional comparisons. It must also recognise that "the decisions made about the social system are 'Pareto non-comparable'. Accordingly it is very difficult to compare the value of say, open space from one part of a city system to another. Different groups will exhibit different elasticities with respect to their use of it and some groups may have no use for it at all. Consequently, the provision of, for example, large parks for inner city dwellers who may not (perhaps) be technically equipped or culturally motivated to make use of them will do absolutely nothing for them from the point of view of improving their social well-being (Harvey 1971 : 291). Therefore being practical and assuming at least some degree of value consensus does not always result in the best allocation of resources, nor does it necessarily solve all problems. Another example of this is the provision of housing for those without any accommodation or those living in substandard dwellings; low-income groups often identify very closely with their environment, as do elderly people, therefore the psychological cost of moving is to them far greater than it is to the more mobile middle classes. Consequently through rehousing projects, well meaning but culturally insensitive middle-class planners can inflict heavy costs upon lower socio-economic and

elderly groups, particularly if the psychological cost is aggravated by the inability to accommodate ethnic differences as occurred in the government's state housing pepper potting schemes.

Basically a distribution or redistribution of welfare facilities can be brought about by changes in allocations of costs and benefits to different groups or regions in the social system and by changes in accessibility and proximity. The question arises therefore,

> Is there some spatial structure or set of structures which will maximise equity and efficiency in the spatial system or at least maximise our ability to control the powerful hidden mechanisms which bring about current and future distributions of goods and services? This is both a nomative and positive question for it suggests that we can both explain current distributional effects by looking at existing spatial structures and devise spatial structures to achieve a given distributional goal" (Harvey 1971 : 292)

- a view-point complementary to Dunn's social learning metaphor. Typically, any spatial form is not infinitely adaptable nor are the social demands on it easily reconciled with each other. The actual boundaries of the spatial system is necessarily a compromise between a whole set of conflicting and competing demands. When a decision is made about a spatial form, we are presumably trying to reach an efficient, yet just, compromise. Since government does not possess even a rudimentary idea of utility scales held by the population, how should it proceed in forming a spatial structure that appeals to the nation as a whole? One answer is to bow to voting pressure and pressure groups, though the nature of political power in the social system is such that disparities of all types will only be accentuated. Another way is to distribute socially desirable goods equally in all dimensions, though such an extreme socialist position is both politically and economically prohibitive.

A compromise between these two points of view is that proposed

by Tiebout (1956 : 418), of a fragmented community structure in which

> the consumer voter may be viewed as picking that community which best satisfies his preference patterns for public goods ... The greater the number of communities and the greater the variance among them (except for essential goods and services), the closer the consumer will come to fully realising his preference position

The derivation of an "ideal" spatial structure, however, still does not solve the creation of an acceptable welfare function. Devising, let alone operationalising a welfare concept is, as the previous discussions show, a particularly difficult problem. And it is made even more complicated when it is realised that because of their very nature, various public and private goods have to be provided at different spatial scales. The problem therefore, is to identify a form of organisation which is flexible enough to deal with growth, different goods and services, changes in utility scales as well as satisfying an agreed upon welfare function.

Overcoming this set of problems is closely associated with the second of our decision-sets - what width of spatial welfare disparities are acceptable?

The Width of Spatial Welfare Disparities:

The width of spatial variations and disparities in a system is the result of a cluster of factors that go to make up a particular distribution process. This cluster of factors will usually include; what type of distributive mechanism is operative (public or private, welfare or efficiency), what the demands are perceived to be in various regions or spatial units, the economics of location and available financial resources.

Basically the problem of spatial disparities narrows down to an allocation problem, and it is the criteria used for allocation along with the nature of the good to be distributed, that will have

the most impact on the distribution pattern. The distribution of goods that are associated with a rise in the quality of life (including both their 'good' and 'bad' externalities) are closely involved with two spatial concepts, proximity and accessibility. To understand or control spatial variations, therefore, first involves examining distribution criteria - equity of distribution or efficiency of distribution.

Government departments and local bodies operate under financial constraints. As such they must initially be concerned with efficient allocation of resources so as to maximise resource utilisation. In a spatial sense this usually means locating at the point of lowest total cost or effort value. Symons (1971 :54) asks whether a point in space has attributes of equity as well as efficiency i.e. : whether a spatial relationship can be determined which relates the welfare requirement of equity with the resource constraints which require efficiency.

Locational efficiency can be conceptualised in Pareto - optimal terms.[5] Since spatial separation between the consumer and the services provided by a facility of a location represents the degree to which the friction of distance (i.e. : effort to overcome space) must be overcome, Pareto - optimality is achieved to the extent that the spatial separation between all consumers and all facility locations can be reduced. This argument implicitly assumes a closed static system in which restrictive assumptions of human behaviour operate so as to enable calculation of a measure of the total effort required to overcome distance. Such static models have a limited application. They can not accommodate, for example, changes in spatial demand, as would occur with differential growth rates between assumed and actual predictions. Another difficulty is that this model assumes a population of homogenity and rationality. We have already seen that the assumption of homogenous values and preferences is particularly dubious. People do not have identical indifference curves. Nor do

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[5] The discussion in the next three paragraphs is based on Symons (1971 : 55-58).

they operate under identical mental maps of space, so one cannot assume "rationality". Add to this the influence of information field differentials, income differences, varying life-styles, differing abilities to absorb and utilise knowledge with respect to decision-making, and the constraints of the model become serious.

Two final constraints should also be noted. First the time cost of travel is typically not considered in the model. Secondly, individuals are given no choice among different facilites. They are assigned to the closest facility location, irrespective of quality differences in facilities as frequently occurs between schools, parks and libraries. Nor are multi-purpose trips considered.

Because of these difficulties

> location decisions made with the location-allocation model of efficiency will to the extent that they reflect assumptions that conflict with reality, fail to achieve the desired goal of minimising the total social disutility inherent in the provision of a good or service
> (Symons 1971 : 38)

In normal government and local body decision-making however, such a restrictive set of allocation criteria is rarely the principle or only determinant of a public facility location. Typically several factors are involved not the least of which are political considerations, administrative organisation, existing facility locations provided by private means, and any special claims seen as justified for any particular spatial unit. But this extension of location criteria does not explicitly constitute an attempt to use equity as a distribution criterion.

It has become increasingly apparent that the social and economic phenomena that influence the quality of life have an important spatial component, and that their incidence can be subject to areal variations. This has prompted various writers, notably Harvey (1972, 1973) and Smith (1972, 1973) to develop the idea of "territorial social justice". Many individuals, through their life experiences, identify with their physical environment which, when internalised, becomes part of

their sense of psychological well-being, as does their religious, racial, ethnic and social group and primary group identification. Living in a particular place gives many people a sense of security and feelings of "belonging". In this way, geographical location is a characteristic of people in the same way as colour and religion are. If it can be argued that a just society does not discriminate on the basis of race or religion, then it can equally be argued in the appropriate context that a society should not discriminate on the basis of spatial location. While it is recognised that financial restraints are always operating on goods and service location, there should be at least some attempt to reconcile this with the idea of territorial social justice. Obviously blanket coverage of any desirable social product is impossible, and probably undesirable since it is essential to preserve a degree of spatial variety within New Zealand. But under provision of goods and services essential to an acceptable standard of living and quality of life is a point of real concern.

Harvey (1972) in his discussion of social justice in a spatial context starts with the construction of "a just distribution justly arrived at" which involves two important elements : "a just distribution" (i. e. a state or condition) and "justly arriving at a distribution" (i. e. a process). The question of what comprises a just spatial distribution is a complex one involving what it is that justifies an individual or group making claims on the product of a society and the moral judgements on the relative merits of alternative criteria of need, contribution to the national good, inherited rights, merit and so on.

This set of criteria is then translated into a just territorial distribution that would meet the following requirements:

a) The needs of the people of each territory would be met
b) Resources are so allocated as to maximise inter-territorial multiplier effects thus rewarding contribution to the national good, and,

c) Extra resources are allocated to help overcome special difficulties stemming from the physical and social environment which can be considered as cases of merit.

Harvey also argues that in such a just distribution justly arrived at the prospects of the least advantaged territory should be as great as possible.

As demand and costs were the principle factors in the efficiency model in determining location, Harvey's term "need" is central to his equity location criteria. He suggests four techniques for measuring this need: market demand, latent demand measured by relative deprivation, potential demand based on inherited factors (e.g. population growth rates), and finally, consultation with experts. This approach would demand a far more sophisticated data set to reach a realistic measure of demand or 'need' than the efficiency model requires. Consequently we are reminded once again that to devise a system of measuring and solving socio-economic problems requires a research and planning methodology of greater scope, quality and flexibility than is used for present decision-making.

Putting aside for the moment the political considerations that usually accompany a 'normal' efficiency distribution as carried out by local bodies and governments, there are several facets of the allocation - location model that can be modified to accommodate some of Harvey's "spatial justice" requirements. Accessibility to employment, resources, services and goods that improve the quality of life can be obtained only at a price, and this price is generally equated with the cost of overcoming distance, of using time, and so on. It is by no means easy, however, to measure such a cost. The social price which people are forced to pay for access to certain facilities is a very complicated thing which can vary from the simple direct cost of transport to the emotional and psychological price imposed upon an individual who has intense resistence to doing

something ("the kind of price which may be extorted, for example, from someone who has to take a means test to qualify for welfare" Harvey 1971 : 272).

While the measurement of costs in this sense is not currently practical because of the conceptual and measurement difficulties involved, Symons does offer one means of relaxing the unrealistic linear transportation cost function typically assumed in efficiency location decisions. The modification would reflect the non-linearity in transport costs. For example the value lost to a burning structure is a distinctly non-linear function of the elapsed time from the beginning of a fire, as illustrated in Figure 3. Using this type of distance-decay function, in this case for fire services, could be a valuable tool in locating services and facilities more appropriately.

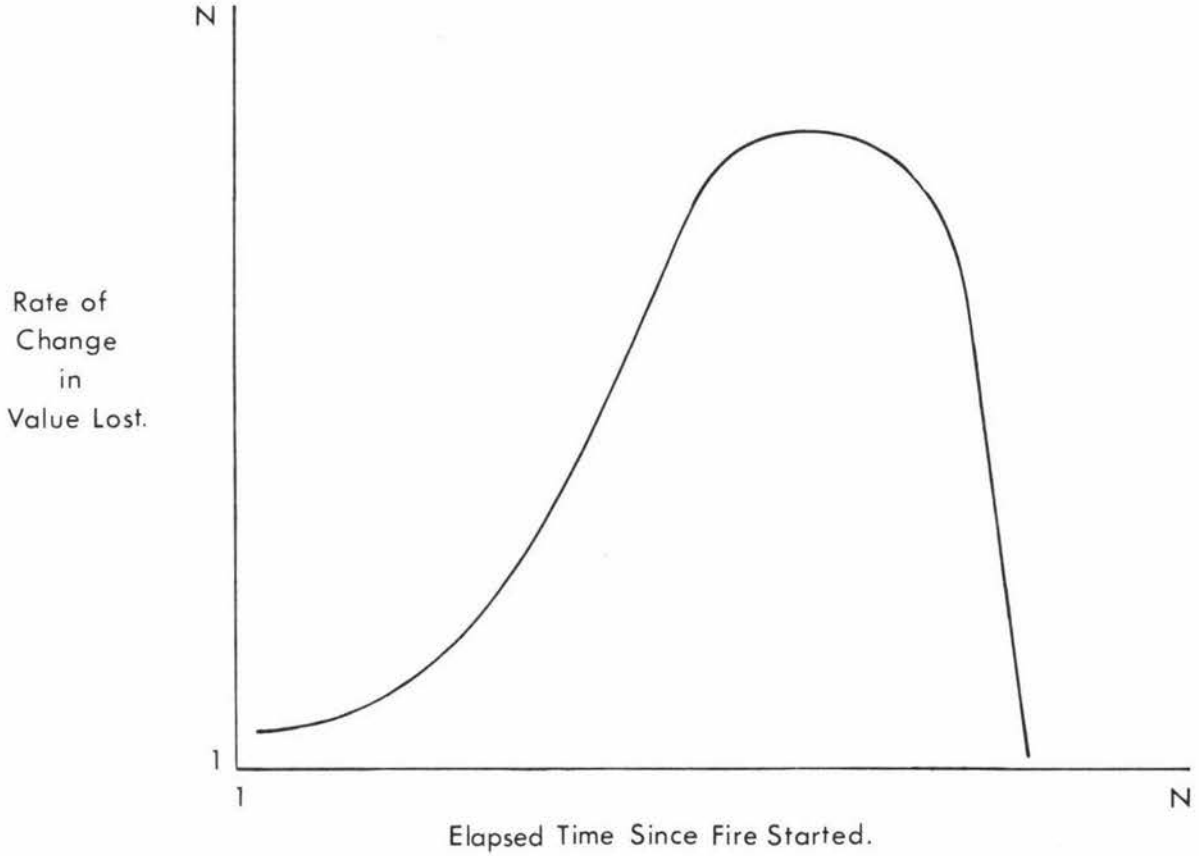
Symons further modifies the efficiency model by calculating spatial inequalities by an "accessibility measure". This would include two theoretical components not found in the efficiency models : a distance-decay function and a non-captive population assumption. Symons conceptualises accessibility as

> a measure of spatial opportunities that are inherent in any location - the population living at nodes which are high in accessibility relative to other nodes spend proportionately less of their income for transportation of goods and services than the population at the low accessibility nodes. In other words, for a fixed transportation budget, people living at nodes of high accessibility have greater choice in acquiring goods and services (Symons 1971 : 63)

The calculation of the degree of spatial disparities, in this case a measure of each node's spatial proximity, can be measured in various ways.

> A mean and standard deviation may be calculated from the vector accessibilities

FIGURE 3. EXAMPLE OF A NON-LINEAR DISTANCE-DECAY FUNCTION.



Source: Symons. 1971. 61.

> that result from a particular set of facility locations. Other things being equal, a higher mean implies a greater quantity of spatial opportunity for each node, while a smaller standard deviation implies that the disparity between the nodes of highest accessibility and nodes of lowest accessibility is less
> (Symons 1971 : 63)

A second measure is the percent of population below some accessibility value, preferably a value based on a consideration of the service or good in question and the need and preferences for it, rather than say an arbitary value, such as below the mean. By evaluating sets of facility locations by these measures there can be distinguished

> sets of locations with properties of high mean, low standard deviations and low proportion of people below some specified level of accessibility (a level which might be considered a minimum standard) (that) would be spatially more equitable than sets of locations which did not have these properties
> (Symons 1971 : 64)

It is a frequent argument of government agencies that while it is desirable to locate facilities equally, providing relatively lower level of services in a location with low accessibility is not spatially discriminatory and therefore justified if few people live in this area. Another way of looking at the accessibility surface, then, is to look at the degree of accessibility per person at any particular point or area, but this leads to another theoretical difficulty. Using this approach assumes that each person in a spatial unit is allocated an equal proportion of the opportunities at that particular place - hence the more people on a particular node, the less will be each person's share of the available opportunities. By this reasoning highly accessible C.B.D. areas with high population densities would not have as high a per capita accessibility measure ~~than~~ as small towns or even rural areas.

The inherent physical characteristics of a node or area of space is not, because of these arguments, a completely satisfactory

basis to evaluate accessibility surfaces. Two important details that also have to be assessed are mentioned by Harvey (1972 :89) in his requirements for a just distribution. These are a) distribution can be seen in terms of a measure of "income" and b) he notes the importance of scale (i. e. individuals, organisations or territories etc) in determining whether a distribution is just. That is, justly defined regions for one purpose at one scale will not necessarily be just at another scale.

Symons (1971 : 64-65) summarises the argument as follows:

> We might recognise the ecological fallacy and argue ... that we shall cautiously assume that territorial justice implies individual justice. This permits us some degree of areal aggregation of individuals. More importantly, however, the consideration of differences in real income permits us to distinguish between the relative opportunities received by those who live in areas of low accessibility. For example, many affluent people choose to live in areas of low accessibility, nevertheless their ability to acquire opportunities is high. On the other hand, other people live in areas of relatively high accessibility, yet their ability to receive the opportunities inherent in their spatial location is low. In this sense, space is a necessary but not sufficient variable in the equity surface of a metropolitan area. Consideration must be given to the heterogeneity of the population's ability to acquire the opportunities that their spatial location supplies"

To recognise this in a distribution model and hence in laying down specifications for allowable spatial variations, a measure of relative deprivation describing the differences between the inherent spatial opportunities of an area and the ability of the population to acquire or utilise these opportunities should be used.

A final factor to be recognised in measuring spatial disparities is the influence of externalities. The spatial fields of externality effects will vary in intensity and extent from the influence of a derelict property on the values of adjacent property and aesthetic quality of a neighbourhood to the extensive field of the impact of

the noise from an international airport. These externality fields can be positive and/or negative. For example negative effects of airport noise can be balanced against mobility and employment opportunities. As Harvey states (1971 : 274)

> we know very little about the shape and form of these externality fields but there can be no doubt that their location has a very real and powerful effect upon "income" and the quality of life. Changes in these externality fields can be a major factor in the redistribution of welfare, income or quality of life variables, and hence, a potential source of spatial inequality.

There is thus a consensus that the degree of spatial disparities is to a large extent determined by accessibility, proximity, and externalities.[6]

The Choice of Spatial Units

Once policy-makers have reached agreement on both the welfare function to be operationalised and criteria for acceptable spatial variations, they must face the problem of defining appropriate spatial units and the scale of these units. The range of alternatives from which the choice of spatial units must be made is very wide, for there is an extremely broad continuum of aggregation levels at which the spatial distribution of welfare could be considered, from the micro-

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[6] Symons (1971 : 66) argues that if any degree of spatial equality is to be achieved, spatial variations based only on the economics of overcoming space are permissable. Any further spatial deviation from this limitation should be viewed as discriminatory and therefore, as unjust. In other words, "the maximum inequality that a government might permit would be due to the different costs required to overcome space". Space, however is certainly not the only impediment to the distribution of goods or services. Examples might include unjust organisational structures, discriminatory practices and transport networks.

level of the individual household, the variation between which is essentially spatial since each household occupies a unique position, to high macro-levels such as regional authority boundaries. Further, any one policy objective may be formulated with reference to more than one aggregation level. Not only might there be a hierarchy of spatial units, but the type of objective aimed for at any one level might be fundamentally different from the type designated for another level. Thus it might be intended to reduce disparities between large regions but to accentuate the variation between sub-regions within such a large region by focusing upon a specified number of nodes.

In addition, a difference of objectives between different levels of aggregations is made likely by the fact that the smaller the region, the greater the degree of spatial welfare disparities that may be expected since the aggregation process itself filters out variation.

The decision on defining appropriate spatial units upon which to base a policy decision must take into account the specific nature of the social phenomena that are relevant, the degree of spatial disparities to be tolerated, the population that the policy is designed at, the characteristics of the good or service to be distributed and the financial limitations within which the policy is operating. Defining spatial units, however, implies the ability to specify boundaries. Boundaries must be appropriate to whatever social phenomena is being looked at, since to do otherwise is to run the risk of applying policy measures to the wrong populations or applying them in an inappropriate way. A boundary "

> is not (just) conceived as an enveloping membrane that defines some sort of physical limit to the system. Instead, the boundary is conceived as a behavioural design. It is a pattern that constrains the behaviour of subsystem components to action.
> It is the boundary or organisation design that embodies the meaning or purpose of

> the system and organises lower order meanings or purposes in a manner consistent with its control
> (Dunn 1971 : 189-190)

Any attempt to specify precise boundaries over the spatial behaviour of any social phenomena is particularly difficult because of the prevalence of boundary overlapping.

> The problems of specification are multiplied. Not only is a given system more difficult to separate from other overlapping systems, it is by virtue of the overlapping and interdependence of components, more apt to represent a unique entity.
> (Dunn 1971 : 232)

Defining boundary conditions, therefore, requires the recognition of a) designing a boundary system consistent with the behaviour to be confronted b) designing a boundary set appropriate to the problem to be solved and c) recognising that the process of research by the social learning paradigm may frequently redefine boundary conditions in lieu of new knowledge, changing purposes and shifting paradigms.

Summary

This chapter has covered a range of issues that need to be faced if a social learning methodology is to be applied to problem-solving situations. Attention is now focused on the problems encountered in developing social indicators and on the application of social indicators in a spatial framework.

These problems are examined in Chapter 3, which outlines the procedure by which relevant social indicators are developed to monitor the spatial variations in the provision of community services and accommodation for the elderly.

CHAPTER 3

MONITORING THE SPATIAL DIMENSION OF TWO SELECTED SOCIAL PHENOMENA IN NEW ZEALAND

The methodology of geographic inquiry is central to the issues that have been discussed in this thesis so far. Geographers are coming to realise that their concern with such themes as man-environment relationships, location analysis and spatial differentiation can be more broadly conceived so as to include the study of social phenomena previously regarded as outside their range of competence or interest. (Smith 1972, 1973, Taaffe 1974, Peet 1972, Harvey 1971, 1972, 1973.) Geographers, therefore, like other social scientists, should welcome and encourage the development of social indicators and the expansion of social statistics, social monitoring and the testing of experimental hypotheses to help decide alternative social futures. Not only can such developments help researchers in broadening geography's field of concern by making relevant statistical, methodological and conceptual tools more readily available and applicable, but geographers can contribute towards this need for better understanding of social phenomena by offering expertise on the spatial perspectives of social phenomena. A greater understanding of spatial trends in New Zealand society will be a valuable contribution to the regional development debate (Hamer 1973, Armstrong 1973, McDonald 1969, 1972 and Johnston R J 1971, 1973), and provide much essential data for formulating both a regional development and a regional planning framework. With a wide range of useful social statistics and data on community preference and need patterns, it should be easier to make more realistic, useful and more flexible decisions as to the distribution and location of goods and services that contribute to improving New Zealanders' quality of life.

With these contributions in mind, this chapter demonstrates

how the development of social indicators may proceed and how they may be integrated into geographic inquiry.

Research Framework and Methodology

The empirical research section of this thesis is divided into two major parts. The first part examines requirements for establishing a framework within which a monitoring procedure could be carried out. To this end, the first step for the identification of appropriate data was the development of a 'General Housing Schema' for New Zealand. This schema specified variables that were critical for any study of housing requirements. From this a housing schema that identified variables essential for the study of elderly housing requirements was constructed.

On completion of these schemas it was then possible to postulate a set of hypotheses for investigation that would formalise a geographic approach to monitoring the social situations selected for this study. Once this stage was reached, data identified from the 'Elderly Housing Schema' as being necessary for the investigation of each hypothesis was collected.

Ideally at this stage, data would be generated for the specific purpose at hand - the study of the provision of community services and accommodation for the elderly. Thus in operationalising a selected study this would normally be a matter of setting in motion the gathering of necessary data by such means as questionnaire surveys.

Since time and resources were limited however, reliance was put on data already generated for other purposes, namely the Department of Health (1972a) Survey. To supplement this data source a survey was designed and carried out to gather data on the provision of elderly accommodation by Local Authorities.

The data eventually used in the monitoring procedure was selected from the Department of Health Survey according to two criteria. The first criterion was that the data correspond directly with the requirements specified in the Elderly Housing

Schema. This selection criterion did not apply to the Local Authority Survey since it was constructed from the Elderly Housing Schema. The second criterion was that data be available in an appropriate spatial frame. Normally this would entail national coverage using small scale spatial units. But because the Department of Health is not concerned with analysing spatial variations, the sample was not spatially stratified, hence there are greatly differing sample sizes for each Hospital Board. This has resulted in a spatially inefficient frame with some regions having samples too small to be useful. As a consequence only those Hospital Board Regions with samples greater than 30 were selected for study in this thesis.[1] (See Figure 4.)

The random sample, selected from Social Welfare Department Records and Psychiatric Hospital Records representing 99% of the total New Zealand population 65 years and over, was however, stratified by age, sex and marital status. To ensure adequate representation for each age group by sex and marital status different sampling fractions were used to select each age cohort. To combine the age, sex and marital status strata for national estimates, the Department of Health used a set of raising factors and strata weights. But since this data would be uninterpretable when reaggregated on a regional basis by Hospital Boards for the purpose of examining spatial variations, the unraised and

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[1] The Department of Health Survey located each questionnaire respondent by Hospital Board Regions and Area Types. The regional samples used in this study are as follows:-

Out of a total sample of 1,277 individuals, the Hospital Board sample populations were: Northland 43; Auckland 368, Waikato 82, Tauranga 33, Hawkes Bay 51, Taranaki 43, Wanganui 40, Palmerston North 65, Wellington 169, Nelson 33, North Canterbury 168, South Canterbury 45, Otago 81 and Southland 55.

For the Area Types, out of a total sample of 1401, the sample populations were: C.B.D. 46, Transition Zone 67, Old Suburbs 452, Newer State built suburbs 97, Newer privately built suburbs 330, Towns 5,000 - 20,000 130, Towns 1,000 - 5,000 133 and Rural Areas 146.

FIGURE 4.a HOSPITAL BOARD REGIONS
NORTH ISLAND

Source: Department of Health. 1972c.

FIGURE 4.b HOSPITAL BOARD REGIONS
SOUTH ISLAND

Source: Department of Health. 1972c.

unweighted data is used by summing across the various strata. However the use of larger sampling fractions for smaller population groups whilst ensuring adequate representation would also, in unweighted combinations, lead to over representation of, for example, older age groups.

Due to the extreme difficulty of constructing a new, and spatial, stratification with appropriate weights for age, sex and marital status, the unweighted sample data were retained for use in this thesis.

An important consideration is that the over representation of some groups (in comparison to the proportion of the population they represent) is consistent from region to region and will not therefore, affect relativity comparisons. It would, however, make statistical significance testing difficult to interpret, and since it is the intention here to demonstrate procedures for developing social indicators and their utility in a spatial monitoring exercise it is considered adequate and appropriate only to inspect the data for relative differences and trends in the levels of provision and demand between Hospital Board Regions and Area Types.

Once the spatial frame was finalised and adequate data gathered to investigate the hypotheses postulated from the Elderly Housing Schema, the monitoring procedure was carried out. This consisted of specifying the possible causes of spatial variations of each phenomenon, the stating of relevant hypotheses and then an analysis of the respective data sets. This involved a description of the trends and an explanation of the tentative suppositions relating to spatial variations of the phenomena under study. The thesis then closes with a presentation of conclusions and a discussion of selected implications about the development of social indicators and the monitoring procedure.

Developing the Social Indicators

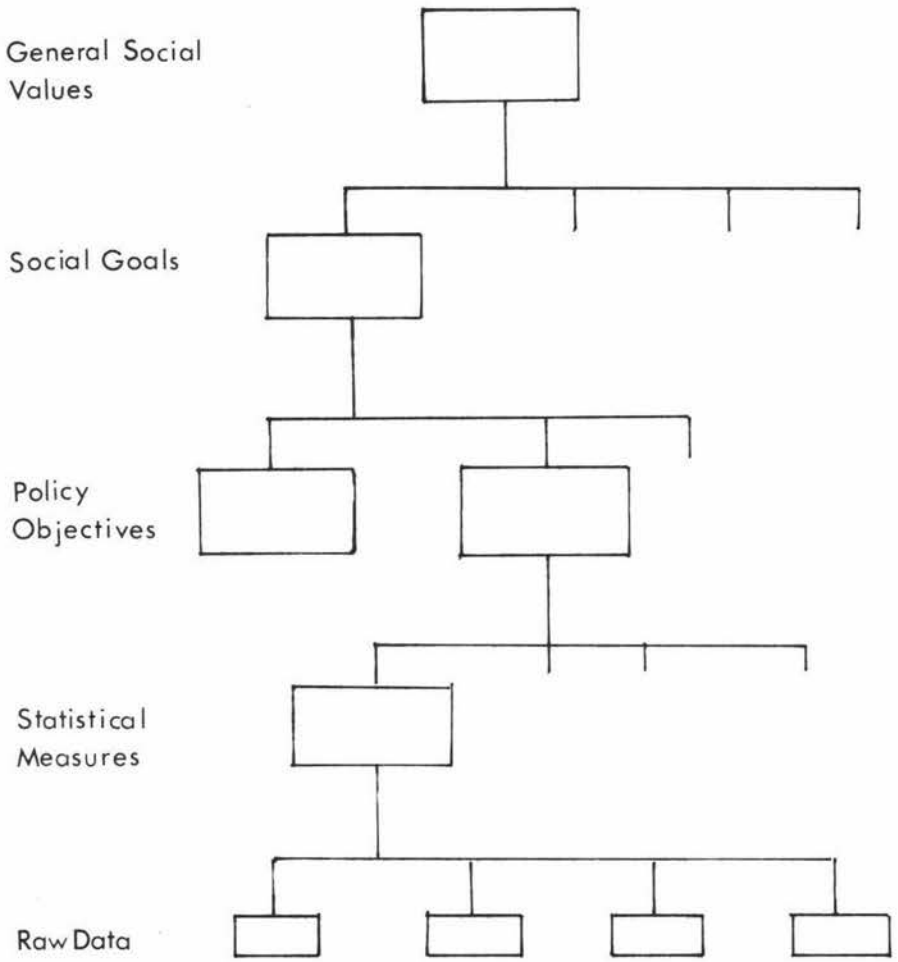
At a time when particular social groups such as age beneficaries are being hard pressed by inflation, issues like the provision of adequate housing for elderly people tend to become politically important. As a consequence, in the last few years many statements by politicians at local and national level have been made over the plight of many elderly people in their quest for accommodation that is suitable for their needs. In response to this pressure many local bodies and national government agencies have either instigated building programmes specifically for elderly accommodation or have started on plans for providing for such needs. To successfully monitor this aspect of the New Zealand social system, to assess the extent of elderly accommodation needs and to be able to successfully fulfil that demand requires, first of all, the generation of valid data.

In order to determine whether the current state of elderly accommodation is adequate or inadequate, it is essential that some standards be established against which the existing state can be measured. As mentioned in a previous chapter, this can best be achieved by following a procedure similar to that illustrated in Figure 5.

A general housing schema was first devised to identify those variables that are of essential concern if adequate solutions are to be devised. By documenting these variables for housing in general it was found to be easier to fit the needs of the elderly into a more realistic perspective i. e. : elderly people being just one group within our community that has identifiable housing requirements.

The following general housing schema is based on the N. D. C. Social Council objective deemed to be relevant for any planning of housing in this country.

FIGURE 5. DATA COLLECTION PROCEDURE.



Source: Barr & Shields. 1973. 21.

GENERAL HOUSING SCHEMA

"To Share Resources Fairly"

SOCIAL GOAL — That each person has the opportunity to own and enjoy property. (Social Council Obj. D. No. ii)

POLICY OBJECTIVES

A. The Opportunity to own a house and property (or rent the same).

B. The Ability to enjoy a house and property.

C. To be able to live in an enjoyable and appropriate neighbourhood environment.

STATISTICAL MEASURES

A.

1. The opportunity to own or rent a house and property.

   a) types and numbers of existing houses
   b) the demand for existing housing types
   c) the number and sizes of existing prepared sections
   d) the demand for various section sizes
   e) the number of persons without personally owned accommodation who desire it.
   f) the number of persons without rented accommodation who desire it
   g) the availability of labour and materials to fulfil demand requirements (including capital and land).

2. The availability of housing finance which will depend upon:

   a) existing restrictions on available finance
   b) reserves of available finance in relation to current costs and demand
   c) financial assistance required by various income, ethnic and other sub-groups defined as having less than "normal" access to housing resources: for example solo parents, Island immigrants, assisted immigrants, low income earners, large families etc.

B. The Ability to Enjoy Property

1. The ability to obtain accommodation appropriate to the values and life styles of those wanting accommodation which will depend on the availability of:

a) property for purchase (of various sizes)
b) accommodation for purchase or rent
c) individual house and section
d) town houses
e) single flats
f) multiple unit flats
g) communes
h) pensioner housing etc

2. The ability to obtain accommodation appropriate to individual and family life-stage and incomes i. e.: the availability of:

a) low income housing
b) middle and high cost housing
c) accommodation for single persons
d) accommodation for married couples
e) accommodation for family groups
f) accommodation for extended families
g) accommodation for pensioners and other elderly persons

3. The availability of essential appliances and services to run a household:

a) electricity, water, sewerage etc
b) telephone, milk, mail services etc
c) water and home heating, cooking and washing facilities etc

C. An Appropriate and Enjoyable Neighbourhood Environment

1. The availability of amenities appropriate to the social and demographic structure of the neighbourhood community:

a) amenities for teenagers - e.g.: social centres, entertainment, workshops
b) amenities for children e.g.: parks and play grounds
c) amenities for working parents e.g.: play centres, kindergartens, creches
d) amenities for ethnic groups, e.g.: social services, churches, community centres
e) amenities for elderly persons, e.g.: meals on wheels, laundry on wheels, public transport access

2. Accessibility of facilities for normal enjoyment of leisure and individual and family demands:

a) shopping facilities
b) entertainment facilities
c) landscaping and parks

d) essential services e.g.: telephones, drainage mail boxes
e) sporting facilities
f) cultural facilities
g) community centres

The advantage of the above schema is that the relationships between the social goal and the variables to be measured are explicitly stated. In this way extraneous and irrelevant data collection is kept to a minimum and complementarity of data is kept at a maximum. This procedure facilitates attempts to devise policies that in their final form are geared not only to actual purposes it was designed for (the social values, social goals and policy objectives) but that it is appropriate in its application to the target group it was designed for.

While this schema was designed with the aid of social workers and local body administrators, it, and the following schema were not designed in co-operation with the target group themselves. Fortunately for the purposes of this thesis this short coming is not serious due to the relatively uncontroversial nature of the subject. Social workers and local authority representatives can with reasonable accuracy assess those variables that are important in considering the elderly accommodation problem. In more controversial areas of social concern however, such as population control or attempts to overcome cultural ethnocentrism in some of our social institutions, devising a working policy for the solution, or even the identification, of such problems would necessitate direct consultation of all groups concerned.

This is a particularly important point, and even in an uncontroversial field, at least in terms of defining the problem, local bodies and government departments up to the present time have only made sporadic attempts to understand accommodation needs as perceived by the elderly themselves. Rather, the degree to which elderly accommodation is defined as satisfactory or otherwise is for practical purposes, determined by the size of official

local body waiting lists for pensioner flats.

This procedure for assessing elderly accommodation needs at best cannot be adequate for at least two reasons. First, not all elderly people who are in need of the accommodation offered by local authorities will be on official waiting lists. Second, the accommodation needs of the elderly cannot be limited to those who desire pensioner flats. Furthermore, the adequacy of the housing environment for any social group must be seen in the context of adequate provision of supporting community services. As government experience in state housing projects in the past have shown, the provision of community services and cultural facilities are essential to community and individual well-being. (Commission of Inquiry: 1971).

With these points in mind, the housing schema for elderly accommodation requirements has been devised within the same framework as the general housing schema. Using this schema a data set can be identified that would best measure the several dimensions of how adequate is the provision of elderly accommodation:

ELDERLY HOUSING SCHEMA

"To Share Resources Fairly"

Each elderly person should have the opportunity to own (or rent) and enjoy a house and property.

A.	B.	C.
The opportunity to own/rent a house and property.	The ability to enjoy a house and property.	To be able to live in an enjoyable and appropriate neighbourhood environment.

A. The Opportunity to Own or Rent a House and Property

1. The availability of elderly accommodation

a) existing accommodation stock

b) demand for elderly housing (types)
c) the number of elderly wanting their 'own' accommodation who have not at present got their own accommodation
d) housing and section costs
e) income of elderly seeking accommodation
f) rent structure of elderly accommodation
g) availability of mortgage finance for elderly
h) labour and material restrictions on building elderly accommodation
i) State Advances Corporation loan capacity for elderly accommodation
j) provision of elderly accommodation by local bodies

B. The Ability to Enjoy a Home and Property

1. The degree of satisfaction for existing housing stock or the existing preferences for another dwelling type:

a) pension flats
b) own your own flats
c) old people's homes
d) smaller houses and section
e) other accommodation near friends/relatives or needed community services
f) other types of accommodation

2. The degree to which existing accommodation provides essential home appliances:

a) dishwashing, clothes drying, cooking facilities etc

3. The degree to which accommodation provides for elderly physical handicapped:

a) lamps, rails, flat ground, telephones etc

4. The degree to which accommodation is structured to facilitate elderly social requirements:

a) small accommodation complexes
b) large accommodation complexes
c) dwelling design to facilitate social interaction
d) design to cater for individual privacy
e) designing units to give bed-ridden a view with a degree of human interest

C. To be Able to Live in an Enjoyable and Appropriate Neighbourhood Environment

1. Accessibility to transport facilities:

a) public bus transport
b) telephone and parking for taxis
c) parking for friends/relatives private cars

2. Accessibility to communication media

a) availability of a telephone, T.V., radio

3. Accessibility to elderly social centres and rest rooms

4. Accessibility to public and private community services for the aged:

a) nursing
b) meals on wheels
c) laundry on wheels
d) home aids
e) occupational therapy
f) physiotherapy
g) psychotherapy
h) vision aid
i) hearing aid
j) dental therapy
k) chiropody

The availability of such a data set would allow a partial evaluation of the needs of the elderly. This does not mean of course that local bodies and government agencies would be obliged to meet all these demands and needs. Rather, given the nature of allocation procedures and the limitation of economic feasibility such a data set would allow a more realistic assessment of elderly accommodation than the reliance on official waiting lists could give.

In keeping with Dunn's social learning methodology, the next step involved the generation of the actual data necessary to carry out analysis of the problem. Although economic, administrative and architectural aspects of the housing schema are extremely important, this research exercise will concentrate on the availability of public and private community services, and appropriate accommodation units, for the elderly.

It is assumed the adequate availability of various community services and accommodation units has a positive relationship with the level of social well-being for elderly people. Therefore, areas in New Zealand which have a high degree of convergence between the provision and the demand for various facilities for elderly people represent areas where certain needs of the elderly are

being well catered for. That is, elderly people living in these areas will have a higher level of social well-being, within the narrow terms of this analysis, than elderly people living in areas where there is a notable disparity between the provision of a facility and the need for that facility.

The next two chapters analyse this relationship first in terms of provision of community services and second, with reference to the availability of various types of accommodation for the elderly.

CHAPTER 4

THE PROVISION OF COMMUNITY SERVICES FOR THE ELDERLY IN NEW ZEALAND

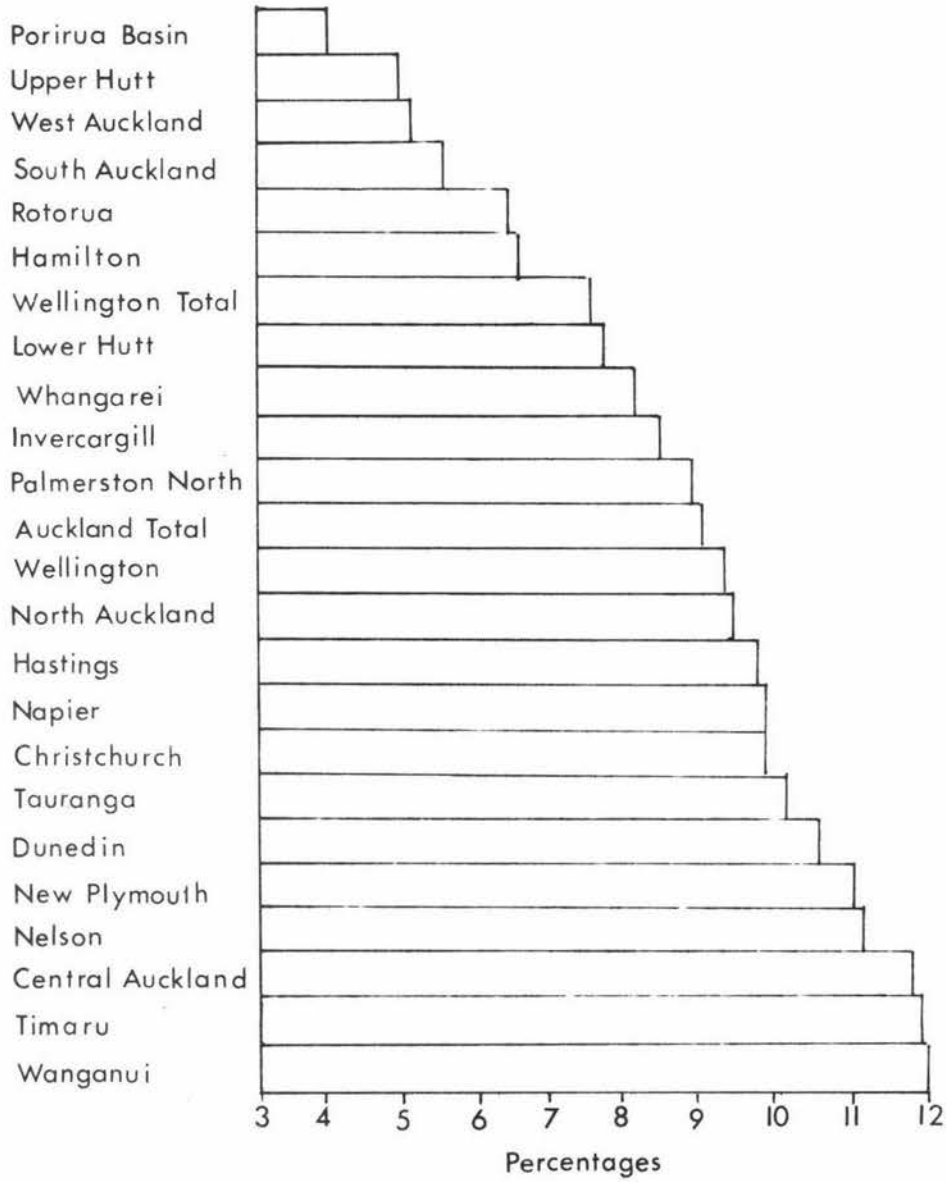
Sources of Variation in Service Provision

The reasons for spatial variations in the provision of facilities for the elderly lie in the spatial organisation of New Zealand society, and in particular the spatial manifestations of the urban, economic, welfare and administration systems. Four inter-related causes of spatial variations in the provision of community services can be deduced from observation of the organisation of these components of the New Zealand social system.

The first cause is the variation in the location of people in the 65 and over age group. As Figure 6.a demonstrates, people over 65 tend to retire in the small and medium sized towns in particular. Presumably this allows greater access to friends, families, facilities and their various leisure and job pursuits. Figure 6.b shows the greater variation in the regional location of elderly people. This age group makes up higher proportions of the total population in South Island regions, particularly Otago, Nelson and Canterbury. There is also a tendency for older people to locate in slower growing areas and in regions of pleasant climate such as Hawkes Bay and Nelson. There are proportionately less elderly people in the faster growing and industrial areas. In terms of absolute numbers (Figure 6.c and 6.d) as expected there are far more elderly people in the larger urban areas and in the North Island. The provision of community services for the elderly, therefore, should reflect the distribution of the clientele for whom these services are provided. Failure to locate such services where demand is greatest may result in inefficient administration, an inability to serve those for who the services are designed and result in areas of unsatisfied demand.

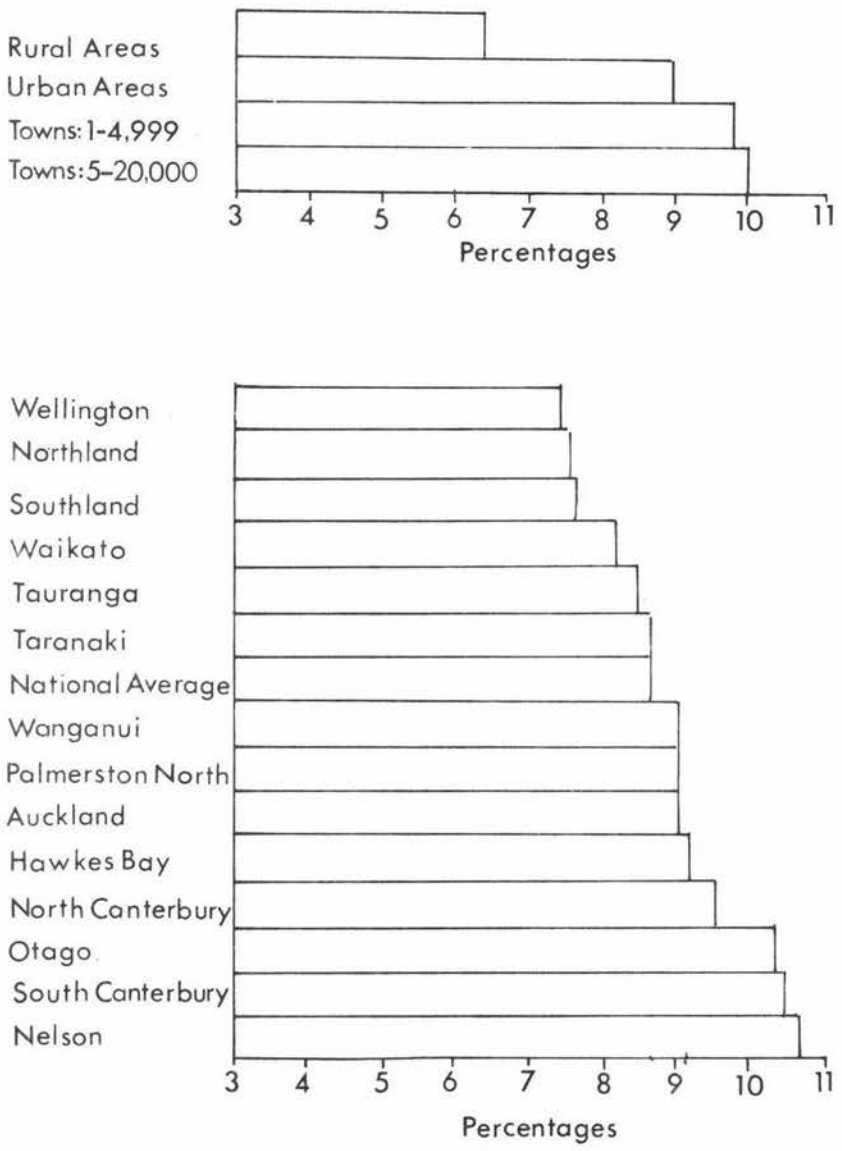
The second cause of spatial variation in the provision of

FIGURE 6·a THE PERCENTAGE OF PERSONS 65 YEARS AND OVER IN URBAN AREAS. 1972.



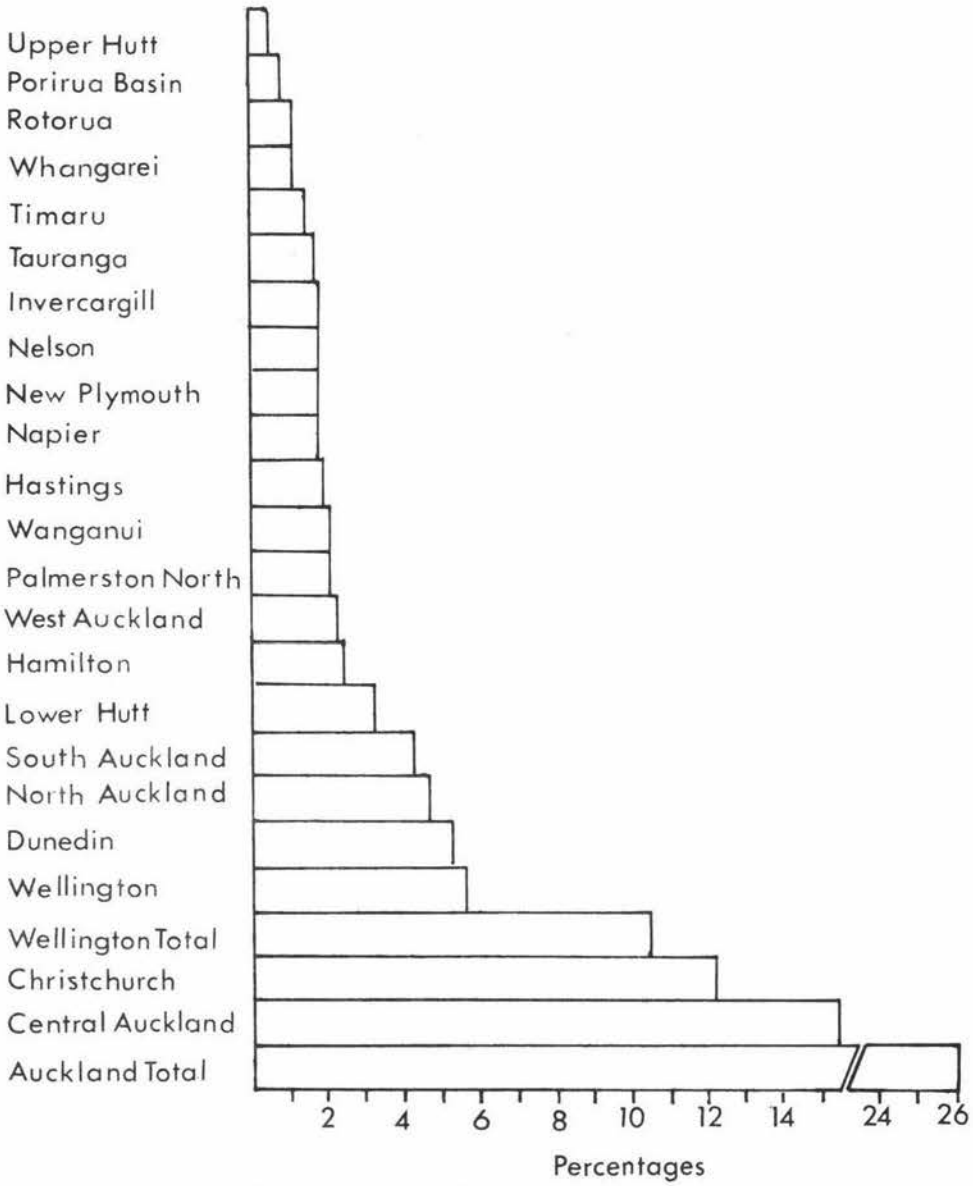
Source: Department of Statistics.1971.

FIGURE 6·b THE PERCENTAGE OF PERSONS 65 YEARS AND OVER IN AREA TYPES AND HOSPITAL BOARD REGIONS 1972.



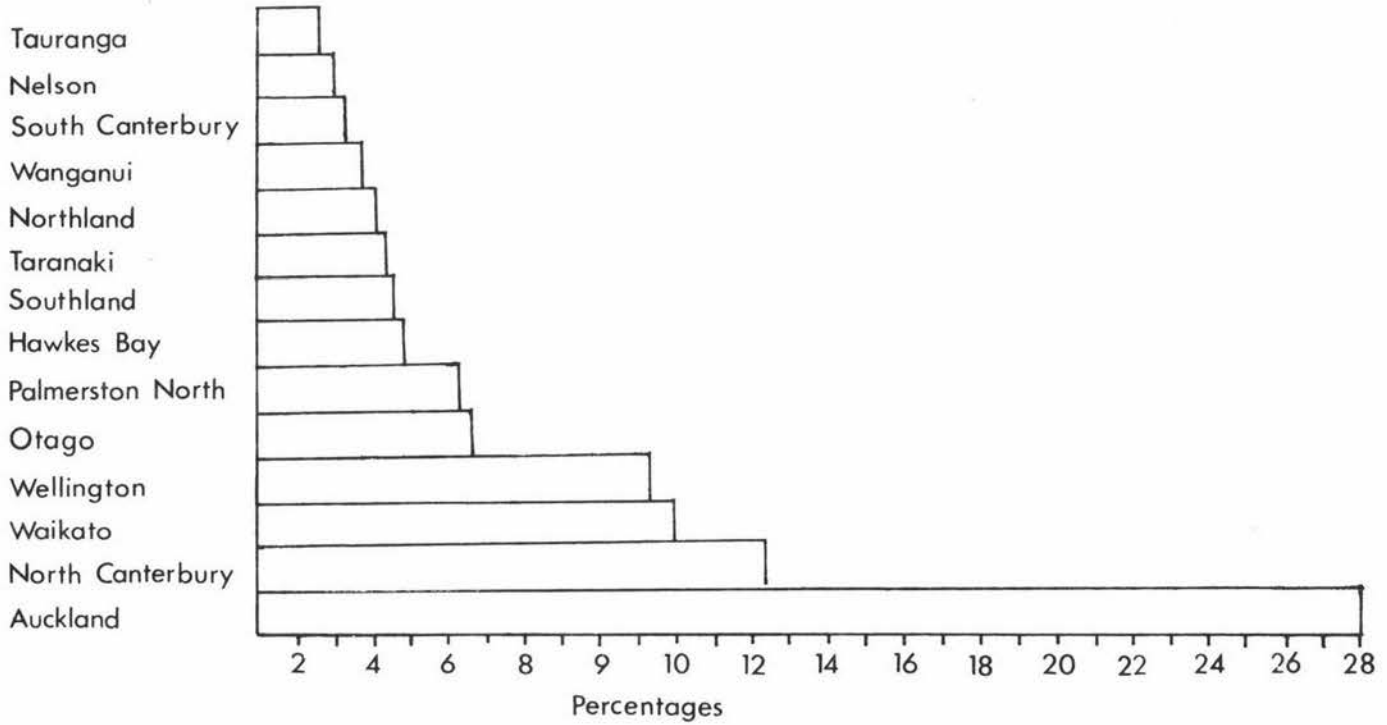
Source: Department of Statistics. 1971.

FIGURE 6·c PERSONS 65 YEARS AND OVER IN URBAN AREAS AS A PERCENTAGE OF THE TOTAL NEW ZEALAND POPULATION 65 YEARS AND OVER. 1972.



Source: Department of Statistics, 1971.

FIGURE 6·d PERSONS 65 YEARS AND OVER IN HOSPITAL BOARD REGIONS AS A PECENTAGE OF THE TOTAL NEW ZEALAND POPULATION 65 YEARS AND OVER. 1972.



Source: Department of Statistics. 1971.

facilities is the differences between urban areas, towns and rural areas in terms of the economics of location. In the New Zealand context there are three operative factors that influence the economics of location. The first is the problem of overcoming the conflicting goals of attempting to serve as many people as possible without exceeding the limits of financial feasibility. This relationship is summarised in the diagrams on Figure 7. a and 7. b. The consequences of this relationship is that areas of higher population concentrations will be cheaper to serve on a per capita basis than areas of sparse populations. This trend also holds with the second economic influence. Areas of higher population density can support higher order economic functions. Since most of the community services provided for elderly people are supplied through local hospitals and their associate institutions, the level and quality of facilities provided may be higher in hospitals of the highest order, which are invariably found in areas of highest population densities - the larger urban centres. This relationship is shown in Figure 8. While this relationship may influence the quality of the community services provided the elderly, most of the service requirements would be of a lower level and hence be provided by most of New Zealand's hospitals. Difficulties may arise when access to some facilities may be reduced by heavy demand on small hospitals in rapidly expanding regions and the sheer numbers that may be competing for access in the large urban areas. The third factor that may influence the cost of locating community services is the operation of the Welfare State. As a consequence community services location is less likely to be determined principally in terms of economic rationality than on some philosophy of social justice. Medical, hospital and community services in general are therefore likely to be located in areas that would otherwise be unable to attract such facilities. This may be demonstrated in Table I which lists those towns which have medical and hospital services as their main industries.

FIGURE 7·a RELATIONSHIP BETWEEN THE HUMAN COST OF INSUFFICIENT FACILITIES AND THE NUMBER AVAILABLE TO SERVE PEOPLE IN A REGION.

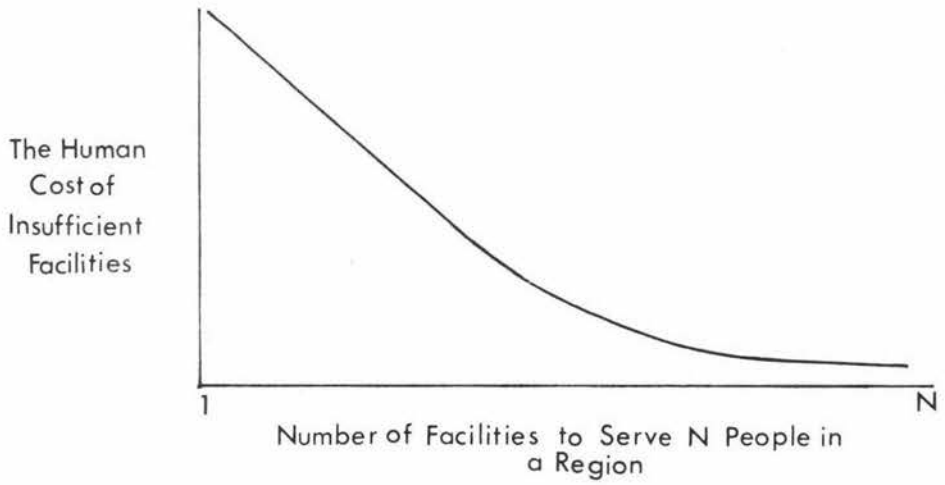
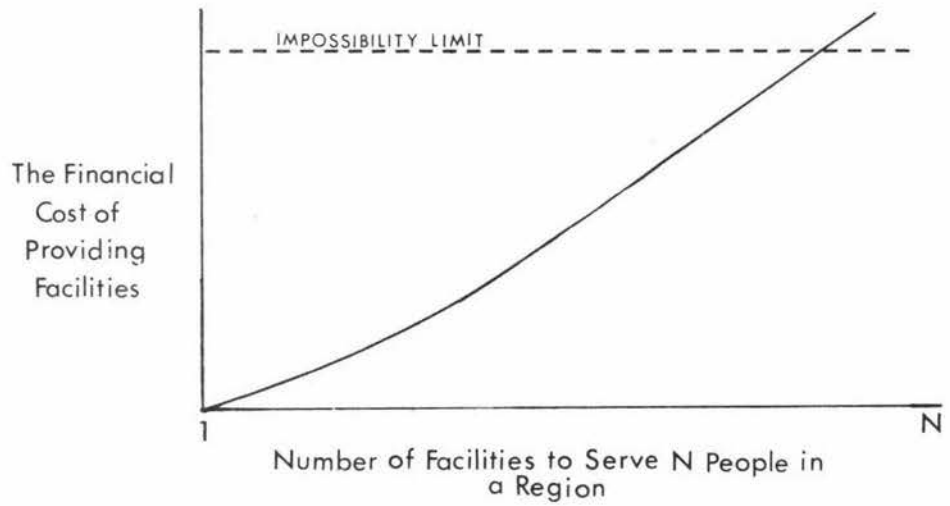


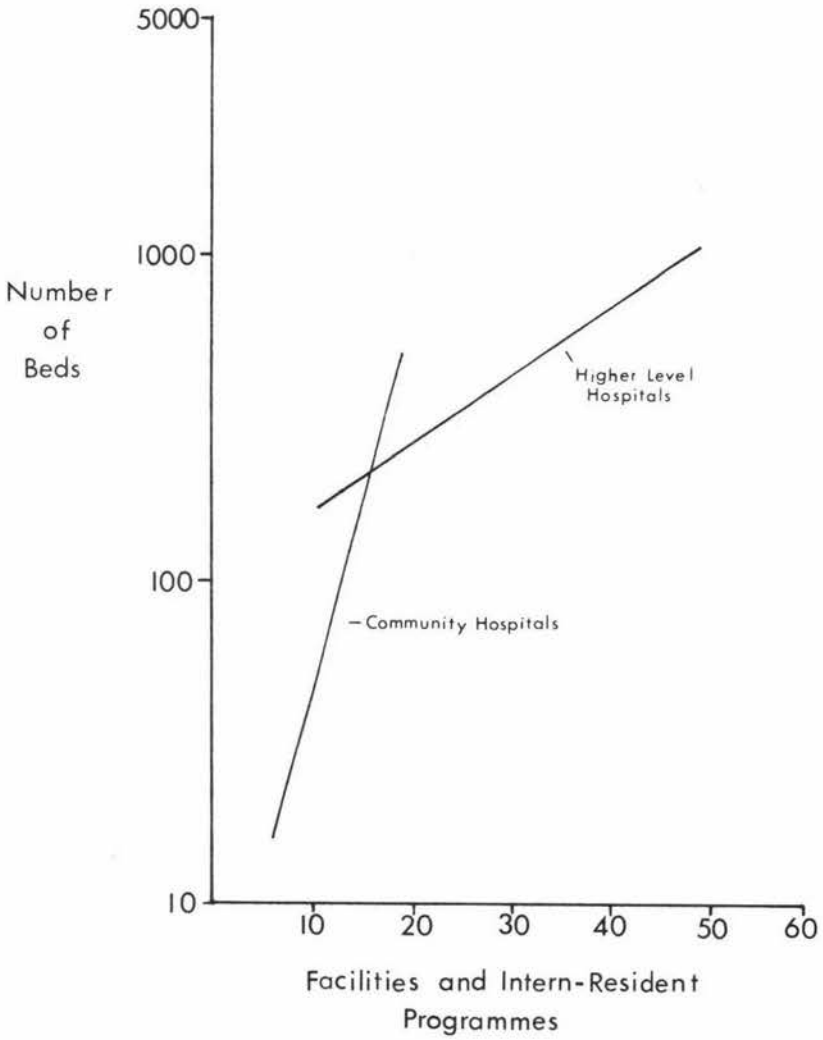
FIGURE 7·b RELATIONSHIP BETWEEN THE FINANCIAL COST OF PROVIDING FACILITIES AND THE NUMBER AVAILABLE TO PEOPLE IN A REGION.



Source: Abler, et al. 1973. 532 - 533.

FIGURE 8.

THE RELATIONSHIP BETWEEN HOSPITAL SIZE AND HOSPITAL FACILITIES AVAILABLE.



Source: Morrill & Earickson, 1968, 393.

TABLE I

TOWNS WHICH HAVE MEDICAL AND HOSPITAL SERVICES AS MAIN INDUSTRIES

A. Towns with 10-30 employment categories absent

Gisborne	Levin
Rotorua	Nelson

B. Towns with 31-50 employment categories absent

Waipukurau	Raetihi
Wairoa	Taumaranui
Kaitaia	Kawakawa
Morrinsville	Waimate
Opotiki	Warkworth
Thames	

C. Towns with over 50 employment categories absent

Riverton	Waverley
Reefton	Te Teko
Waikanae	Rununga
Patea	

Source: Johnston R.J. 1973 : 180-1.

With the elderly population location factor and the influence of the three economic factors, the location of community services would tend to be higher in urban areas and smaller towns and in those regions where the elderly form a high proportion of the local population. There are, however, two factors that may alter the distribution of community services for the elderly away from the expected pattern. The third cause of variation is that the investment and allocation of resources by central agencies[2] between regions may not be equal on a per capita basis. That is, some regions may be financially discriminated against with the result that on a per capita

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[2] It is realised that many services are in fact provided by private practicioners. But since data on their practices is unavailable, this discussion is directed to Government directed agencies.

basis, there may be less money available for the provision of services. While no data could be found on the expenditure by government agencies for elderly people's community services, data on hospital expenditures for the population as a whole was available.

As Table II illustrates, there are notable variations in the per capita expenditure for facilities between the fourteen Hospital Boards that provide the spatial frame used in this study.

TABLE II

EXPENDITURES BY HOSPITAL BOARD 1972

Dollars per capita for total populations

Hospital Board	Maintainence[1] Expenditure	Total[2] Expenditure
Palmerston North	42.9	67.4
North Canterbury	47.5	57.4
Wanganui	48.7	59.5
Nelson	50.3	57.9
Tauranga	50.3	71.6
Auckland	50.8	66.8
Southland	51.0	63.3
Waikato	52.1	69.3
Wellington	53.9	68.3
Taranaki	54.4	79.1
South Canterbury	56.8	72.3
Northland	57.4	68.9
Hawkes Bay	59.5	79.5
Otago	81.5	101.25

1. Includes expenditure on all treatments and services provided, staff, administration costs, grants to private hospitals and other institutions.
2. Includes same as described in footnote 1 plus repayment on loans, land, building, maintenance and expansion.

Source: Department of Health 1972.c.

Although quite large variations are shown in the per capita expenditure on hospital facilities, it is difficult to state that this is solely a result of a bias in allocation of resources and government finance. Variations may be due to regional cost structures, which may be particularly important in interpreting the figures for total expenditure that includes building and expansion programmes that are being undertaken by various hospitals. The figures may also reflect the combination of population size, demand and need in any one region. For example, a low per capita expenditure score may reflect either a "healthy" region where the demand for facilities are low or it may reflect a large competing population in relation to the services that are available. A high per capita expenditure score may reflect either an "unhealthy" region where many people need health facilities or it may reflect the presence of an abundance of hospital facilities serving a relatively small or declining population, as may be the case in Otago. Areas of net in-migration may have low maintenance expenditure score and high total expenditure scores, reflecting attempts to cope with increasing demand through expansion of services. A high score in relatively isolated areas such as Northland may reflect attempts by Hospital Boards to compensate for the lack of facilities provided by private practicioners.

Whatever the interpretation put on the data showing variations in expenditure between regions, the unexpected variations in the provision of services may be caused by a fourth factor, the disparities in the "health" of regions. A region may be "unhealthy" due to some combination of inherent characteristics that are found in that region. Or a region could appear "unhealthy" because of the lack of remedial action that has been provided in other regions. If this is the case spatial organisation and the pattern of regional investment should be such as to fulfil the highest level possible the needs of the population of that region. Regions could also be "unhealthy" because of the prohibitive costs of providing services

to its population. Resource allocation to these areas can be justified on grounds that

> Deviations in the pattern of territorial investment may be tolerated if they are designed to overcome specific environmental difficulties which would otherwise prevent the evolution of a system which would meet need or contribute to the common good.
> (Harvey D. 1972 : 96)

If there are "unhealthy" regions in New Zealand, there may be deviations from the expected distribution in the provision of community services which either reflects attempts to compensate for local problems or a lack of adequate resources to meet local problems.

Hypotheses

Having discussed the possible causes of spatial variation in the provision of community services for the elderly, it is now appropriate to synthesise the preceeding discussion by stating a series of hypotheses that may be used as foci in the investigation of the actual state of the provision of these facilities in New Zealand. These hypotheses are listed below:

1. There will be a proportionately higher percentage of users and recommended users in areas that have a large number and high proportion of elderly people in their populations.[3]

2. The percentage of users will be higher in urban areas and larger sized towns than in other areas that could be due to the lower costs of providing for concentrated populations.

3. Areas other than urban areas will have a lower percentage of users for high threshold value services and a comparatively higher percentage of recommended users for these services due to these services being located in larger centres.

4. Regions furtherest away from major centres and regions

topographically isolated will have higher than average percentages of recommended users indicating a paucity of facilities available.

5. Slow growing regions, particularly the South Island,[4] will have proportionately less investment and services available per capita due to the tendency to direct government resources to areas of rapid growth associated with areas of high recommended user scores.

6. Areas and regions of net in-migration will have relatively few users and a relatively high percentage of recommended users indicating the competition for overutilised services.

7. Areas and regions of net outmigration and slow expansion will have little disparity between the percentage of users and recommended due to the lack of competition for under utilised services.

8. Areas in New Zealand classified by geographic Area Types will have greater variation between them in the provision of community services for the elderly, than regions classified by Hospital Boards. This is due to Area Types having a minimum of variation within their boundaries and a maximum variation between the various types due to the way the Area Types have been classified. Hospital Boards on the other hand will tend to show less inter-regional variation due to their scores

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[3] "Users" refers to all those individuals in the Department of Health Survey of 1972 who indicated that they either were using a particular service at that time or had an appointment to visit particular service facilities.
"Recommended Users" refers to all individuals in the survey who either do not at present use a service but need to, or those who already use a service but require more adequate or more extensive treatment.

[4] Areas here described as having "slow" rates of growth are similar to those mentioned in the New Zealand regional development literature, particularly Armstrong 1973.

representing the average of the intra-regional variations.

9. Regions discriminated against in terms of the allocation of funds for service provision and which have high percentages or numbers of elderly people will have high percentages of recommended users and low percentages of users.

For a complete spatial monitoring of the provision of elderly community services investigations should be made of all the above hypotheses and any others that may be relevant. Unfortunately in the case of many of these hypotheses, there was either no data or inappropriate data available.

To test many of these hypotheses it would be necessary to have data for very precise categorisation and precise definitions, otherwise it would not be possible to determine with any accuracy between the multiple possible causes of any one observed trend. Of even greater importance, it was not possible to generate data specifically designed for the purpose of testing these hypotheses, therefore data designed for other purposes had to be used, resulting in the necessary compromise of data availability and suitability. A further problem was the non comparability of much of the available data. For example the hypotheses on the regional variations in the allocation of funds for services provision is untestable without data on the finance spent on services for the elderly. Figures for Hospital Board expenditures per capita of the total regional populations can serve as only a very crude guide for any trends that may manifest themselves. A great deal of accuracy was also lost by having to use such large regional boundaries. Not only were the Hospital Board boundaries of purely administrative origin but they were so large as to make accurate detection of actual regional variations between Hospital Boards extremely difficult.

Within the confines of the available data set, therefore, only a limited number of hypotheses on the spatial dimensions of community service provision for the elderly are investigated. Furthermore,

because of the inadequacies of the data noted earlier, the analysis is primarily restricted to a description of the existing pattern of service provision. Specifically, the following hypotheses are investigated in the next section:

1. The percentage of users will be higher in urban areas than in other areas.

2. Areas other than urban areas will have a lower percentage of users for high threshold value services and a comparatively higher percentage of recommended users for these services due to these services being located in larger centres.

3. Areas and regions of general population net in-migration will have relatively fewer users and a relatively high percentage of recommended users due to the competition for ~~under~~ over utilised services.

4. Areas and regions of net-outmigration and slow expansion will have very little disparity between the percentage of users and recommended due to the lack of competition for under utilised services.

5. Inter Area Type variations will be greater than inter-regional variations.

Analysis, Results and Interpretation

The first hypothesis, that the percentage of "users" of community services should be higher in urban areas than in other areas is strongly supported from the data on all community services where the percentage of users is recorded. Figures 9.b, 9.f, 9.g, 9.i, 9.j, 9.k, (See pages 82-106) show for their respective services a very heavy concentration of users in urban areas. Since the data is expressed as percentages of those elderly living in each areas the pattern cannot be accounted for in terms of the location of elderly people in the total population as shown in Figure 6. Whether the pattern is

due to the fact that most elderly people suffering from various ailments are located in urban areas or whether most elderly people needing these services have moved to the urban areas, where, presumably, services are more accessible or better provided, cannot, unfortunately, be determined from the Department of Health Survey. One particular trend that may support either argument is that in several cases, notably for chiropody, dental therapy and community nursing (Figure 9.b, 9.i, 9.j) there are proportionately more users in rural areas than in the small and larger sized towns. This may indicate that those in need have already moved from these country towns to urban areas. This trend is emphasised by the data on percentage of users for community services by Area Types (Figure 10). The proportion of users is consistently higher in rural areas than in Towns of 1,000 to 5,000 people and in many cases, higher than the proportions in Towns of 5,000 to 20,000.

The evidence in support of this hypothesis could be used to reinforce the supposition that urban areas, being better provided for in terms of services provision, necessitate the movement of those in need to the urban areas from rural areas and country towns. Whether this is due to the prohibitive economics of making services accessible to country areas or whether there is a bias in allocation in resources cannot be determined. It may well be a case of circular causation whereby service provision in urban areas encourages movement of those in need to urban centres, hence creating further demand that results in an increase in the allocation of funds for these services to urban areas.

That there is greater accessibility and provision of services in urban areas is supported by the evidence for the second hypothesis, that urban areas support higher level functions that are not necessarily available to other areas. It is hypothesised that areas other than urban areas will have a lower percentage of users for high threshold value services and a comparatively higher percentage of recommended users for these services due to these services being located in larger

centres. This hypothesis was tested by comparing the distribution of users for dental services, optical services and chiropratic services. Following from an example in Canada (described by (Berry B J L and Horton F E 1970 : 191-200) it was assumed that these services were higher level functions. In the Ontario research it was found that dental services were a city-level function. This is well supported by the data in Figures 9. i, 9. j, 10. i and 10. j where there is a notable disparity between the low proportion of users in the towns and rural areas and the distinctly higher proportion of recommended users in these regions; particularly in rural areas.

The New Zealand trend for optical services however appears to differ from the Canadian experience in that it does not appear as if vision aid is a regional-capital function. In fact this service appears to be better provided in country towns and rural areas than dental services (Figure 9. k and 10. k). This could be explained by the possible tendency for this service to be provided by state run community hospitals and as was seen in Table 1 (Johnston R J 1973 : 180-1) hospitals appear to be well distributed throughout country areas. This may well be a case where the operation of the New Zealand Welfare State System assists in a more equitable spatial distribution of services.

The data for the provision of chiropratic services (Figure 9. i and 10. i) shows an even stronger trend to that shown by dental therapy services. While there is no example from Canadian experience it could well be that chiropody, a service made available particularly through private practicioners,[5] is a city level and possibly even a regional-capital function. It appears, therefore, that for dental and chiropractic services, urban area inhabitants have a distinct advantage over country dwellers.

The third and fourth hypotheses are directly concerned with

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[5] A trend shown in the Department of Health Survey data but not shown in this thesis.

per capita accessibility to community services. Areas and regions of general population net in-migration are assumed to have relatively fewer users and a higher percentage of recommended users due to the competition for over-utilised services. That is, even in regions that are well endowed numerically with community services, they may well fall short of demand since net in-migration could result in an adverse per capita ratio between services available and those in need. As the map on Figure 11 shows, growth is greatest in urban centres and the northern half of the North Island. It would be expected, therefore, that the Hospital Board Regions of Auckland, Waikato, Tauranga, and possibly to a lesser extent Wellington and Hawkes Bay will illustrate the trend mentioned in the third hypothesis. Evidence to support this is given in Table III and Figure 12. The percentage of users and recommended users for each community service was ranked for each region and Area Type. These were then divided into upper, upper middle, lower middle and lower quartiles. The average number of times a region or area type was ranked in any of the four quartiles determined its location in Table III and Figure 12. The areas of net in-migration were heavily represented in the top two quartiles of recommended users and in general, they were more often located in the middle quartiles of users. Waikato, Wellington and in particular Tauranga all show a generally higher proportion of their elderly populations that are recommended to use services than the number at present who are using the services. Of the five regions expected to show this trend, Auckland does not show the differentiation in users and recommended users scores, and Hawkes Bay shows a slight drop in rank for recommended users. The movement of Southland up the scale of recommended users may support the third hypothesis considering the industrial and power development projects of late have resulted in a net inflow of people at least into the urban centres. (See Figure 11.) Possibly stronger evidence for this

FIGURE 11·a

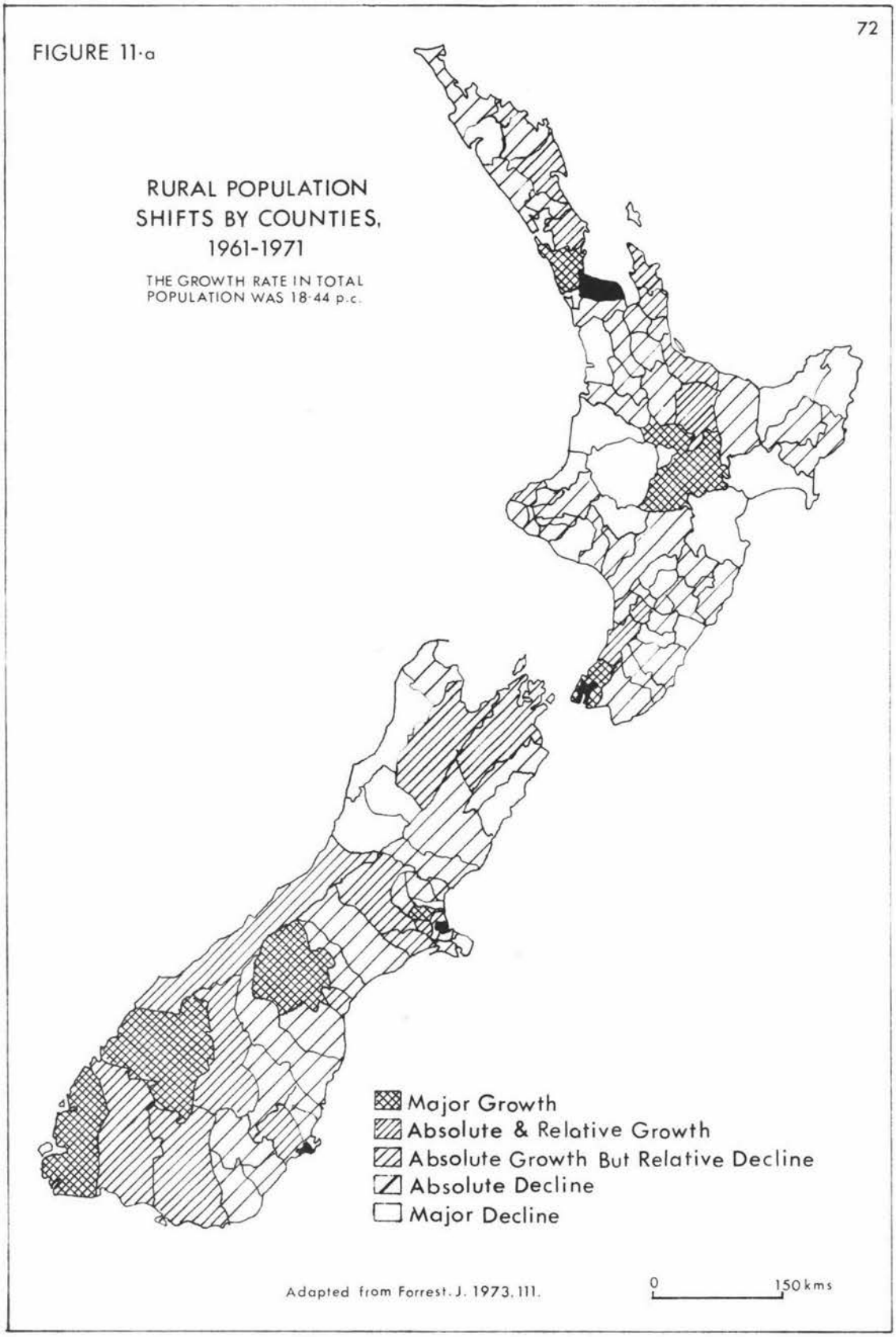
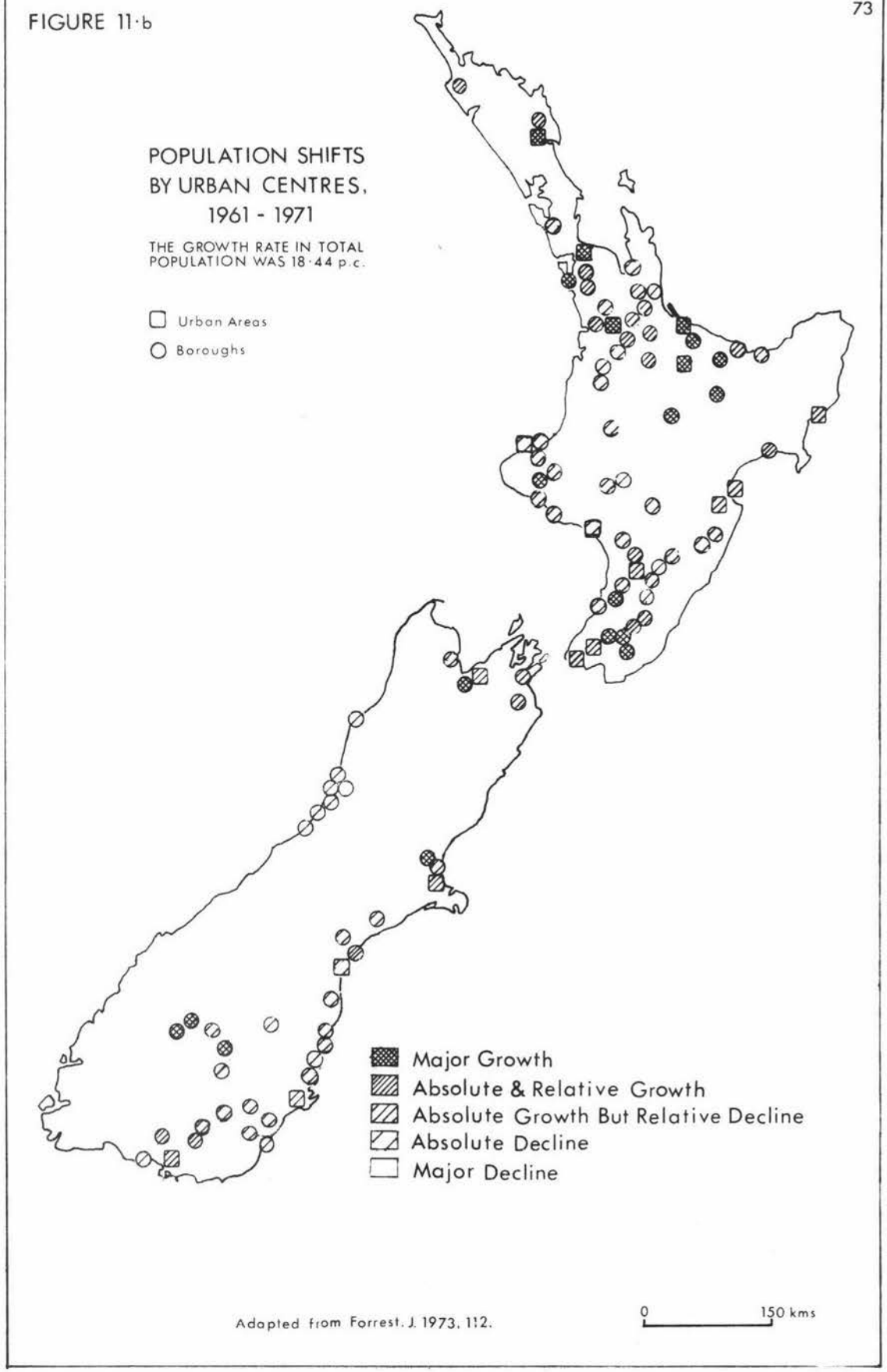

RURAL POPULATION
SHIFTS BY COUNTIES,
1961-1971
THE GROWTH RATE IN TOTAL
POPULATION WAS 18·44 p.c.
Major Growth
Absolute & Relative Growth
Absolute Growth But Relative Decline
Absolute Decline
Major Decline
Adapted from Forrest, J. 1973, 111.
0
150 kms

FIGURE 11·b



Adapted from Forrest, J. 1973, 112.

hypothesis is found in Table III, where it can be seen that those urban sectors undergoing expansion and the larger towns show a movement from middle quartiles in the "users" column to the upper quartile in the recommended column. The reader should be reminded, however, that considerable caution is needed in interpreting these trends. As was the case for the first hypothesis, while the trends appear to support the hypothesis, there is little evidence for an explanation of these trends.

For example in Table III there is a marked divergence between the ranking of newer, predominantly state built suburbs that supports the hypothesis. But it cannot be proved from the data presented that the high unfilled demand is due to net in-migration. It could as easily be caused by a lack of community service provision in these State housing areas accompanied by the fact that these areas probably house individuals who rely heavily on state services and not on privately run services that are often not located in state housing zones. It should also be remembered that the rankings are based on averages. A perusal of Figure 9 and 10 will show that these averages mask a great diversity of scores and individual regional rankings.

Similar caution is required in interpreting the data for the fourth hypothesis, which states that areas and regions of net outmigration and slow expansion will have very little disparity between the percentage of users and recommended users due to the lack of competition for underutilised services. From Figure 11 it would be expected that the scores of Otago, Taranaki, Wanganui and possibly Nelson, South Canterbury and Northland, (outside Whangarei at least) would support this hypothesis. If an area showed marked net outmigration, there is the possibility that the percentage of recommended users will be very low, since many of those who might have used a service could well have moved out of the region. As with the third hypothesis, evidence again supports the contention that the degree of competition for services

TABLE III

QUARTILE RANKING OF HOSPITAL BOARD REGIONS AND AREA TYPES FOR THE PROVISION OF COMMUNITY SERVICES FOR THE ELDERLY

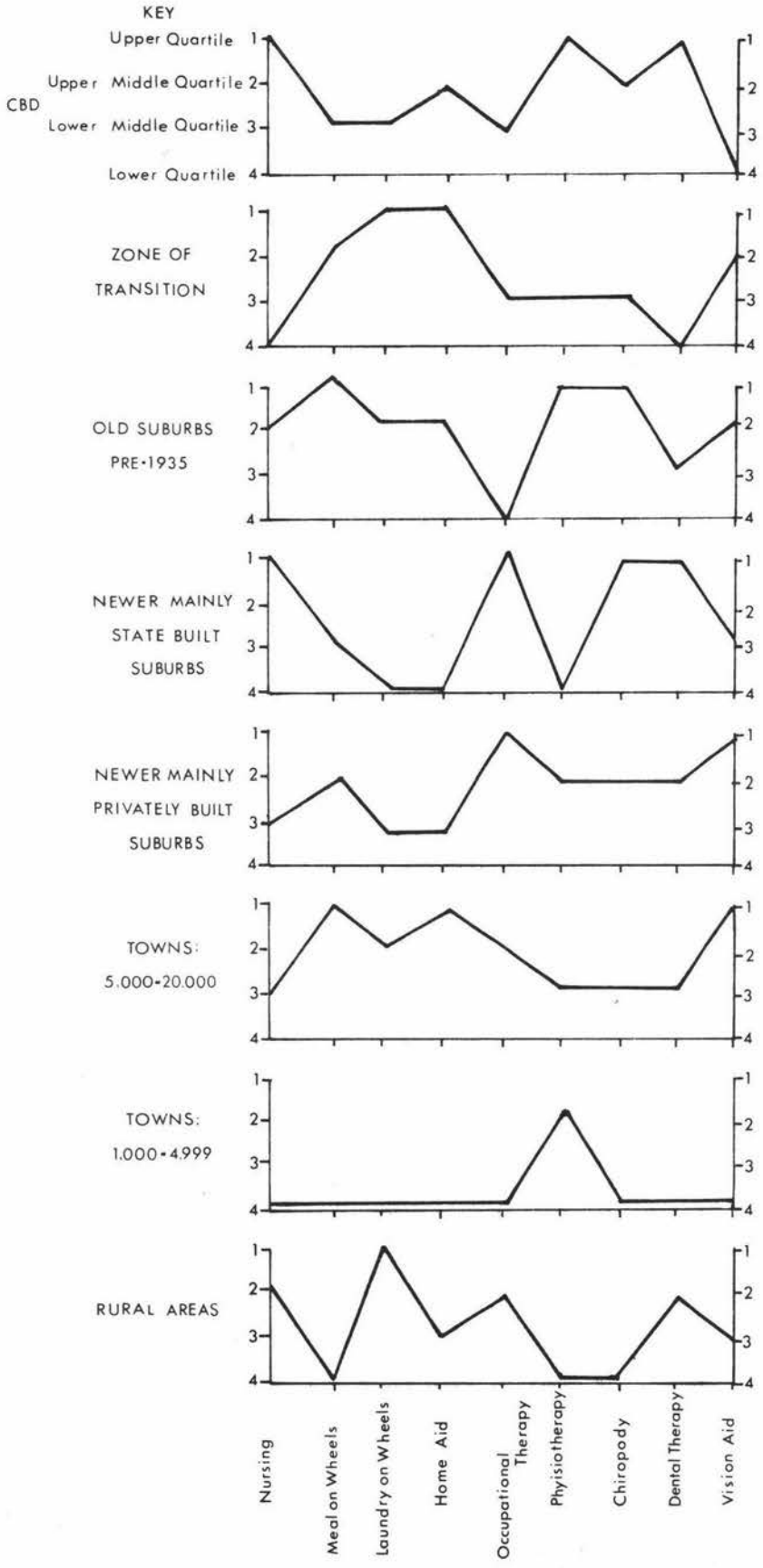
Ranking	Users of Services	Recommended Users of Services
UPPER QUARTILE	Hawkes Bay	Waikato
	South Canterbury	Wellington
	Waikato	Hawkes Bay
	Wellington	Tauranga
UPPER MIDDLE QUARTILE	Otago	South Canterbury
	Auckland	Auckland
	North Canterbury	Otago
LOWER MIDDLE QUARTILE	Nelson	Nelson
	Tauranga	Southland
	Northland	Northland
LOWER QUARTILE	Taranaki	Wanganui
	Wanganui	Taranaki
	Palmerston North	Palmerston North
	Southland	North Canterbury
UPPER QUARTILE	Old Suburbs	Central Business District
	Newer Private Suburbs	Newer State Suburbs
UPPER MIDDLE QUARTILE	Towns 5,000 - 20,000	Towns 5,000 - 20,000
	Central Business District	Newer Private Suburbs
LOWER MIDDLE QUARTILE	Newer State Suburbs	Transition Zone
	Transition Zone	Old Suburbs
LOWER QUARTILE	Rural Areas	Rural Areas
	Towns 1,000 - 5,000	Towns 1,000 - 5,000

Source : Compiled from Department of Health 1972 a Survey

will influence their accessibility. Although it is fully realised that this contention is not directly measured here, it can be argued that a low level of recommended users can not only indicate few people needing a service; it can also indicate an easy access to services, hence the low unfulfilled demand. The data for slower growing areas of Otago, Taranaki, Wanganui, Northland, Transition Zones, Old Suburbs, small towns and rural areas all support this hypothesis (Table III and Figure 12). The hypothesis is also supported by Table II which shows the per capita expenditure by hospitals in 1972. Taranaki, Northland, Otago and South Canterbury rank as having relatively favourable health services available per head of population, and in the case of Otago as an exceptionally favourable ratio. In the light of this data it could be further supposed that the performance of Otago in particular is the result of the region receiving a disproportionately larger allocation of resources at some time in the past, reflecting perhaps an earlier assessment of its growth potential. As that area has declined, the demand on services has dropped relative to other areas of the country, while the physical stock of amenities has remained relatively high. Again this contention cannot be proven from this data. The case of Otago may reflect a political bias in the allocation of finance or it may be a reflection of the high cost and extensive provision of services per capita associated with the Otago University School of Medicine.

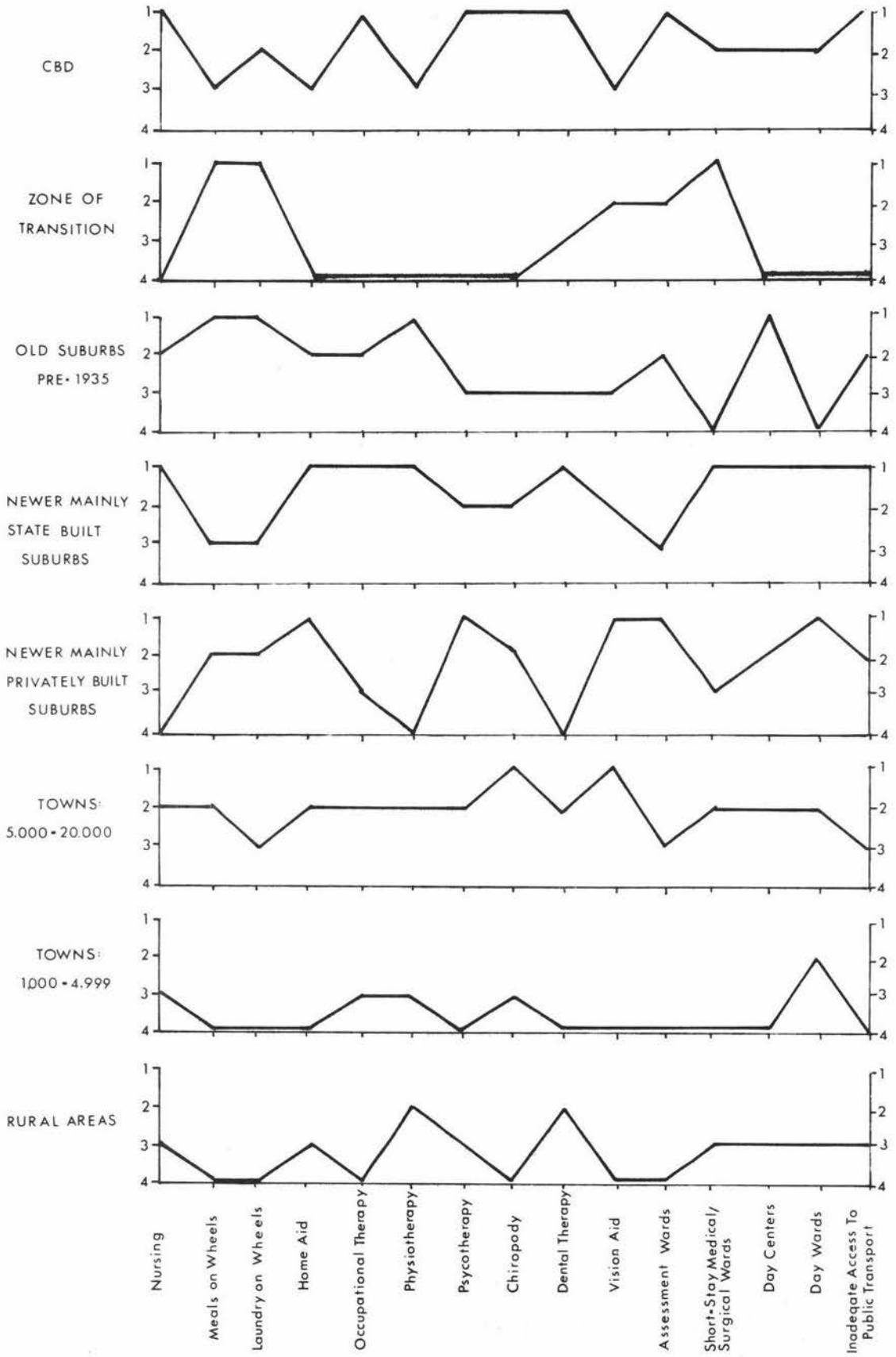
The last hypothesis of this section states that this spatial variation will be greater between the relatively internally homogenous Area Types than the internally mixed Hospital Board regions. To test this hypothesis, observations were made as to the range of variations that existed between the spatial categories. For example the percentage of elderly people who had inadequate access to Public Transport ranged from a high of 15.0% in Central Business Districts to a low of 4.5% in Towns of between 1,000 to 5,000 inhabitants. The range of variation between the

FIGURE 12·a USERS OF COMMUNITY SERVICES PROFILE FOR AREA TYPES BY QUARTILE RANKING.



Source: Department of Health, 1972a.

FIGURE 12·b RECOMMENDED USERS OF COMMUNITY SERVICES PROFILE FOR AREA TYPES BY QUARTILE RANKING.



Source: Department of Health, 1972a.

area types was therefore 11.5 percentage points. This procedure was carried out for all regions and area types, the results of which are summarised in Table IV. Surprisingly, the data showed a trend contrary to that expected, with the Hospital Boards having a far greater degree of inter-regional variation that the area types. In many cases the range of variation between regions was double, and in the case of recommended users for vision aid and home aid and the percentage of users for Dental Therapy, Occupational Therapy, triple that between Area Types. It was expected that there would be a high range of variation between Area Types since the economics of service location, the geographic location of the elderly and migration patterns all showed marked inter Area Type variations. That there is such a large degree of variation between regions can reasonably be explained by only two factors. First, the way the spatial frame was devised by the Department of Health ensured an unfortunate variation in the margin of error inherent in the regional population samples and that this may influence the accuracy of the data. The second possible explanation is that there exists within the New Zealand spatial system a serious degree of variation in the provision of services to the elderly. That in the provision of community nursing, chiropody and vision aid the proportion of recommended users varies more than 30 percentage points, illustrates that in some regions inhabitants have a very high unfulfilled need.

Table IV also shows two other important features. The first is that not one of the fourteen services at present is adequate to meet current demands. Only the specialised function of day wards is anywhere near to providing an adequate service. The second feature is that several of the services will have to undergo major expansion to meet current demands. If it can be assumed that the percentage of users is a crude measure of the existing level of service provision, services such as home aid, provision of public

TABLE IV

THE RANGE OF SCORES BETWEEN AREA TYPES AND REGIONS IN THE PROVISION OF COMMUNITY SERVICES FOR THE ELDERLY

(Ranges expressed as percentage points)

Community Services	Regions		Area Types	
	Users	Recommended Users	Users	Recommended Users
Inadequate access to public transport *	14·0		10·0	
Community Nursing	31.0	33.0	28.0	26.0
Meals on Wheels	9.0	13.0	6.0	8.0
Laundry on Wheels	5.0	13.0	5.0	6.0
Home Aid	4.0	21.0	4.0	6.0
Occupational Therapy	15.0	19.0	4.5	25.5
Physiotherapy	8.0	17.0	6.0	11.0
Psychotherapy	4.0	10.0	4.0	10.0
Chiropody	27.0	33.0	18.0	13.0
Dental Therapy	21.0	18.0	7.0	20.0
Vision Aid	37.0	34.0	17.0	10.5
Assessment Wards		19.0		14.0
Day Centres		15.0		6.5
Day Wards		7.5		3.0

* Inadequate Access to Transport scores are not categorised as users or recommended users but those who do NOT have adequate access to public transport as determined by the Department of Health Survey 1972.

Source: Compiled from Department of Health Survey 1972.

transport and physiotherapy need to be greatly expanded throughout the country. This disparity between existing levels of service provision and current levels of need is particularly noticeable between area types, with dental therapy and occupational therapy being two outstanding examples.

While recognising the inherent adequacy of much of the data used, and the inability to explain trends, this attempt at monitoring the existing state of community services provision for the elderly does bear out the contention of many students of regional development and regional planning that there are areal disparities in the quantity and quality of services provided within New Zealand. Measuring the quality of services provision, however, is only part of the housing environment. The next chapter deals with the adequacy of the housing stock currently used and its availability to elderly people.

FIGURE 9

SPATIAL VARIATIONS IN THE PROVISION OF COMMUNITY SERVICES FOR THE ELDERLY BETWEEN

HOSPITAL BOARD REGIONS

Key

NL	Northland	PN	Palmerston North
AU	Auckland	WG	Wellington
W	Waikato	NS	Nelson
TR	Tauranga	NC	North Canterbury
HB	Hawkes Bay	SC	South Canterbury
TI	Taranaki	O	Otago
WN	Wanganui	SL	Southland

UA	Urban Areas	T1	Towns 5,000-20,000
T2	Towns 1,000-5,000	RA	Rural Areas

Source: Compiled from Department of Health Survey 1972a.

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1 Virtually all users of meals on wheels, laundry on wheels and home aid are resident in various types of institutions, hence they are not included in this data.

2. No data on users available for Assessment Wards, Day Centres, Day Wards.

FIGURE 9.a PERCENTAGE OF ELDERLY PERSONS WITH INADEQUATE ACCESS TO PUBLIC TRANSPORT

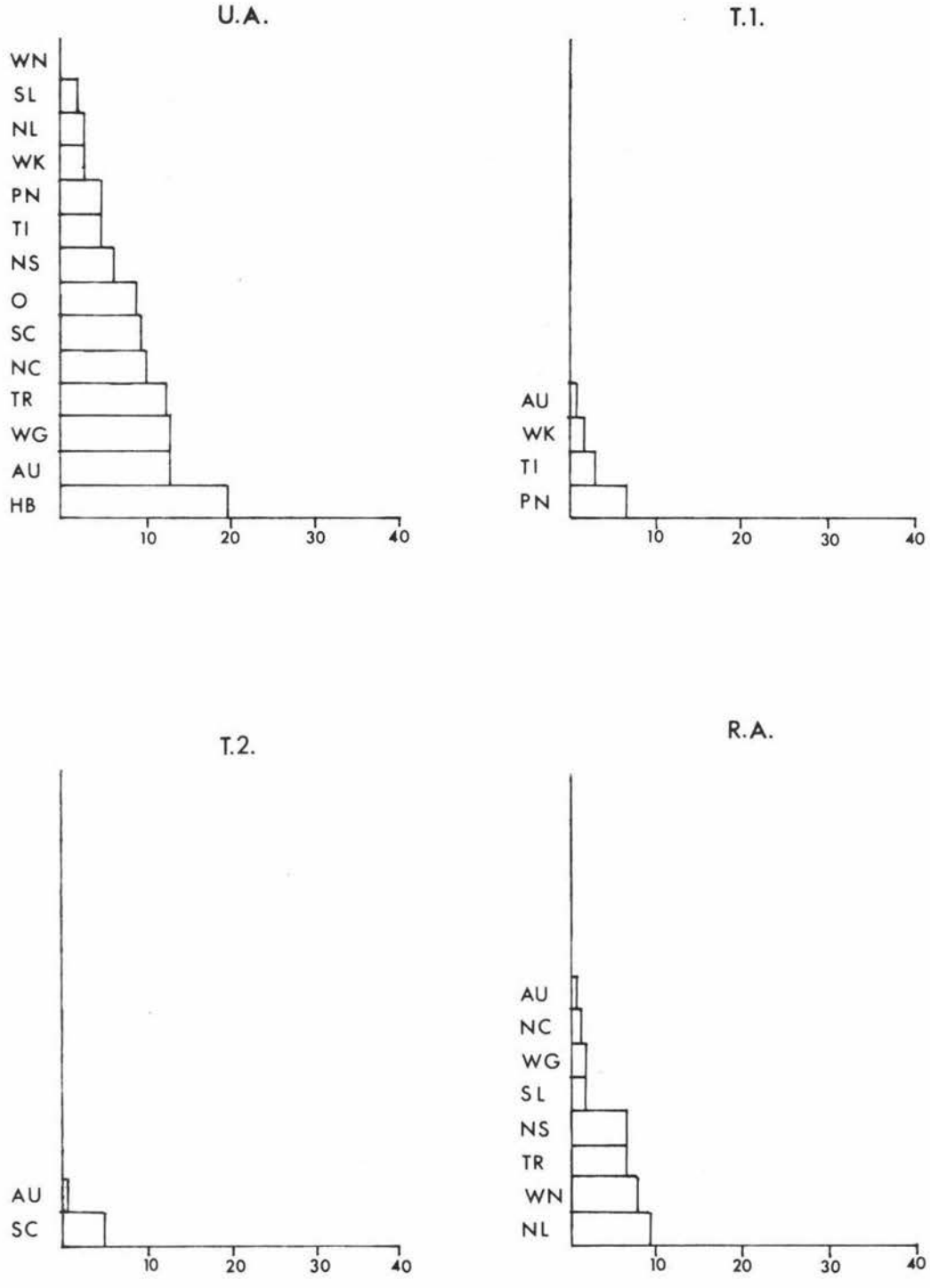
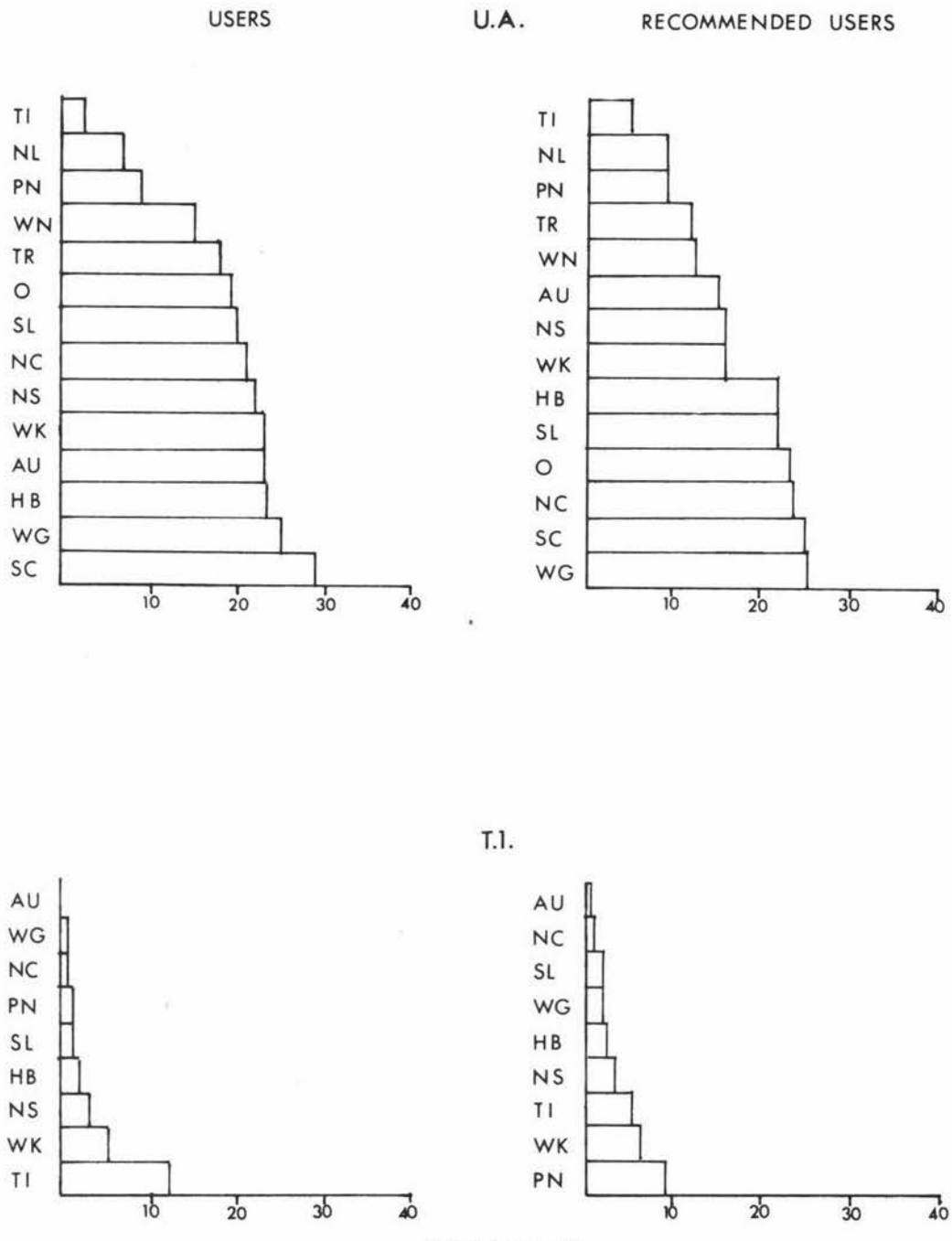


FIGURE 9.b

NURSING



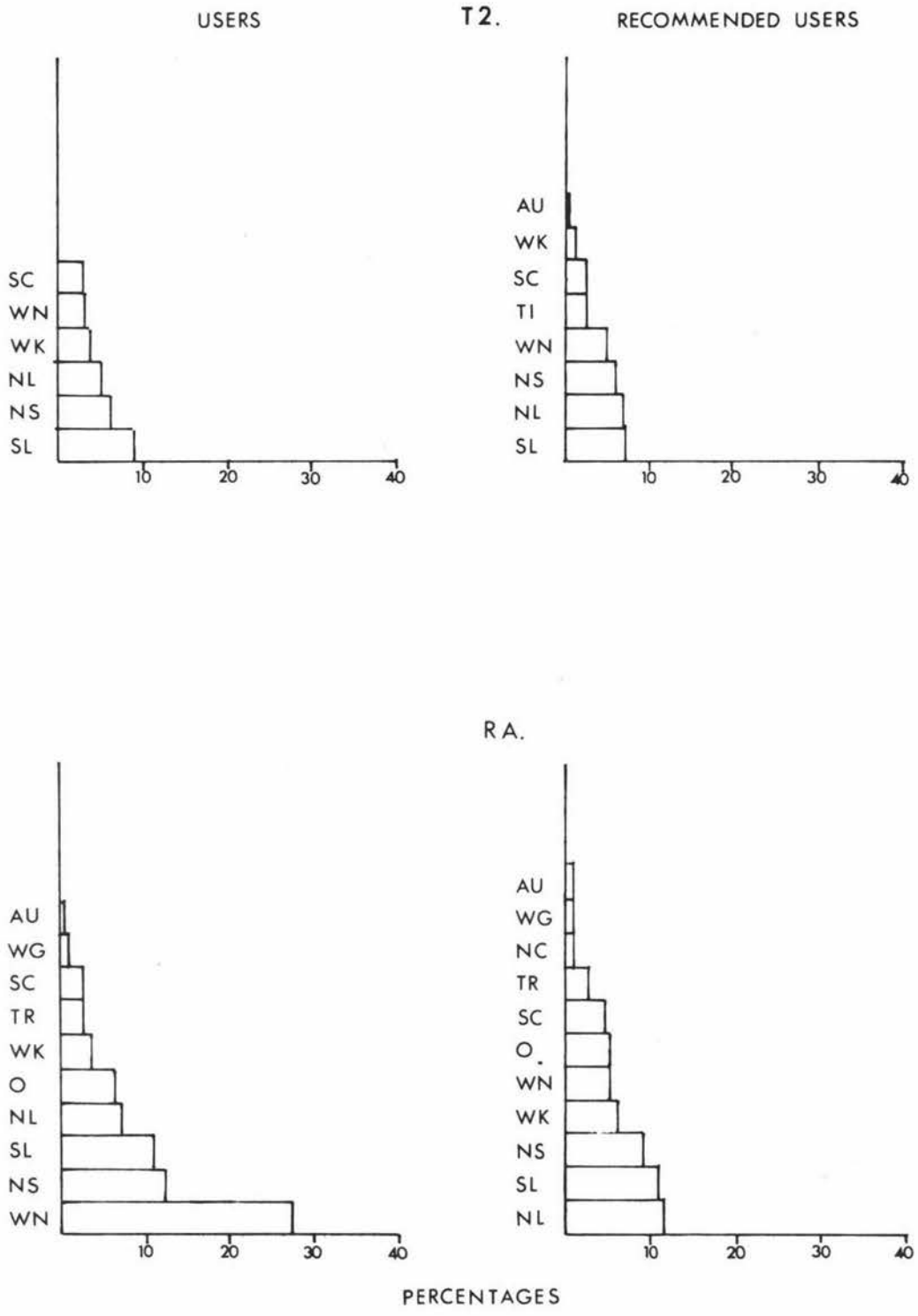

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FIGURE 9.c MEALS ON WHEELS

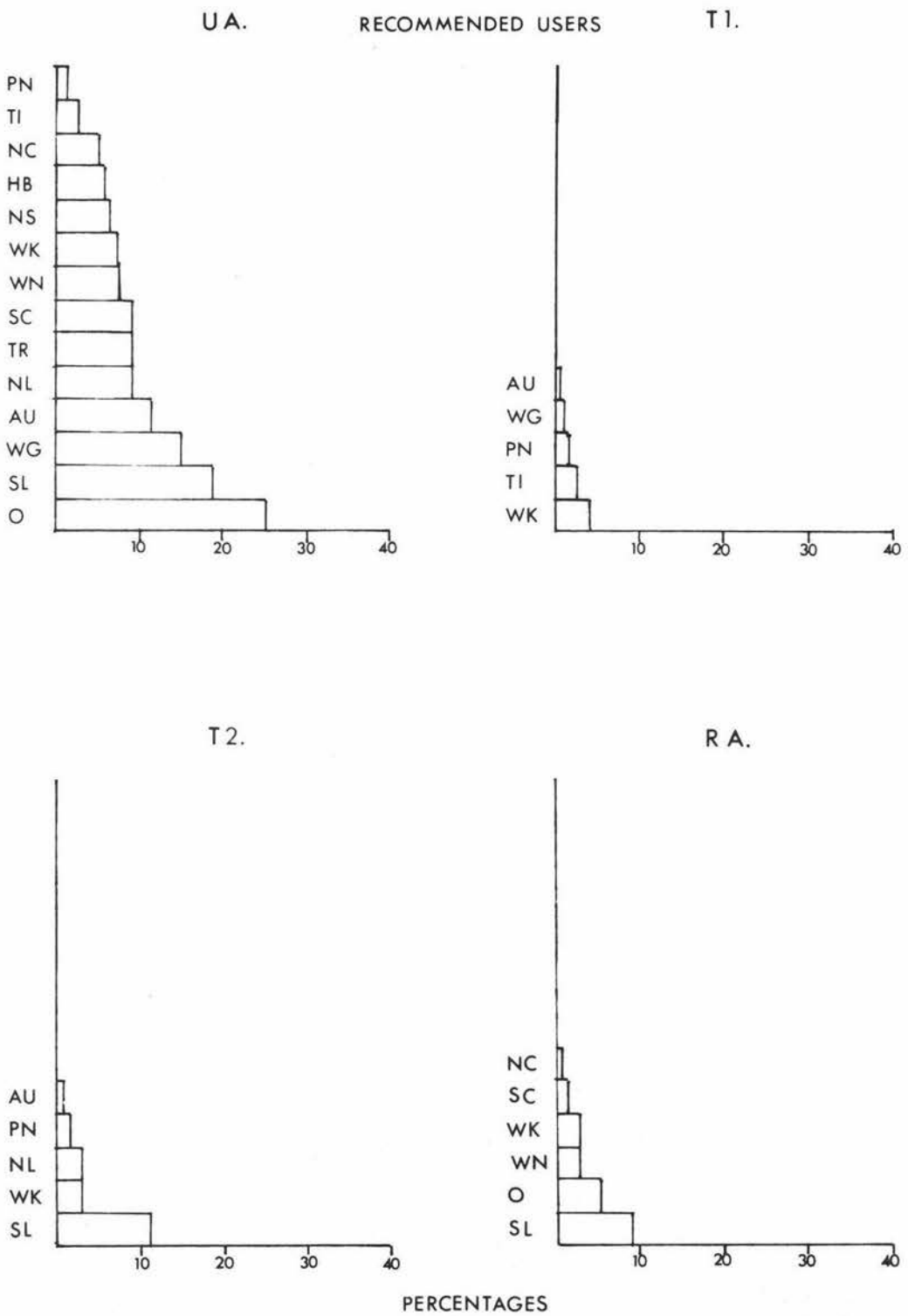


FIGURE 9.d LAUNDRY ON WHEELS

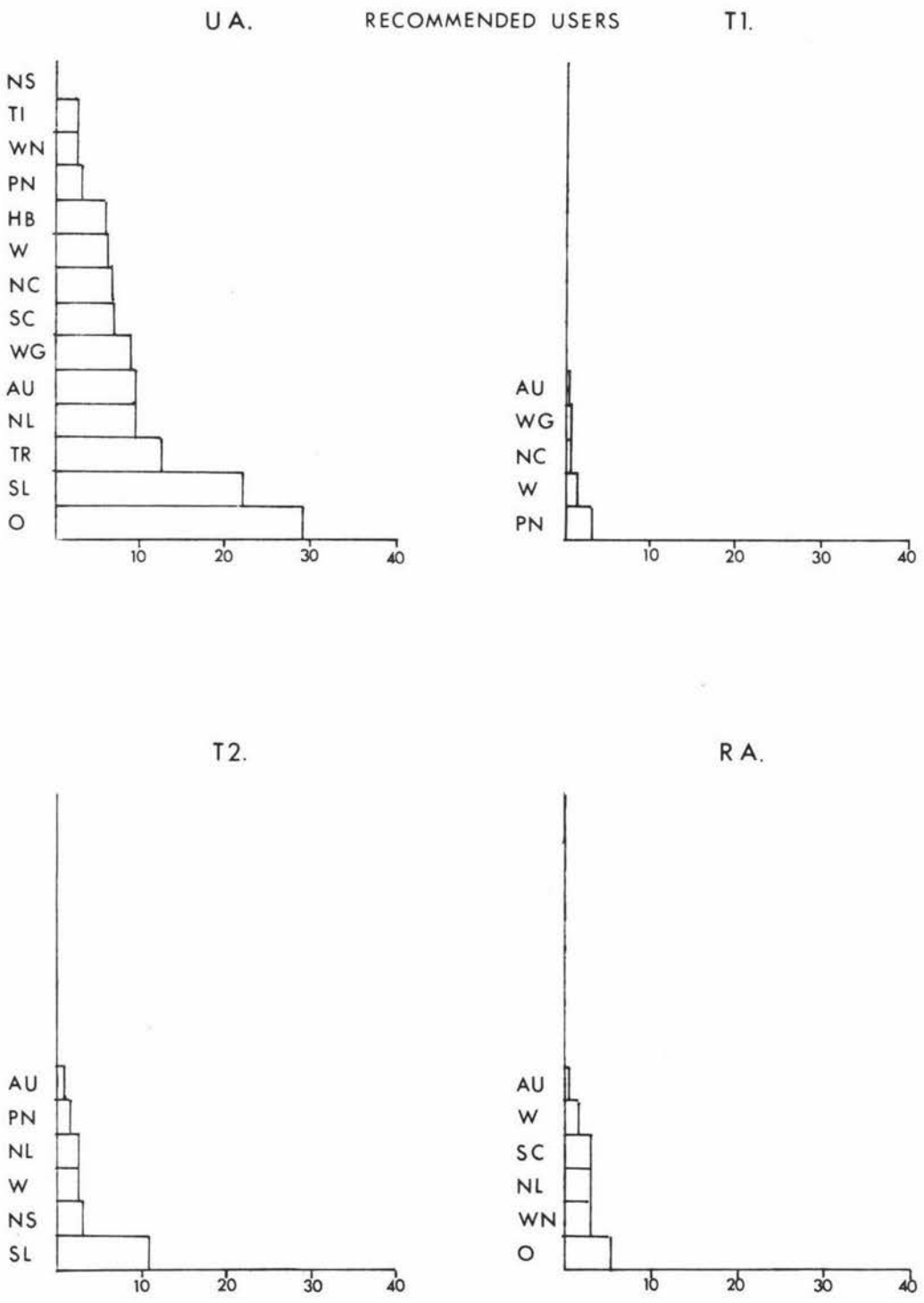


FIGURE 9.e

HOME AID

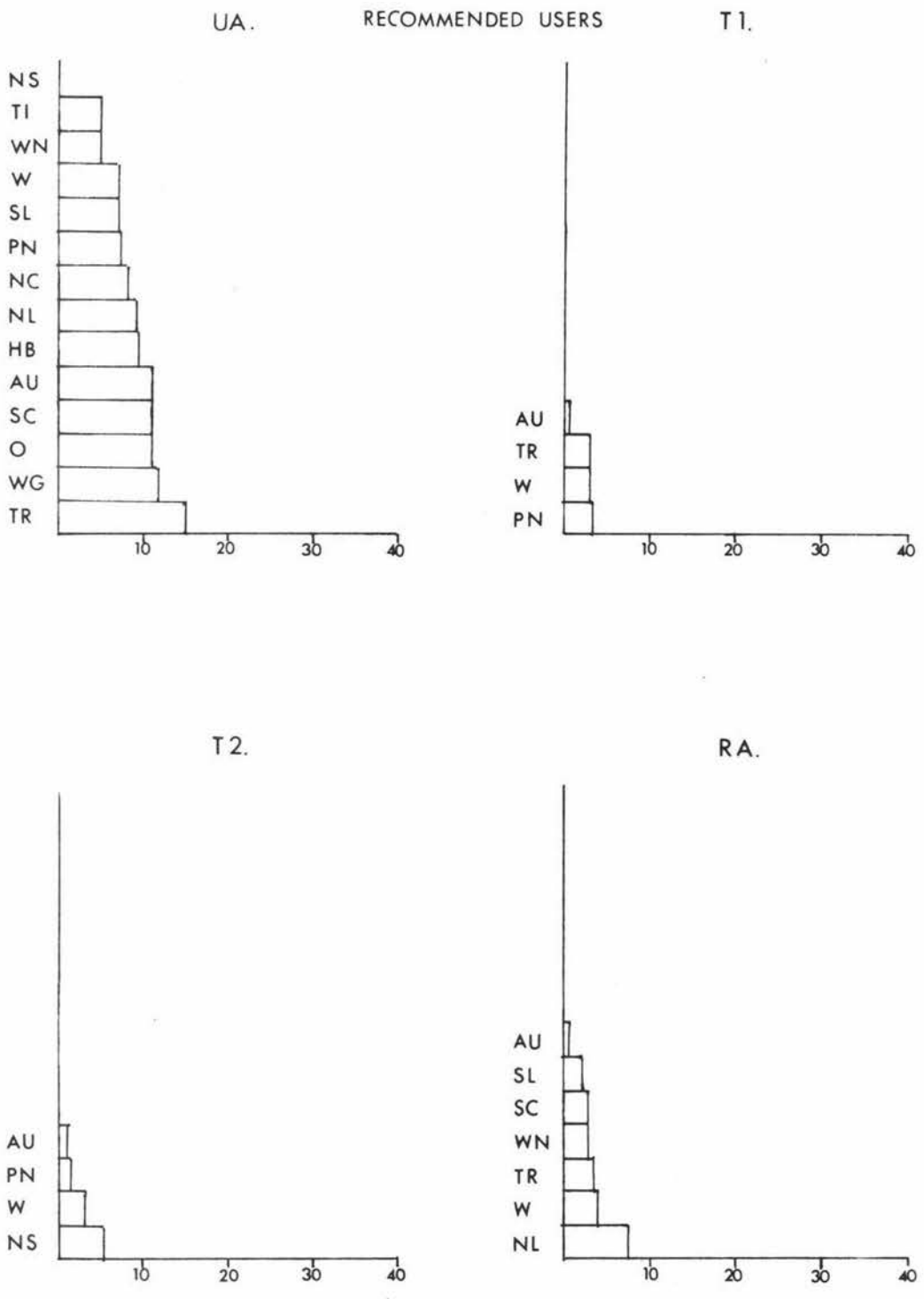
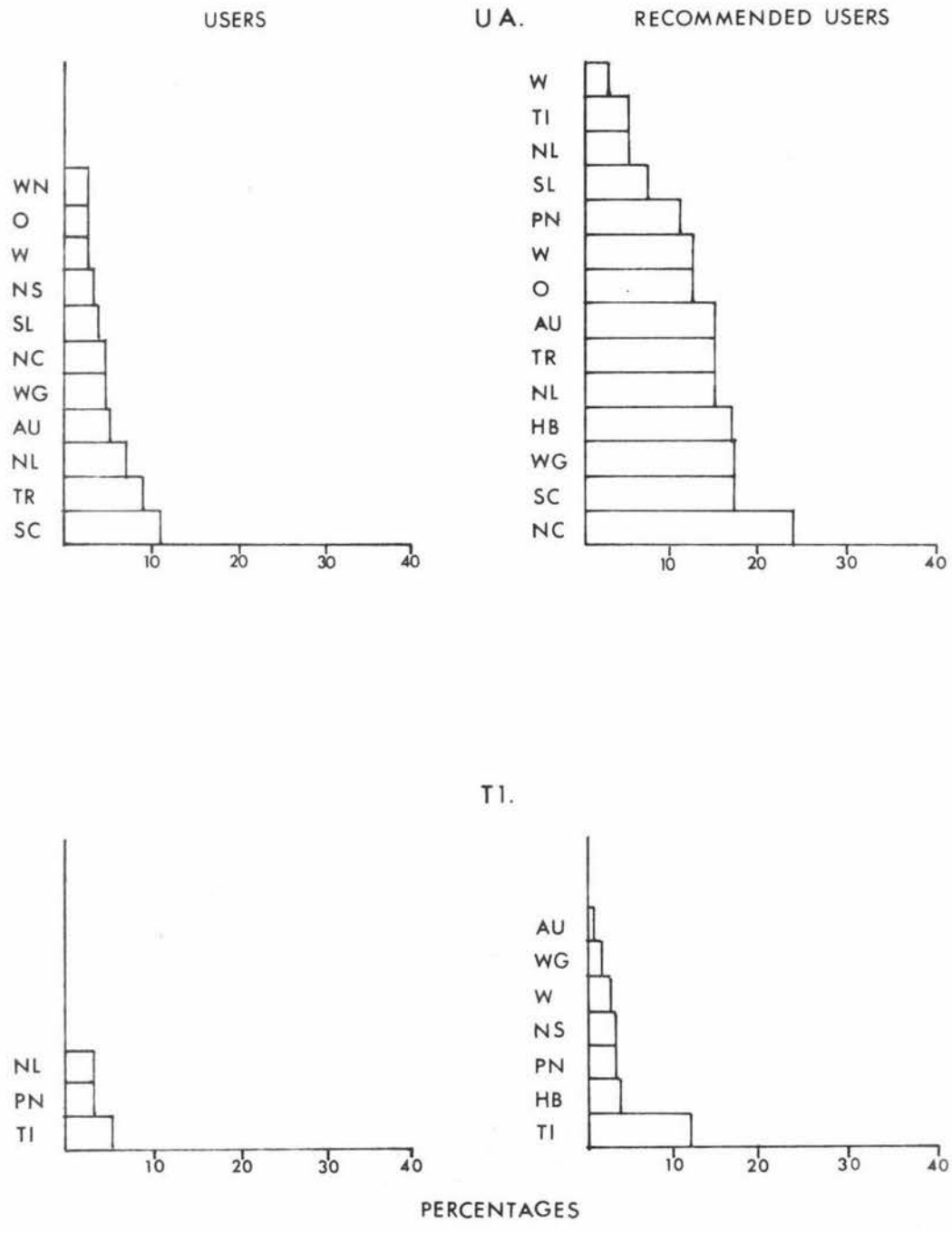


FIGURE 9.f OCCUPATIONAL THERAPY



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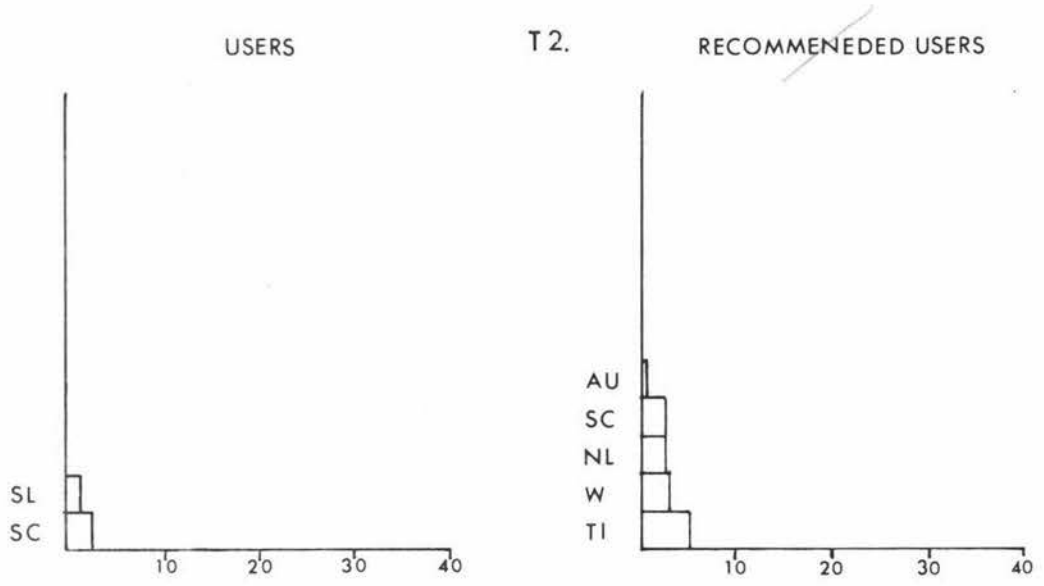

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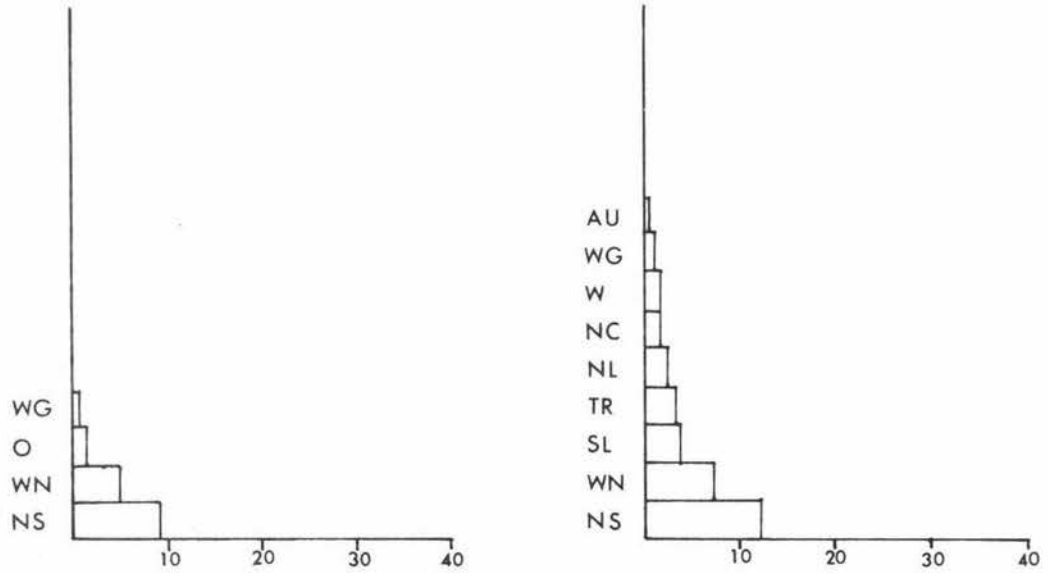
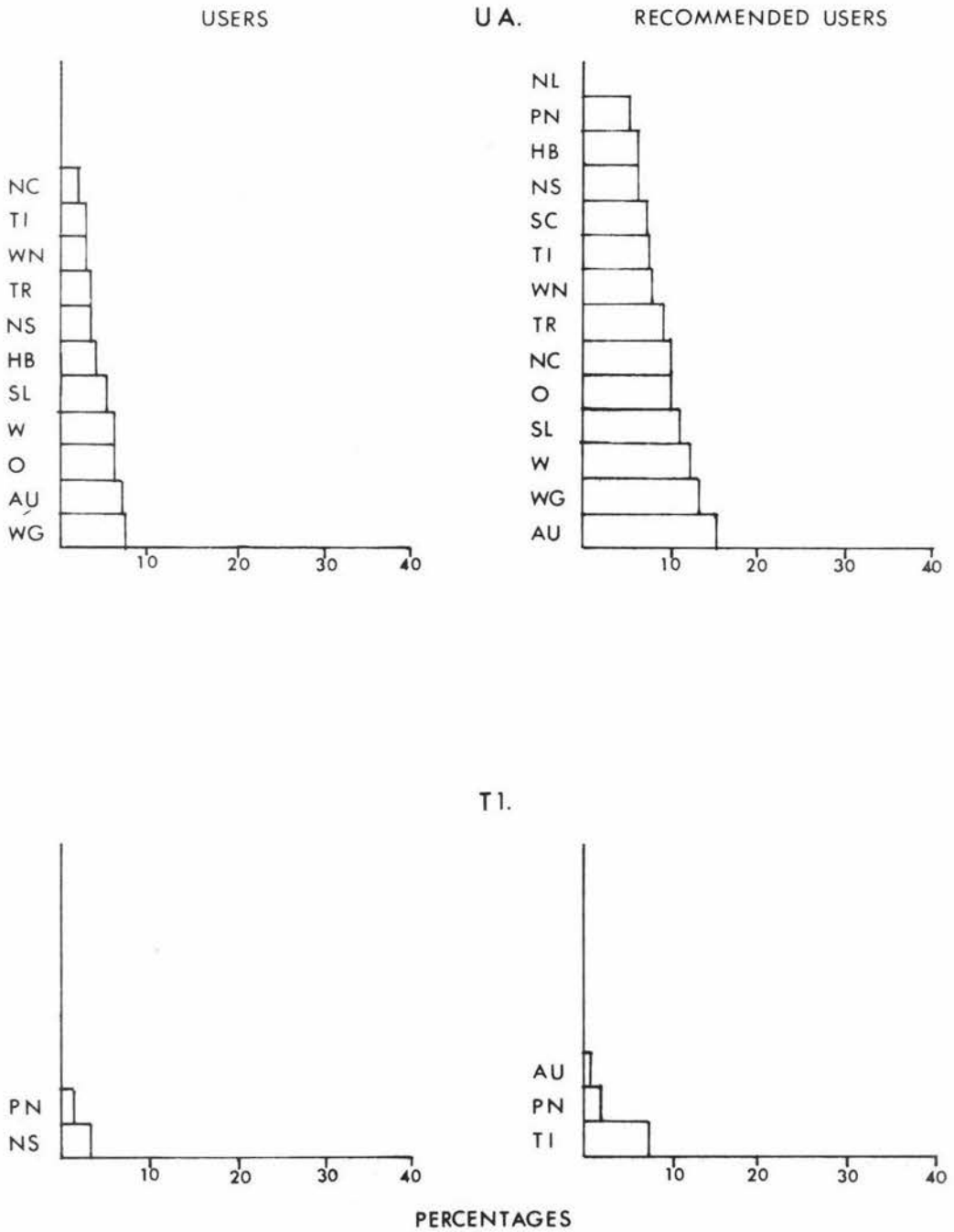


PERCENTAGES

FIGURE 9.g PHYSIOTHERAPY



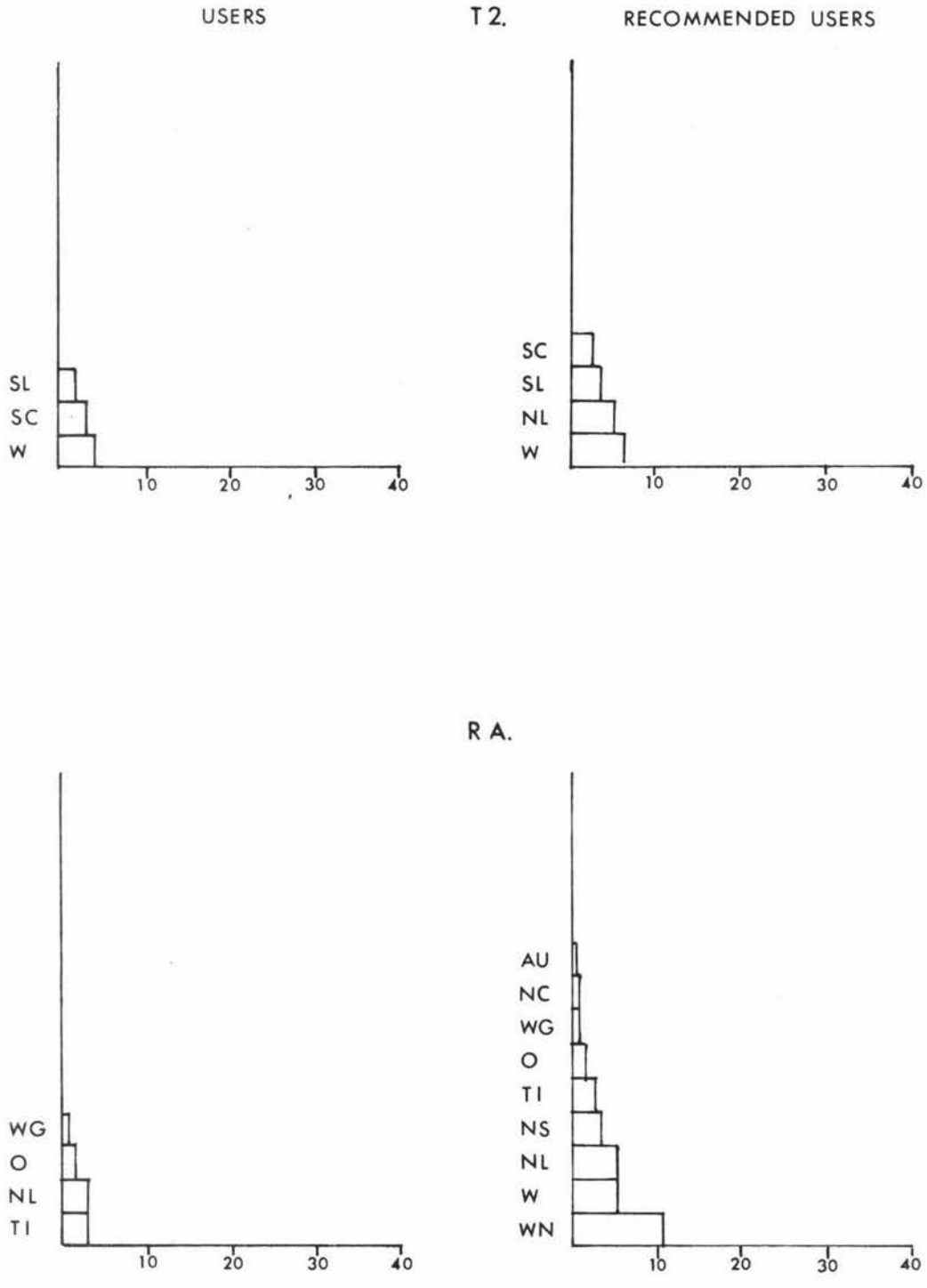

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FIGURE 9.h PSYCHOTHERAPY

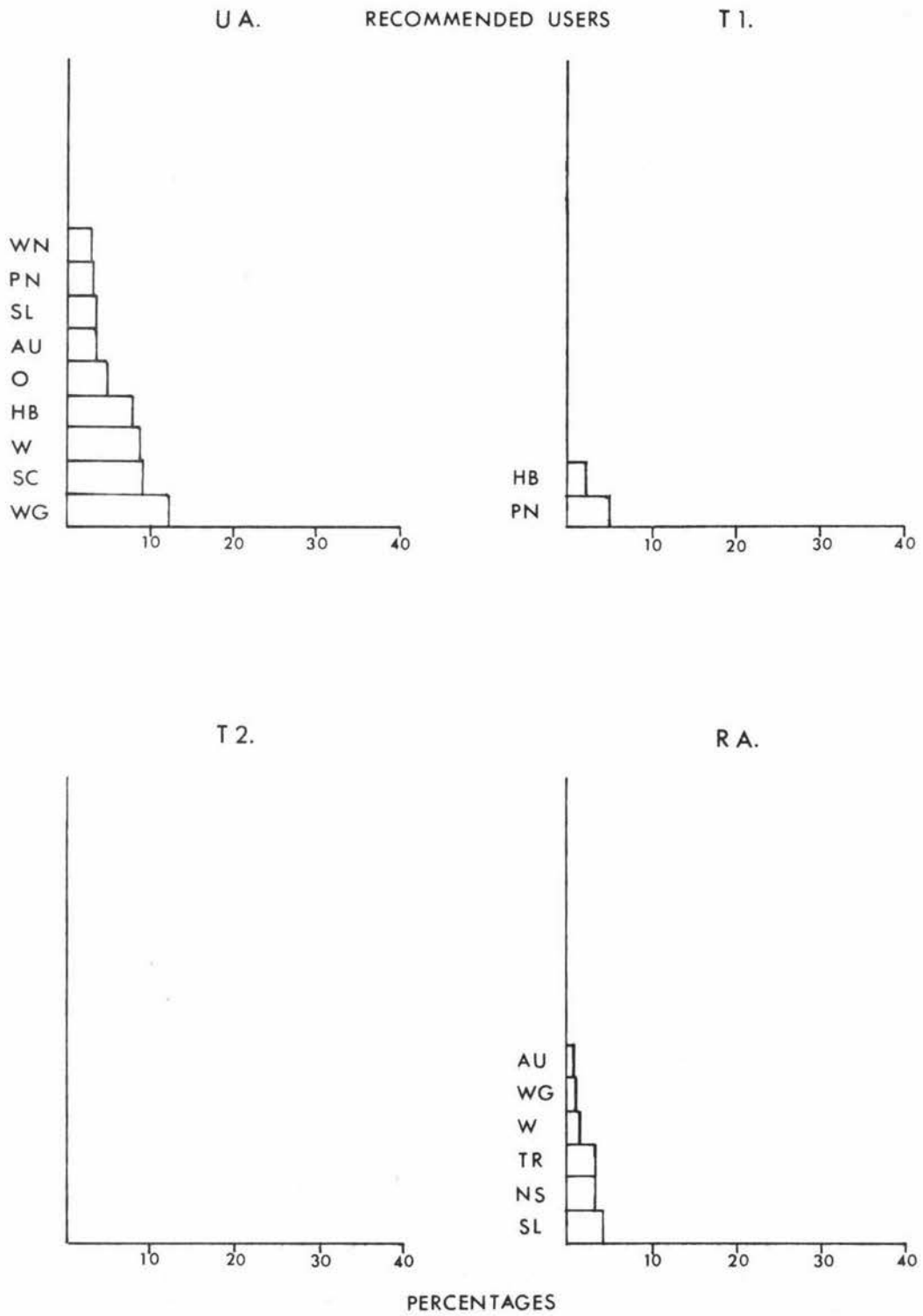
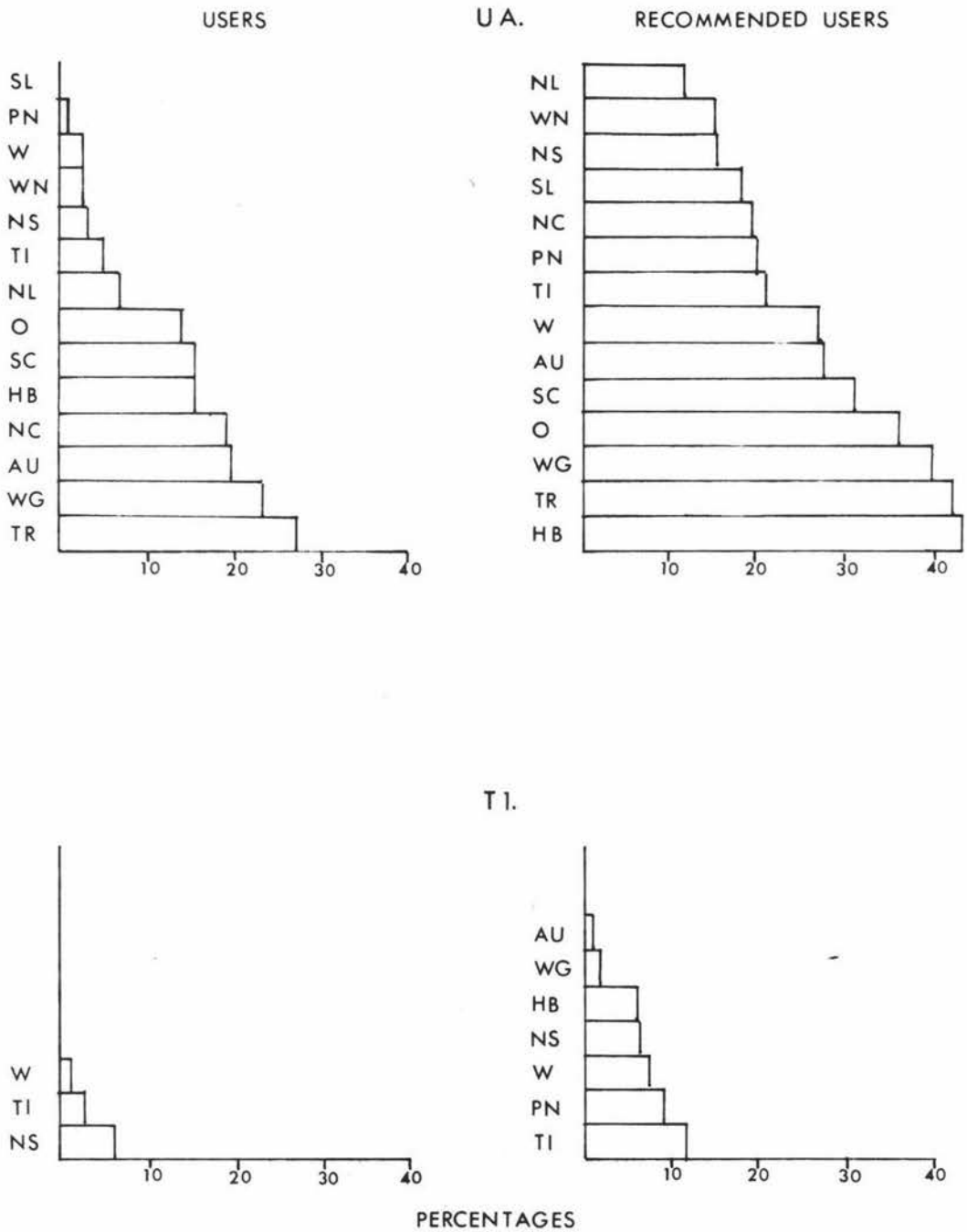
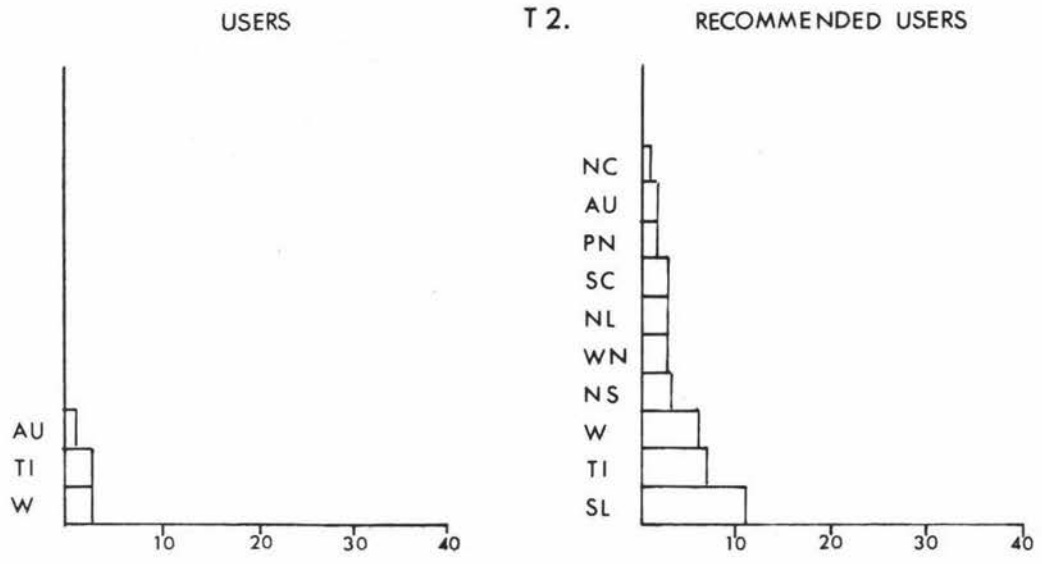


FIGURE 9.i

CHIROPODY

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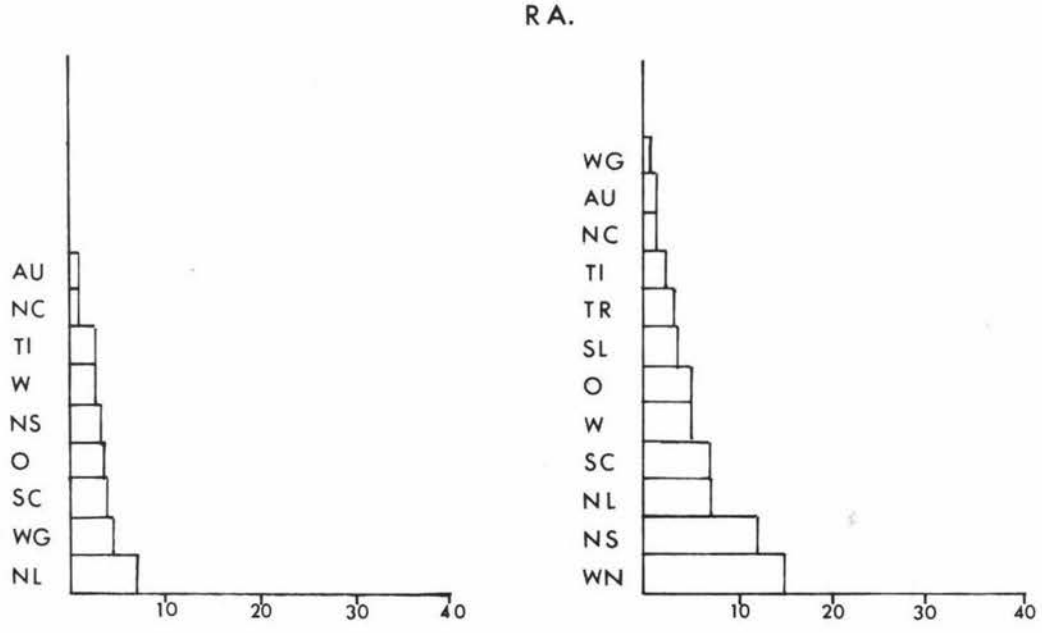
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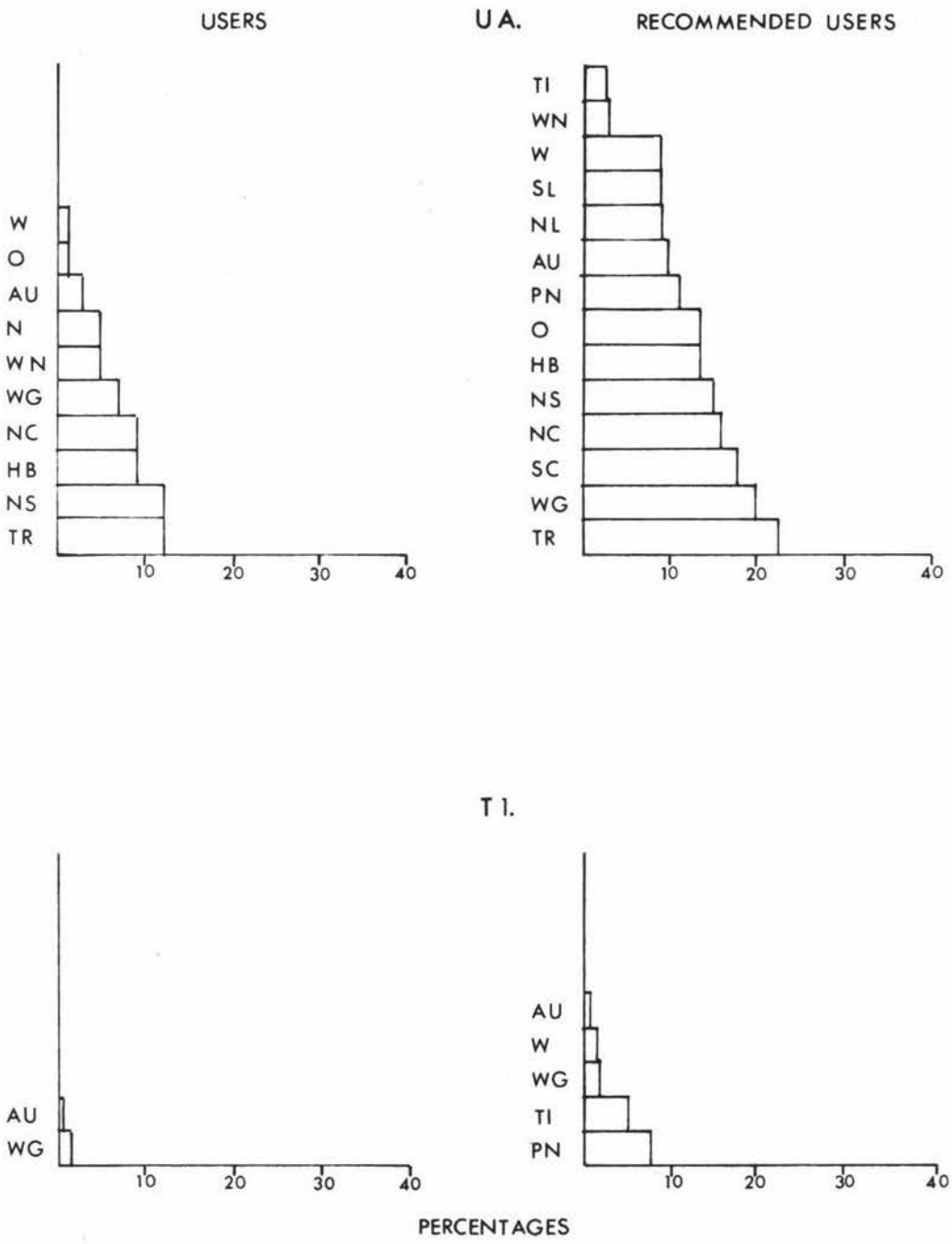
FIGURE 9.j

DENTAL THERAPY



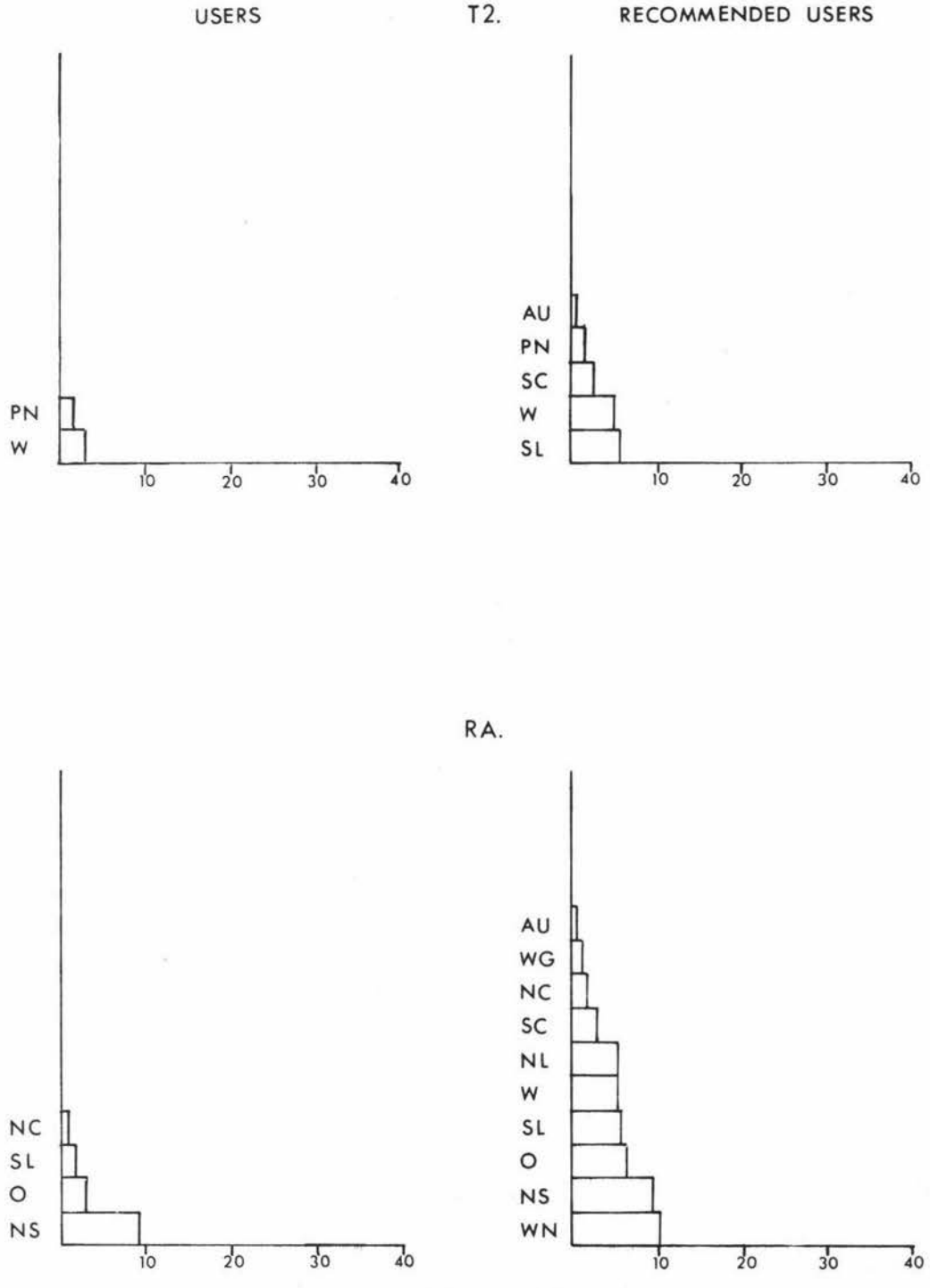

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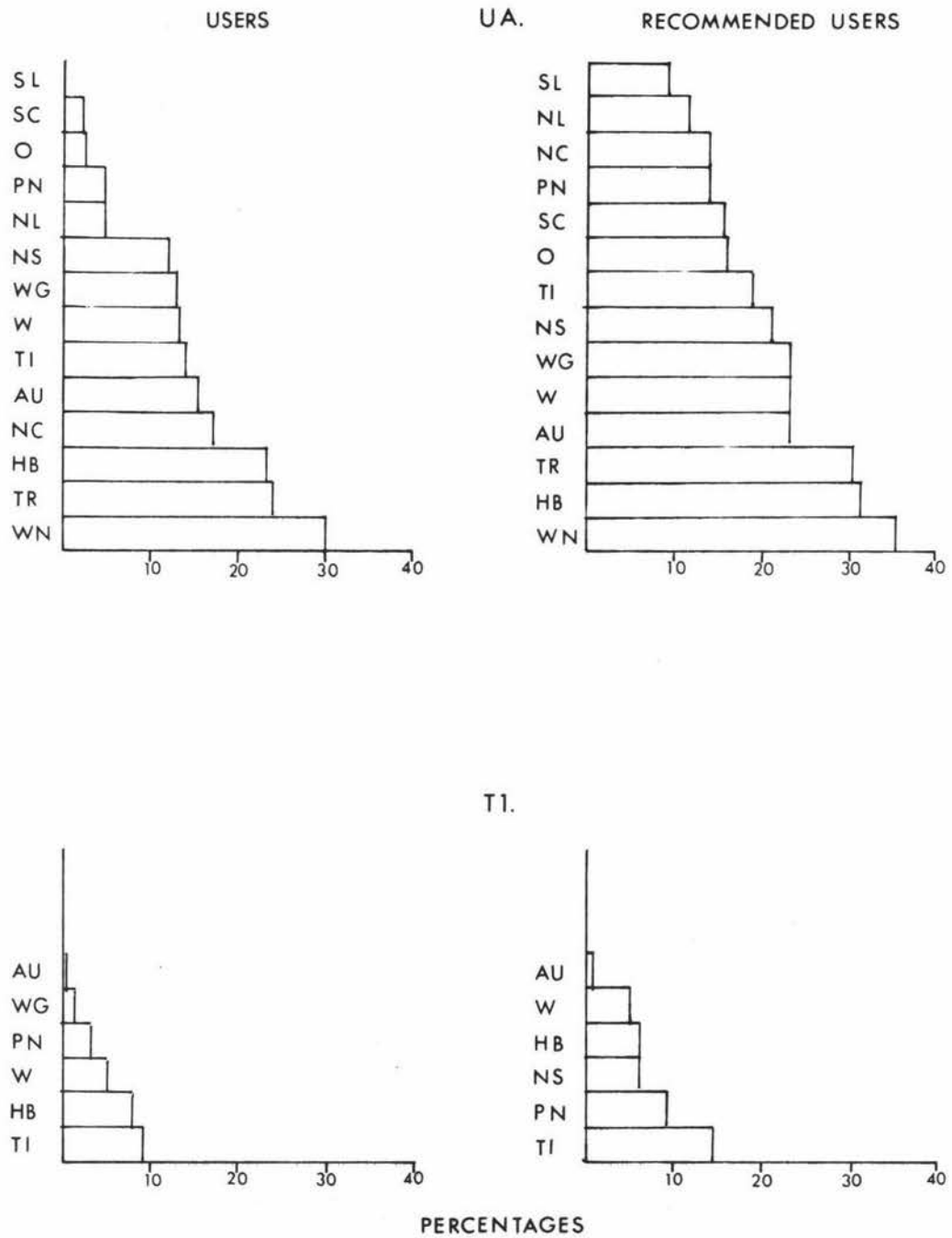
FIGURE 9.k VISION AID



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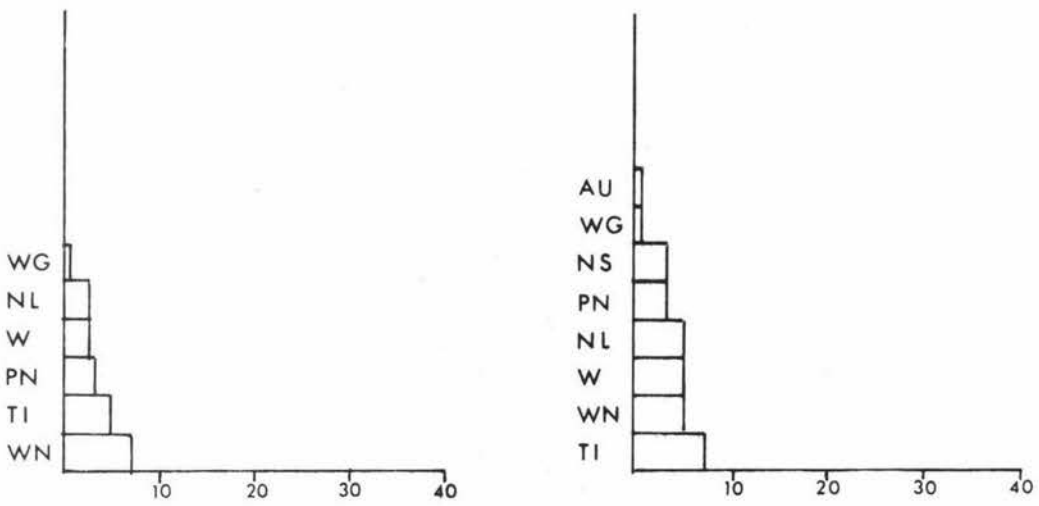

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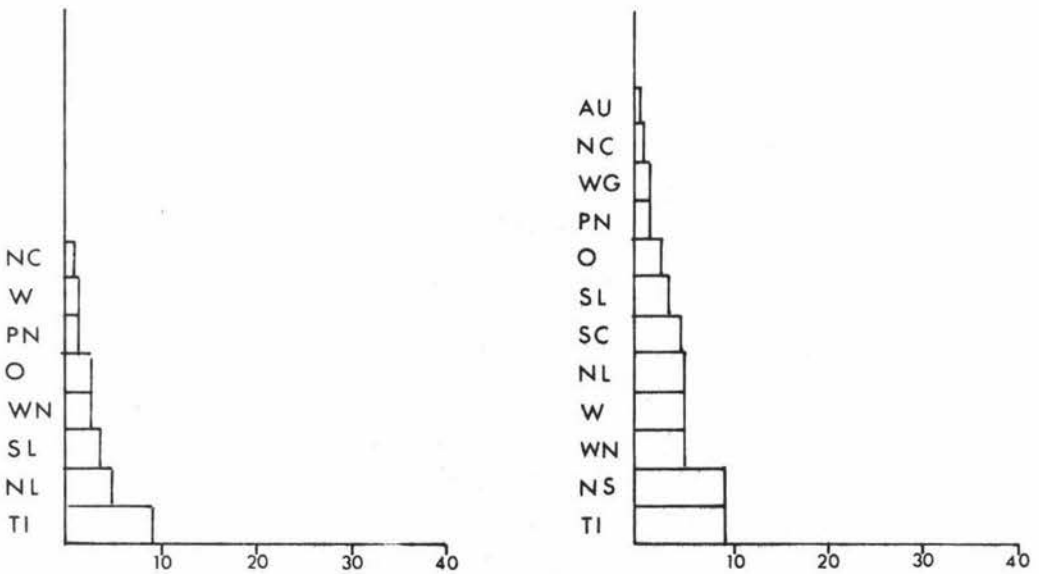


PERCENTAGES

FIGURE 9.1 ASSESSMENT WARDS

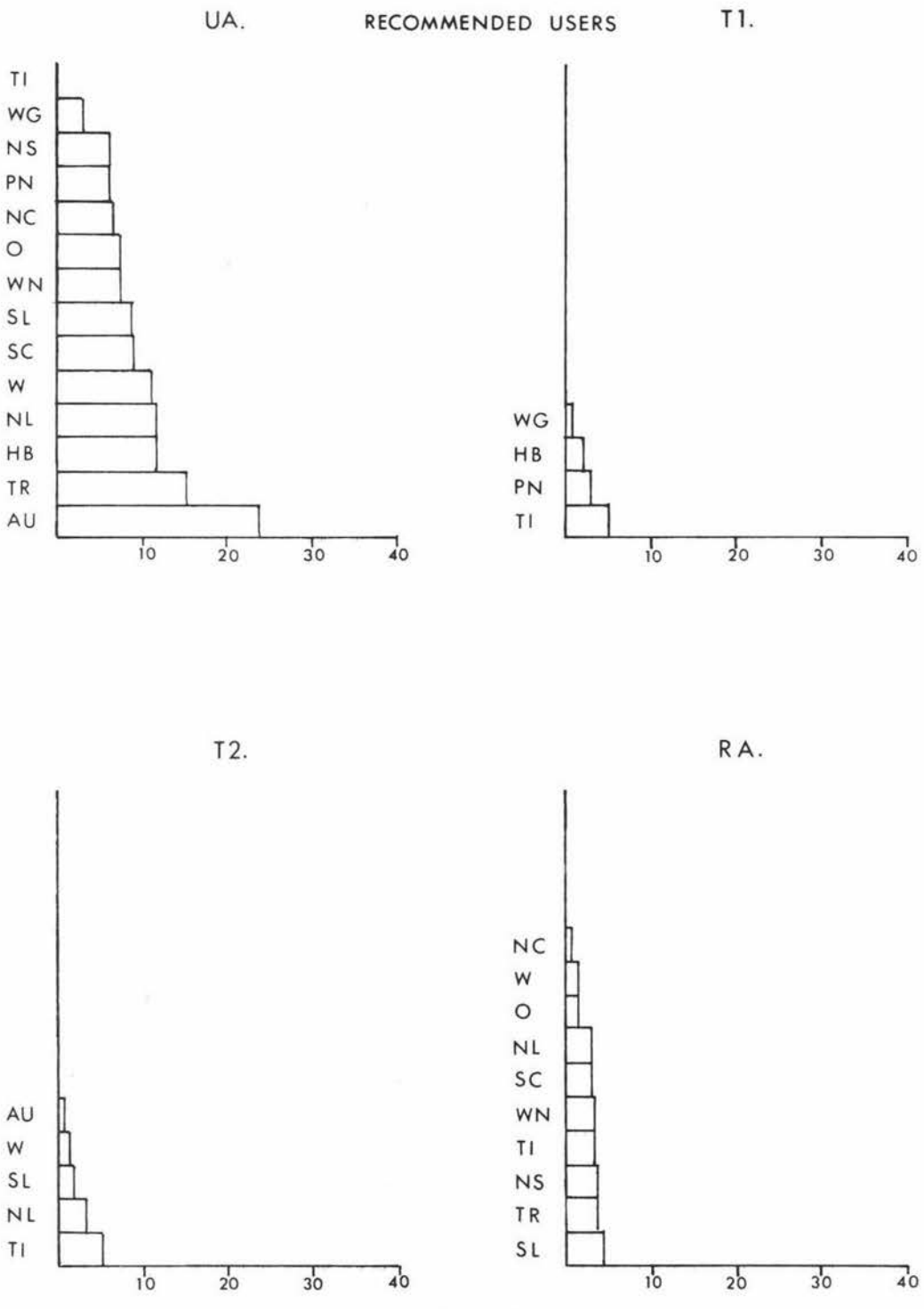


FIGURE 9.m DAY CENTRES

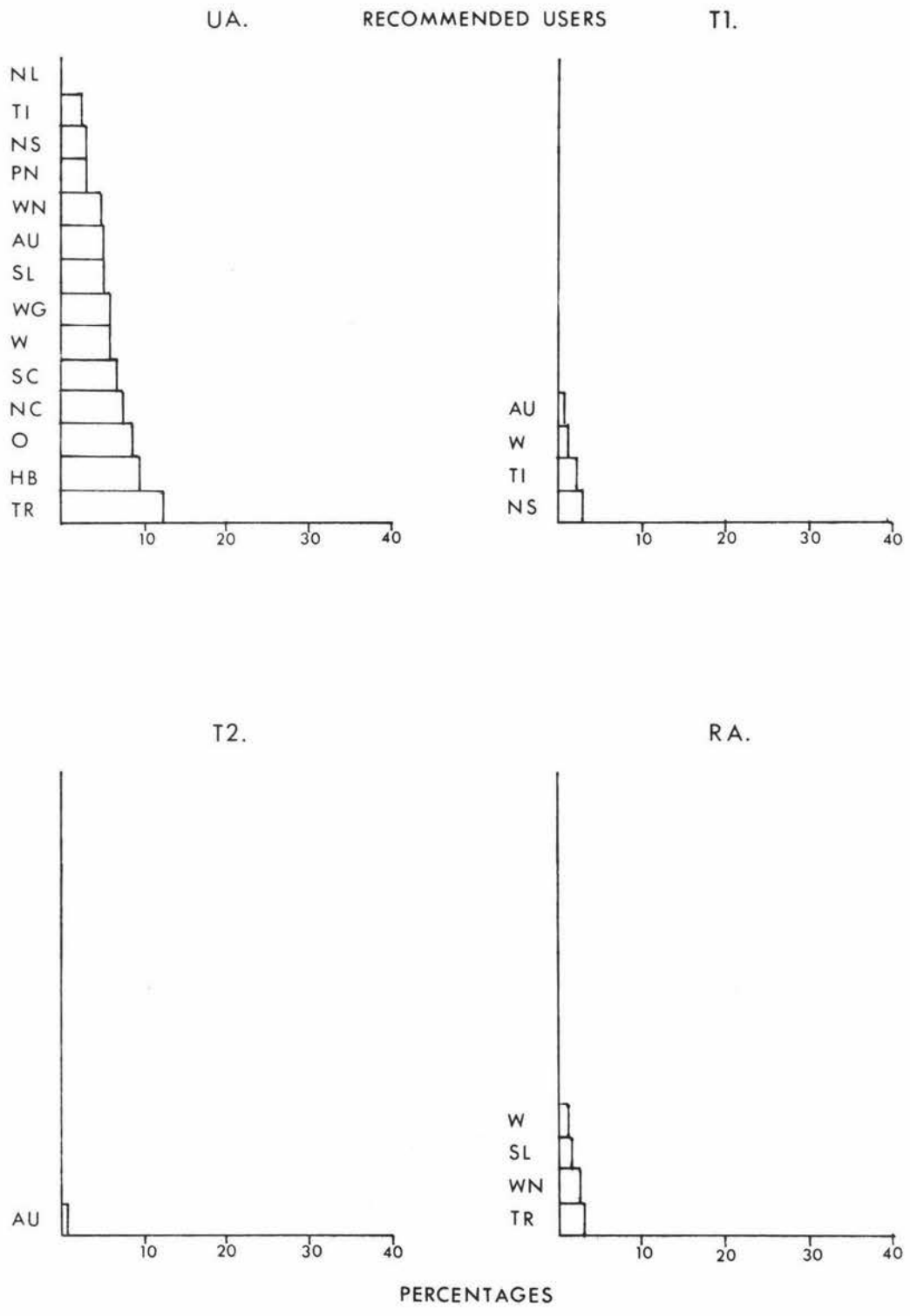


FIGURE 10.

SPATIAL VARIATIONS IN THE PROVISION OF COMMUNITY SERVICES FOR THE ELDERLY BETWEEN AREA TYPES.

KEY:

CB: Central Business District

TZ: Zone Of Transition

OS: Old Suburbs - Pre 1935

NS: Newer Predominantly State Built Suburbs

NP: Newer Predominantly Private Built Suburbs

T1 : Towns 5,000 - 20,000

T2: Towns 1,000 - 5,000

RA: Rural Areas

FIGURE 10.a

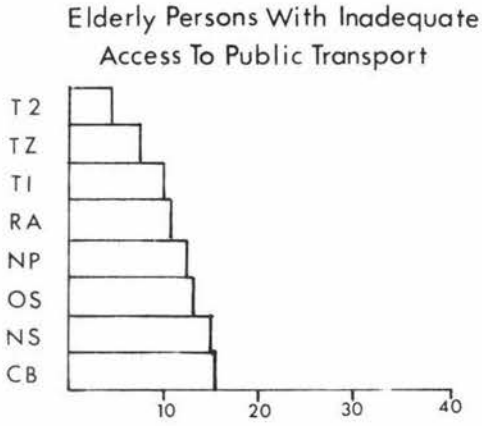


FIGURE 10.b

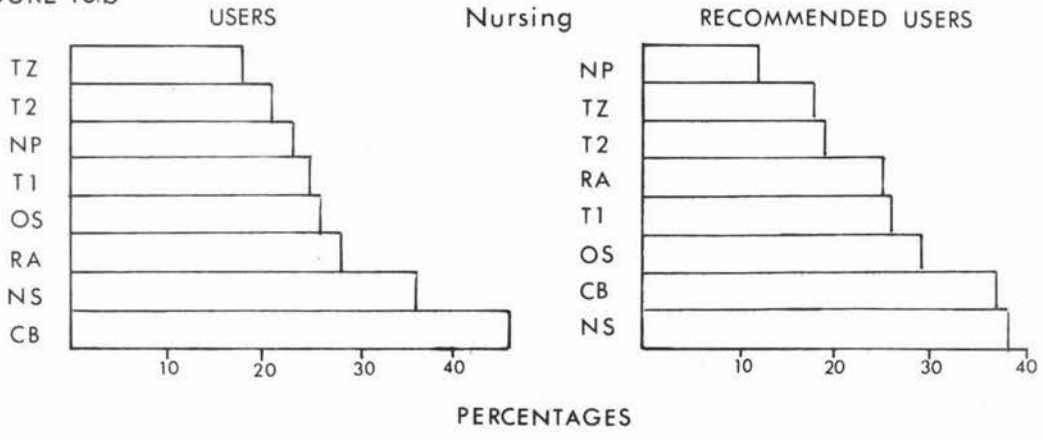
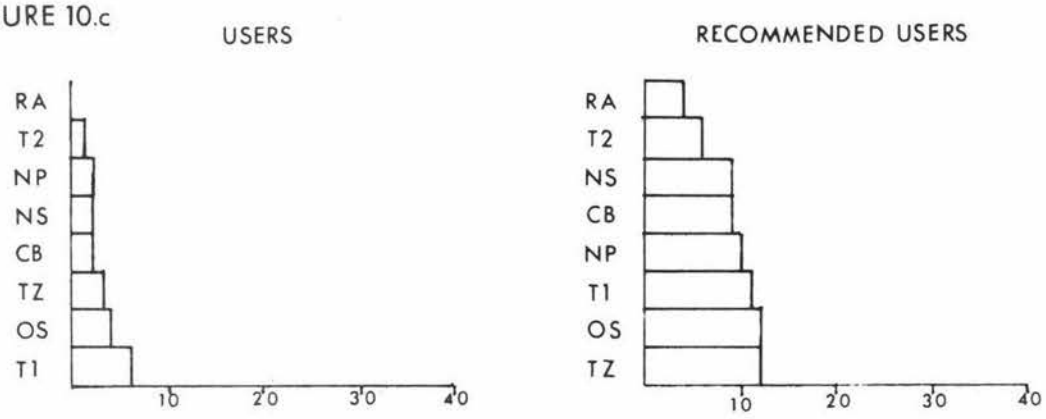
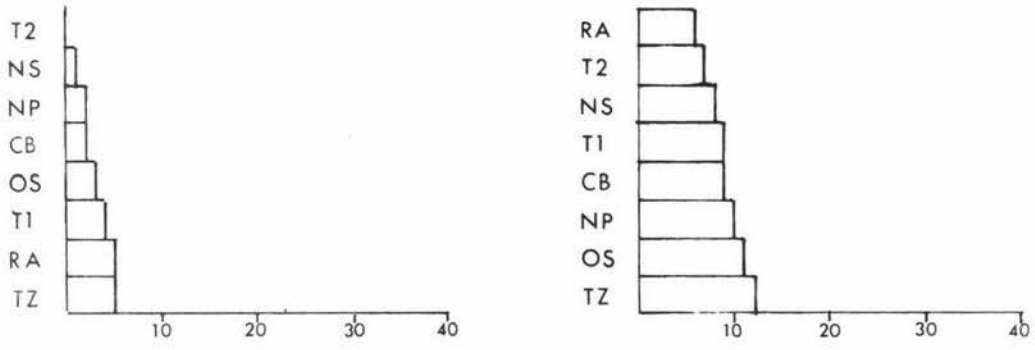


FIGURE 10.c



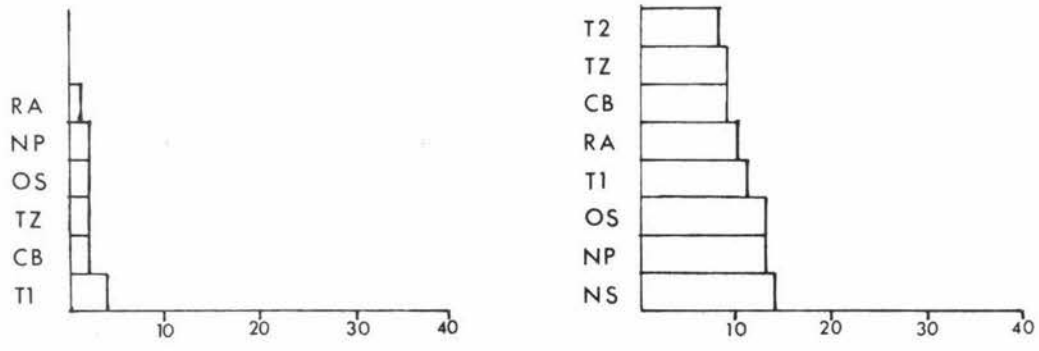
Meals on Wheels

FIGURE 10.d



Laundry on Wheels

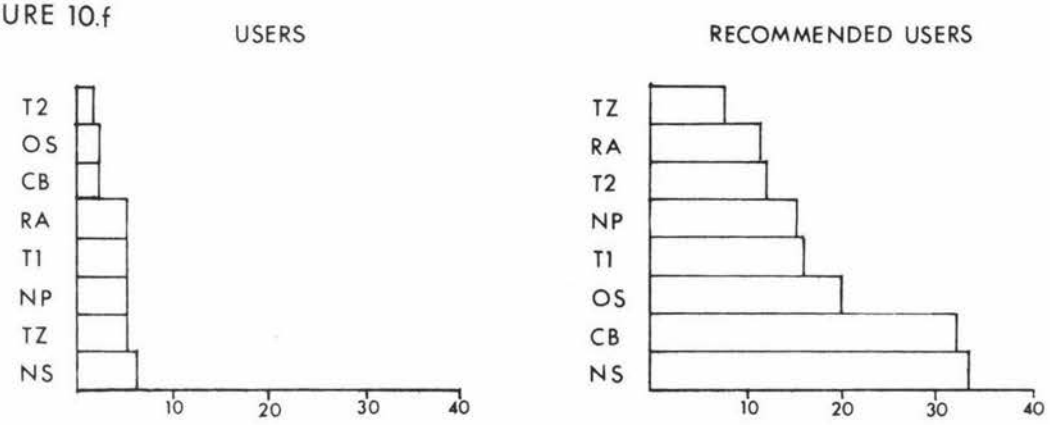
FIGURE 10.e



Home Aid

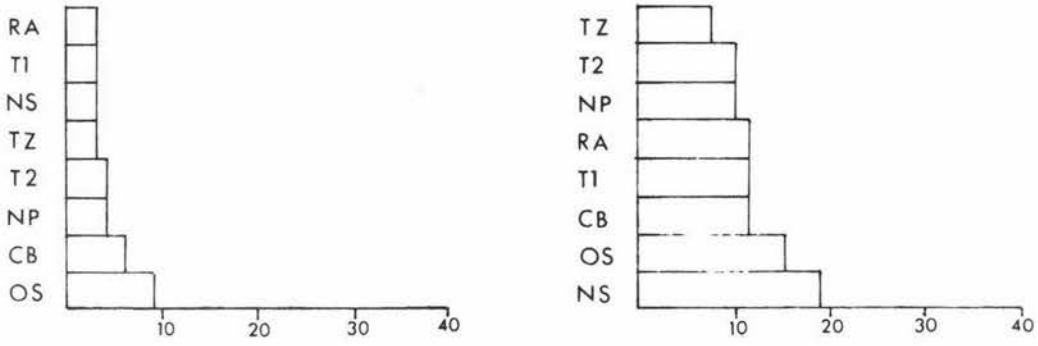
PERCENTAGES

FIGURE 10.f



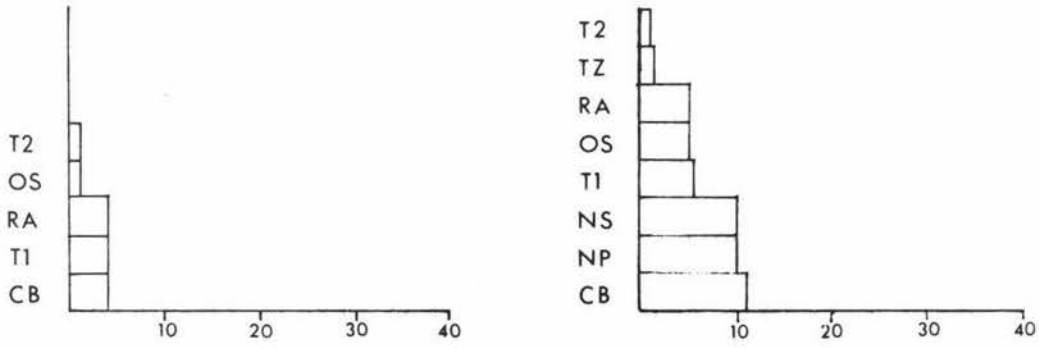
Occupational Therapy

FIGURE 10.g



Physiotherapy

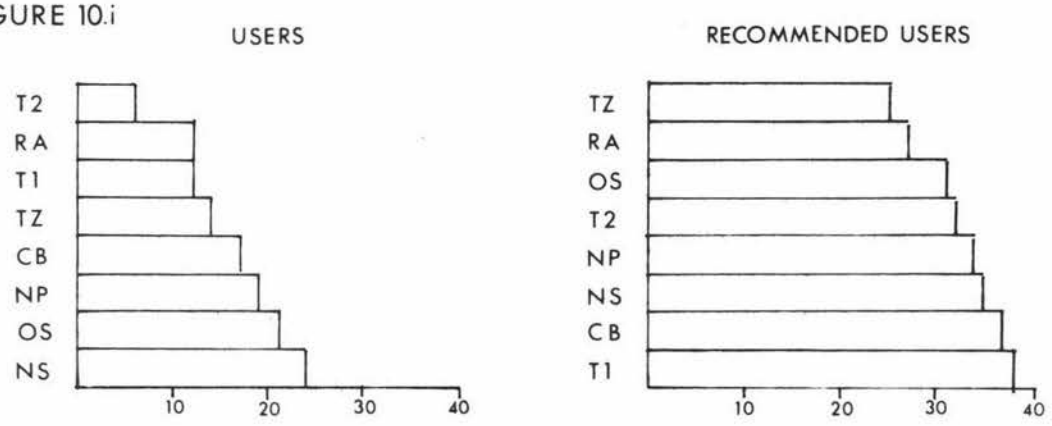
FIGURE 10.h



Psychotherapy

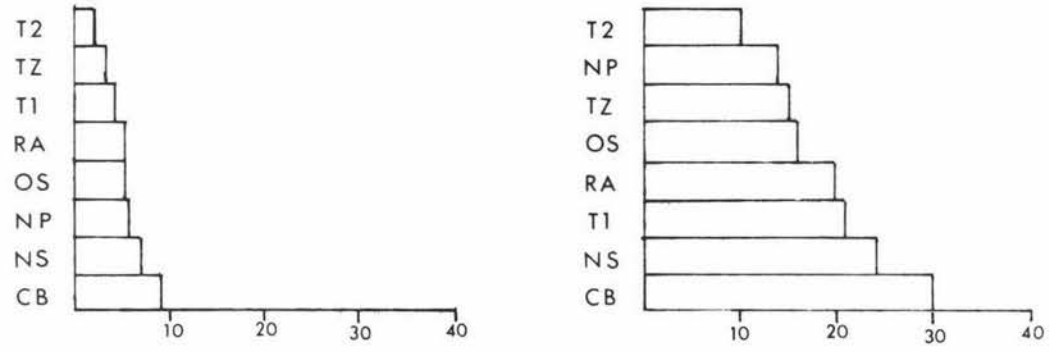
PERCENTAGES

FIGURE 10.i



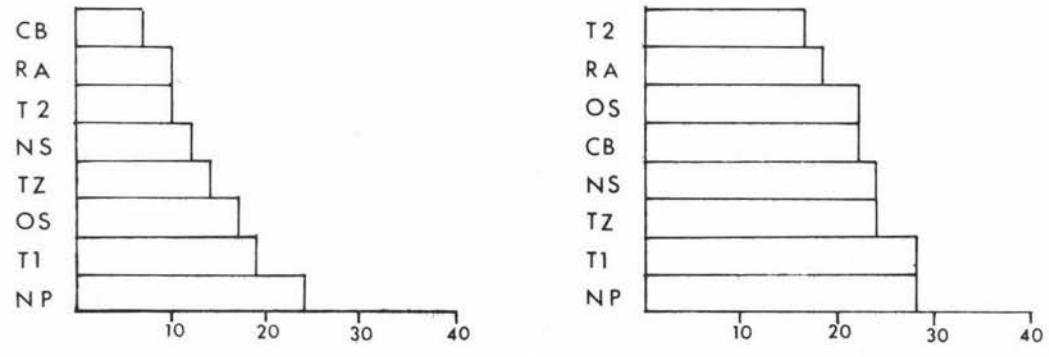
Chiropody

FIGURE 10.j



Dental Therapy

FIGURE 10.k



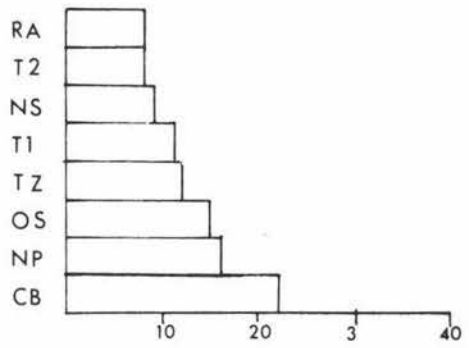
Vision Aid

PERCENTAGES

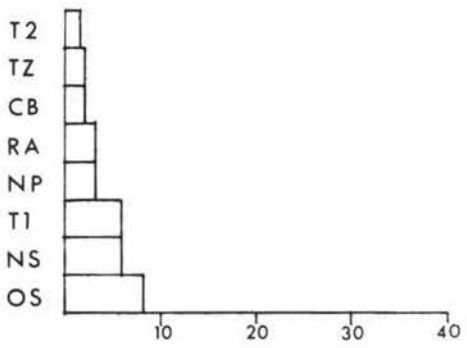
FIGURE 10.l

RECOMMENDED USERS

10.m



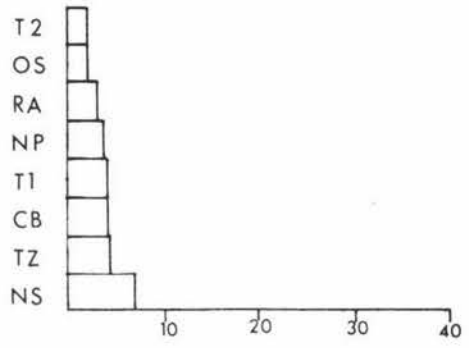
Assessment Ward



Day Centre

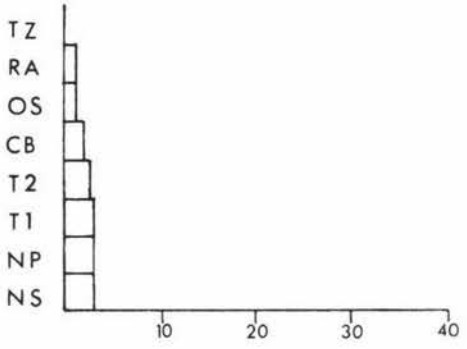
FIGURE 10.n

10.o



Short-Stay
Medical/Surgical Ward

PERCENTAGES



Day Ward

Source: Compiled from Department of Health Survey 1972a

CHAPTER 5

THE PROVISION OF ACCOMMODATION FOR THE ELDERLY IN NEW ZEALAND

With the social problems arising from the current housing market situation, the last two years has seen a growing awareness of the difficulties that some social groups face in obtaining housing appropriate to their needs and within their financial means. Elderly people living on fixed incomes are particularly vulnerable to market forces that are at present tightening the housing market. As a consequence, political attention, at both national and local level, has recently been directed at providing finance for building accommodation for elderly people. Like the previous section on community services, this section is concerned with the spatial variations of the degree to which current housing stock and accommodation provided by local authorities is appropriate in meeting the housing needs of elderly people.

Sources of Variation in Service Provision

As with variations in the availability of community services, variations in the distribution of elderly accommodation depend greatly on the location of elderly people. (See Figure 6.) What is important if elderly people are to have access to appropriate accommodation is that the type of housing available should meet the demand pattern for various accommodation types in each region. Many elderly people have very specific needs that of necessity should be incorporated into their accommodation due to their physical incapabilities or other individual needs.[1] It is very difficult however to determine exactly what proportion of elderly people in any one region require housing with such specialised

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[1] See in particular the publication by the New Zealand Department of Health 1972 The Design of Pensioner Housing.

features. The problem then is that in any one area it is hard to assess what proportion of elderly actually need assistance from local authorities for their accommodation requirements. A second cause of variation is that the more populated boroughs and counties, along with the cities, will have a larger financial resource base from which funds for the provision of elderly accommodation can be allocated. Many of the small boroughs and sparsely populated counties do not have adequate funds to provide elderly accommodation.[2] A further source of variation could be movement of elderly people from rural to towns and from towns to cities at the time of, for example, their retirement. Particularly in rural areas, people once having worked on farms, will retire to the nearest town or to where friends and relatives are living. Demand for elderly accommodation should, therefore, be relatively low in rural counties. But whatever the causes of variation in accommodation provision, the principal criterion by which any region can be judged to be under-provided in terms of elderly accommodation is if that region's housing stock mix is not appropriate to the demands for various housing types.

Hypotheses

To determine if regions in New Zealand do not adequately provide the elderly accommodation required, the following hypotheses are investigated:

1. The existing stock of elderly housing is not consistent with the needs of many individuals. That is, regions may be identified by their inability to provide appropriate housing types for a particular regional demand pattern.

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[2] Several replies from the Local Authority Survey (1974) gave examples where counties committed to schemes such as sewerage treatment stations and drainage systems did not have finance available for elderly accommodation.

2. There will be spatial variations in the degree to which Local Authorities have met demands for government built housing.

3. As with the provision of community services, the demand for provision of housing for the elderly will be greatest in urban areas. Rural areas and small towns will be less capable of meeting demands for elderly housing.

4. Areas of net in-migration will be less able to meet housing requirements of the elderly due to competition for scarce local body finances.

5. There will be variations in the location of elderly accommodation with respect to access to community services, particularly between rapidly growing regions and peripheral regions and between urban areas and rural areas.

Local Authority Survey

The analysis in this chapter also uses the Department of Health Survey. It is, however, supplemented with data collected from those local bodies involved in providing accommodation for the elderly. The purpose of the survey was to look into how Local Authorities cope with the demand for elderly people's accommodation. To this end a questionnaire requesting data on the number of pensioner flats available and the number of people on waiting lists for pensioner flats was sent to every appropriate Local Authority that is located in the spatial frame selected from the Department of Health's Survey. The questionnaire was posted to 22 City Councils, 76 Borough Councils and 71 County Councils. Of the 169 questionnaires sent out 68% (115) were returned. This total return rate consisted of 95.25% (20) from City Councils, 56.6% (43) from Borough Councils and 72% (51) from County Councils. The spatial frame for this chapter therefore, consists

of all fourteen Hospital Board Regions where the Department of Health data is used and the 115 Local Authorities where the data on provision of pensioner flats is used.

Analysis, Results and Interpretation

One basic principle underlying the housing schema in the last chapter was that to be "appropriate", a person's accommodation had to be suitable to his or her needs, particularly in terms of life style, life cycle stage and one's own perception of what are the minimum requirements of an appropriate housing environment. To test the first hypothesis, to determine to what extent existing accommodation is suitable for the diverse needs of elderly people, three variables were cross checked: existing accommodation occupied by elderly people, the accommodation that each individual was recommended to inhabit (assessed by a member of the Department of Health), and the accommodation preferences of the elderly themselves. The cross-regional and area type patterns can be seen in Tables V - VII.

Table V demonstrates the two major groups within the 65 age group, those who need a dependent environment and those who do not. What is also important is the range of dependence that must be catered for, from a pensioner flat which is easy to maintain and gives social contact with near neighbours, to the almost complete dependence of those who require the services of the long-stay medical and surgical wards. A feature, therefore, of Tables V - VII, is the large proportion of elderly people who depend on various types of accommodation that are normally provided by Local Authorities and government agencies.

The Table V also shows notable regional variations in the types of accommodation currently used by the elderly, and used in conjunction with Table VI, shows that several regions have high demands for various forms of accommodation that are under provided. The need for pensioner flats in Northland, long-stay

TABLE V

ACCOMMODATION OCCUPIED AT TIME OF DEPARTMENT OF HEALTH INTERVIEW 1972

PERCENTAGES

		Ordinary Residence	Pensioner Flat	Old Peoples Home	Short-Stay Psychiatric Ward	Long-Stay Psychiatric Ward	Short-Stay Medical/Surgical Ward	Long-Stay Medical/Surgical Ward
Hospital Board Regions	NL	69.7		21.0				9.3
	AK	64.6	5.5	17.0		2.1	1.8	8.0
	WK	65.9	7.4	8.6		1.2	4.9	12.2
	TR	70.8		19.2			6.1	3.1
	HB	74	4.0	14.0			4.0	4.0
	TK	70	3.0	20.0				7.0
	WN	65	2.5	12.5		5.0	10.0	5.0
	PN	80		15.0			3.0	2.0
	WG	64	3.0	12.0		9.0	6.0	6.0
	NS	62		15.0		12.0	2.0	9.0
	NC	64	4.0	15.0		5.0	4.0	8.0
	SC	67	2.0	13.1			4.5	13.4
	O	69	7.4	8.7		7.4	1.3	6.2
	SL	62	4.0	11.0			5.0	18.0
Area Types	CBD	62.0		17.4		2.2	6.5	12.0
	TZ	50.7	22.9	20.5			4.5	1.5
	OS	61.5	5.4	18.7		1.3	3.4	9.7
	NS	51.5	5.4	14.4		22.6	2.0	4.1
	NP	78.2	4.1	12.4			4.6	0.7
	T1	70.8	2.5	14.8		2.5		9.4
	T2	69.4	5.3	9.7	0.1	4.0	3.0	8.2
	RA	84.4		3.4		10.2	0.6	1.2

Source : Compiled from Department of Health 1972 a Survey

TABLE VI

ACCOMMODATION RECOMMENDED

(If Different from the Presently Occupied)

AT TIME OF DEPARTMENT OF HEALTH INTERVIEW 1972

PERCENTAGES

		Ordinary Residence	Pensioner Flat	Old Peoples Home	Long-Stay Psychiatric Ward	Long-Stay Medical/ Surgical Ward	Total %
	NL		12.9		2.4	1.0	16.3
	AK		6.2		0.3	6.1	12.6
	WK		3.6	6.2			9.8
	TR	5.1	6.2			3.0	14.3
	HB	2.0				2.0	4.0
	TK			3.0			3.0
Hospital	WN		2.5	7.5		10.0	20.0
Board	PN				2.0	3.0	5.0
Regions	WS		7.5	6.0		1.0	14.5
	NS	4.0		1.0		9.0	14.0
	NC		5.6	8.0		1.0	14.6
	SC		0.5	8.0	2.5		11.0
	O		2.3	1.2	1.2	4.4	9.1
	SL		4.0	1.0		10.0	15.0
	CBD		6.5	4.3		13.0	23.8
	TZ	3.0	7.5	4.5		4.5	19.5
	OS	1.1	6.0	2.4		2.9	12.4
Area	NS	8.2	1.0	11.3	1.0	4.1	25.6
Types	NP	3.9	5.2	3.0	0.6	3.0	15.7
	T1	4.6	5.4	6.9	0.7	3.0	20.6
	T2	3.0	0.7	7.5	1.5	3.0	15.7
	RA	1.2	2.7	4.1	2.0	3.4	13.4

Source : Compiled from Department of Health 1972 a Survey

TABLE VII

ACCOMMODATION PREFERENCES AT TIME OF DEPARTMENT OF HEALTH INTERVIEW 1972

PERCENTAGES

		Pensioner Flat	Own Your Own Flat	Flat Non Specific	Small House And/ Or Section	Other House Flat Nearer Services
Hospital Board Regions	NL	5.6		3.3	9.5	
	AK	2.8	2.8	0.8	66.0	
	WK		1.3		1.2	1.0
	TR					
	HB				10.4	
	TK			0.9	12.6	
	WN	11.7		1.2	6 1	0.4
	PN	0.4	2.9	3.0	10.4	
	WG		4.7	0.5	7.6	
	NS					
	NC	3.7	1.1	0.1	12.9	0.3
	SC		5.5		6.2	
	O	7.7	3.2		6.2	
	SL	0.3	0.8		11.5	
Area Types	CBD	2.2	4.3		8.7	
	TZ	1.5	3.0		6.0	1.5
	OS	0.9	1.3	0.7	2.9	
	NS	2.0	1.0	2.0	3.0	
	NP	0.6	1.5	0.6	4.2	0.3
	T1	2.3	3.0	5.4	3.0	
	T2	0.75		0.75	3.7	
	RA	2.0			4.7	1.2

TABLE VII

(Contd)

		Other House/Flat Nearer Friends-Relatives	Different Quality	Old Peoples Home/ or More Dependent Accommodation.	Other - 'Own" Home etc.	Total %
Hospital Board Regions	NL		10.3	2.3		32.9
	AK	1.4	6.8	1.1	0.1	21.6
	WK		1.8	0.7	0.4	6.4
	TR		7.1			7.1
	HB	0.3	0.6			11.3
	TK		0.4		0.4	14.3
	WN		5.1			24.5
	PN	4.3	1.2			22.2
	WG	4.1	8.3	0.4	1.6	27.3
	NS		10.4	1.2		11.6
	NC	0.1		0.5		20.7 18.7
	SC		1.5			11.7 13.2
	O	0.5	3.1		0.5	21.2
	SL	4.7		0.8	0.9	19.0
Area Types	CBD		4.3	2.2	2.2	23.9
	TZ	1.5	1.5	4.5	1.5	21.0
	OS	0.9	3.3	2.0	0.4	12.4
	NS	1.0	3.0	2.0	1.0	15.0
	NP	1.2		1.2	0.3	9.9
	T1	1.5	2.3		5.4	20.0 22.9
	T2	1.5	1.5	1.5	1.5	12.7 11.2
	RA	1.2	3.4	0.6	0.6	14.3 13.7

Source : Compiled from Department of Health 1972 a Survey

medical and surgical facilities in Wanganui and Southland and old people's homes in North and South Canterbury are highly visible examples. The data for the various area types also shows variations in demand, particularly for various accommodation types in Central Business Districts, predominantly State built suburbs and the larger towns. One feature of Table V is the concentration of pensioners' flats and old people's homes in the older, semi industrial transition zones of many urban areas. This may be due to available land for these units with the added benefit of close access to central shopping facilites. A similar heavy concentration occurs of short-stay medical and surgical wards in the predominantly state suburbs. The important point, however, is the extent to which many elderly have been recommended for other accommodation types, which is an indication of the number of elderly people who are currently living in inappropriate accommodation. This is further reinforced by Table VII. While this table reflects the desires of many elderly people, it does not necessarily reflect their needs as accurately as Table VI.

But again there are some regions with surprisingly high percentages of people who would prefer another form of accommodation. The most important preference probably being the desire for smaller sections and smaller houses - an indication that many houses in New Zealand may be underutilised. A feature of Table VII is the very small percentage of people who appear concerned about the access of community services. This may reflect either an indifference of individual requirements for these services, or no apparent need for them. Judging by Figure 9 and 10 however, this latter cause appears unlikely. Table VII appears to reinforce the observation from Table VI that the areas most in need of a more varied elderly accommodation stock are central city areas, predominantly state suburbs and larger towns. This could be due to either a bias in allocation of resources against these area types, or more probably, these areas could have higher

proportions of elderly people who need more dependent accommodation or more appropriate, particularly smaller, accommodation units.

Having at least tentatively established the need for government accommodation, the second hypothesis looks specifically at pensioner housing, particularly rental and own your own flats that are built by local authorities in association with the Department of Health and, what was, the State Advances Corporation. That there most definitely are spatial variations in the extent to which various local bodies have provided elderly accommodation can be seen from Tables VIII - X. These variations range from 135 elderly people per existing accommodation unit to 17.5 per unit in Urban areas, from 579 to 6 elderly persons per unit in Boroughs and from 1355 to 5 elderly persons per unit in the predominantly rural counties.

Such a wide variation in the availability of and accessibility of pensioner flats does not mean an equivalent range of the degree to which local authorities are meeting demands for these flats. As can be seen in Table X there are many areas that have no demand (as expressed by waiting lists) for accommodation provided by local authorities. Other areas however, appear to have reasonably large waiting lists and relatively small numbers of units available,[3] for example Palmerston North and Tauranga City Councils, East Coast Bays, Gore and Green Island Borough Councils and Malvern and Waitemata County Councils.

A closer examination of the data in Tables VIII - X supports the contention in the third hypothesis, that as with the provision of community services the demand for provision of housing for the elderly will be greatest in urban areas. Clearly the largest

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[3] A comparison of accommodation units available and the size of waiting lists cannot give an indication of how many individuals any one local authority can accommodate since successful applications for flats depends primarily on existing flats becoming vacant - usually through the death or hospitalisation of current occupants.

TABLE VIII

PROVISION OF ELDERLY ACCOMMODATION BY LOCAL AUTHORITIES

CITIES

	No. of Elderly People per Accommodation Units provided (1972 population.)	No. of Accommodation Units Built (Up to October 1974.)	No. of Elderly on waiting lists from inside area of jurisdiction.	No. of Elderly on waiting lists from outside area of jurisdiction.	Total
Palmerston North	135	36	63	29	92
Wanganui	60.5	71	108	28	136
Hamilton	47.1	110	107	22	129
Nelson	45	75	44	21	65
Timaru	44.5	76	91	5	96
Whangarei	40	64	81	21	102
Papatoetoe	39.5	52	13	26	39
Invercargill	39	103	51	0	51
Tauranga	38.5	80	156	15	171
New Plymouth	38	105	67	0	67
Auckland	36.5	496	340	0	340
Porirua	36	31	8	5	13
Upper Hutt	35	44	30	0	30
Wellington	32	396	164	1	165
Lower Hutt	32	221	30	26	56
Hastings	31	98	76	16	94
Christchurch	28	680	589	NA	589
Takapuna	25	133	150	112	162
Napier	23.5	172	68	0	68
Manakau	21	194	87	89	176
Rotorua	17.5	124	42	40	82

Accommodation provided by Local Authorities consists mainly of pensioner flats, own your own flats and assistance with other local groups in such projects as elderly boarding homes and old people's community homes.

Source: Compiled from Local Authority Survey 1974.

TABLE IX

PROVISION OF ELDERLY ACCOMMODATION BY LOCAL AUTHORITIES

BOROUGHS

	No. of Elderly People per Accommodation Units provided (1972 population).	No. of Accommodation Units Built (Up to October 1974).	No. of Elderly on waiting lists from inside area of jurisdiction.	No. of Elderly on waiting lists from outside area of jurisdiction.	Total
Eastbourne	579				
Tawa	391				
Riverton	257				
Bluff	179				
Winton	167		1		1
Havelock North	115	6	5	9	14
East Coast Bays	109	14	49	29	78
Raetihi	83		6		6
Papakura	64	31	30	28	58
Gore	64	14	40	20	60
Hawera	60	16	11	3	14
Petone	60	17	10	14	24
New Lynn	59.5	4	3	10	13
Waitara	57	8	4	1	5
Taupo	44	15	13	9	22
Eltham	42	5	8	3	11
Howick	36	27	10	57	67
Dargaville	36	11	16	5	21
Port Chalmers	30	9	21	4	25
Huntly	28	14	14	0	14
Kaitia	28	10	4	14	18
Levin	27	72	22	35	57

BOROUGHS

(Continued)

	No. of Elderly People per Accommodation Units provided (1972 population).	No. of Accommodation Units Built (Up to October 1974).	No. of Elderly on waiting lists from inside area of jurisdiction.	No. of Elderly on waiting lists from outside area of jurisdiction.	Total
Waimate	26	22	12	6	18
Patea	25.5	6	3		3
Inglewood	25	7	8	2	10
Green Island	23	16	35	40	75
Marton	22	20	31		31
Geraldine	22	16	6	14	20
Mataura	21	8	7		7
Mt Maunganui	19	38	24	6	30
Otaki	16	42	11	15	26
Matamata	16	25	6	4	10
Birkenhead	15	65	38	10	48
Te Aroha	15	28	13	9	22
St Kilda	15	70	31	0	31
Temuka	14	28	5	3	8
Onehunga	14	144	38	87	125
Pukekohe	14	53	14	17	31
Waiuku	12	10	15		15
Feilding	11	96	19	15	34
Mt Wellington	8	155	6	5	11
Devonport	8	8		4	4
Otahuhu	7	145	25	61	86
Henderson	6	68	15	57	72

Source: Compiled from Local Authority Survey 1974.

TABLE X

PROVISION OF ELDERLY ACCOMMODATION BY LOCAL AUTHORITIES

COUNTIES

	No. of Elderly People per accommodation Units provided (1972 population).	No. of accommodation Units Built (Up to October 1974).	No. of Elderly on waiting lists from inside area of jurisdiction.	No. of Elderly on waiting lists from outside area of jurisdiction.	Total
Southland	1355				
Franklin	1190				
Whangarei	973				
Heathcote	918		10	2	12
Manawatu	684				
Waiapu	672				
Waimea	616	2	4	2	6
Mangonui	542		8	4	12
Ellesmere	495				
Taranaki	478				
Taupo	407				
Piako	395				
Hobson	357				
Waimate	337				
Tauranga	331	3	6	3	9
Geraldine	327		9		9
Malvern	300		19	1	20
Ashley	282				
Lake	267				
Hawera	258				
Rotorua	254	3	8		8
Kairanga	237				
Horowhenua.	222	9	28	9	37
Croua	199				
Stratford	199				
Wanganui	173				
Whangaroa	157				

COUNTIES

(Continued)

	No. of Elderly people per Accommodation Units provided (1972 population).	No. of Accommodation Units Built (Up to October 1974).	No. of Elderly on Waiting lists from inside area of jurisdiction.	No. of Elderly on waiting lists from outside area of jurisdiction	Total
Eltham	146				
Bay of Islands	146	7	7	6	13
Waipara	129				
Patea	122				
Inglewood	112				
Rangikitei	107	6	14	3	17
Eyre	104				
Raglan	102				
Kiwitea	89				
Waimarino	86				
Waitemata	84	66	85	82	167
Waimate West	67				
Akaroa	64	3	2	3	5
Pohongina	64				
Mt Herbert	59				
Wairewa	58				
Hokianga	48	6		6	6
McKenzie	47	5	2		2
Kaikoura	37	8	8	1	9
Oxford	30.5	5	5	1	6
Waimarie	21.5	194	93	86	179
Paparua	18	70	37	71	108
Waihemo	8	14	12	4	16
Waitotara	5	62		6	6

Source: Compiled from Local Authority Survey 1974.

number of those wanting pensioner flats are on waiting lists in the city council urban areas, which is confirmed by the large numbers of flats that have been built[5] and the very large waiting lists (Table VIII). Proportionately, however, demand seems to be equally as high in the boroughs, with very low waiting lists in the country councils. With the relatively high waiting lists for borough councils and the high proportions of those on these waiting lists from outside many borough council areas, it would appear that many Boroughs act as retirement centres for the rural populations at least. Several city council areas also seem to perform this function. But whether areas such as Palmerston North, Whangarei, Nelson, Lower Hutt and several areas in the Auckland Urban Area are places that elderly people are attracted to in their retirement or whether the number of people on waiting lists from outside these areas represents a paucity of suitable accommodation within the respective urban fields is debatable.[6] It does seem likely, however, that the movement of elderly people to areas other than where they spent the last years of their working lives is an important dimension behind the spatial patterns of demand for pensioner flats.

The fourth hypothesis on elderly accommodation is designed to determine a similar pattern, - that areas of net in-migration will be less able to meet housing requirements of elderly people due to the competition for scarce local body finances. Figure 11.b indicates that Whangarei, Tauranga, Palmerston North, Nelson and Invercargill and the Auckland Urban Area are all points of rapid growth. They are also areas with some of the most adverse

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5 In Auckland, Lower Hutt, Manakau and Wellington City Councils, the current value of pensioner flats is $5,000,000 + $2,000,000 : $2,000,000 and $4,000,000 respectively (1973 valuations). (Local Authority Survey 1974.)

6 The trends in Table IX and X may be masked by the fact that many Borough and County Councils in reality are closer in character to most City Councils for example, Waitemata, Waimarie and Paparua County Councils and the Boroughs of Henderson and Papakura.

ratios of elderly people to available accommodation units in Table VIII. Some apparent exceptions to this trend such as Rotorua, Takapuna and Manakau may be explained by the fact that people over 65 years of age constitute very small proportions of their respective populations (See Figure 6. c). A similar trend of the apparent difficulty of providing housing in areas of expansion can be seen in the Boroughs of Taupo, Papakura and New Lynn (Table IX and Figure 11. b). The data for Lake Taupo and Rotorua Counties also support the hypothesis.

The last hypothesis aptly sums up both the section on community services and accommodation. It is designed to illustrate what appears to be two important factors behind the spatial patterns of both the provision of community services and elderly accommodation. The hypothesis states that there will be variations in the location of elderly people's accommodation with respect to access to community services between slower growing, predominantly rural orientated areas and faster growing predominantly urban orientated areas. Figures 13. a and 13. b demonstrate the relevance of the growth factor and the urban-rural factor in determining the spatial trends that have been observed. The slower growing regions of Northland, Taranaki and Wanganui show very distinctive patterns in that none of the elderly people living in these areas are located in areas where all community services are available. Urban orientated areas, however, such as Auckland, Hawkes Bay, Wellington, North Canterbury and Otago show that the great majority of their respective elderly populations enjoy a location where all community services are available. Regions of larger urban areas with extensive rural hinterlands such as Palmerston North, Nelson, South Canterbury, Waikato and Tauranga are mid-way between the poles of expanding urban orientated regions and slower growing rural orientated regions. That the distinctive profiles of these three groups identified in Figure 13. a are closely related to their

FIGURE 13·a ACCESS TO COMMUNITY SERVICES

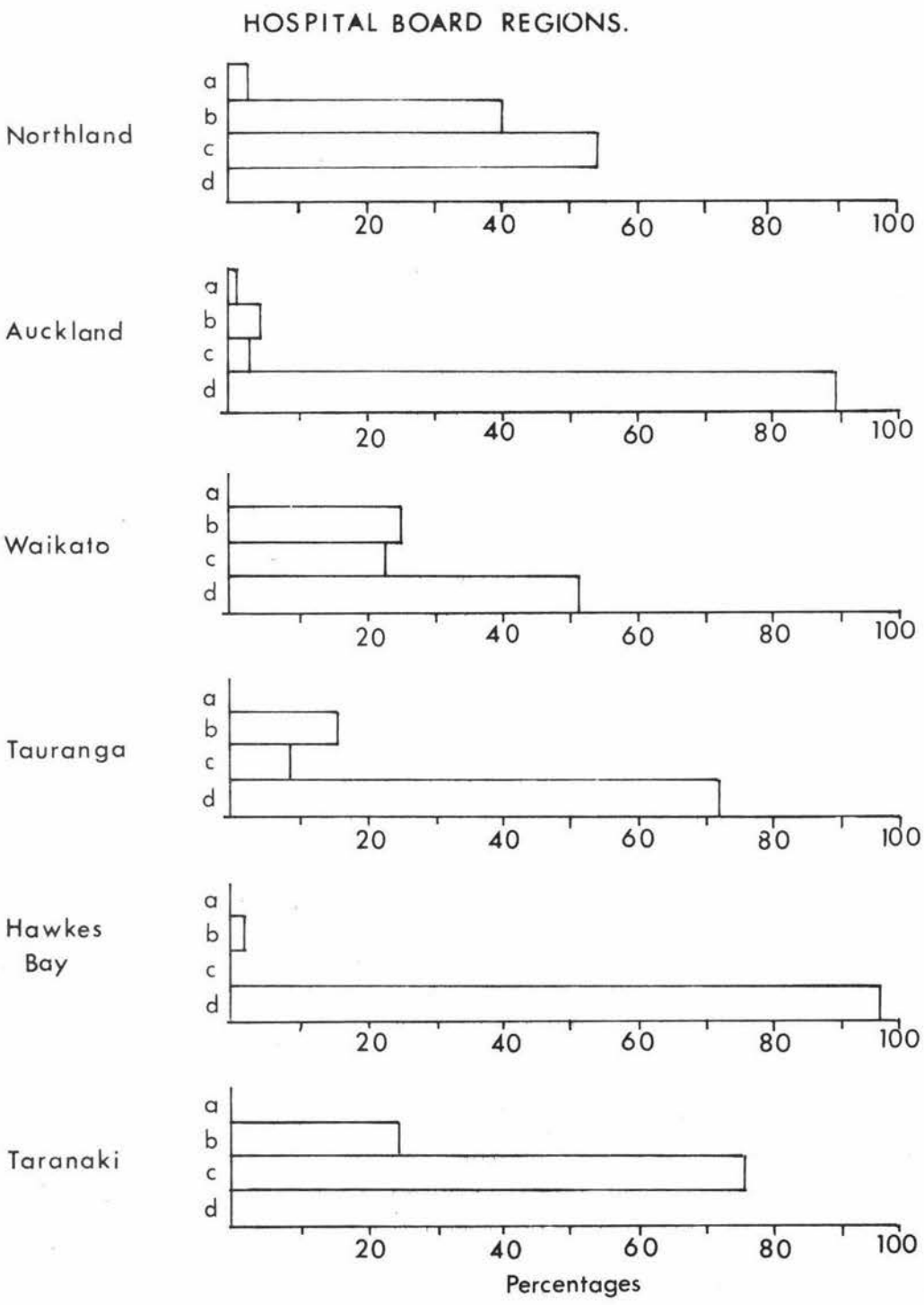
The Percentage Of Elderly People Living In Area That Have–

a. No Services

b. Only District Nursing

c. District Nursing Plus Other, But Not All Services

d. All Services



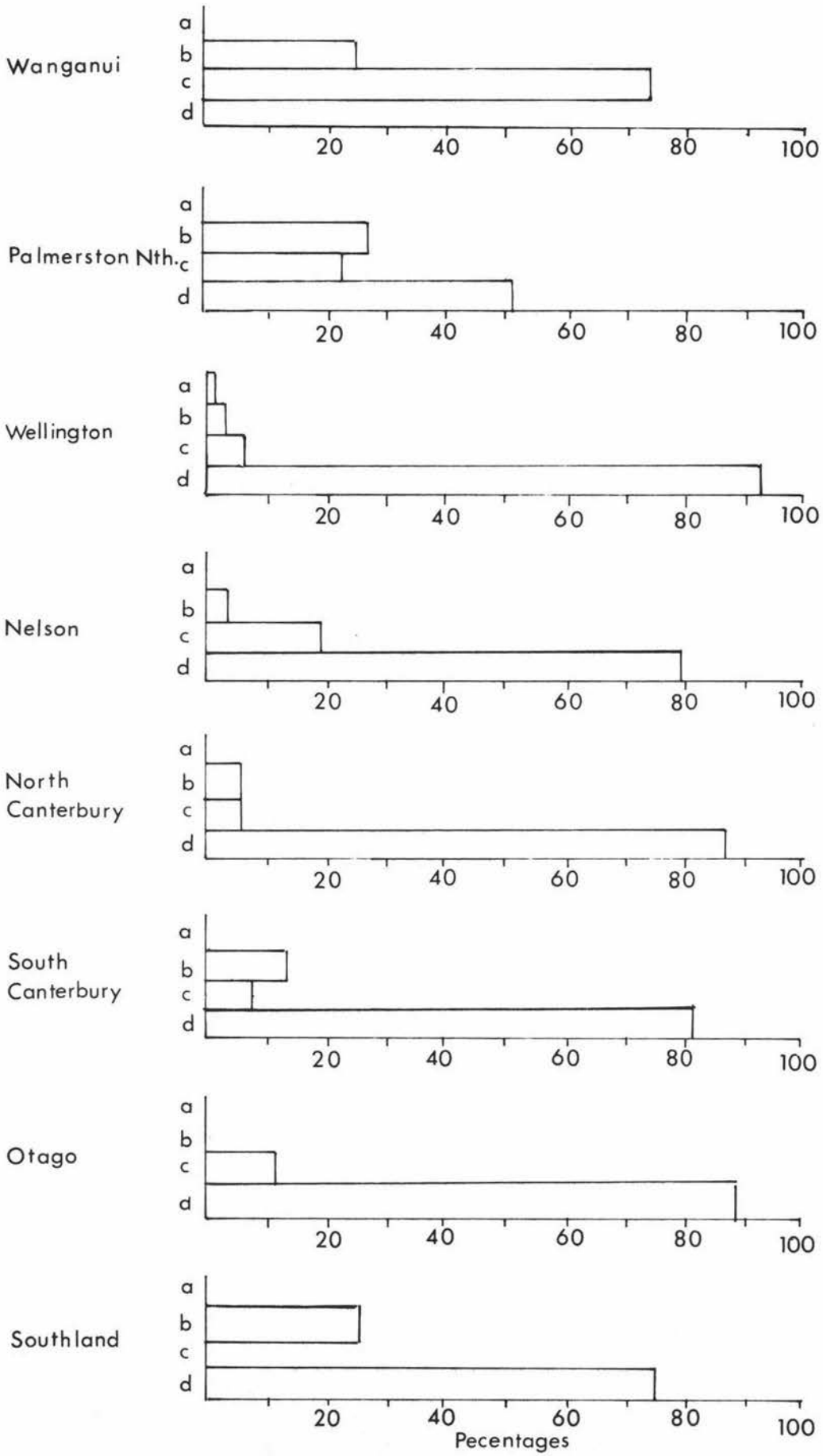
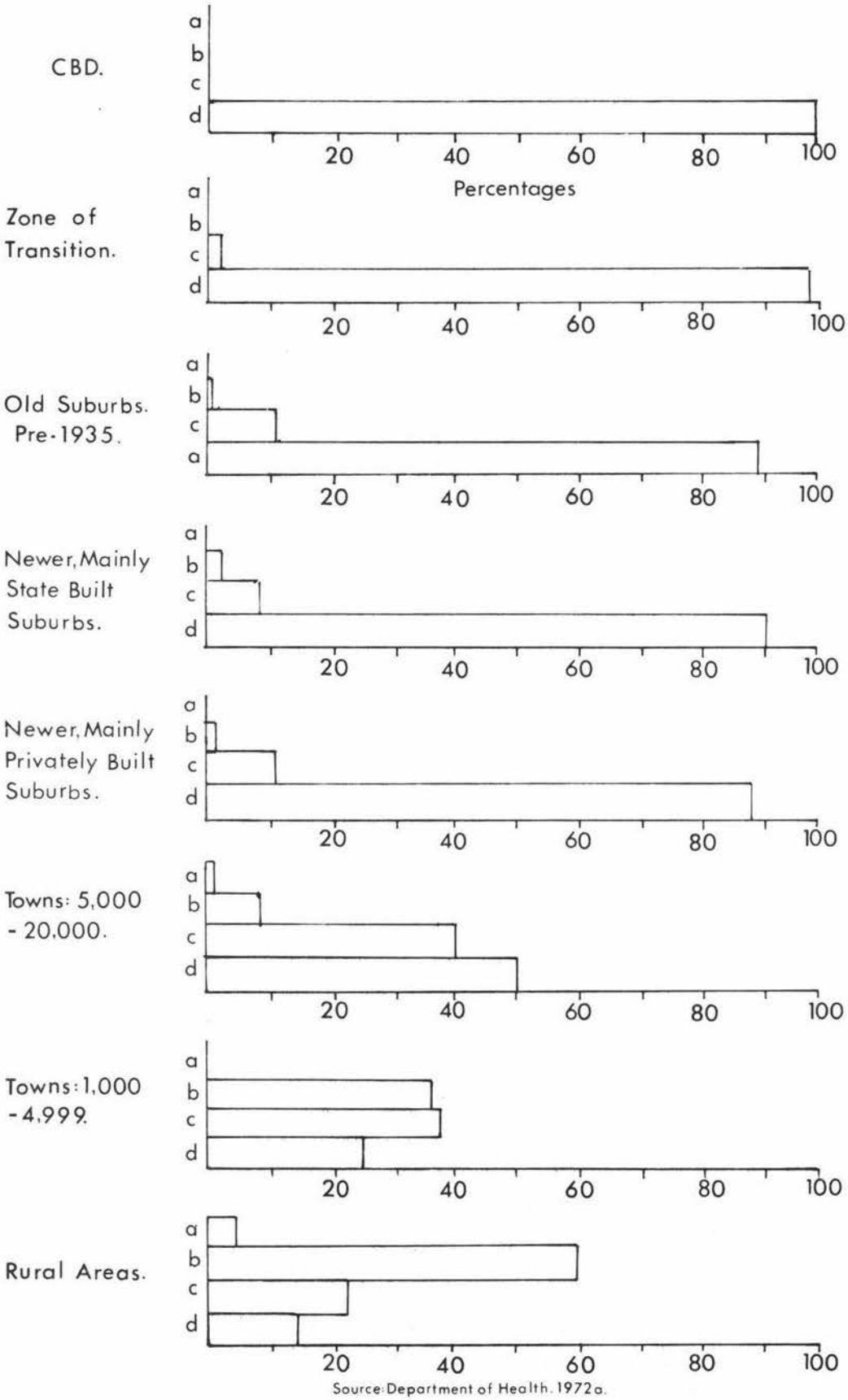

Wanganui
Palmerston Nth.
Wellington
Nelson
North Canterbury
South Canterbury
Otago
Southland
a
b
c
d
20
40
60
80
100
Pecentages

FIGURE 13-b ACCESS TO COMMUNITY SERVICES: AREA TYPES.



Source: Department of Health. 1972a.

urban or rural orientated character is clearly demonstrated in Figure 13.b which shows the trend from urban areas with what appears to be full accessibility to community services for those living in these area types, to rural areas where the greatest proportion of their elderly populations live in regions of only partial access to community services.

CHAPTER 6

CONCLUSIONS AND IMPLICATIONS

Conclusions

The foregoing analysis of the existing state of community services and accommodation provision for elderly people in New Zealand has provided evidence in support of several hypothesised relationships. The principal conclusions are as follows. First, there are differential levels in the availability and accessibility of both community services and accommodation between rural, town and urban areas. Variations were also detected in the provision of facilities between areas of net in-migration and areas of net out-migration. Further, wide differences were detected in the provision of most services between regions. While no region or regions appeared to be lacking provision in all services, most regions were under provided with at least one service. The provision of pensioner flats and the appropriatness of accommodation stocks occupied by elderly people also had marked spatial variations that exceeded variations expected on the basis of regional waiting lists for pensioner flats.

While the evidence in this study supports these general conclusions, two important qualifications need to be made. The first is the varying degree to which the hypothesised trends are revealed. For example, the evidence for the hypothesised variations between urban and rural areas in the provision of facilities for the elderly is particularly strong, whereas the evidence for variations between slow growing and rapidly growing regions is more equivocal. The second qualification is the limited explanatory power of the evidence about which specific causes are responsible for the detected spatial variations in service provision.

In general, however, there does appear to be marked

spatial variations in the provision of most of the community services and accommodation types covered in this thesis. In economic terms it is reasonable to expect that capital and facilities will tend to favour certain regions at the expense of other regions. For social reasons, however, the provision of such facilities that may well have considerable influence on the quality of life for elderly people : it is not acceptable that the distribution of such facilities should favour any particular set of regions or Area Types. Such a distribution of facilities over space may, however, merely be a short-term trend in response to population change, as is illustrated in the hypotheses concerned with regions characterised by either in or out-migration. But if such a spatial pattern is a long term phenomenon, then serious consideration should be given to operationalising the concept of spatial or territorial social justice proposed by Harvey (1972) and Smith (1973). While there is a very real possibility that there are distortions in the data used in this study, Figures 9, 10, 13 and Tables IV and VI indicate that the spatial variation within New Zealand does in fact exceed those variations expected due to the problems of overcoming distance. Though the causes of this apparent spatial discrimination is not the over-riding concern of this thesis, they are of concern to regional planners, decision-makers and above all, to the elderly people living in these regions. It does not seem as if any particular regions stand out as those that consistently suffer from spatial discrimination, but rather that disparities occur between the provision of various facilities (Figures 9, 10 and Table VI). If it is accepted by the Welfare State System in New Zealand that equality in the provision of public services is a goal, then we can agree with Symons (1971 : 66) when he says that:

> it can be argued that if inequality exists it should only be a function of spatial separation. Any deviation from the

> inequality that exists due to spatial separation, it could therefore be argued, is discriminating. That is, the "maximum" inequality that a government might permit would be due to the different costs required to overcome space.

When spatial variations exceed this acceptable maximum, as would appear to be the case in the provision of facilities for the elderly, then several important implications must be faced. In particular, the need to analyse the forces behind distributive mechanisms, the political implications of modifying these distributive mechanisms and their effect on the quality of life of those concerned and, the assessment of how these spatial patterns are consistent with, or divergent from, social goals, are likely to be issues of immediate concern.

Implication for Further Social Indicator Application

The monitoring procedure demonstrated in Chapter 4 was basically designed to produce data that could be useful in planning for a better housing environment for elderly people. A simple monitoring process however, generates far more important questions than those it was designed to answer. For instance, is the existing state convergent with the desired state? What is the desired state? How can the present state be altered? Answers to such questions are far beyond the scope of this thesis. Nevertheless it is pertinent, in this final chapter to discuss the implications of the research methodology proposed in this thesis and to indicate a few areas where its application would be most useful, both to geography and to broader fields of social planning.

Social Learning and Social Planning

Much planning by government agencies have been made against a series of assumptions that are becoming increasingly doubtful. Commonly these assumptions include at least the following:

1. That social organisation and social objectives will remain stable during the time-period under review
2. That there is a society wide consensus on development goals
3. Because these goals are stable, future goals will be like present goals, and that they are knowable by professionals

(Webber 1973 : 40)

The underlying theme of this thesis has been that these assumptions and the associated research methodology can be improved or at least supplemented, by a future orientated methodology similar to that advocated by Dunn and used in combination with a social indicator's programme. It appears that so many important social and economic problems are at present difficult to cope with because we do not as yet, know how to design social systems that are consistent with known target values. Most of our historical experience has been with the design of social systems, such as the welfare state, that attempt to fulfil basic "deficit motives". Future social systems, however, must be capable of fulfilling "human growth motives".

The ultimate goal of planners should be the acceptance of the need to make social organisation serve human needs, particularly to assure that social change is consistent with the requirements of human development. This fundamental issue is summarised by Dunn (1971 : 217)

> Can total system reorganisation be provided with this higher order paradigm that guides the choice among emergent options in a way similar to the control exercised by system boundaries over subsystem reorganisation in normal problem solving ?

This aim would partly be met by a better understanding of social systems, particularly the boundary conditions that define an organisation and the goals and controls that shape its behaviour. This is important for two reasons. First, it is the anomalies of social organisation in a changing world that constitute the

motive and object of social change. The anomalies are manifest in the discrepancies between social system goals and the operation of social system controls. The social learning methodology described in Chapter 1 could be used to formulate evolutionary hypotheses that would, in essence, visualize a procedure that is presumed would improve the consonance between goals and controls. "The evolutionary experiment is an experiment in social reorganisation or boundary definition. Both the understanding and the practice of social learning require that organisation be seen in this light." (Dunn 1971 : 247). The second reason why an understanding of social organisation is important is that social organisation itself can become an instrument of social change. Planners and social scientists need to become more concerned with the role of organisation and boundaries in providing goals and controls that are appropriate for the management of problem solving and meeting human requirements.

The first steps in the challenge of making social organisation consistent with human needs is to understand the current state of our social system. Only after the existing state has been monitored and the goals of the communities understood can a start be made in reorganising planning procedures through a social learning methodology to make social organisation consistent with social requirements.

It is in these first steps that social indicators and monitoring procedures have their initial importance by enabling planners to determine the existing state of any particular social phenomena and to compare this with community goals and aspirations. Only after specifying what the pattern of spatial provision of community services should be and comparing it with the actual pattern of provision is it possible to determine exactly what the most appropriate way of rearranging the organisation responsible for community services distribution. And this procedure itself

cannot be adequately carried out without knowing beforehand the needs of the elderly for community services. Social planning by the social learning methodology must, then be complemented by procedures that define and direct social goals and objectives.

Social Goals and Spatial Form

The problems inherent in specifying and agreeing upon social goals and values have already been discussed in Chapter 2. Once social goals have been specified, however, it is possible to determine how well existing spatial forms serve these higher order goals. As Harvey (1970 : 267) states

> Any overall strategy for dealing with urban and regional systems must contain and reconcile policies designed to change the spatial form of the city or region (i.e. : the location of objects such as houses, industrial plant, transport links etc) with policies concerned to effect the social processes which go on in the city or region (i.e. : social structures and activities which link people with people, organisations with people, employment opportunities with employees, welfare recipients with services etc). Ideally we should be able to harmonise these policies to achieve some coherent social objective.

In this sense, the monitoring in this thesis of the spatial provision of community services and accommodation for the elderly was carried out in a vacuum. There was no existing social goal that specifically stated desired spatial patterns to which the monitored situation could be compared. Whether social welfare administrators have evaded the specifying of desired spatial patterns or have simply been unaware of the need to so is not possible to determine. The problem inherent in not specifying desired ends however, is that judgements are inevitably implied by a decision in any case. If, for example, planners predict as well as they can on the basis of current knowledge and trends

the future population distributions, consumption and need patterns, current patterns of accessibility and so on, and allocate investment accordingly. The planner is therefore inextriably linked with spatial patterns since his predictions, plans and assumptions are bound to be to some degree self-fulfilling.

Social planners responsible for the distribution of both private and public goods that directly influences the social well-being of people need to concentrate on understanding the "invisible" mechanisms by which distribution proceeds. Harvey lays down two complementary conditions for evaluating and directing spatial trends in the provision of social goods. First, it is necessary to take a stand point on exactly what sort of distribution and society deems desirable - that is "the formulation of a generally accepted social welfare function" for urban systems, regional systems and the national system as a whole. Secondly, governments must identify and understand the mechanisms which

> connect allocation decisions (public or private) on such things as transport networks, industrial zoning, location of public facilities, location of households etc, with their inevitable distributional effect upon the real income or welfare of different groups in the population... In this way it can be determined who will lose and who will gain and by how much from a given allocation decision (even though this may be politically unacceptable.) If we are to achieve a chosen welfare objective (e.g.: a specified and agreed upon spatial distribution of community services[1]) we must have a very clear idea of the mechanisms which generate inequalities (in access to community services[1]) in the first place, for it is presumably by controlling and manipulating these mechanisms that we will achieve our given objective.
> (Harvey 1970 : 168-9)

As the regional development debate in New Zealand has illustrated, it is particularly difficult to decide on priorities

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[1] my additions in parenthesis.

for the spatial organisation of economic activity in society - a decision that if taken in any direction, will be intimately linked up with the levels of social well-being that can be expected in various parts of the country.

Toward a Just Spatial Order

The results of the monitoring procedure carried out in Chapter 4 reveal an important, yet often neglected dimension of the social system - the extent to which "groups of people, defined by their area of residence, have different experiences with respect to conditions that have a bearing on the well-being of society and the quality of individual life" (Smith 1973 : 139).

It is to be expected at the inter-regional level to find variations for economic and social indicators. There will always be variations between national averages and regional scores. The problem, however, is the extent of some of these variations. It is doubtful that variations in economic performance and social conditions between regions in New Zealand could reach the stage where social cohesion and stability are threatened. There is, however, the likelihood of variations which indicate that certain areas in New Zealand may be spatially discriminated against.

If such discrimination does exist then it must result from the existing form of spatial organisation that is currently operating within New Zealand. If discrimination is to be overcome, and if the type of variations found in Chapter 4 and 5 are eventually seen to be socially unjust, decisions must be made on alternative ways of spatial organisation. If the "unjust" variations are not simply the result of an anomally in the distribution pattern of individual agencies, but a consistent trend throughout New Zealand's social organisation then a spatial welfare function that remedies this situation must be incorporated in an alternative form of spatial organisation. Such a welfare function must answer such

questions as (Johnston 1973 : 79 and 82)

> Is the present pattern of regional development really the most economically efficient, and is it socially and culturally the best for the country? Is the present pattern of spatial organisation within large cities the most desirable for ensuring a high quality of life for New Zealand's growing legion of urban residents? Are the trends in regional imbalances in economic development and population growth prices that must be paid for continued economic expansion in New Zealand? ...And is it necessary in the operation of a social policy that stresses equality of opportunity to add the requirement that this also includes spatial opportunity?

The often mentioned distinction between urban and rural areas in the spatial provision of resources is an important point that will need further clarification in the future. As was found in Chapter 4 and 5, notable differences exist between provision of facilities for the elderly between urban, rural areas, probably due primarily to the economic limitations demonstrated in Figure 7. In aggregating places on the basis of a classification into rural and urban areas, and in formulating objectives for the planning of spatial welfare distribution, a decision must be made on whether or not to specify separate goals for rural and urban communities. Should an attempt in fact be made to close any welfare gap between the rural and urban areas? There is debate, in the New Zealand context, as to whether the discernable sociological traits that differentiate urban populations from rural and small town populations could validly be used as a basis of separate planning objectives since in reality, both rural and urban populations consist of a multitude of sub-groups that are as different from one another as rural groups from urban groups. The formulation of objectives, then, should recognise this inherent heterogeneity of groups in a spatial context.

Recognising this diversity, the principles of social justice as they apply to geographical situations can be summarised as follows:

1. The spatial organisation and the pattern of regional investment should be such as to fulfil the needs of the population. This requires that we first establish socially just methods for determining and measuring needs. The difference between needs and actual allocations provides us with an initial evaluation of the degree of territorial injustice in an existing system.
2. A spatial organisation and pattern of territorial resource allocation which provides extra benefits in the form of need fulfillment (primarily) and aggregate output (secondarily in other territories through spill-over effects, multiplier effects and the like, is a 'better' form of spatial organisation and allocation.
3. Deviations in the pattern of territorial investment may be tolerated if they are designed to overcome specific environmental difficulties which would otherwise prevent the evolution of a system which would meet need or contribute to the common good. (Harvey 1972 96)

There is already tentative recognition in New Zealand that a series of criteria are needed in formulating regional planning objectives that will be consistent with the needs of the communities involved. (McDonald T.K. 1972 : 31-34). The next step is to apply the social learning and social indicator methodologies to monitor needs and existing states and to ultimately devise an appropriate spatial welfare function for New Zealand and implement the planning objectives that will be formulated.

By specifying alternative futures that may result from acting or not acting in accordance with various planning formulations and the consequences of acting or not acting to fulfil various social goals and objectives, geographers can help New Zealand society avoid some of the more serious problems that might develop if society was left to organise itself under a laissez-faire philosopy.

The monitoring of the provision of community services and accommodation facilities for the elderly, as undertaken in this thesis, provides insights about the nature of the problems

geographers are likely to face in analysis of social problems and their spatial dimensions. The rewards to be gained from facing the many difficult tasks mentioned in this text should be manifest in our ability in the long run to devise just spatial distributions and spatial systems of organisation that are consistent with our social goals. In the short term, a determined effort simply to monitor New Zealanders' general state of social well-being should greatly assist our understanding of the nature of New Zealand society and improve our ability to make adequate decisions about the sort of future we might wish to aim for.

APPENDIX I

N.D.C. SOCIAL COUNCIL

GOAL AND OBJECTIVES FOR SOCIAL DEVELOPMENT

GOAL:

1. A social, cultural, physical and economic environment which provides the maximum opportunity for each person now and in the future to achieve self-fulfilment in a caring community concerned for the rights and well-being of all.

Objective A.

To strengthen the spirit of community by ensuring each person has the maximum opportunity to:

i) Create and belong to family and other social units based on mutual co-operation and responsibility, affection,

ii) Participate in community decision-making.

iii) Contribute towards the generation of community objectives.

iv) Contribute his or her unique qualities towards the achievement of community objectives.

v) Share in the benefits of attaining community objectives.

Objective B.

To enhance the dignity, freedom and independence of the individual by ensuring that:

i) Each person is regarded as having dignity and as being worthy of respect.

ii) Each person has the maximum freedom of choice and action without encroaching upon the rights of others.

iii) Decisions relating to community objectives take account of the views and situations of all persons living in the community.

iv) Each person is encouraged to understand and appreciate the views and religious, political, ethnic and cultural differences of other persons and groups.

v) Each person has adequate access to processes of law and equal rights before the law.

Objective C

To preserve life and promote health by ensuring that:
i) Each person has the opportunity to be as physically healthy and fit and emotionally healthy and stable as his potential allows.

ii) A stable family or other intimate group is provided for children growing up (and dependent adults.)

iii) Adequate and reality available, health services are provided.

iv) The hazards of injury, accident and crime are kept to a minimum.

Objective D.

To share resources fairly by ensuring each person has:
i) The opportunity to own and enjoy property and possessions.

ii) The opportunity of a material standard of living at a level which enables him or her to enjoy a sense of belonging to and participating in the community.

iii) Access to the knowledge and skills which will lead to the development of the individual and the well-being of the community.

iv) Vocational opportunities which are satisfying and within his or her capabilities.

v) Ready access to leisure time activities.

vi) Ready access to the community social welfare services.

Objective E.

To enhance man's environment by:

i) Ensuring the ecological balance between man and his environment is such that his use and enjoyment of the environment does not endanger the quality of life of future generations.

ii) Preserving community access to and enjoyment of the country's physical endowments and attractions.

iii) Promoting the social, intellectual, artistic and creative and physical pursuits which enrich people's lives.

iv) Helping people in other parts of the world in their efforts to achieve a better life.

v) Promoting world peace and justice and international understanding.

APPENDIX 2

DEPARTMENT OF HEALTH 1972, ELDERLY PERSONS ACCOMMODATION NEEDS IN NEW ZEALAND

Questions Used in this Thesis

1. Hospital Board: . . . . . .
2. Type of Area:
   1. Central City - high rise, business . . . . . .
   2. Area of transition - industrial growth . . . .
   3. Old suburb - mainly pre 1935 . . . . . .
   4. Newer suburb - mainly state . . . . . .
   5. Newer suburb - mainly private . . . . . .
   6. Town - 5,000 - 20,000 population . . . . . .
   7. Town - 1,000 - 5,000 population . . . . . .
   8. Rural - Dense settlement . . . . . .
   9. Rural - Sparse settlement . . . . . .
3. Access to Public Transport: distance. . . . . .
   steps . . . . . .
   gradient . . . . .
4. Use of Public/Private Services:
   Nursing. . . . . .
   Meals on Wheels. . . . . .
   Laundry on Wheels . . . .
   Home Aid . . . . . .
   Occupational Therapy . . .
   Physiotherapy . . . . . .
   Chiropody . . . . . .
   Dental Therapy . . . . . .
   Vision Aid . . . . . .
   Hearing Aid . . . . . .
5. Accommodation Preference:
   . . . . . .
   . . . . . .

6. Assessment of Dwelling and Support For Person:

   1. Too supportive
   2. Appropriate
   3. Not appropriate - improvement feasible
   4. Not appropriate - improvement unlikely for present dwelling/support -

      Access to public transport. . .

      Services, public/private . . .

      Dwelling . . . . . .

7. Community Services Available in area:

   1. No services. . . . . .
   2. Only district nursing . . . . . .
   3. At least one other but not all services. . . .
   4. All services. . . . . .

8. Accommodation occupied at time of Interview:

   . . . . . .

   . . . . . .

9. Accommodation Recommended:

   . . . . . .

   . . . . . .

10. Services Recommended:

    . . . . . .

    . . . . . .

APPENDIX 3

LOCAL AUTHORITY SURVEY 1974

Elderly Accommodation Requirements

Questionnaire

1. How many publically owned elderly accommodation units were built within the area of your jurisdiction?

   before 1960 1961-1970 1971-1974

2. What is the current worth of the total value of elderly accommodation (at 1974 valuation) within your area?

   . . . . . .

3. How many elderly accommodation units are planned to be built within the area of your jurisdiction in the next

   1 year 2 years 3 years

4. How many persons from within your area of jurisdiction are on your elderly persons accommodation waiting lists for this calender year?

   . . . . . .

5. How many persons from outside your area of jurisdiction are on your elderly persons accommodation waiting list for this calender year?

   . . . . . .

6. How many applicants for elderly persons accommodation in the last year, from within your area, have been turned down due to their failure to meet eligibility requirements?

   . . . . . .

7. How many applicants for elderly persons accommodation in the last year, from outside your area, have been turned down due to their failure to meet eligibility requirements?

   . . . . . .

8. How many eligible applicants for elderly persons accommodation in the last year have been turned down because they live outside your area of jurisdiction?

   . . . . . .

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