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THE DEMOGRAPHIC SITUATION AND PROBLEMS OF THE OLD POPULATION IN HUNGARY

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FOREWORD

Low fertility levels in IIASA countries are creating aging populations whose demands for health care and income maintenance (social security) will increase to unprecedented levels, thereby calling forth policies that will seek to promote increased family care and worklife flexibility. The new Population Program will examine current patterns of population aging and changing life-styles in IIASA countries, project the needs for health and income support that such patterns are likely to generate during the next several decades, and consider alternative family and employment policies that might reduce the social costs of meeting these needs.

An important component in the organizational structure of the Population Program is an extensive network of collaborating scholars and institutions in over two dozen countries. The Hungarian Central Statistical Office is a member of this network and the Head of its Population Statistics Department, Dr. Andras Klinger, is actively collaborating with the IIASA research. As part of this activity, Dr. Klinger arranged for the translation into English of the essays included in this publication. Originally prepared for a conference on the elderly population in Hungary, held in Budapest, they are being issued in this form to make them available to a wider audience.

Andrei Rogers
Leader
Population Program

CONTENTS

Introduction 3

János Szentágothai: Opening Speech 5

András Klinger: Demographic Aspects of Aging 12

József Kepecs: The Problems of Old Population on Basis of Family and Housing Statistics 57

Péter Józan: Some Aspects of the Mortality of Old Population in Hungary on Basis of International Statistics 64

László Cseh-Szombathy: The Sociological and Socio-Political Aspects of Aging 69

Zoltán Ajkay: Health and Socio-Political Aspects of Aging 81

Edit Beregi: Medical Aspects of Gerontology 101

Vera Nyitrai: Demographic Situation and Problems of the Old Population. Closing Speech 114

INTRODUCTION

The Demographic Committee of the Hungarian Academy of Sciences and the Hungarian Central Statistical Office organized jointly with the Hungarian National Committee of the UN World Conference on Ageing and with the Hungarian Society of Gerontology a scientific conference on the demographic situation and problems of the old population from 20 to 21 April 1982. The organization of the conference served the preparation of the Conference on Ageing convened by the United Nations for 1982. The meeting was held at the Hungarian Academy of Sciences. Beside the Hungarian participants at the conference also the UN Economic Commission for Europe was represented and the experts of Bulgaria, Czechoslovakia, Poland, the GDR and USSR were present.

The conference was opened by Professor János Szentágothai, member and president of the Hungarian Academy of Sciences. The introductory paper was read by Professor Sándor Szalai, member of the Hungarian Academy of Sciences and the closing speech was held by Dr. Vera Nyitrai, secretary of state, president of the Hungarian Central Statistical Office.

The conference dealing with the demographic situation and problems of old population discussed the problems in four sections. The individual sections approached the problems from different sides /demography; sociology and social policy; public health and social policy; medical aspects of gerontology/ giving thus a synthesis of the different studies on ageing.

The following selection containing the opening and closing speeches, the Hungarian papers of the four sections and two Hungarian contributions to the demographic section gives a cross-sectional view, including in some cases international aspects, too, on the situation and problems of old population in Hungary as well as on the approach of the solution of the problems.

The complete material of the conference will be published by the Hungarian Central Statistical Office in 1983 under the title "Az időskoru népesség demográfiai helyzete és problémái" /The demographic situation and problems of the old population/.

Professor János SZENTÁGOTHAI, Member and President of the Hungarian Academy of Sciences

OPENING SPEECH

Ladies and Gentlemen, as your host, may I welcome you not only in my own name, and in the name of the Presidium and the members of the Hungarian Academy of Sciences but also on behalf of the scientific community working in our committee network, covering a great share of our scientific researchers. The scientific research in general, and its leading highest forum, the Hungarian Academy of Sciences observe with a special attention such questions of national importance as "the ageing and the problems of old people in general" being on the agenda of this conference. This attention represents a part of the new working style of the Hungarian Academy of Sciences, the main point of which is that instead of the introversion characteristic of the earlier periods our Academy concentrates a greater part of its attention on general socio-political problems requiring scientific knowledge. I don't want - especially not in the presence of statisticians - to "carry coals to Newcastle" by boring with data the honourable participants, all the more because during the whole conference we shall hear more thorough analyses based on figures from experts of a much greater competence in the following two days. However, to illustrate the importance of the question I still mention some figures, e.g. that the proportion of persons of pensionable age within the total population attained 20 per cent and by the end of the turn of the century it will be 23 per cent. In this respect we are among the more developed countries of the world. On basis of such figures we often hear the question - which is not always real - that as another quarter of the population consists of children or persons participating in the intensive education, who will maintain the old persons whose number is growing con-

tinuously. This itself would not involve necessarily a greater danger because the modern development of manufacturing and in general of the economy produces more and more efficacious methods requiring less and less labour force, therefore in the most developed countries it is no more the manpower shortage but, on the contrary, the labour force of a number too high as compared to the demands which causes a problem.

In my opinion the real problem is - which is illustrated by another figure - that within the total population of today's Hungary the proportion of persons aged 80 years and older represents 2 per cent and it will continue to grow till the end of this century /to 2.2 per cent/. Not only the persons over 80 years but a great share of those of pensionable age, about 50 per cent of them, need a permanent or at least a repeated hospitalization. This figure illustrates the real burdens imposed regarding old people on the society; the modern technology - automatization and robot technology - will not decrease these burdens but on the contrary, parallelly with the development and the growing costs of medical attendance also its personal needs will continue to increase, maybe, not first of all in respect of the medical care but in respect of nursing. In my view this is the fact which makes the situation even in itself alarming in a further perspective, and in my introduction I want to outline some ideas concerning this question.

From the written history of mankind but also from the excavation of undisturbed cemeteries of closed settlements we have got some idea on the historical and pre-historical age-structure of the population. More exact figures can be obtained by collecting the known biographical data of the sovereigns of certain epochs. In Western Europe in the early Middle Ages, i.e. in the period between 800 and 1300 the sovereigns lived on the average till the age of 31 years. They

were mostly men, and as ruling is no harmless profession, we hardly make a great mistake by estimating a similar average age for the majority of the broad population living under worse conditions. A significant increase took place in the late Middle Ages, i.e. in the 1300-1450 period when the average age of the sovereigns was already 36 years. It is curious that after this epoch the lengthening of age became stagnant for a long time; in the period from 1600 to 1780 the average age of the sovereigns was still only 37 years and some decimals. The first statistical data which can be considered as relatively exact are available from the end of the 17th century on the civil population of Central and Eastern Europe. Caspar Neumann, the priest of the St. Elizabeth church in Breslau /at present Wroclaw/ analysing the data on births and deaths in the years 1687-1691 proved that opposite to the earlier misbelief the constellation does not affect much either the births or the deaths. /Despite the fact that the pseudo-science of astrology still exists in the western illustrated papers, this result is scarcely a surprise for us./ Leibnitz, the outstanding philosopher and mathematician of this epoch found Neumann's data important enough to draw to them the attention of the Royal Society in London, and requested Neumann to make his tables available. The Royal Society charged Edmund Halley, the prominent astronomer to evaluate the data, who in his famous work in 1693 elaborated the first life table practically in a modern form and indicated the average life expectancy. At that time the average age of the total population of an average town was only 33.5 years, i.e. lower than that of the sovereigns. Even during the 18th century there was only a slight development but after this a significant change took place. During the 19th century and at its end in the most developed countries of Europe and in the USA the average duration of life was around 50 years and in the 1930s it already reached the value around 60 years, not to mention the later much greater development due to which in many countries the average life expectancy is already over 70 years for both sexes at present.

So if by the turn of the millenary in Hungary, too, the proportion of 80 year old and older persons will be 2.2 per cent - as indicated above - which means about 229 000 persons of this age, it is obvious that at that time the share of persons, though not helpless but unable to care for themselves will be rather high. A certain change in the attitude of the whole society will be necessary to ensure the provision for so many old people more or less sick on a proper human level. Already in the ancient times the thesis was formulated: "senectus ipse morbus", i.e. "old age itself means illness" which seems to be true, but the problem is quite different if it is considered from another side. Though a person over 60 years is more feeble and needs a greater medical care and hospitalization, respectively, he/she is not at all helpless, in many cases not even in his/her ninth decade. On a rough average everybody may count upon living two decades after retiring, and to spend this period in a useful and sensible way is the main interest both of the society, family and of the person in question. It is sure that at present in the practice of our society an attitude opposite to logic can be observed in this field: while the physical ability, i.e. the muscular strength begins to decrease already at the end of the twenties - though in case of normal health it can be perceived more seriously and becomes more significant only in the sixties -, the mental ability of a person who improves his/her mind and is busy regularly develops more or less till the age of 60 years, though at a slower pace, and a greater regress takes place only after the age of 65 years even under /non-specific/ pathological conditions. In this respect it is not logical that after the attainment of the pensionable age our society has still a great demand on manual work, especially on unskilled manual work of so-called female type, but practically there is no demand - except for the open professions - on the

intellectual work of persons over the pensionable age. I have no idea how to eliminate this rather general basic contradiction of the modern society.

Brilliant accomplishments surpassing highly the average and connected with age in a very various way according to the individual fields of activity make a great impression. Many mathematicians and theoretical physicians attain the peak of their work at their twenties, while in natural sciences requiring experimental and practical work, as well as in social sciences the main work is often postponed to the decades of the pensionable age. A good example for this is Arnold Hauser, the outstanding Hungarian art-sociologist deceased recently who worked mostly abroad during his life. His scientific oeuvre of international fame ended at the age of 70 years with a work which was translated into 26 world languages in some years. Of the "peak artists" known all over the world Tiziano deceased at the age of 100 years is a good example for the relationship between the artistic accomplishment and age; he painted the torture of Christ at the meridian of his life, in his early forties and the second time again at the age of nearly 100 years. The comparison of the two pictures shows that though the nearly 100 year old artist lost much in his famous ease of handling the brush and in elegance, the presumable decrease in his physical strength and sight forced him to simplifications in his later picture which are much nearer to us at present and make a deeper artistic impression than his earlier more elegant work painted with a great routine.

These examples and also the inner contradictions of our social practice indicate that at the pensionable age it is realistic to count on the average upon 15-20 useful years and it is not at all the same whether we spend this period often in a hospital, maybe in bed, partly helpless or in an active way doing maybe, nothing else than a hobby work. This raises the closing idea of my introduction that though the fitness of our

organism depends much on the genetic factors which we cannot influence, still we can do much by decreasing the risk factors of the diseases at old age. Allow me, please, to enumerate them briefly. It is well known that a body weight above the optimum is a grave risk factor partly in itself because it overburdens the blood circulation and the lower limbs, but indirectly the main causes of the diseases of the circulatory system are the same as those of the too high body weight. Thus between these two there is a correlation of circulus vitiosus character. Maybe, I must not speak of smoking and alcohol abuse as well-known serious risk factors which in case of women are even more harmful because a smoking woman exposes her foetus to danger even in the case if she happens to stop smoking completely for the period of her pregnancy with a sufficient self-discipline. At present we can already speak without exaggeration of the two "white killers" of mankind. One of them is the sugar. It is a custom to characterize the living standard of the society - also ours - with the increase in sugar consumption. This is a rather bizarre characteristic if we consider that formerly the diabetes - except for the late old age - was a disease of the bourgeois and petty bourgeois strata, at present it became a widespread disease of masses, just because also a great part of the working population became great sugar consumers. We speak much less of the other white killer, the salt, and even the physicians don't pay much attention to it. It is true that in respect of the "salt discharging capacity" very various among the animals the human being is in the forefront. A rat getting a usual human food does not even attain 70 per cent of its potential age, just because it does not bear so much salt. We forget that over 10 per cent of the population cannot assimilate genetically the quantity of salt which the human civilization forces us to take under the pressure of manual work done also in a warm environment. These are people getting ill with essential hypertonia; therefore this is not a disease but simply a genetic variant which cannot manage the salt consumption developed in

consequence of human civilization and thus such a person gets irretrievably ruined at an age of 50-60 years. It is true that modern therapy has wonderful means for the discharge of sodium but these medicines are still not neutral. If persons sick with grave essential hypertonia difficult to control are put on salt-free diet, their life expectancy can be lengthened and it may correspond to the life expectancy of quite healthy people. Among the risk factors, or more correctly among the methods decreasing the risk factors I want to mention the regular screening tests which can diagnose tuberculous diseases still existing and mainly cancers of gynaecological character in a period when these diseases can be cured practically completely.

Please, don't take it amiss that in my introduction I also mentioned such slightly frightening perspectives but it would be advisable for everybody to consider whether at young or middle age it is worth-while to give up a very doubtful enjoyment for the sake of old age which seems to be very far at that time. In my humble opinion it is more than worth-while: by means of decreasing the risk factors we ourselves can do the most to solve this grave problem of our society, the provision for old and helpless people on a level worthy of a human being in the near decades without burdening irreally the society. In the opposite case the age lenghtened by the modern science and civilization would add only painful and humiliating decades to the end of human life.

In the spirit of this idea I open the conference wishing a good work and successful discussion to the participants.

Dr. András KLINGER, Chief of Department of the Hungarian
Central Statistical Office:

DEMOGRAPHIC ASPECTS OF AGEING

Among the changes in the structure of population the distribution by age is the most important in all the stages of the demographic development. The different demographic movements alter first of all the age-structure of the population; its modification, however, reflects strongly the development of the demographic processes. The demographic transition changed much the age-structure of all the populations: because of the decrease in fertility and parallelly with it due to the decline in mortality the proportion of young people became lower and that of old persons got higher. So we can also say that after the demographic transition the ageing is characteristic of the demographic development. Therefore the analysis of the ageing of population is of special importance for the demographic research. Besides also the general study of the society - the foundation of the social and health conditions - is based indispensably on the knowledge of the age-structure and within it the number and proportion of old persons. So if at the conference we want to deal with the situation and problems of old people it seems logical to speak - as an introduction - of the number and composition of old persons.

Before dealing with this topic in all details it is necessary to clear some concepts. We shall often hear of elderly or old people. The Hungarian language uses these two definitions as synonyms, there is no distinction in content between them. This refers not only to the everyday use of words but also to the professional terminology. Also the demographic literature uses these two words alternately and does not want

to make any distinction between these two terms concealing some differences after all. With both terms those persons are indicated who belong to the so-called "third" age-group, i.e. to the one following the young and adult age. Analyses having a different purpose and content state the lower limit of this age-group at different ages. In all cases the basic idea is to find the so-called "inactive" age, the approach let be either on basis of the economic activity or the health condition or, maybe, the need of social care. Naturally in demographic sense this delimitation has not an individual but a social basis, so the "average" situation is taken into consideration. In Hungary two definitions of such kind are used most frequently: the one defines the lower limit of old age traditionally at the age of 60 years, i.e. the 60 year old and older people are considered as old persons. The conceptual basis of this definition is that practically it is this age when the main symptoms characteristic of the ageing of human being begin to appear: in the economic activity, the increasing biological "wear and tear", the health condition, the need of care etc. The other definition is of legal character. According to this definition the person who is entitled to get a pension, i.e. who completed the age when according to the valid legal rules - in case of an adequate period of economic activity - he/she is pensionable is considered as old. Naturally, in this respect several changes occurred with time in the legislation and so this approach reflects the existing situation and is not suitable for comparison in time. According to the present practice the 55 year old and older females and the 60 year old and older males can be considered as old /independently of their actual economic activity/. If old age is defined in this way, opposite to the former concept having more demographic character, the females aged 55-59 are included among old people, but they are not considered as old according to the mentioned in the first case. As the legal

retiring age changes with time not only within the country /for example, some years ago in Hungary, too, the retiring age was different for persons employed and for the members of production cooperatives/ but even more by countries /it varies between 55 and 70 years/, also for international comparison it seems to be more motivated to choose a more simple and more uniform definition. The UN decided in general and as a preparation of its Conference of this year that the age-limit of 60 years should be used for the definition of old age. So in this paper this practice will be followed unanimously, i.e. in all cases when we speak of old persons we mean those who are 60 year old or older.

Naturally, in its content the old age cannot be considered as uniform. At a biological, health- or social approach the condition of the individual persons and population groups is different within this large age-group. As the person gets older, these troubles and problems increase, so parallelly with the advancement in age the content of the social care is different. Therefore in this paper we want to present the demographic problems of old people not only together but also by age-groups. For simplicity - taking into consideration the Hungarian and international practice - the group of old persons will be presented in three parts: those aged 60-69, 70-79 and people of 80 years and older. It is difficult to find a separate definition for these three groups; the first group /which means the period immediately after the activity/ may be called young old-age; the third one /with most problems of care and of social character/ is called the oldest age. Also the term "senescence" is used but it rather indicates the extremely old persons /85 or 90 year old and older/.

In a demographic sense <u>ageing</u> means the process of the increase in the <u>proportion</u> of old people within the

population. So the change in this value can be ascribed not only to the fact that in consequence of the lengthening of the duration of life more old persons live in the population but also to the fact that the number and through this also the proportion of younger persons change within the total population. In Hungary - similarly to the other countries of Europe - this process is connected with the fact that under the impact of the gradual decline in fertility the number and ratio of persons of young age /under 15 years/ fell much /in this respect those of adult age - 15-59 years - may be left out of consideration because their proportion scarcely changed during the 20th century/. Taking in view this phenomenon we have to state to what extent the actual increase in the number of old people and the shift in the proportion - because of the fall in the number of young people-contribute to the growth in the proportion of old people. If we observe this process since the beginning of the century we find that the share of old persons grew from 7.5 per cent to 17.1 per cent. If the ratio of persons of young age had not decreased - from 35 per cent to 22 per cent - but if within the population the ratio of persons under 15 years were the same as 80 years ago, then the proportion of persons over 60 would be only 15 per cent. With other words this means that one fifth of the apparent ageing observed during 80 years was caused by the decline in the number of young persons and only four fifth by the actual growth in the number of old people. This refers even more to the ageing process supposed for the following two decades. According to the projections the proportion of old people will grow from 17 per cent, the value of 1980, to 19 per cent by the year 2000; two fifths of this increase can be ascribed to the probable decrease in the proportion of young persons and only three fifths to the actual tendency of ageing.

After this short introduction the ageing process in Hungary will be described and the number and composition of

old people will be indicated, respectively. Naturally, our main purpose is to outline the present situation but to understand it, it is necessary to begin the study in a somewhat farther period, so where it is possible, the change in the demographic structure will be followed from the beginning of the century, and the period after World War II will be analysed in a somewhat more detailed form. Beside revealing the past we also want to speak of the presumable future trends on basis of population projections. In this respect we don't intend to look very far into the future, only till the year 2000. To understand the Hungarian situation we also deem necessary the comparison with the figures of the countries of Europe as far as data are available.

1. Number and proportion of old persons[a/]

The most important is to know the development of the number and proportion of old persons within the population of Hungary. First reliable data on the present territory of the country can be drawn from the 1870 population census; at that time 256 000 60 year old and older persons lived in the country which was equal to 5 per cent of the population. By the beginning of the 20th century this ratio was near to 8 per cent and in the inter-war period it varied between 10 and 11 per cent. After World War II this increasing trend got even more intensive: the process of ageing was especially strong till 1970, when already 17 per cent of the population were old; in the recent decade the proportion of old people did not grow, in 1980 their number was 1 830 000 which is three and a half times as much as at the beginning of the century.

In the case we do not content ourselves with the presentation of the old population as a whole but we want to

a/ See: Table 1.

study the trends of ageing for the three age-subgroups, we find the greatest increase in the oldest age-group. In 1900 only somewhat more than 30 000 80 year old and older persons lived in the country /their ratio was only 0.5 per cent/, at present already 210 000, i.e. six and a half times as many as at the turn of the century, and also within the population they already represent 2 per cent. During the period of eighty years the number of old people belonging to the middle group - 70-79 year old - grew four and a half times; their proportion increased from 2 per cent to 6.5 per cent. Among the young old persons - 60-69 years - the growth was relatively smaller, namely in the 1900-1980 period their number increased "only" two and a half times; their share changed from 5 per cent to nearly 9 per cent. But in respect of this latter trend we have to know that by 1980 old age was reached by those age-groups which were born during World War I, covering much less persons due to the losses in births than the previous age-groups /between 1915 and 1918 the number of births - from which derived those who were 61-64 year old in 1980 - was scarcely more than the half of the number of births of the previous four years/. That's why the number of persons aged 60-69 years fell by 12 per cent in the 1970-1980 period; and this is also the reason for the apparent stop in the ageing process during the last decade, though this is only a repetition of the demographic "ebb" which took place 60 years earlier. The continuity of the basic process is also proved by the further increase in the number of persons belonging to the older age-groups: in 1980 the number of 70-79 year old persons was by one quarter, and that of 80 year old and older persons nearly by two fifths higher in Hungary as compared to 1970.

Because of the different development of the various old age-groups the inner age-structure of old people changed much. In 1900 68 per cent of the 60 year old and older persons

still belonged to the age-group of 60-69 years, 26 per cent of them were 70-79 year old and only 6 per cent were 80 year old and older. On the contrary, in 1980 only the half of old people belonged to the age group below 70 years, 38 per cent of them was 70-79 year old and the share of the oldest was already 12 per cent, i.e. relatively twice as much as at the beginning of the century. This latter proportion grew to a value one and a half times as high even as it had been before World War II.

After having outlined the trend of the past let us look into the near future: what will happen in the following twenty years? According to the population projections in Hungary in the year 2000 the number of persons of old age will be by about hundred thousand higher than at present, i.e. it will be equal to 1 930 000, and their proportion will be near to 19 per cent. An increase will take place in all the three age-groups of old persons - but just because the above mentioned age-group born during World War I will advance in old age, i.e. in 20 years they will already belong to the oldest -, the growth in the number of 80 year old and older persons will be the lowest /only 3 per cent, thus their share will be practically the same as at present/; the number of persons aged 70-79 years will grow somewhat more /by 5 per cent, so their ratio will increase from 6.5 per cent to over 7 per cent/; and the growth will be the greatest in the number of 60-69 year old people to whom only the members of larger age-groups born in peace will belong /their number will increase by 7 per cent, their share from less than 9 per cent to 10 per cent, but even so it will be lower than in 1970/.

It is worth-while to study the change in the number and proportion of old persons not only in itself but also compared to the other two - young and adult - age-groups. Namely as it was already mentioned, the ratio of persons of old age

grew mainly parallelly with the decrease in the proportion of persons of the young age-group. In 1870 still 37 per cent, in 1900 35 per cent of the population were children, then by 1930 this ratio fell to 27 per cent and at the recent two population censuses it was equal to 21-22 per cent. According to the projections by 2000 only 18 per cent of the population will be under 15 years. Consequently the number of old persons per 100 children grew from 14, the value of 1870 and from 23, the value of 1900, to 78-79 by the years 1970-1980, and in 2000 the number of old persons will be already higher than that of children; i.e. there will be 103 old persons per 100 children.

If we compare the same to the population of adult /economically active/ age and calculate the so-called dependency indicators, we see that in Hungary the general dependency indicator has declined on longer term. In the last third part of the 19th century there were still 73-75 dependents /i.e. children and old persons/ per 100 persons of active age; by 1930 this proportion fell to 59, then it grew slightly and in 1980 it was 64. The trend of the following 20 years will produce again a decline: in 2000 the dependency ratio will fall again to 59.

But for the conditions of maintenance the proportion between the two groups of dependents is important, because not only in financial, but also in social respect it is not the same whether the economically active persons are obliged to maintain their descendants or their ancestors. While in 1870 12 per cent, in 1900 19 per cent of dependents were of old age, in 1930 already 27 per cent. By 1970-1980 this proportion already grew to 44 per cent and according to the projections in 2000 it will reach 51 per cent. More exactly: the maintenance of old people increased to the detriment of children: while 110 years ago 100 persons of active age had to maintain only 9 old persons and even 50 years

ago only 16, at present they have to support already 28 and after 20 years 30 old persons. All this indicates the great change occurred in respect of ageing in the society.

The ratio of old persons in Hungary can be considered as medium size among the European countries. According to the data available for the end of the 1970s the present Hungarian ratio of 17 per cent corresponds to the ratios of Czechoslovakia and France and is near to the proportions of Greece, Italy, Luxemburg and Switzerland /18 per cent/ and to those of Finland and the Netherlands /16 per cent/. Among the European countries Sweden is the "oldest" where 22 per cent of the population are 60 year old and older, but there are relatively many old people in England, Norway and Austria, too /20 per cent/. The less old countries are Yugoslavia /where the share of old people is only 12 per cent/, Poland and Iceland /13 per cent/ and Portugal and Romania /14 per cent/, respectively. Higher are these proportions in the GDR, FRG, Belgium and Denmark /19 per cent/, lower in Bulgaria, Ireland and Spain /15 per cent/.

The situation is practically similar if we compare the proportions of the oldest persons, though in this respect Hungary takes a somewhat lower position in the rank of the European countries. If in this respect we divide the countries in four groups, Hungary will be in the third place by order, where the ratio of 80 year old and older population is around 2 per cent. To this group belong also Ireland, Italy, Spain, Luxemburg, Czechoslovakia and Finland. The share of the oldest is the highest - between 2.5 and 3 per cent - in Sweden, the GDR, Denmark, Norway and France. Also in this respect Yugoslavia is in the most favourable situation, namely here 1 per cent of the population is 80 year old and older; but the ratio is scarcely higher - 1.1-1.5 per cent - in Bulgaria, Poland, Romania and Portugal. In the other European countries the pro-

portion of the oldest shows an average value /between 2.1 and 2.5 per cent/. To this group belong Iceland, England, Greece, Austria, Belgium, the FRG, the Netherlands and Switzerland. Between the countries representing the two extreme values there is a significant difference: in Sweden with the highest value the number of the oldest persons is relatively three times as high as in Yugoslavia where this ratio is the lowest /taking the old population as a whole the difference between these two countries is much smaller, but even so it is significant: four fifths/.

2. Old persons by sex[b/]

At the study of the composition of the old population the most important is to examine the differences by sex. At the beginning of the century among the old population the sex ratio was still balanced in Hungary: there were only 106 old females per 100 old males, and the distribution was practically similar also in the inter-war period. After World War II, however, great differences could be observed in the ageing between the two sexes, ageing was much greater among the females than among the males. Between 1930 and 1980 the number of women of old age became nearly two and a half times as high, while the number of old males grew only by four fifths. The trend is similar in the last and also in the following twenty years: while the number of 60 year old and older females increased by 37 per cent between 1960 and 1980 and will grow by further 11 per cent till the year 2000, among the males during the recent twenty years the increase was only 28 per cent, and according to the projections in the following 20 years there will be a regress by 2 per cent among the males. Consequently among the old population the ratio of females grows more and more: in 1960 only 57 per cent were females, at present 59 per cent and in 2000 already 61 per cent. Naturally, all this is

b/ See: Table 1.

also reflected by the female surplus at old age: in 1960 there were 133 women of old age per 100 old men, in 1980 already 142 and in 2000 it may be 159.

The surplus of females is even greater if we study it in the different age-groups of the old population. Namely with age this indicator shows an increasing trend. Already in the longer past the relatively higher female surplus could be found among the oldest but the differences were not significant. Even before World War II at a 11-14 per cent female surplus of old persons belonging to the younger age-groups /under 80 years/ among the oldest the surplus of females was "only" 32 per cent. However, in the last 40 years these differences grew much. So in 1980 the number of 80 year old and older females was already twice as high as that of males of the same age; among those aged 70-79 years the surplus of females was nearly the half and among those aged 60-69 years about one quarter as compared to the males of the corresponding age. In the following twenty years these differences will even increase: there will be already 270 females of the eldest age per 100 eldest males; among those aged 70-79 years this ratio will be 172 and among those of 60-69 years 136. All this means that in the age-group of 80 years and older, causing the greatest problem, the share of females grew from 57 per cent to 67 per cent during forty years and will already attain 73 per cent after the next twenty years. This means that while between 1940 and 1980 the number of 80 year old and older males grew only to the double and in the following twenty years it will even decline presumably by one sixth - mainly under the impact of the lower number of births during the two World Wars and under the influence of the war losses -, among the females during forty years the number of the oldest grew to its triple value and till 2000 a further increase by nearly one sixth can be expected. All this can be summarized in figures in the following way: while before World

War II 45 000 females of the oldest age lived in the country, at present already 145 000 and at the end of the century their number will be near to 160 000. Among the males the number of those aged 80 years and older grew from 34 000 to 70 000 and at the end of the century it will be again under 60 000 /only slightly higher than it was in 1970/. All this draws the attention to the special problems of the eldest females.

In international comparison the situation of Hungary in respect of the different ageing of the two sexes is similar to that of other countries. If we study separately our place among the European countries in respect of the ratio of old persons between the two sexes, we see that both for the males and for the females we are about in the middle.

The 15 per cent ratio of old males is the same as in the GDR, Italy, the FRG and Luxemburg, it is by 5 per cent lower than in Sweden where this indicator is the highest, but it is only by 2-3 per cent lower than in the countries following Sweden, i.e. in Norway, England and Denmark. The 11 per cent ratio of Poland and Yugoslavia where the situation is the most favourable is only by 4 per cent lower than in the group to which Hungary belongs.

For females the 19 per cent ratio of old age is similar to that of Czechoslovakia, Finland and Greece. Also this is by 5 per cent lower than the 24 per cent proportion - which is the maximum - in Sweden and the GDR and by 4 per cent lower, than in England, the FRG and Austria. At the same time the ratio of Hungary is by 5 per cent higher than the 14 per cent proportion of Yugoslavia and Iceland and by 4 per cent higher than the ratio of Romania, respectively.

3. Family conditions of old persons[c/]

The significant changes in the age- and sex structure of old people occurred in the last decades exerted a great impact on their family situation, too. The increase in the share of the oldest and among them the growing female surplus themselves augmented the number and share of persons living outside the close family bonds and especially of those living alone without any family- or household relation. For these persons the problems of provision and support which cannot be solved anymore by the family are especially urgent. They need a social care.

Data on the family status in a stricter sense are available only for the last two decades but also their trends reflect well the basic processes. Between 1960 and 1980 among old people the proportion of those living in a marital relation slightly decreased and the share of those living as an other family member - mainly as a lonely parent - with the family fell even more, from 29 per cent to 25 per cent. On the other side among persons of 60 years and older the proportion of those living alone grew significantly: from 15 per cent to 20 per cent, which means in figures that while in 1960 200 000 old **persons**, in 1980 already nearly 370 000 old persons were forced to live alone. Also the number of old persons living in institutional households increased much: from 16 000 to 40 000 /even so their ratio is altogether only 2 per cent/.

This general tendency in itself causes great problems of care and provision; this can be stated even more at the study of this tendency by sex and age-groups, namely the distribution of the family status between the two sexes is not identical at all and it does not develop parallelly in time either. Among the males the share of those living together with the spouse is much higher than among the females /77 per cent as against the 37

c/ See: Tables 2, 3/a and 3/b.

per cent proportion of the females/. On the other side a much greater part of women live as family members as compared to men /34 per cent as against the 11 per cent of the males/. As compared to the 1960 situation the ratio of persons living as family members decreased for both sexes, but, maybe, to a greater extent in case of females /from 40 per cent to 34 per cent/. Consequently among old females the share of those living alone is higher /27 per cent, while among the males 10 per cent/, and a great increase could be observed for both sexes. The ratio of persons living in institutes is equal for the two sexes.

Beside the various habits of marriage /widowing, remarriage/, the differences are motivated naturally also by the dissimilar age-structure of the two sexes. Because with age the ratio of persons living together with the spouse decreases - for both sexes - and that of persons living as family members or alone increases. But in all the age-groups there are differences "to the detriment" of the females. Thus according to the 1980 data e.g. the proportion of persons living together with the spouse is still 65 per cent among the young old people, 47 per cent among the middle-old and only 22 per cent among the oldest. At the same time the ratio of persons living alone grew from 17 per cent to 23 per cent and to 24 per cent, respectively. If we continue to analyse this most problematic group we have to say that in Hungary 50 000 80 year old and older persons live alone /ten years ago their number was only 28 000/; among them naturally there are very many females /three quarters of them, nearly 40 000/. If we study the persons belonging to the oldest age-group from another side we see that while 52 per cent of the 80 year old and older males still live together with the spouse, only 8 per cent of the females of this age live together with husband. On the other side, relatively twice as many 80 year old and older women live as family members as compared to

the number of males. The share of oldest females living alone is 28 per cent, that of males is equal to 16 per cent.

The differences in the family status by age and sex can be partly ascribed to the distribution of old persons by marital status.

At a study by age we find that for both sexes the ratio of married persons decreases and that of widows increases parallelly with the ageing process; the proportion of the divorcees, however is higher among the younger old people. In all age-groups there are relatively much more married men than married women but in all the age-groups the share of widowed females is much higher and that of divorced women is higher as compared to the males of corresponding marital status.

Thus if we examine first the persons belonging to the age-group of 60-69 years we see that here still 86 per cent of the males are married /this is the same as it was in 1960-1970 and slightly higher than it was before World War II when only 82-83 per cent of them were married/; among the women this ratio is only 52 per cent /it declined as compared to 1970 and increased as compared to the 1930-1960 period/. At the same time in this age-group 37 per cent of the women are already widows /it has to be mentioned that this share was still 45-47 per cent in the 1930-1949 period/, as against the 7 per cent proportion of the males /which fell from 13-14 per cent to this value/. The 5 per cent share of the divorced females is 5-6 times as high as it was 40-50 years ago and is higher than the 3 per cent proportion of the males which also grew considerably.

In the age-group of 70-79 years still 74 per cent of the males are married /this ratio is higher than it was any time before 1960/ but only 29 per cent of the females /though this proportion, too, increased from the former 26-27 per cent level/. Here already 61 per cent of the women are widowed in comparison

with the 19 per cent proportion of the men /especially among the males there is a great decrease compared to the past, because 40-50 years ago still 30-31 per cent of them were widows, while at that time the share of widowed women was 69-70 per cent/. At the same time the proportion of the divorced "middle-old" persons became six times as high for both sexes, the difference, however, is not too great: for females 3, for males 2 per cent.

Even among the oldest males the share of married men is more than 50 per cent; among the 80 year old and older women this marital status is very rare /it is also interesting that while among the males a continuous increasing trend could be observed as against the 42 per cent ratio of the past, among the females this ratio fell first from 11 per cent to 8 per cent and it slightly grew only in the last decade/. In this age-group already 82 per cent of the females are widowed /this ratio scarcely changed in the last 50 years, maybe, it slightly decreased only in the last decade, from 85 per cent/; also among the males the relatively highest ratio of widows can be found in this age-group /44 per cent/, but this, too, is much lower than that of the females and much lower than it was in the past /when it attained even 53 per cent/.

Summarizing we can say that also the study by marital status shows the more pitiful situation of the oldest females. In 1980 115 000 80 year old and older widowed females were enumerated in the country but altogether we found 622 000 old widows. To this we have to add the 43 000 divorced women and the 67 000 single females of old age. Most of them live alone without any family relation.

4. Probability of surviving till old age[d/]

The ageing process, i.e. the increase in the proportion of old people within the population result from the fact that more and more persons reach an older age, i.e. an ever growing share of the population enters the old age or its lower age-limit of 60 years set by us.

On basis of the results of the life tables we can follow the development of the probability of surviving till the old age in our century up to now and the life expectancies of persons having already reached the lower limit of old age.

The first approach could be to state the probability for newborn to survive till the old age, with other words, of 100 newborn how many can count upon attaining the age of 60 years. At the beginning of the century this possibility was still very small: of 100 boys 34, of 100 girls 36 could hope to cross the lower limit of the "third" age. After this an enormous increase could be observed, expecially for females: in 1970 the girls' probability to survive till the old age reached 85 per cent and since then it remained on this level. For boys the "peak" took place in 1960: with a 76 per cent probability, this indicator was similar in 1970, too, then by 1980 it worsened: 71 per cent of the male newborn of the present generation - supposing a stable mortality - can hope to attain old age. Thus the differences between the two sexes continued to grow: in 1960 the females' relative probability was by one tenth, in 1980 already by one fifth more favourable than that of males.

If we examine the probability for persons having attained the old age to survive till an elder birthday, too, the development is not so great at all. With other words we can say that the ageing process can be ascribed mainly to the fact that

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d/ See: Tables 4/a, 4/b and 5.

in the younger age-groups mortality decreased and therefore an ever growing number of persons can enter the old age. But we hardly find any favourable change which would exert a positive impact on the probability of survival within the old age and therefore at present there are more old persons only because there are more 60 year old people and not because more 60 year old persons became 70 or 80 year old.

The data of the life tables confirm this statement. So e.g. in 1900 the probability for a 60 year old male to survive till his 70 year birthday was already 61 per cent, then by 1930 it increased to 69 per cent; it continued to improve till 1960 /but only to 73 per cent/, but after this by 1980 it decreased again under the 1930 level /to 68 per cent/. For females the same probability increased from 60 per cent to 72 per cent in the 1900-1930 period, then it reached its maximum in 1960: 83 per cent, since then it stagnates with 82 per cent. Here the relative improvement was already more than one third during the period of 80 years; this also means that while in 1900 the 60 year old males and females had an equal probability to survive till their 70 years' birthday, in 1980 the women's situation was already by 20 per cent more favourable.

The results will be similar if we study the probability for a 70 year old person to survive till the age of 80 years. At the beginning of this century for both sexes it was still 32 per cent; for males it increased to 39 per cent by 1930, then in 1950 it already attained 45 per cent, since then it decreased gradually and by 1980 it fell to the 1930 level, i.e. at present in this respect the males' situation is more favourable by scarcely one fifth than it was eighty years ago and is the same as it was fifty years ago. For females in 1930 this indicator already reached 42 per cent, then after certain fluctuations it increased again and in 1980 already attained

55 per cent. That means that a woman aged 70 years at present has a probability relatively by three quarters greater to survive till her 80 years'birthday than eighty years ago and by 40 per cent greater as compared to a man of the same age. We could prove with many examples that also in this respect the development is greater among the females; in respect of the males a regress could be observed in the recent one-two decades and therefore the differences between the two sexes grow.

The probability of surviving till the old age can be followed not only on basis of theoretical calculations, i.e. by means of life tables. If we study for a long period which share of the different Hungarian generations attained actually the old age, we can trace the development taking place in this respect in Hungary during the last 120 years.

The survival of ten-year birth cohorts were studied on basis of the actual ratios of attaining the old age. To the first generation-group investigated belong the persons born between 1860 and 1869 who were 60-69 year old in 1930 and 70-79 year old in 1940. The youngest generation-group which can be studied is that born between 1920 and 1929 who will be 60-69 year old in 1990 and 70-79 year old in 2000.

If we examine the change in the proportion of survival till the age of 60-69 and 70-79 years, respectively, for 7 generation groups, we find that in the oldest generation the share of those having attained the age of 60-69 years was still only 25 per cent and it was scarcely higher in the following two groups /who entered the old age in 1940 and 1950, respectively/. In the following generations a great increase took place, thus 44 per cent of those born between 1910 and 1919 attained the age of 60-69 years /in 1980/ and for the following generation this ratio will be already 48 per cent. The proportion of those having survived till the age of 70-79 years grew from 14-15 per cent, in the 1900-1909 generation

already to 26 per cent /in 1980/, and according to the projections in the 1920-1929 generation it will attain even 31 per cent.

If we compare the actual survivals to the theoretical survival ratios of the life tables, we see that the probabilities calculated on basis of the life tables at birth are much more pessimistic than the actual survivals. This can be presented more exactly only for the generations born in the 20th century but in case of these generations the differences are already very great. Thus, for example, if the generations born between 1900 and 1909 had survived in a way indicated by the 1900 life table, then only 29 per cent of them would have attained the age of 60-69 years and 18 per cent the age of 70-79 years. Actually, however, 40 and 26 per cent of this generation, respectively, survived till this old age, i.e. for the former this is a 11 per cent and for the latter a 8 per cent surplus in survival. Calculated in another way this means that the decrease in mortality having occurred in the meantime contributed to a great survival as compared to that imagined earlier; as a result of this relatively about more than four fifths of persons born at that time survived till the old age. Similar differences can be found for the 1910-1919 birth cohort, if we compare the actual survivals to the probabilities of the 1910 life table, as well as for the 1920-1929 birth cohort, though here there is a smaller difference as compared to the calculations /but even so the share of those who survive till the old age as a "surplus" is about 30 per cent/. If we generalized this statement, it would be valid also for the further generations, even if according to the projections the differences decreased. Thus, e.g. according to the 1930 life table which can be referred to the generation born between 1930 and 1939, 47 per cent of the persons belonging to this age group would attain the age of 60-69 years and 33 per cent the age of 70-79 years. If we project our knowledge gained till now, then their actual survival ratios could be near to 60 per cent /in 2000/

and 40 per cent /in 2010/.

If we study the situation of Hungary on basis of the survival probabilities of the life tables, we find a very unfavourable situation. According to the life tables of European countries for the end of the 1970s the probability of survival till the old age is one of the lowest in Hungary for both sexes. However the data available don't permit to compare the probability of survival till the age of 60 years chosen by us because the data reflect the probability of attaining the ages of 55, 65 and 75 years, but in respect of the size of the differences this is not important, the differences between the countries are indicated equally by any age.

Thus if we study the probability of survival till the age of 65 years - which is used the most frequently - we see that for males the 63 per cent Hungarian probability is the lowest in Europe. This value is similarly low - 64-65 per cent - in Poland, Portugal, Finland and Czechoslovakia, scarcely higher - 67-69 per cent - in Romania and Yugoslavia, but in the other European countries it is 70 per cent or even higher. It is the most favourable in Greece and Iceland where 78 per cent, and in the Netherlands, Sweden and Switzerland, where 77 per cent of the male newborn can hope to survive till their 65 years' birthday i.e. in these countries the relative probability is by one fifth more favourable than in Hungary. However, the differences are similar in respect of the probability of survival till the age of 75 years: in case of the Hungarian male newborn this is only 36 per cent, in case of the newborn of Sweden and Switzerland 52 per cent, i.e. higher by two fifths.

Also for the females the Hungarian data are the lowest: 79 per cent of the female newborn can hope to live till their 65 years' birthday, similarly to the Romanian girls. This probability is scarcely higher - 80-82 per cent - in Yugoslavia,

Czechoslovakia, Portugal, Poland, Ireland, Bulgaria, but in the other European countries it is 83 per cent and higher. The most female newborn survived till her 65th birthday in Switzerland and Norway /88 per cent/ and in the Netherlands, Sweden and Greece /87 per cent/. Thus the girls of these countries are relatively by about 10 per cent in a better situation than the Hungarian girls in respect of the probability of survival till the age of 65 years. This also means that in case of females the difference in a negative direction is much smaller than in case of males. The probability of survival till the 75 birthday is 57 per cent for the Hungarian girls as against the 72 per cent of those born in the countries being in the most favourable situation /the Netherlands, Sweden, Switzerland, Norway, Iceland/. Here the difference is already one quarter.

Also in respect of the survival within the old age the unfavourable signs of the Hungarian mortality can be felt, though, maybe, the differences are already smaller than in respect of attaining the old age.

Thus, e.g. the probability for a Hungarian male aged 65 years to survive till his 75 birthday is 56 per cent, practically similarly to those living in Belgium, Luxemburg, Poland, Czechoslovakia, the GDR, Finland. At the same time the probability for a male of the same age is in Iceland 76, in Greece 71, in Switzerland or Sweden 68 per cent. In this respect the difference is about one quarter. For females the same probability is 72 per cent in Hungary which practically corresponds to the proportion in the GDR, Yugoslavia, Ireland, Bulgaria, Romania and Cezchoslovakia. But for a woman in Iceland the probability of living additional ten years is 84, in Switzerland and France 83, in Sweden, Norway, the Netherlands 82 per cent. That means in case of females the difference is relatively about one sixth to the detriment of the Hungarian women.

The above mentioned is confirmed in another respect by the data - also obtained from the life table - on life expectancy. They, too, prove that the great increase in the average life expectancy at birth is caused by the decrease in mortality at young age, and at old age there was hardly any change in the average life expectancy. This also shows that no significant improvement could be stated in the possibilities of survival at old age, only the impact of the fact can be felt, that more persons attain the lower limit of old age.

It is known that the average life expectancy at birth was almost equal for both sexes at the beginning of the century: 37 years for the males and 38 years for the females. By 1941 this difference already grew to 3 years; by that time an average newborn male could hope to survive till the age of 55 and a female till the age of 58 years. After World War II this value continued to increase: for the males this trend lasted till 1970: by that time it attained 67 years, since then it fell by 1 year and in 1980 a male newborn could expect to live till the age of 66 years. Also among women an increase could be observed till the year 1970: to 73 years, since then this value has not changed practically.

If we examine how much of this great lengthening of the duration of life - during the century the duration of life of the females increased by 35 years and that of the males by 29 years - falls to the share of old age, we see what we mentioned above, that essentially there was scarcely any change. A male of 60 years in 1900 survived on the average 13 additional years, by 1930 it grew to 15 years, then between 1950 and 1970 to 16 years, and in 1980 it fell again to the 1930 level; that means that during eighty years the improvement in this respect is only 2 years /15 per cent/. As for females, while in 1900 a 60 year old woman lived on the average also 13 and in 1930 15 additional years, after this the increase was continuous and more intensive than among the males, and thus

by 1970 their average life expectancy was already 19 years which remained constant also by the year 1980. Thus the improvement for the females was 6 years during the century /i.e. 46 per cent/.

The differences are even smaller - especially for males - at the further ages. E.g. the life expectancy of a 70 year old man grew from 8 years, the value of 1900, to 10 years by the year 1950, then after a long stagnation it decreased to 9 years by the year 1980 - to the 1930 level -. Among the females the life expectancy at this age grew from 8 to 12 years during eighty years. But at the age of 80 the life expectancy increased from 4 to 6 and from 5 to 7 years, respectively, in the 1900-1980 period.

This trend can be observed in the other European countries, too, and the differences in this respect are much smaller between the individual countries. Thus if we examine the life expectancy at the age of 65 years at the end of the 1970s, we see that for the males it varied between 12 years /Hungary, Czechoslovakia, the GDR, Finland, Portugal, Austria, Belgium/ and 15-16 years /Iceland, Sweden, Greece/, in the majority of the countries it was 13-14 years. As compared to the beginning of the century the life expectancy did not change or it lengthened by 1-3 years in most countries. For the females the differences are similar: the minimum is 15 years /Hungary, Bulgaria, Czechoslovakia, the GDR, Romania, Portugal, Ireland/ and the maximum 19-20 years /Iceland, Sweden, the Netherlands, France/; in the majority of the countries 16-18 years. As compared to the beginning of the century an increase by 3-6 years can be observed which, too is a very small improvement.

At the end of the treatment of this question it is worthwhile to present the so-called Ryder's index of ageing. It shows the age at which the value of the average life expectancy is 10 years /with other words, the age after which the half of living persons will live additional 10 years/. According to the Hungarian life tables of the 20th century this value scarcely changed,

showing that at the end of the duration of human life the actual duration of life did not change much. Namely for the males it was already 65 years in 1900, then in 1950-1960 it was 70 years, in 1970-1980 69 years, i.e. the number of years till which a human being can live biologically increased by 4 years during the century /excluding early mortality/. For women this value was also 65 years in 1900, then it grew gradually and it attained 72 years in 1950-1970 and 73 years in 1980; thus in case of women the improvement was already 8 years.

However, as compared to these differences it is much more important to know the proportion of the population which attained this age, which to a certain extent can be considered as a biological background. In 1900 only 28 /males/ - 29 per cent /females/ of the population lived at this age. In 1970, however, this proportion grew for the males to 57 per cent and for the females to 65 per cent, i.e. during 70 years the biological age which scarcely changed was reached by two - two and a quarter times as many persons. Because of the increase in mortality by 1980 this share fell: at present only 51 per cent of the males and 62 per cent of the females survive till this age; so in this respect, too, our mortality fell to its level observed 20-25 years earlier.

5. Mortality of old persons[e/]

Already the probabilities of survival showed unanimously the change in the mortality conditions of old people and especially the significant alteration of the differences between the two sexes occurred in the recent decades. If now we study directly the mortality indicators by age-groups, this trend becomes even more obvious.

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e/ See: Table 6.

Summarizing we must say that the mortality of females - in each old age-group - improved continuously and relatively to a great extent during the century, that of males, however, decreased to a smaller extent and in the last two decades it even increased.

Examining in more details the mortality of the two sexes belonging to different age-groups first we survey the males' development of this respect. Studying the males' mortality during the complete 80 year period - from 1900 to 1980 - we see that with age the improvement is smaller. While the mortality of 60-69 year old males decreased by one quarter, that of men aged 70-79 years by one fifth and that of males over 80 years only by one sixth. If we divide the past long period we see that during the first 40 years only the mortality of the males under 80 years improved, in 1940 the mortality rate of men over 80 was the same as at the beginning of the century. Among the "young" old males mortality decreased by one quarter, among those belonging to the "middle" group by one fifth already at that time, i.e. we can also say that the mortality of males under 80 years fell to the present level already forty years ago and has not changed since that time. Since 1940 only the mortality of men over 80 years decreased, by about one tenth. This is true only for the period as a whole because between 1940 and 1960 the mortality of males in all age-groups decreased by about 10 per cent but since then the improving trend turned into a worsening tendency producing the above-mentioned strange situation. Between 1959-1960 and 1979-1980 the mortality of 60-69 year old males increased nearly by one sixth, that of men aged 70-79 by one tenth and only the mortality of 80 year old and older males remained practically the same.

The situation is quite different in respect of the mortality of females. Their mortality decreased continuously during the whole period, to a greater extent than that of the males. Also here the regress is greater among the younger women: at present the mortality of 60-69 year old females is less than two fifths, that of women aged

70-79 years is the half and that of 80 year old and older females somewhat more than two thirds of the value stated at the beginning of the century. Also in case of females the improvement was the greatest during the first forty years of the century: between 1900 and 1940 the mortality of 60-69 year old women fell by 40, that of women aged 70-79 years by 30 and that of 80 year old and older females by 10 per cent. During the second forty years - between 1940 and 1980 - the improvement was almost equal in all the three age-groups: the proportion of persons deceased fell nearly by one third. In case of women an improvement in mortality could be observed - though to a smaller extent - in the last twenty years, too. The decrease is the greatest in the age-group of 70-79 years, namely here in 1980 female mortality was by one sixth lower than 20 years earlier; in the young and oldest age-groups the regression was about 10 per cent.

Because of the differing mortality trends of the two sexes their mortality compared to one another changed considerably. While in 1900 under the age of 80 years there was still a surplus of female mortality, and also over 80 years the surplus of male mortality was only very small /4 per cent/, during the past eighty years a great surplus of male mortality developed in all the old age-groups. This became very significant in case of persons under 80 years: the mortality of 60-69 year old males is almost the double of the female mortality and that of the 70-79 year old men is more than one and a half time as high as that of women of the corresponding age. In case of persons over 80 years the surplus of male mortality is only one quarter but this, too, has a markedly increasing character, especially relating to the last decade. There is a growth chiefly among persons aged 80-84 years: in 1980 the mortality of men of this age is already by one third higher than that of females of similar age, while twenty years ago the difference was scarcely higher than 10 per cent and ten years ago scarcely higher than

20 per cent.

On an international scale the Hungarian mortality at old age can be considered as very high. As compared to the data of the European countries with the most favourable mortality, expecially the mortality of persons under 80 years seems to be very high. In case of women the differences are even greater: the mortality of Hungarian females under 75 years is by three quarters higher than in the countries with the lowest mortality /Norway, Sweden, France, Switzerland/. For males this difference is about 50-60 per cent. In case of persons aged 75-84 years for both sexes the Hungarian mortality is by 50 per cent, that of the oldest - 85 years old and older - males by 40, females by 45 per cent higher. For both sexes a high mortality similar to that of the Hungarian one can be observed in Czechoslovakia, besides for the males in Poland and under the age of 75 years in Finland, Belgium and Luxemburg, over the age of 75 years in the FRG, Ireland and Portugal. Similarly to Hungary the females' mortality is high in Bulgaria, Romania, Ireland, the GDR and Yugoslavia and over 75 years also in Portugal. We have to say that at the end of the 1970s the mortality of 60-69 and 75-79 year old males and of 60-74 year old females of Hungary was the highest in Europe. In most foreign countries mortality has not yet increased, not even in case of males. Thus in the countries where the mortality is similar to ours, in the past the mortality conditions were much worse than in Hungary /the only exception is Czechoslovakia where the trends are similar to those of Hungary/.

6. Regional differences[f/]

There are great differences by residence in the proportion of old persons and in the ageing process, respectively. It is sure that the environmental harms and health conditions of the residence affect much the probability of survival till the old age.

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f/ See: Tables 7, 8, 9. and 10.

The situation is illustrated the best by the study of the proportion of old persons by settlement types. In 1980 the ratio of 60 year old and older population was the highest in Budapest - over 20 per cent -, then in the rural areas - where 18 per cent of the population were of old age - and the proportion was the lowest in the provincial towns - 14 per cent. This order has been characteristic of the Hungarian settlement types only since 1960, earlier just the population of the capital had the "youngest" age structure. In 1949 e.g. in Budapest 11 per cent of the population was of old age, in the rural areas and in the provincial towns this share was 12 per cent. The situation was similar also before World War II: in 1930 the proportion of old persons was 8 per cent in Budapest and 10 per cent in rural and in the other urban areas. Thus the ageing process was the most intensive in Budapest: in the last forty years the number of 60 year old and older persons grew from 171 000 to 416 000, i.e. by 143 per cent in the capital. During the same period in the rural areas the number of old people increased by 55 per cent and in the provincial towns by 104 per cent. Between 1960 and 1980 the number of old persons grew by 52 per cent in the capital, by 47 per cent in other urban areas and by 19 per cent in rural areas. While 19 per cent of the total population live in the capital, 23 per cent of the old persons live in Budapest /but forty years ago only 17 per cent/.

The situation is similar if we examine the proportion of the oldest by settlement types. Their ratio is the highest in the capital, it has a middle value in the rural areas and the number of persons over 80 years is the lowest in the provincial towns /in 1980 the relative difference was 56 per cent as compared to Budapest/. This order, however, refers only to the recent time: in 1970 the proportion of the oldest was still equal in Budapest and in the rural areas and it was only slightly different in the

other urban areas; earlier the number of oldest people was relatively always the lowest in Budapest and relatively higher both in the rural and in the other urban areas.

The situation is similar by sex: in general most old males and females live in Budapest and the least in the other urban areas. For females the order was similar already in 1960 but as to the males, the greatest number of them lived in rural areas both in 1960 and 1970. Among the oldest there are differences in the proportions of the two sexes: for the women a unanimous ageing can be stated in Budapest: the ratio of 80 year old and older females is relatively by 32 per cent higher in the capital than in rural areas and by 57 per cent higher than in the other urban areas. However, somewhat more oldest men live in rural areas though there is hardly any difference as compared to Budapest. The increase in the number of the oldest females in Budapest should be mentioned separately: as against the 13 000 women of 1960, in 1980 36 000 80 year old and older females lived in the capital, i.e. their number grew to the triple value during 20 years. In the same age-group the number of males increased to the double.

The different proportion of old persons by settlement types is in a strict relationship with the various demographic movements, but mainly with the regional differences in mortality. According to the 1980 data under 75 years for both sexes mortality is the highest in Budapest, over 75 years, however, already in the rural areas. The mortality surpluses of Budapest, however, are rather small: they are equal to 1-4 per cent in the different age-groups of the two sexes between 60 and 74 years; there is a greater mortality surplus only for women aged 60-64 years, over 20 per cent as compared to the rural women. However, the rural surplus mortality over 75 years is already greater, especially for the 80 year old and older persons: the number of deceased at this age is by about

10 per cent higher in rural areas than in Budapest and by less than 5 per cent higher than in the provincial towns.

In the proportion of old people great differences can be stated also by the individual counties of Hungary. There are counties where the ratio of old persons has been extremely high already for a long period, in others, however, this proportion has been low for decades. According to the 1980 data - without taking into consideration Budapest - the relatively highest number of old people can be found in Békés county, here 19.5 per cent of the population are 60 year old and older. There are relatively many old persons - 18-19 per cent - also in Csongrád, Somogy and Heves counties. Fejér county is the "youngest", i.e. here the proportion of old people is the lowest, only 13.7 per cent of the population are 60 year old and older. But there are few old people - around 14 per cent - in Komárom and Szabolcs-Szatmár counties, too.

The proportion of the oldest shows a similar situation. More than 2 per cent of the population are 80 year old and older in three of the above-mentioned counties: in Békés, Csongrád, Heves, as well as in Szolnok and Vas counties. The number of the oldest persons is the lowest also in Fejér and Komárom counties /here only 1.4 per cent of the population is 80 year old and older/.

The higher or lower proportion of old people is only partly related to the mortality differentials of old persons by counties, because the former is also affected by the migration of the population and due to the various fertility conditions also by the different proportion of persons of young age. Still it is worth-while to mention that there are great differences in the mortality of old persons by counties. The mortality of the county with the maximum value is by about one quarter higher in the individual age-groups than the similar indicator of the county with minimum mortality. We have to add that there are counties where the high or low mortality at old age is characteristic.

E.g. in Somogy county in all old age-groups the mortality rate is the highest or the second highest /according to the 1980 data/. Among the counties with the highest mortality also Baranya and Fejér counties must be mentioned in relation with several age-groups. The counties being in the most favourable situation show a much more various situation: by age-groups mortality is the lowest always in another county. But we must mention Szolnok county where a minimum mortality was stated in three cases, and Veszprém and Csongrád counties where a minimum mortality was observed in two age-groups.

The regional differences in ageing and consequently in mortality require further detailed analysis. At the study of these differences especially the socio-economic processes playing a role in ageing and in the mortality trends influencing the process of ageing should be taken into consideration. With other words, in the near future we have to examine the socio-economic differences in mortality and through it the differences in the probability of ageing and draw conclusions concerning the possibilities of changing the trends which are still negative in many respects at present.

Tables

1. Number and proportion of old persons

Age-groups	1900	1930	1941	1949	1960	1970	1980	1990	2000
	In thousand								
Males									
60-69 year old	170	259	284	298	366	478	409	489	420
70-79 "	65	126	147	142	180	223	279	220	267
80-X "	15	25	34	33	45	56	70	79	59
Together	250	410	465	473	591	757	758	788	746
Females									
60-69 year old	177	269	325	377	466	573	519	638	569
70-79 "	70	168	163	179	252	332	412	365	459
80-X "	17	31	45	44	64	98	141	177	159
Together	264	438	533	600	782	1 003	1 072	1 180	1 187
Total									
60-69 year old	347	528	609	675	832	1 051	928	1 127	989
70-79 "	135	264	310	321	432	555	691	585	726
80-X "	32	56	79	77	109	154	211	256	218
Together	514	848	998	1 073	1 373	1 760	1 830	1 968	1 933
	As per cent of the total population								
Males									
60-69 year old	5,0	6,1	6,2	6,8	7,6	9,6	7,9	9,7	8,6
70-79 "	1,9	3,0	3,2	3,2	3,8	4,5	5,3	4,4	5,4
80-X "	0,4	0,6	0,8	0,7	0,9	1,1	1,4	1,6	1,2
Together	7,3	9,7	10,2	10,7	12,3	15,2	14,6	15,7	15,2
Females									
60-69 year old	5,1	6,0	6,8	7,9	9,1	10,8	9,4	11,8	10,7
70-79 "	2,1	3,2	3,5	3,8	4,9	6,3	7,5	6,8	8,7
80-X "	0,5	0,7	0,9	0,9	1,2	1,9	2,5	3,3	3,0
Together	7,7	9,9	11,2	12,6	15,2	19,0	19,4	21,9	22,4
Total									
60-69 year old	5,1	6,1	6,5	7,3	8,3	10,2	8,6	10,8	9,7
70-79 "	1,9	3,0	3,4	3,5	4,4	5,4	6,5	5,6	7,1
80-X "	0,5	0,7	0,8	0,8	1,1	1,6	2,0	2,5	2,1
Together	7,5	9,8	10,7	11,6	13,8	17,2	17,1	18,9	18,9
	Females per 100 males								
60-69 year old	104	104	114	127	127	120	127	131	136
70-79 "	108	133	111	126	140	149	148	166	172
80-X "	113	124	132	133	142	175	201	230	270
Together	106	107	115	127	133	133	142	150	159

Source: 1900-1980: population census data; 1990-2000: research analysing projection prepared in 1982.

2. Old persons by family status

Family status	Males			Females			Total		
	1960	1970	1980	1960	1970	1980	1960	1970	1980
	In thousand								
1	2	3	4	5	6	7	8	9	10
60 year old and older persons together									
Spouse /husband, wife/	458	536	581	302	359	395	760	895	976
Other family member	84	150	82	310	412	365	394	562	447
Person living alone	41	59	79	162	216	288	203	275	367
Inhabitant of institute	7	12	16	9	16	24	16	28	40
Together	590	757	758	783	1 003	1 072	1 373	1 760	1 830
60-69 year old									
Spouse	.	372	342	.	272	265	.	644	607
Other family member	.	68	23	.	187	127	.	255	153
Person living alone	.	32	34	.	110	121	.	142	155
Inhabitant of institute	.	6	7	.	4	6	.	10	13
Together	.	478	409	.	573	519	.	1 051	928
70-79 year old									
Spouse	.	142	203	.	80	118	.	222	321
Other family member	.	56	36	.	160	156	.	216	192
Person living alone	.	21	34	.	84	128	.	105	162
Inhabitant of institute	.	4	6	.	7	10	.	11	16
Together	.	223	279	.	331	412	.	554	691
80-X year old									
Spouse	.	22	36	.	7	12	.	29	48
Other family member	.	26	20	.	65	82	.	91	102
Person living alone	.	6	11	.	22	39	.	28	50
Inhabitant of institute	.	2	3	.	5	8	.	7	11
Together	.	56	70	.	99	141	.	155	211

/Continuation of table 2: Old persons by family status/

1	2	3	4	5	6	7	8	9	10
			Percental distribution /of 100 persons of the same age/						
			60 year old and older persons together						
Spouse	78	71	77	38	36	37	55	51	53
Other family member	14	20	11	40	41	34	29	32	25
Person living alone	7	8	10	21	22	27	15	16	20
Inhabitant of institute	1	1	2	1	1	2	1	1	2
					60-69 year old				
Spouse	.	78	84	.	47	51	.	61	65
Other family member	.	14	6	.	33	24	.	24	16
Person living alone	.	7	8	.	19	24	.	14	17
Inhabitant of institute	.	1	2	.	1	1	.	1	2
					70-79 year old				
Spouse	.	64	73	.	24	29	.	40	47
Other family member	.	25	13	.	48	38	.	39	26
Person living alone	.	10	12	.	26	31	.	19	23
Inhabitant of institute	.	1	2	.	2	2	.	2	2
					80-X year old				
Spouse	.	39	52	.	7	8	.	19	22
Other family member	.	47	29	.	66	58	.	58	49
Person living alone	.	11	16	.	22	28	.	18	24
Inhabitant of institute	.	3	4	.	5	6	.	5	5

Source: Population censuses /the 1960 data are partly calculated figures/.

3/a. Old persons by age and marital status /as per cent of persons of corresponding age /

Males

Age, marital status	1930	1941	1949	1960	1970	1980
60-69 year old						
Single	3,6	3,6	3,7	3,8	4,3	3,8
Married	82,1	82,7	84,0	85,9	86,1	85,5
Widowed	13,7	12,7	11,3	8,7	7,3	7,4
Divorced	0,6	1,0	1,0	1,6	2,3	3,3
70-79 year old						
Single	2,7	2,9	2,7	3,0	3,3	4,0
Married	65,8	66,7	69,3	72,2	74,5	74,4
Widowed	31,1	29,9	27,4	23,6	20,5	19,3
Divorced	0,4	0,5	0,6	1,2	1,7	2,3
80-X year old						
Single	4,1	3,8	2,2	2,6	2,8	3,2
Married	42,3	42,1	45,2	46,6	50,4	51,4
Widowed	53,4	53,8	52,4	50,2	45,8	44,0
Divorced	0,2	0,3	0,2	0,6	1,0	1,4

3/b.Old persons by age and marital status
/as per cent of persons of
corresponding age/

Females

Age, marital status	1930	1941	1949	1960	1970	1980
<u>60-69 year old</u>						
Single	4,6	5,4	5,6	7,0	6,7	5,9
Married	49,7	48,4	46,5	51,4	54,3	52,3
Widowed	45,0	45,1	46,6	38,9	35,3	36,6
Divorced	0,7	1,1	1,3	2,7	3,7	5,2
<u>70-79 year old</u>						
Single	4,0	4,5	4,5	5,6	6,7	6,6
Married	26,5	25,8	24,5	25,4	28,9	29,3
Widowed	69,0	69,1	70,3	67,6	61,9	60,8
Divorced	0,5	0,6	0,7	1,4	2,5	3,3
<u>80-X year old</u>						
Single	4,8	5,4	4,2	4,9	5,8	6,9
Married	10,7	8,9	7,7	7,8	7,9	9,3
Widowed	84,2	85,3	87,7	86,5	85,0	81,6
Divorced	0,3	0,4	0,4	0,8	1,3	2,2

4/a. **Probability of surviving till old age**

Males

	1900	1930	1941	1950	1960	1970	1980
Of hundred newborn persons number of those surviving:							
till the age of 40 years	50	66	75	81	90	91	92
" " " " 50 "	43	60	69	76	86	86	85
" " " " 60 "	34	50	59	65	76	76	71
" " " " 70 "	21	35	42	47	55	54	49
" " " " 80 "	7	14	17	21	24	22	19
" " " " 90 "	0,5	1	1	3	3	3	2
Of hundred 40 year old persons number of those surviving:							
till the age of 50 years	87	91	93	93	96	95	93
" " " " 60 "	69	77	79	81	85	84	78
" " " " 70 "	42	53	56	57	62	59	53
" " " " 80 "	13	21	23	26	26	25	20
" " " " 90 "	1	2	2	3	3	3	2
Of hundred 50 year old persons number of those surviving:							
till the age of 60 years	79	84	85	86	88	88	84
" " " " 70 "	48	58	60	61	64	62	57
" " " " 80 "	15	23	24	28	28	26	22
" " " " 90 "	1	2	2	4	3	3	3
Of hundred 60 year old persons number of those surviving:							
till the age of 70 years	61	69	71	71	73	71	68
" " " " 80 "	19	27	29	32	31	29	26
" " " " 90 "	1	2	3	4	3	4	3
Of hundred 70 year old persons number of those surviving:							
till the age of 80 years	32	39	41	45	43	41	39
" " " " 90 "	2	3	4	6	5	5	5
Of hundred 80 year old persons number of those surviving:							
till the age of 90 years	8	7	9	13	11	12	12

4/b. **Probability of surviving till old age**

Females

	1900	1930	1941	1950	1960	1970	1980
Of hundred newborn persons number of those surviving:							
till the age of 40 years	50	69	77	85	92	94	95
" " " " 50 "	44	64	73	81	89	92	93
" " " " 60 "	36	55	65	73	83	85	85
" " " " 70 "	21	40	48	57	69	70	69
" " " " 80 "	7	17	21	28	33	37	38
" " " " 90 "	0,6	2	2	5	5	6	7
Of hundred 40 year old persons number of those surviving:							
till the age of 50 years	88	93	94	95	97	97	97
" " " " 60 "	71	80	84	86	90	91	89
" " " " 70 "	42	58	63	67	75	74	73
" " " " 80 "	14	24	28	33	36	39	40
" " " " 90 "	1	3	3	5	5	6	7
Of hundred 50 year old persons number of those surviving:							
till the age of 60 years	80	87	89	90	93	93	91
" " " " 70 "	48	62	67	70	77	77	75
" " " " 80 "	15	26	30	35	37	41	41
" " " " 90 "	1	3	3	6	6	7	8
Of hundred 60 year old persons number of those surviving:							
till the age of 70 years	60	72	75	78	83	82	82
" " " " 80 "	19	30	33	39	40	43	45
" " " " 90 "	2	3	4	6	6	7	8
Of hundred 70 year old persons number of those surviving:							
till the age of 80 years	32	42	44	50	48	53	55
" " " " 90 "	3	5	5	8	7	9	10
Of hundred 80 year old persons number of those surviving:							
till the age of 90 years	8	11	11	16	15	16	18

Source: 1900–1941: Life tables of Hungary, 1900/01–1967/68
1950–1970: Life tables of Hungary, 1949–1978
1980: Demográfiai Évkönyv 1980 /Hungarian Demographic Yearbook 1980/.

5. **Life expectancy values**
/number of survivable years at a given age/

Age	1900	1930	1941	1950	1960	1970	1980
Males							
0	37	49	55	60	66	67	66
40	26	29	30	32	33	32	30
50	19	22	22	23	24	23	22
60	13	15	15	16	16	16	15
70	8	9	9	10	10	10	9
80	4	4	5	6	6	6	6
90	2	2	2	3	3	3	3
Females							
0	38	52	58	65	71	73	73
40	27	31	32	34	36	36	36
50	19	23	24	26	27	27	27
60	13	15	16	18	18	19	19
70	8	9	10	11	11	11	12
80	5	5	5	6	6	6	7
90	2	3	3	4	4	3	4

6. Mortality of old persons by age-groups
/yearly average/

Age-groups /years/	1900	1930–1931	1940–1941	1948–1949	1959–1960	1969–1970	1979–1980
	Deaths per 1000 males of corresponding age						
60–64	38	29	28	25	25	26	29
65–69	59	45	43	38	40	43	45
70–74	86	72	70	61	63	66	70
75–79	140	115	115	97	102	105	111
80–84	192	197	186	155	162	159	165
85–X	294	292	292	257	271	269	261
	Deaths per 1000 females of corresponding age						
60–64	39	25	22	18	16	14	15
65–69	62	41	37	30	28	25	24
70–74	87	65	62	50	49	45	43
75–79	142	109	104	85	87	78	73
80–84	184	168	163	136	146	131	125
85–X	287	253	262	226	240	227	222
	Male mortality as per cent of female mortality						
60–64	98	116	127	139	156	186	193
65–69	96	110	116	127	143	172	188
70–74	99	111	113	122	129	147	163
75–79	98	106	111	114	116	135	152
80–84	104	117	114	114	111	121	132
85–X	103	115	111	114	113	119	118

Note: 1900: The territory of Hungary before World War I.

7. Proportion of old persons by settlement types
/as per cent of the total population/

Age-groups, residence	1930	1941	1949	1960	1970	1980
60 year old and older						
Budapest	8,4	10,0	11,4	15,1	18,7	20,2
Other urban areas	10,0	10,9	12,1	13,2	14,8	14,1
Rural areas		10,9	11,6	13,6	17,7	17,9
Together	9,8	10,7	11,6	13,8	17,1	17,1
60-69 year old						
Budapest	5,6	6,5	7,6	9,6	11,1	10,4
Other urban areas	6,2	6,6	7,6	7,9	8,8	7,2
Rural areas		6,5	7,2	8,1	10,7	9,0
Together	6,1	6,5	7,3	8,3	10,2	8,6
70-79 year old						
Budapest	2,3	2,8	3,2	4,5	6,0	7,3
Other urban areas	3,1	3,4	3,6	4,2	4,7	5,3
Rural areas		3,5	3,5	4,4	5,5	7,0
Together	3,0	3,4	3,5	4,4	5,4	6,5
80 year old and older						
Budapest	0,5	0,7	0,6	1,0	1,6	2,5
Other urban areas	0,7	0,9	0,9	1,1	1,3	1,6
Rural areas		0,9	0,9	1,1	1,6	2,0
Together	0,7	0,8	0,8	1,1	1,5	2,0

8. Proportion of old persons by sex and settlement types
/as per cent of the population of corresponding sex and age/

Age-groups, residence	Males			Females		
	1960	1970	1980	1960	1970	1980
60 year old and older						
Budapest	12,4	15,5	16,6	17,4	21,7	23,4
Other urban areas	11,3	12,8	12,0	15,0	16,7	16,1
Rural areas	12,7	16,4	15,7	12,6	19,0	20,1
Together	12,3	15,2	14,6	15,2	19,0	19,4
60-69 year old						
Budapest	8,3	10,1	9,4	10,7	12,2	11,3
Other urban areas	6,9	8,1	6,6	8,8	9,5	7,9
Rural areas	7,8	10,2	8,2	6,6	11,1	9,7
Together	7,6	9,6	7,9	9,1	10,8	9,4
70-79 year old						
Budapest	3,4	4,4	5,8	5,4	7,3	8,8
Other urban areas	3,5	3,7	4,3	4,9	5,5	6,1
Rural areas	3,9	4,9	6,0	4,8	6,1	7,9
Together	3,8	4,5	5,3	4,9	6,3	7,5
80 year old and older						
Budapest	0,7	1,0	1,4	1,3	2,2	3,3
Other urban areas	0,9	1,0	1,1	1,3	1,7	2,1
Rural areas	1,0	1,3	1,5	1,2	1,8	2,5
Together	0,9	1,1	1,4	1,2	1,9	2,5

9. Mortality of old persons by settlement types, 1980

Age-groups /years/	Deaths per 1000 males of corresponding age			Deaths per 1000 females of corresponding age		
	Budapest	other urban areas	rural areas	Budapest	other urban areas	rural areas
60-64	31	30	30	17	16	14
65-69	46	46	45	26	25	25
70-74	72	70	71	44	41	44
75-79	112	113	114	72	72	77
80-84	153	166	169	118	127	132
85-X	257	268	285	211	217	239

10. Proportion of old persons by counties, 1980

Residence	60-69	70-79	80-X	60 year old and older		
	year old			Total	Males	Females
	As per cent of the population					
Budapest	10,4	7,3	2,5	20,2	16,6	23,4
Baranya	7,8	6,1	1,7	15,6	13,3	18,0
Bács-Kiskun	9,0	6,9	2,0	17,9	15,4	20,2
Békés	9,7	7,5	2,3	19,5	17,5	21,1
Borsod-Abauj-Zemplén	7,7	5,3	1,6	14,6	12,5	16,9
Csongrád	9,2	7,5	2,3	19,0	16,7	21,2
Fejér	7,0	5,3	1,4	13,7	11,6	15,7
Győr-Sopron	8,0	6,0	1,8	15,8	13,8	17,7
Hajdu-Bihar	7,7	6,1	1,8	15,6	13,6	17,4
Heves	9,2	6,7	2,1	18,0	15,3	20,5
Komárom	7,4	5,1	1,4	13,9	11,8	15,8
Nógrád	8,9	6,2	1,8	16,9	14,7	18,8
Pest	8,1	5,7	1,7	15,5	13,3	17,9
Somogy	9,2	7,3	1,9	18,4	15,9	20,8
Szabolcs-Szatmár	7,2	5,4	1,7	14,3	12,6	15,8
Szolnok	8,7	6,8	2,3	17,8	15,5	19,7
Tolna	8,6	6,8	1,9	17,3	14,9	19,7
Vas	8,8	7,0	2,1	17,9	15,7	20,0
Veszprém	7,6	5,8	1,7	15,1	13,2	17,1
Zala	8,8	7,0	2,0	17,8	15,2	20,2
Total	8,6	6,5	2,0	17,1	14,6	19,4

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THE PROBLEMS OF OLD POPULATION ON BASIS OF FAMILY- AND HOUSING STATISTICS

Three-four decades ago the idea arose that in demography the population should be studied not only by the age and sex of persons and other criteria but also by the composition of the narrower or wider human collectivities, the families and households. The investigations concerning the basic cells of the social coexistence are included more and more in the data collecting and processing programmes of the population censuses as well as in the surveys of social statistics and sociology all over the world. Almost upon the same consideration, with another purpose and on basis of an already earlier perception the population censuses are often connected with a housing census, too. It is not a chance that they try to examine together the persons, the smallest human collectivities and of the objective conditions the one which may be the most characteristic of their environment, which is an important determinant of the manner of life, life conditions, i.e. the way of living. Therefore beside presenting the personal data, mortality conditions of old people it is worth-while to say some words also about the household-, family- and housing conditions under which they live, whether these conditions are suitable for the individuals and whether their placement is equitable in social respect. Independently of the material factors all these affect much the life conditions of old people.

It is a basic question whether they must live alone, maybe, with an old spouse or in another composition. In 1980 of the population over 60 years nearly 1.9 million persons lived in

households, of them more than 1.3 million belonged to one- and two-person households. In case of living alone the personal provision is surely more difficult. But above a certain age even the old married couples living together can solve with difficulties the problems of their everyday's life, especially if their home is far from the shopping districts, the health network, and they have even greater difficulties if they live in detached farms, far from everything, even from other people.

In spite of this there are probably still great differences in the life conditions of persons living alone and of those who do not live alone. In 1980 156 000 60-69 year old as well as 212 000 70 year old and older persons lived in one-person households. From decade to decade their number grows continuously and though the number of old persons placed in social homes increases /in 1970 it was 28 000, in 1980 33 000/, this way of placement cannot follow the rhythm of the increase in the number of persons remaining alone.

If we want to speak of the difficulties or if in general there are different degrees, we have to mention that the life of those 460 000 persons over 70 years - the majority of whom live as married couples, a smaller part of them as two old relatives in a common household -, is probably not easy as well.

In respect of the size of the household, beside the one- and two-person households old people live mainly in three-person households. This means that the younger married couples /naturally, mostly couples of middle age/ take into their home the elder parent or relative who remained alone and these old persons live together with the couples in a common household. The number of old people living in four- or more-person households is very small. In case of those aged 60-69 years it is 5.4 per cent, among the 70 year old and older ones 2.2 per cent. So the period characteristic of the earlier decades is over, when because of a housing shortage very often two or three generations had to live together. This

is reflected also by the data which present to what extent old people live together with persons of similar age or with other generations and to what extent young and old people, middle-aged and old persons and three generations, respectively, live together.

Old persons in the above composition live in 36 per cent of the total number of households. Half of these households only consists of old people. Young and old persons live in 2 per cent and three generations in 8 per cent of the households. The nearly 10 per cent proportion of the middle-aged and old people rather reflects a demographic characteristic, namely that a part of the males over 60 years - taking into consideration the marriage habits - has a partner under 60 years. Though data are not available on this difference in age but if we suppose 4-5 years, even then it is obvious that from this stratum sooner or later most persons enter the old age. Thus this group does not differ much in quality from the households in which only old persons live together.

Beside the demographic, family-household characteristics of the old population it may be interesting to say some words of the factor exerting a great influence also on the life conditions of this stratum, i.e. to present some characteristics of the dwellings occupied by old people, despite the fact that first of all there is only a possibility for a static analysis characterizing the 1980 situation and the changes occurred since the 1970s can be revealed only in some cases.

The basic characteristic of the last decade was that parallelly with the ageing of the population also the number of dwellings occupied only by old people slightly grew, by about 10 per cent, and at the end of the decade more than 800 000 old persons lived in these dwellings. Within this the ratio of one-person dwellings increased, this change was dynamical especially in the urban areas.

At the analysis of the housing situation the special observation of old people living alone seems to be important not only for the social care and provision - though I think that the solution of these problems has a priority among the tasks relating to old persons -, but also because at the discussions connected with the study of the administration of the housing stock these dwellings became very important. Among the specialists dealing with the housing conditions from time to time the idea arises that the dwellings occupied by old persons living alone will become a potential housing resource on a long range. Naturally, this is partly true but leaving out of consideration its numerous problems as regards to the practical distribution we have to mention that the comfort of these dwellings is much lower as compared to the dwellings occupied by younger age-groups which decreases much the possibility of the actual utilization of this complementary resource. But despite the low number of the dwellings which become free actually I think that the solution of the psychical, health- and provision problems of living alone is a social task of much greater importance which should be dealt with continuously and which has a priority in many respects against the questions of housing administration.

At the actual outlining of the housing conditions of old people it should be emphasized that in the 1970s the comfort of the dwellings increased much and the density of occupancy decreased. We have to add, however, that this process occurred in an extremely different way.

In 1980 in Hungary about the half of the occupied dwellings was supplied with comfort facilities, while despite the great development in case of the dwellings occupied only by old persons this proportion did not even attain 30 per cent. One of its reasons is surely that young people got the overwhelming majority of the new dwellings in the past period, too, but it should be

mentioned that also sticking to the environment, to the habitual at old age plays a role in this process.

The increase in comfort was mainly characteristic of the urban areas, in rural areas even at present more than the half of the dwellings has no comfort, and within this nearly 85 per cent of the dwellings occupied only by old people belong to this category.

Due to the realization of the dynamic housing programme of the past two decades not only the comfort of the dwellings increased much but parallelly there was also a significant progress in respect of decreasing the crowdedness in the dwellings. Naturally this impact could be felt also in the housing conditions of old people because in the dwellings occupied only by this age-group the number of inhabitants per 100 dwellings fell from 162 to 150 during 10 years. We have to say that the density of occupancy in the dwellings of two- and more-generation families living together with the old persons declined. Beside the process of the decrease in the number of inhabitants it should be mentioned that over the half of the dwellings occupied by 60 year old and older persons is an one-room flat and there is a great number of dwellings - 160 000 - in which old people live together with other age-groups in one-room dwellings.

In our social purpose system it is probably difficult to clear unanimously the increasing or decreasing of the living together of several generations but anyhow it can be stated that its future development depends basically on the change in the housing conditions. The data of the past period show that in the recent years living separately got a priority which is partly confirmed also by the gradual growth in the number of old persons living alone. It must be emphasized that the provision for old persons, the possibility of their participating in the division of labour within the family, the direct human relations all

require to afford the families by all means the possibility of choice in the question of living together. This is important also because in respect of the provision of any kind for old people the division of the social burdens between the family and the state can be solved more successfully.

I want to illustrate with figures only one problem of the living together of several generations. At the 1980 population census there were 215 000 one- and two-room dwellings where three or more generations lived together. It is obvious that in this field, too, a further improvement of the life conditions of old people is necessary, to ensure a harmonic common life of the families even in case of living together with old persons.

I should like to speak of another aspect, namely of the situation of old people living in housing estates because of the differences in the manner of life in this field. Naturally this stratum represents only a part of the old population of nearly 2 million persons, and this statement is valid also for the dwellings in housing estates occupied only by old people numbering altogether 50 000 persons. The study of the situation of old people living in housing estates is motivated also therefore, because in the next 1-2 decades the number of persons who will live in housing estates at their older age will grow continuously. In this respect it is of special importance that the society shall make greater efforts to solve the problems of solitude and the psychical problems connected with old age, because this phenomenon is very frequent especially in urban areas, in housing estates.

Studying the housing conditions of old people living in housing estates it is clear that both in Budapest and in other urban areas their housing conditions are much more favourable as compared to those not living in housing estates. To give some examples: nearly 60 per cent of the dwellings occupied only by old people living in housing estates are at least two-roomed, in

case of dwellings which are not situated in housing estates this proportion does not even reach 50 per cent. But it can be also mentioned that among the dwellings of old people living together with other age-groups in housing estates the ratio of one-room dwellings is by about 40 per cent lower as compared to non-housing estate dwellings with identical age-structure of the inhabitants.

Maybe, all these factors completed the description of the situation of old people as it can be illustrated with figures at the beginning of the 1980s. I have to add that first of all I felt necessary to emphasize the problems because they also reflect the worries of the future old generation and may indicate the directions of further actions.

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SOME ASPECTS OF THE MORTALITY OF OLD POPULATION IN HUNGARY ON BASIS OF INTERNATIONAL STATISTICS

I want to complete Dr. Klinger's paper in two respects: 1. the proportion of old people in Hungary in an international comparison; 2. the present mortality conditions of the 60 year old and older population in Hungary according to an adopted international standard.

In the majority of the European countries the "ageing" process of the population can be observed, though to a various extent. The proportion of old people is higher in England, Austria, Belgium, the two German states and the three Scandinavian countries, it is similar in Czechoslovakia, France, Italy and Switzerland, while in Poland, in the southern countries - except for Italy - as well as in the Netherlands, Finland and Ireland it is lower as compared to Hungary. Since 1970 in Hungary the share of the 60 year old and older population has been over 17 per cent, but in Sweden the relative weight of old people was 21 per cent, in the neighbouring Austria it was more than 20 per cent in the second half of the 1970s.

In fact the worries and troubles of old age still appear only slightly in the seventh decade, and in many countries, mainly the males are economically active till the age of 65 years. But it is rather a general experience that over the age of 70 years the complaints get more frequent and the eighth decade is anyhow the period when people lose gradually their capacities and the reserve forces get exhausted irretrievably. What is the proportion

of these old persons requiring absolutely a help and care in the European countries? In Hungary their share is nearly 9 per cent. It is similar in Denmark and Switzerland. Their ratio is higher in England, Austria, Belgium, France, Norway, Sweden and in the two German states. In the German Democratic Republic the share of 70 year old and older population is nearly 11 per cent. In the countries of South- and East Europe the relative weight of the 70 year old and older people is lower than in Hungary.

Thus Hungary can be found in the middle among the European countries in respect of the age-structure of the population. This is equally valid for the share of persons both over 60 and over 70 years.

In demographic respect at old age the study of mortality is of first importance, because resulting from the character of old age the other demographic phenomena either do not occur at all or only with a neglectable frequency. This is not the case for mortality. At the present age-structure of deaths in Hungary the development of mortality depends first of all on the deaths of old people. At the beginning of the 1980s 76 per cent of the deceased were 60 year old and older, while 58 per cent of them were 70 year old and older. Therefore mortality can be decreased only in the case if we are able to reduce the age- and cause-specific mortality rates of old persons.

Is this possible? With other words: are there any real chances at old age for lengthening the life expectancies? Well, how is the mortality of old people living in the 1970s, 1980s in Hungary in an international comparison?

To state it we calculated for the 1978 year the standardized mortality ratios /hereinafter called SMR/ of the 60 year old and older male and female sub-populations of 20 European countries,

as well as of Japan, Australia and New Zealand. This method produces a rank in which the mortality of the male and female sub-populations over 60 years of Hungary represents 100 per cent and the mortality of the respective sub-populations of the other countries is compared to it. The standardization permitted to eliminate the bias deriving from the differing age-structures of the observed population groups of the 23 countries. Beside Hungary the following countries were included in the study:

England /1977/
Austria /1977/
Belgium
Bulgaria
5. Czechoslovakia /1977/
Denmark
Finland
France /1979/
Greece
10. The Netherlands
Iceland
Yugoslavia /1977/
Poland
German Democratic Republic
15. German Federal Republic
Norway
Romania
Switzerland
Sweden
20. Japan
Australia and
New Zealand.

The mortality of the 60 year old and older male sub-population is lower in all the countries - except for Czechoslovakia - than in Hungary. In Czechoslovakia in 1977 the mortality of males over 60 years was by 4 per cent higher than the value calculated for the respective population group of Hungary. In four countries: in England, Austria, Belgium and the German Democratic Republic the mortality of the old male sub-population

was by 5-10 per cent lower than in Hungary. In eight countries: in Bulgaria, Finland, Yugoslavia, Poland, the German Federal Republic, Romania, Australia and New-Zealand the SMR is by 11-18 per cent lower than in Hungary. In nine countries the mortality of 60 year old and older males is by 20-40 per cent lower than in our country. To this group belong the Scandinavian countries /except for Finland/, Switzerland, France, Greece, the Netherlands and Japan.

In Hungary the mortality of 60 year old and older females is higher than in any of the observed 22 countries. In Czechoslovakia the mortality conditions of females over 60 years are only somewhat more favourable than in Hungary. Czechoslovakia is followed in order by Bulgaria, Romania, the German Democratic Republic and Yugoslavia. In these countries the SMRs of the 60 year old and older female sub-population are by 4-7 per cent lower than the SMR of the Hungarian female sub-population of corresponding age. In the following group of the countries the standardized mortality ratios are by 15-28 per cent lower than in Hungary. To this group belong England, Austria, Belgium, Finland, Poland and the German Federal Republic as well as Australia and New Zealand. The female sub-population with the longest life expectancies at old age can be found in some small European countries; of the bigger countries the mortality of the old female sub-population is low in France and Japan. In Denmark, France, Greece, the Netherlands, Iceland, Japan, Norway, Switzerland and Sweden the SMR is by 33-41 lower than in Hungary.

The international comparison shows, on the one hand, that in Hungary the mortality conditions of old people are unfavourable /it is important to know that they were always unfavourable/, on the other hand, it is just the use of the international standard which, by revealing the high mortality, proves in an indirect way that there are real chances to lengthen the life expectancies even at the age of 60 or 70 years. It is sure that in Hungary during the

whole course of life many deaths - which might have been prevented - occur too soon, and in this respect old age is not an exception either.

However, it cannot be emphasized sufficiently that mortality will decrease only if purposeful, co-ordinated efforts will be made - greater than at present - to prevent and cure the chronic diseases and pathological conditions. The secular mortality trend of the 20th century has three stages in the industrial countries. Of the second stage, in which also Hungary is at present, the decrease in the extent of the lengthening of the duration of life which could be observed clearly earlier, the possible stagnation and even a temporary regress are characteristic. This stage could be observed about twenty years ago in the countries with a more developed health culture as compared to Hungary. Thus the lag is about two decades. The third stage is the period of lengthening of the duration of life at all ages, i.e. also at old age. The whole strategy of the change in this direction is developed. This has to be adopted and applied efficaciously.

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THE SOCIOLOGICAL AND SOCIO-POLITICAL ASPECTS OF AGEING

1. The place of old people in the social structure

At the date of the 1980 population census 92 per cent of the population over the pensionable age were inactive or dependent in Hungary. In the first five years after the retiring age the ratio of active persons was still significant, among the 60-64 year old males 13 per cent, among the 55-59 year old females 19 per cent, but over this age it already decreased rapidly and among persons over 70 years it was only 2 per cent.

The above data show that it is an unjustified simplification to say in general that old persons don't participate in the social production though there is no doubt that their majority does not work anymore in full time, regularly, and the pension is the basis of their subsistence.

In the past decades for the study and presentation of the social stratification a model became predominant which includes the economically active persons in the individual strata by their occupation, occupational status and treats separately the inactive persons as a uniform block independently of the fact to which active stratum they belonged during the period of their earlier work. Thus old people form two major groups: the group of active persons who do not even form a sub-group within their own stratum, and that of inactive ones where they are not distinguished anymore by the specializing characteristics of the stratum but by the fact whether they have an own pension or they are considered as dependents.

It is problematic to place old people in the scheme of the social stratification that way. On the one hand, it is disputable to what extent this ranking reflects the social reality, to what extent it illustrates the dividing lines along which the people's manner of life is differentiated most of all, on the other hand, it is questionable to what extent this model helps the social planning and the socio-political decisions in indicating and planning the social tasks regarding old persons.

With the enacting of the law concerning the youth in the study of the active population and in the planning of the measures relating to it a demographic criterium was included connected with real social differences. For revealing the tendencies appearing at the bases of the labour force of the socio-economic development and after their statement for deciding upon the tasks, no doubt, it is useful to treat separately the persons under 30 years in the strata and occupational groups. For similar reasons it would be desirable to separate among the economically active persons those being near the retiring age, and especially those who are over the pensionable age but are still economically active. On the one hand, it is worth-while to take continuously into consideration upon what changes we can count after certain years simply because of the presumable modification of the age-structure of the employed, on the other hand, however, it also indicates the socio-political tasks of the foreseeable process and the extent of these tasks. This separation should not be considered at all as a negative discrimination: ageing is a natural process which, no doubt, has negative features, which, however, can be delayed and decreased if we treat them in a real way and reckon with them. Thus in case of the employed persons the decrease of the burdens of work, a re-grouping which saves the old worker the trouble of learning working processes of quite a new character are rather requirements and cannot be considered as a discrimination. It is

obvious that much depends on the way and style of the realization of such measures.

The manner of life of persons who are still full-time workers but are near to the pensionable age or even surpassed it has specific characteristics beside working, in other fields, too. These characteristics connect them rather with those being already inactive than with the younger active persons. Of them I should like to mention first of all the family conditions. They entered the cycle of family life when their children were already adult, independent persons and their grandchildren were born. They have new family tasks: they help in the grand-children's provision, care, rearing. The other family task is to nurse their own parents. With the increase in the age at death the number of very old persons who need more and more a regular assistance for their subsistence grows. This work is done mostly by their children aged 50 and 60 years who often leave their regular gainful work to fulfil their family obligation.

Consequently the older persons still active already form a specific sub-group in the social structure. Similarly it is worth-while to treat as a separate sub-group those old persons who are already inactive but do a regular gainful work while getting their pension. This gainful work has two main types: part-time employment and continuation of the work in the complementary farm-plot.

Of the pensioners yearly more than four hundred persons take a job within the frameworks prescribed by the rules concerning the pensioners. Beside them there are also persons doing a work for which there is no limitation in the number of hours during which a pensioner may work while getting the pension. A great share of the part-time workers is employed further on in the former working place, i.e. they not only continue to participate in the social division of labour but they also remain member of the working community which formerly meant for this person the most important

social relations beside the family. Therefore it seems unreasonable that the stratification model does not take into consideration the inner stratification of the inactive persons, one of the determinants of which is the part-time employment or its lack.

In their part-time employment the pensioners mostly do a work corresponding to their earlier occupation, therefore they seldom change their stratum. However, the relation to the individual strata does not cease even at the end of the part-time employment. The surveys concerning the manner of life show that the manner of life has its stratum characteristics, among others preference systems remaining also under the partly changed conditions. Thus after retiring even at a much reduced income people try to maintain those characteristics of their manner of life which they deem the most important, and the value system adopted by them earlier plays a decisive role in their judgement, i.e. what they consider as the most important. But these value systems depend much on the stratum. The further impact of the value system explains the differentiation of the life of inactive persons by their earlier social stratum, as well as the maintenance of the important relations between the manner of life of the active and inactive persons within the same stratum, despite the differences in income.

In respect of the old persons it is worth-while to emphasize the work done in the complementary farm-plot because of its two consequences: it is an important complement of the income and it provides an opportunity for a productive activity producing new values.

In Hungary the majority of persons with the lowest income can be found among the inactive old people. If the stratification model takes into consideration the per capita income, too, we get a scale of social hierarchy on the lowest grade of

which the greater part of the persons are inactive pensioners. The occupation of this lowest place of the scale depends much on the persons' possibility to complete their income, first of all on the fact whether they have a complementary farm-plot and by what sum does this farm-plot increase their income.

There is a further difficulty in stating the social status of old people, in their ranking according to the reality,namely a great share of them, about one third lives together with the children in a common household, and the level of their consumption, their housing conditions, possibilities of activity depend not only on their own income but also on the financial situation of those living together with these old people.

Summarizing the above mentioned I think that 1/ the division in "active" - "already inactive" is no more sufficient to form in the social structure a separate category - considered as being uniform - of the inactive old persons, and that 2/ it is worth-while to take into consideration the ageing, more exactly the age factor at the more detailed study of the social structure, and finally that 3/ at the study of the situation of old people it is necessary to use a model which takes into account beside the age also the different types of economic activity, the family circumstances and the health conditions.

2. Social tasks of ensureing adequate life conditions for old people

In the economically developed countries everywhere it is an outworn concept that society must care only for old persons no more able to support themselves and have no spouse or child who could be obliged to support them. A further change in social policy regarding old persons is that it is no more sufficient to

ensure the subsistence but also other components of the old people's manner of life are taken into consideration, and social policy helps in this respect, too.

The most important is to ensure the financial bases for the subsistance of old persons. Its main form is the pension paid on basis of social insurance. In Hungary the sum of this pension is more differentiated than in the other socialist countries because it depends both on the number of previous years of work or more exactly on the number of years covered by social insurance, and on the income attained in the last years. After an amployment of 35 years the pension is equal to 71.5 per cent, after 42 years to 75 per cent of the earlier monthly income. This means that at the cessation of the regular economical activity the income decreases in general by 25-30 per cent. If the health condition of the person retiring permits it and there is an opportunity to take a part-time job, the pensioner can easily gain this difference between his/her pension and earlier income in the first period.

In most cases the problems concerning the sum of the pensions do not arise immediately after retiring but only after some years. No doubt that for those retiring after a short period of economical activity the decrease in the income is very great immediately, and for those with a low income even a 25-30 per cent decrease is a very significant loss, still the sum of the pensions causes troubles after some years. Though in the 1970s the Government ordered to increase the pensions by 2 per cent yearly and the lowest monthly pensions by at least 70 forints, later by 100 forints, this increase could compensate the depreciation caused by the rise in prices only till the end of the seventies and could not follow at all the pace of the increase in real wages. Independently of the further increase in pensions in the near future, permitted by the economic situation of the country, it is desirable to declare the obligation of the

society that also the pensioners must get their share from the achievement of the social development, i.e. the pensions must be stated in conformity with the development of the real wages, and the way of the realization of this principle should be elaborated already at present.

Many females who are old at present have not yet had an employment in the course of life and have not been members of co-operatives either. Consequently they have no right to get a pension on basis of their own work, i.e. social insurance. A part of them gets a widow's pension after the death of the husband, another part of them are supported by the retired husband. In both cases the group of those finding difficult to make both ends meet is large. The widow's pension is the half of the pension of the deceased husband, and often already at its statement it is lower than the sum necessary for maintaining a separate hosehold. Also in case of couples living on one pension the number of those with a per capita income below the social minimum is significant, and even the allowance for the spouse of 500 Ft paid together with the pension does not increase the per capita income to the desirable level.

The third group of old people consists of those who get no pension either by own or by the spouse's right. They are assisted by the local councils. The amount of these allowances is various, only its maximum is fixed centrally: it is equal to the minimum widow's pension. It seems desirable to include also this assistance in the general pension system which would mean practically that the right of the inactive old persons to be supported by the society would become a citizen's right, and the amount of the earlier insurance payments would only differentiate the sum of the allocation paid. When fixing the minimum amount the target should be a pension sufficient for an independent life on a level which can be considered as a minimum requirement on the given level of the socio-economic development.

At present a part of old people is in a better financial situation, as compared to the standard of life which they could maintain and cover from their pension, because they live together with their economically active children or get a regular assistance from their children. However, it is not advisable to include the financial assistance given by the children in the system of social provision ensuring the subsistence of old people. No doubt that it is a moral obligation of the children to help their parents in all respects when the parents need this assistance, but it is also the moral duty of the younger generations to provide for old persons because the bases of their present life conditions were created by these old people. A part of the adult children is in that stage of the family life cycle when they have to bear great burdens in connection with the rearing, support of their own children and at the given wage-system the per capita income would fall under the level acceptable as a minimum if they had to support their parents, too. If only persons with a higher income were obliged to maintain their parents, this would require difficult investigations provoking resistance and create an atmosphere which may worsen the emotional relation between the parents and children.

It is clear that at present nobody thinks that it would be necessary to impose the whole burden of the support of old persons on the children but if the parents have no pension or the utilization of special services, e.g. the support in social home, are in question, the idea arises again that the children should be obliged to cover a part of the costs of maintenance. In my opinion, also in such cases obligating and collecting the sum command a higher price as compared to the profit gained for the society.

The participation of the family, first of all of the adult children in the works concerning old persons who already require nursing and care is much more important. Here, at the fulfilment of this task the society really cannot do without the help of the family.

The tasks of provision and care are very great. Projecting the findings of the surveys carried out by the Hungarian Central Statistical Office regarding persons who were old around the year 1970 to the 1980 age-structure we can estimate that there are about 200 000 old persons whose moving ability is limited so much that they can not leave their home at all or can go outside their dwelling only with a help, an escort. This figure covers those for whom this is already a standing condition: beside the above mentioned persons there are also people ataxic because of acute diseases and invalids of other type who are also unable to provide for themselves alone.

At present the society affords a permanent institutional provision to about 25 000 old persons in social homes and 35 000 get a regular care at home. The difference between the sum of these two figures and the number of those requiring a care /200 - 250 000/ shows that at present in this field the society can provide only for one quarter, maximum one third of those requiring a care and this task has to be fulfilled mostly by the families.

The changes occurred in the structure and activity of the families are well known. In consequence of the fact that the females' economic activity became general and the women-mothers maintained their employment, that labour reserve of the family disappeared which could be mobilized formerly in case of diseases, invalidities in the family. Therefore the families in which beside the old persons requiring a care the others are either economically active or they are still pupils or students, the family can fulfil its tasks of nursing and care only imperfectly in spite of all efforts, utilizing even its final energy reserves.

It is obvious that in the following decades it will not be possible to socialize completely the fulfilment of these tasks but in this case - opposite to the financial insurance of subsistence - the exclusion of the family cannot be considered as an aim not even

on a long range. The experts examining the development of the life of old people agree in the question that it is the old persons' interest to live as long as possible in their usual milieu, not to be separated from their family and to remain the members of a community fulfilling many tasks and full of feelings. I don't want at all to idealize the family milieu of old people, and when speaking of feelings, I don't say at all that they are mostly positive. However, also the conflicts, disagreements occurring in the average family have an important function in the life of old people: they stimulate and provoke a reaction. The greatest danger of ageing is the mental debilitation, the absence of interest in all questions, the biological vegetation. The appearance of such a condition can be hindered or at least retarded much more by the mass of interactions within the family than by the placement in best institutes.

In my opinion on a long range, too, old people should live in a number as high as possible in a family milieu, but at the same time also the social policy has a task in the provision for old persons within the family: to increase the ability of the families to provide for their old relatives in a proper way. As it was mentioned above, this task can be fulfilled best of all by the families in which the adult "children" themselves are already inactive but still able to work: they have time and energy for nursing. We should meditate how to decrease temporarily or for a long period the great burdens resulting from the social division of work of those economically active persons who have to care for helpless old persons in their family. Probably the combination of a part-time job and a regular allowance for the completion of the income could lessen the strain of this work, improve the conditions that the tender could deal with greater patience with the person cared for and could provide sufficient time in consequence of which the contact between the two persons would not be limited only to the acts of physical care.

Another problem to be solved by the society is to release temporarily the family from the problems, works of nursing. Families providing for helpless old persons are not exempted from this work often for years, they have no holidays, because there is nobody to charge with this work for one-two weeks. Beside the social homes providing for lonely old people also homes of another type should be developed which would take upon themselves to provide temporarily for the old persons affording by this an opportunity for the regeneration of the family which would decrease the risk of getting physically and mentally exhausted from the old person's care.

I, too, find the social homes as a final solution. But this solution would be required much more frequently than afforded by the present capacity of the social homes. The social homes must take in first of all old people living alone and already needing a care. At the date of the 1980 population census there were 368 000 households in which one old person lived alone. According to the values calculated for the total population about 10-11 per cent of the old people cannot provide for themselves alone anymore. In case of lonely people this means about 40 000 persons. At present it is the merit of the service of care at home organized by the social policy, as well as of the neighbours that these old people can exist somehow, but for a great part of them the real solution would be the placement in a social home.

No doubt, that the assurance of the income and in case of getting helpless the total or partial solution of the care and provision represent the two main groups of the social duties in respect of old people. However, beside the above mentioned there are also some other fields where the administration of the local council or that of the special branches - public health, culture, etc. - already fulfil important tesks of social care in respect

of old persons. In the first place I should mention that activity of the health institutions which, beside the treatment of the disease, deals very often also with the general problems of the life of old people getting to the physician or to the hospital. Also that activity of the cultural institutions is important which is focussed resolutely on old people and wants to arouse, maintain their interest and amuse them. The council administration has much to do when old people turn to it with their different worries and problems, e.g. with their housing problems connected with ageing, with questions of support, with the problems of their loneliness. The adequate activity of the individual organs is hindered not only by the shortage in financial means but also by the lack of co-ordination of the works concerning the social provision for old people.

Thus the organizations of public administration and the family play the leading role. Beside them also at present the neighbours, the network of friends, the former working place, the different social organizations, first of all the services for old persons of Churches, especially of parishes are important. Their activity will be needed in the future, too, partly because if it is necessary, they can help more rapidly, with a greater elasticity and partly because the interest, concern from many sides are valuable themselves: they strengthen the faith in the society of people advancing in years because in this way they still feel that the society cares for them. The attention from several sides is the most valuable if it does not treat the old persons only as passive parties but gives them also tasks according to their ability, prevents them from dealing only with themselves and makes them an active participant of the life around them. I think that this is the third task of social policy in a broader sense which can be realized only by means of the widest social co-operation.

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HEALTH- AND SOCIO-POLITICAL ASPECTS OF AGEING

An integrant part of health provision is the therapeutic-prophylactic activity displayed among old people. The number of diseases increasing naturally with age requires for old persons a great - in some fields an overwhelming - proportion of the total capacity of health provision. Our tasks relating to old people are widened by the fact that at this age the majority of the diseases develops in a specific - often for a long period in a concealed, latent - form, the number of complications is very high and in many cases the disease-process is graver, the tendency for recovery is worse than among younger people. The mostly chronic diseases require very much nursing, and their process, outcome are in a strict correlation with the psycho-social situation characteristic of the individual old persons in the particular cases. As this age may contain psychologically many disadvantageous situations, in social respect also the desocialization /estrangement from work and in some cases from the family/ may exert a negative effect, thus in this field the therapeutic-prophylactic work in a strict sense is in a very close connection with many elements of the social provision, with the various forms of concern and care.

Recently in Hungary, too, tensions could be observed almost simultanously in the field of health service and the care for old people. It is comprehensible that these problems cumulated in these interacting critical fields overlapping each other: in the field of the health provision for old people. Our society reacted very sensitively to the arising problems.

The activity of public health carried out among old persons, the concrete tasks of provision can be judged only by revealing and analysing the presumable need resulting from the health condition of persons over 60 years.

In this approach the mortality and morbidity statistics may give a good information but also the data maybe, less reliable, on the utilization of the institutions and those obtained at the screening examinations may help in the analysis.

Studying the mortality by age-groups per 1000 population of the corresponding age we see an increasing trend also among people over 60 years in the last decade /Table 1/. This is characteristic mainly of the 60-74 year old age-groups of males where the growth is explicitly dynamic - by around 12 per cent during 6 years -, but a slight increase can be observed also in all the age-groups of old females. The difference in mortality between the males and females which is almost the double to the detriment of men at the age under 70 years even among old people, decreases with age but it remains till the end. The comparison of deaths per 1000 population of the corresponding age presents a very exact view of mortality, and the method eliminates completely the impact of the factor that once everybody must die because this is a process according to the laws of nature. Thus the study of the Hungarian mortality data in time series indicates the worsening of the health condition of the old population.

It is advisable, however, to make an international comparison, too. Comparing the Hungarian data with the European figures we see that in the elder age-groups, too, we are near to the European maximum though here we don't represent the maximum /as in case of persons aged 40-50 years/.

The comparison of the 1967 and 1976 proportions of persons whose death was caused by the three major groups of diseases illustrates well the mortality structure and its change in the age-groups of old patients /Table 2/. The incidence of deaths caused by the diseases of the circulatory system, neoplasms and accidents is very high also at the age over 60 years, together they represent nearly three quarters of the causes of death. With age the proportion of these diseases grows to an ever bigger extent among the causes of death, between 1967 and 1976 a slight decrease can be found only in case of the diseases of the circulatory system in the eldest age-groups.

The incidence of deaths caused by malignant neoplasms grows evenly in all the age-groups of both sexes.

The most shocking is the increase occurred in the number and ratio of old persons died with accident during nearly ten years.

In some cases the Hungarian data were compared with the European ones also in the major groups of diseases:

- the comparison of the diseases of the heart and circulatory system by age-groups indicates an unfavourable situation especially of females;

- in respect of deaths caused by malignant neoplasms for females aged 30-40 our data represent the maximum, our situation is almost as unfavourable also in case of females over 70 years;

- deaths caused by accidents by age-groups show a very interesting situation also for males: while in the young age-groups our situation is very good, it worsens more and more in the elder age-groups and over 70 years it is again Hungary which has the maximum mortality rate. /According to the part-statistics mostly resulting from so-called household accidents/.

Summarizing the mortality data we find that in the recent decade the health condition of old people /even within the same age-groups/ worsened, the proportion of persons died with the diseases of the circulatory system became predominant and in respect of deaths at old age caused by neoplasms and accidents we belong to the countries having the most unfavourable statistics in Europe.

Naturally these tendencies also affect the morbidity data in the same direction. The most reliable statistics can be obtained by means of processing the data on hospitalized morbidity i.e. on persons treated in hospitals. These data show unambiguously that the share of people over 60 years grows continuously among the hospitalized persons, and among the patients of internal medical divisions reflecting morbidity best of all it is more than 50 per cent from the middle of the seventies on. This figure means, that - according to their number - old people's demand on hospitalization is nearly three times as high as that of the total population! We can learn most of all about the causes of this phenomenon by making comparative statistics on patients hospitalized with the most frequent chronic diseases.

A survey was carried out on a large sample covering all the Hungarian in-patient health institutions to collect information on the hospitalized cases of four very important groups of diseases - diabetes, hypertonia, arteriosclerosis and chronic ischaemic heart disease./See data in Table 3/. The most striking feature is the great increase even in the absolute number of patients over 60 years between 1972 and 1976 as well as their high ratio. E.g. the great growth in the number of persons over 70 years treated for benignant hypertonia is surprising but also the increase in the number of diabetics is significant. We see that the proportion of persons over 60 years suffering from these chronic diseases - within the total number of patients - rose much even during 4 years. Studying the average duration of hospitalization /Table 4/ we can state unanimously that in all the groups of diseases hospitalization requires a longer period for the older age-groups,so

the share of old persons in the number of days of hospitalization is even higher. At the same time we see that in the 1972-1976 period the average duration of hospitalization shortened in all groups of diseases and age-groups, probably due to the more efficacious treatment, but maybe, also to a changing view as well as because of the insufficient number of beds in hospitals. Therefore it is interesting to examine separately the proportion of persons over 60 years in the number of cases and days of hospitalization /Table 5/. It can be well demonstrated that while the number of cases grew very rapidly during 4 years, the duration of hospitalization of old persons was shortened by the hospitals for the above reasons to an extent, that they even reduced the ratio of old people in the total number of days. We shall speak of its disfunctional consequences later.

However, of the indicators relating to the utilization of health institutions not only those of the hospitals show the old people's growing demand but also the statistical data on the basic medical provision and out-patient service. E.g. when we studied recently the first data of patients having utilized the central duty reorganized because of the working week of 5 days, it was surprising that in the acute cases - for example, when the physicians were called in night time - at present the share of old persons is already higher than the incidence which was more than twice as high as the average value compared to their ratio - observed by KORMOS at the beginning of the 70s.

The screening examinations give an information on the concealed diseases of old people, too. Unfortunately, few reliable data of this kind are available; in Hungary the common methodical - and in my opinion ethical - fault of the screening examinations already organized widely at present /x-ray, oncological, complex screening etc./ is that they discriminate at least with a tacit upper age-limit and maybe that they omit even the immobile old people which

distorts the epidemiological information. The data of some sample surveys /e.g. that of Balassagyarmat/ and those of the 2 per thousand morbidity survey being in the stage of processing already permit to draw some conclusions. Thus the data series on the incidence of long-lasting diseases per 100 pensioners was included in the national material. /Table 6/. Here as patients for a long period were considered those suffering from a chronic disease for at least three months as well as the invalids.

Thus it is clear that the unfavourable morbidity and mortality situation of old people determines more and more the utilization of the health institutions.

Our next question is how can public health with its present means meet this increasing need?

The basic medical service, first of all the activity of the district doctor is also the key issue of the health provision for old people. The old person parallelly with age requires more and more - because of the changes in his/her health condition or even because of his/her ebbing physical condition - to be under a continuous medical control and treatment ensuring for him/her at any time the primary provision, the necessary control examinations and through this the feeling of the required safety because he/she knows that he/she is under the care of a physician responsible for this person. Many district doctors realize this expectation on a high level, not only with their special erudition but also with their humanity, proper empathy. At present, however, this is not yet general. Therefore it is absolutely necessary to improve the function of the district medical service in the care for old people because at present in this field it often fulfils its tasks in a formally and professionally objectionable way causing by this a source of great tensions among the population. So the basic provision is available but its professional level is alternating.

The greatest faultiness can be stated in the field of care. The regular, correct care even for old persons suffering from a chronic disease known for many years is not yet solved everywhere. In some districts it is completely left to the patient with what periodicity to consult the physician and in the urban districts the recallings of the patients are organized in a proper way in few places, i.e. in a time the most suitable for the physician and the patient to avoid the crowdedness and waiting.

In this way, however, in several cases the medical care is limited to the prescription of medicines and laboratory examinations, it does not cover the thorough examination of the patients and the detailed counselling e.g. concerning the manner of life, food. And this is necessary for the old person also because sometimes the physician represents one of his/her remained few human relations.

Another problem is that in some cases, if a new disease is suspected or if it develops, often as a concomitant of the chronic illness or as a banal associated sickness, the district doctor seldom completes the medical provision even for this age-group. Also within this group the patients are sent too much, without any sufficient reason, to specialist's consultation, to laboratory and x-ray examinations. This is disadvantageous both for the patient and for the health provision because it is often superfluous to make old people move and wait and the expensive and tiresome examinations mostly only confirm the diagnosis which can be stated with a thorough examination of the patient, but sometimes they don't modify the therapy at all.

Also the superfluous prescription of medicines is frequent among old persons. No doubt that a great part of the patients attaches a too great importance to them and sticks very much to the medicines, especially to certain preparations advertised well at that time. In such cases it is just the task of the district

doctor to maintain the therapy within a rational framework, convincing the old patient that a too great consumption of medicines may be also dangerous for health. This question has also serious financial implications both for the old person and the national economy.

Beside the physician also the district nurse plays an important role in the home care of patients confined to bed. Their joint task is to treat at home the patients who do not need any hospitalization, by means of visiting them even every day. It is a general deficiency that mainly in cases requiring nursing, when the self-provision is not ensured by the old patient, he/she is sent to an in-patient health institution without a proper professional reason. This could be often prevented if the workers of the district service relied more on the organized formsof the social provision, first of all on the network of social nurses. However, often even the elementary forms of this relation are missing, they don't even know of the persons under the care of each other.

Consequently the patients who do not get a proper care, first of all a social provision require much the hospitalization. In such cases the district doctor, too, gets into a difficult situation because on the one side the old patient or his/her relatives want to continue the treatment in a health institution, and the permanent visit of the patient confined to bed may be a burden for the physician, too. On the other hand, the physician knows that the patients suffering mostly from a chronic known disease are received with antipathy and even with reproaches in the hospital because the number of beds is not sufficent in the internal medical divisions. In this situation also the specific financial interests of the participants may serve as motives. Now I don't want to speak of the ethical aspects, I only mention that the income of the sick pensioner does not change even during hospitalization but that of persons of productive age being on

sick pay decreases considerably.

So there is a flow of patients not cared or cared for only unwillingly at home towards the hospitals, especially to the active internal medical divisions, and there they often cause another tension. Mostly they are included in the inflexible examination order covering all the patients admitted but serving originally for the simplification and mechanization of the examination of the acute patients. Routine examinations are carried out in a great number, then because of their complaints these patients are sent as soon as possible to numerous special examinations which mostly only confirm the well known underlying disease and the unavoidable and expectable complications. The prescribed usual therapy of the underlying disease is widely interrupted which may be as dangerous as the too great number of examinations which may be both a physical and a psychical burden for the old patients. In these internal medical divisions the special demands of old people can be met least of all: the workers of these internal divisions cannot nurse these patients in a particular way increasing their endurance. The professionally really very important conserving therapy begins only in the last days of hospitalization, and because of the above mentioned there is hardly any time to wait for the result of this treatment and for the patient's reaction. In most cases the patient would like to remain in the hospital longer, also the family stimulates everybody in this direction but the situation in respect of the beds and the relative professional disinterest of the case urge to sent the patient home and this is often done even at an unchanged condition.

It is clear that after a short stay at home these patients need again hospitalization and it is difficult to get out of this cycle. A part of the families feel less and less that it is their duty to nurse their old relatives, mostly they are completely

unprepared when this moment necessarily arrives and they must provide for their old family members. The harmonic placement in a social home can be realized only on basis of a uniform family decision - coordinated with the patient - and by preparing for it the old persons. One has to wait even some years for an admission to an infirmary for incurables, and the delay, the emergency arrangements contribute to further psychical injuries of the patients, to the increase in their feeling to be excluded, banished from the family. The preparation of the family for old age and the preventive role of the social care can only jointly prevent the crisis situation, the emergency arrengements.

Unfortunately the present bed structure of our health institutions is not favourable either for the adequate provision for old people. It is a general and banal statement that most old persons lie in divisions which are by one nursing level "higher", "more active" and more expensive than it would be necessary for their health condition. The homes having served originally for social purposes become homes for sick persons in many places, to hospitalize patients suffering from a chronic disease and those who are incurable. In the so-called divisions for incurables there are really many patients with a chronic disease but actually they would need a hospitalization only at certain intervals and are forced to stay in the hospital till the end of their life mainly because of their social conditions.

This present structure cannot solve the question of the differentiated placement of old people in hospitals also because in the present divisions for chronic diseases and for those needing an after-treatment or a hospitalization till the end of life - i.e. in cases for which a long period of hospitalization is required - the incurable patients in the most grave condition, those with cancer, lamed, amputated and incontinent patients, resp. are together with those old persons who only need a care and on whom this milieu exerts a very great depressing effect making them sick practically.

Surveying the way of old patients within our public health service we can say as a summarization, that at present this system in itself cannot garantee a complete adequate provision meeting the social demands, too, and we have to add that this system was not even organized to meet these social demands. At the professional examples indicated it was often mentioned that the medicine of old age is a social medicine and most concrete problems can be solved only through a simultaneous joint solving of the social questions and health problems. In respect of the provision at home we already spoke of the necessity of unification, too, but several fields of the old people's provision require more and more the approach of the social care and therapeutic-prophylactic provision, the development of a common strategy. Regarding the old persons' health the social care has, no doubt, a preventive role which in a favourable case may prevent directly the disease.

In this respect I don't want to treat in detail the developed forms of social provision, as the day-time home of old people, social nursing at home or social home, we can surely get a more thorough information on them from the contributions.

Finally I consider as my duty - especially because of some negative consequences of the above mentioned - to say some words also on the possibility of improvement, the planned direction of development, the prospect of old people's health provision. The weight of the questions of old people's provision in public health will surely increase in the following years, and it must not be explained in detail that in case of unchanged conditions the tensions will grow. Knowing this fact the public health attaches a great importance to the development connected with old people also in its middle-range plan and long-range strategy, and in the field of therapeutic-prophylactic provision and social care.

Taking into consideration the above mentioned we put the development of the basic provision and especially the improvement

of the care in the centre of our envisaged professional programmes. Another conception of similar great importance is to provide for and cure in a more modern, efficacious way the diseases representing the most frequent causes of death within the framework of complex programmes, also en masse.

Also on basis of the statistical data mentioned earlier old people are much affected by the modernization programmes of the therapy of the diseases of the circulatory system, neoplasms and injuries caused by accidents.

Persons over 60 years are endangered among the diseases of the circulatory system not only by the various forms of the well-known cardiac failure but also by the cardiac infarction, the incidence of which increases with age, and especially by the diseases resulting from the cerebrovascular occlusion contributing to permanent injuries of the nervous system and to paralysis. In the cardiological divisions and sections for the adequate therapy of the new cases intensive and so-called guarding beds are established in a growing number but we want to solve the rehabilitation, too, in special divisions, professionally on a higher level. The rehabilitation may be equally important for persons of productive age who can regain through this their fitness for work and for pensioners who in consequence of rehabilitation will be no more helpless but can provide for themselves.

Of the complex programme of the therapy of neoplasms - as at the age over 60 years the tumours of the respiratory and digestive systems developing mostly in a "concealed" way, without any symptom are the most frequent - the correct performance of the screening examinations is very important because over certain ages it is not always possible anymore to carry out an operation which alone may ensure the total recovery, especially in case of complication with another disease, mainly a disease of the circulatory system.

The presentation of the mortality statistics of old persons proved the importance of the programme of traumatology. At the stressed development of this branch, too, the main purpose is to modernize the forms of emergency and rehabilitation provision. For old people the spreading of the implantations of bone protheses at the operations of the joint /mainly of the iliacal joint/ in Hungary means a great professional achievement; in the near future these operations will meet all demands. Beside the modern therapy of grave fracture of the fremoral neck and its complications, the incidence of which is very high at old age, this implantation permits the chirurgical solution of the limitation of motion caused by rheumatic locomotor diseases in a certain part of the cases.

Basically the measures for the modernization of the bed structure of our in-patient health institutions according to a comprehensive conception serve for the better provision for old persons. Recently the balancing of the provision, the great tasks of emergency and chirurgy did not permit to increase sufficiently the number of beds especially in the divisions for chronic diseases and to develop these divisions professionally according to the needs, mainly towards a rehabilitation profile. Already for this plan period it is envisaged to develop several divisions of this type with a long hospitalization period and through this to improve the old people's provision and to make it more differentiated. Similarly we should like to include more the sanatorial beds in the scope of the curing provision.

The unanimous purpose of these planned measures is to ease gradually the tensions between the rightful demands of old people and the conditions of provision of our community, also in respect of public health.

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Tables

1. Mortality by age-groups of old persons /Deaths per 1000 males and females of corresponding age/

Year	Age-groups											
	60-64		65-69		70-74		75-79		80-84		85-X	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1972	24,5	13,9	40,3	23,5	63,8	41,8	99,7	73,9	154,8	123,9	260,0	220,9
1973	24,5	13,9	41,2	24,5	65,8	42,1	103,6	75,0	162,3	126,1	264,8	222,4
1974	25,1	14,1	40,9	23,2	66,5	41,3	101,3	72,8	156,2	124,6	253,9	221,8
1975	26,7	14,0	41,6	23,8	67,6	42,5	105,8	76,1	164,7	129,0	258,5	228,4
1976	26,6	14,7	42,1	23,9	68,6	43,0	105,5	74,6	161,9	128,1	264,6	229,1
1977	26,7	14,4	42,1	24,3	68,5	41,8	107,0	73,7	161,3	123,2	252,3	219,7
1978	29,4	15,2	43,8	24,8	71,0	43,4	112,5	77,6	169,1	133,3	266,0	233,7

2. Death ratio of persons died in consequence of the three major groups of diseases in 1967 and 1976

/Deaths per 100 000 persons of the same age/

Major groups of diseases	Year	Males			Females		
		Age-groups			Age-groups		
		55-65	65-74	75-X	55-64	65-74	75-X
Diseases of the circulatory system	1967	821	2 466	8 817	463	1 939	8 338
	1976	979	2 744	8 510	514	1 817	7 753
Malignant neoplasms	1967	525	1 206	1 806	345	709	1 262
	1976	575	1 305	2 249	391	718	1 343
Accidents, poisonings and violence	1967	132	194	486	47	100	436
	1976	198	283	642	72	144	610

3. Incidence of the cases of some diseases within hospitalized morbidity, by age-groups in 1972 and 1976

Diseases	1972				1976			
	Age-groups				Age-groups			
	45-59	60-69	70-X	60-X %	45-59	60-69	70-X	60-X %
Diabetes /ICD[x] 250/	5 447	6 329	3 629	50,8	6 948	6 372	5 064	54,6
Essential benign hypertension /ICD 401/	5 855	4 205	2 672	40,8	7 068	4 428	3 756	51,7
Arteriosclerosis /ICD 440/	2 589	5 180	11 431	84,2	3 120	5 952	14 484	88,6
Chronic ischaemic heart disease /ICD 412/	8 970	11 249	12 766	70,5	10 812	12 000	15 840	72,0

x/ International Classification of Diseases

4. Days of hospitalization and average period of hospitalization of some diseases within hospitalized morbidity, by age-groups in 1972 and 1976

Diseases		1972				1976			
		Age-groups				Age-groups			
		45-59	60-69	70-X	60-X %	45-59	60-69	70-X	60-X %
Diabetes /ICD 250/	Days of hospitalization	87 514	115 219	72 939	54,4	112 008	106 992	86 352	50,9
	Average duration of hospitalization	16,1	18,2	20,1	-	16,1	16,8	17,1	-
Benign hypertension /ICD 401/	Days of hospitalization	84 102	74 439	59 694	51,8	97 548	69 840	60 696	48,1
	Average duration of hospitalization	14,4	17,7	22,3	-	13,8	15,8	16,2	-
Arteriosclerosis /ICD 440/	Days of hospitalization	53 388	127 059	359 267	88,7	52 284	110 916	275 796	86,8
	Average duration of hospitalization	20,6	24,5	31,4	-	16,7	18,6	19,0	-
Chronic ischaemic heart disease /ICD 412/	Days of hospitalization	160 304	212 763	248 309	72,1	189 828	215 964	292 416	70,3
	Average duration of hospitalization	17,9	18,9	19,5	-	17,6	18,0	19,0	-

5. Proportion of persons over 60 years to the cases of hospitalization and days of hospitalization of some diseases in 1972 and 1976

Diseases	1972		1976	
	Cases of hospitalization	Days of hospitalization	Cases of hospitalization	Days of hospitalization
Diabetes /ICD 250/	50,8	54,4	60,9	50,9
Essential benign hypertension /ICD 401/	40,8	51,8	52,6	48,1
Arteriosclerosis /ICD 440/	84,2	88,7	86,6	86,8
Chronic ischaemic heart disease /ICD 112/	70,5	72,1	71,8	70,3

6. Incidence of chronic diseases by age-groups and sex

Age-groups /years/	Of 100 male pensioners number of those having a chronic disease	Of 100 female pensioners number of those having a chronic disease
55 - 59	-	54
60 - 69	51	58
70 - 79	56	64
80 year old and older	56	61

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MEDICAL ASPECTS OF GERONTOLOGY

The increase in the proportion of old population raised a lot of new problems not only for physicians but also for biologists, psychologist, sociologists and social scientists. Being aware of these various problems the UN passed a decision in 1979 to convene a World Conference on Ageing in 1982.

In 1982 in all parts of the world conferences deal with the problems of old people and prepare the UN Conference. The previous papers already spoke of the demographic, sociological, socio-political and health aspects. In my paper I briefly mention the diseases and death of old people - of which we already heard in Dr. Ajkay's paper - as well as the possibilities of gerontological prevention. This latter is also an important medical task as it was indicated by Professor Szentágothai, member of the Academy in his introductory speech.

The main purpose of the gerontological research carried out all over the world is to lengthen the duration of the active, productive life. The World Health Organization set this target within the World Health Day, too. In the recent decade our knowledge on the changes occurring in the course of ageing, on the health condition, social and medical needs of old people increased considerably. Ageing is a slow physiological process. At longitudinal surveys it was stated that the function of most organs attain the maximum achievement at the age of 20-25 years and after it it remains the same for a long period. The function of certain organs begins to decrease already at the age of 25-30

years. E.g. the functions of the lungs begin to decrease at a young adult age and so do the functions of the kidneys, too. These latter, however, decline to a greater extent over the age of 50 years. The longitudinal surveys show that the function of the different organs decreases in general by 1 per cent yearly with age.However, at the evaluation of the individual functions it must be always taken into consideration that also the manner of life, e.g. nourishment, smoking, alcohol consumption etc. may affect in many respects the function of the various organs, and the observed decrease in the function does not always mean a change related to old age.

We have to draw your attention to the fact that till the age of 70 years there is a very great variability in the change in the functions. This means that many persons maintain well their functional capacity even at the age of 70 years, and the function of some of his/her organs is similar to that of a 30 year old person. On the other hand, it may also happen that at the age of 70 years the functions of the organism decrease to an extent that the person already needs a care. The decrease in the function of the organs is the basis of the development of diseases frequent at old age.

The purpose of the gerontological studies is to reveal the basic process of ageing, the changes occurring in the structure and function of the organs and tissues. Namely this will help to understand the correlation between the process of ageing and the diseases frequent at old age. If we understand this correlation, then it will be possible to develop new methods contributing to the conservation of the health of old people. Only getting acquainted with ageing and its influencing can permit people to maintain their activity and productivity. Until we get acquainted with the basic process of ageing we may attach the greatest importance to the gerontological prevention for improving the life of old people.

All over the world the proportion of old persons grows significantly within the population. Between 1970 and 2000 the number of persons over 60 years will presumably increase from 307 million to 580 million in the world. In the previous papers the Hungarian data were already indicated, so I don't want to speak of them in detail.

The average life expectancy at birth grew all over the world, as well as in Hungary. The improvement in the situation of hygiene, the development of medical sciences and public health, the standard of life, the improvement in life and working conditions play a role in the lengthening of the average life expectancy at birth. Consequently the mortality of newborn, children and adults declined considerably.

The life expectancy of newborn lengthened. Thus at present a newborn has much more chance to survive till the age of 60 years than in the past.

At the same time it can be stated that since 1970 the average life expectancy of 50 year old persons - mainly of males - scarcely increased, then it decreased by the year 1979. /Table I./. The lengthening of the duration of life stopped which can be ascribed presumably to the wrong manner of life and to the increase in the harms of the civilization.

With age the number of chronic diseases, which often develop only with few symptoms for a long period, grows: hypertonia, coronary- and cerebrovascular sclerosis, chronic bronchitis, pulmonary emphysema, diabetes, malignant neoplasms etc. Because of these diseases persons getting old become rather frequently invalids, unable to work and need a support already before the pensionable age. This is confirmed by the data of the statistical surveys. Under the pensionable age among the males the proportion of those retired

because of disability is high, the ratio of healthy men is low, and in this age-group the incidence of chronic diseases is higher /for males at the age of 55-59 years, for females at the age of 50-54 years/. At the same time among males and females under the pensionable age the number of those suffering from two and three diseases, respectively, is higher /Table II./.

Also according to the survey of the Organizing, Planning and Information Centre of the Ministry of Health carried out in 1972-1973 at the age of 55-59 years the proportion of the diseases of the male population increases considerably, and with age it is always higher than in the female population. The difference between the two sexes is the greatest in the population over 60 years. According to the surveys persons over 60 years lie in each third hospital beds and even within this in each 6-7 beds persons over 70 years are hospitalized. Studying the change in the number of the days of hospitalization by branches we see that especially the utilization of the beds for chronic diseases, beds in the internal, eye-, oncoradiological, urological divisions increases significantly among the 60 year old and older persons /Table III./.

The greater utilization of the hospital beds at old age is connected with the special process characteristic of the disease of old people, e.g. with the frequent polymorbidity, i.e. the joint incidence of several diseases; with the development of frequent chain-reactions - one sickness contributes to the consequent disease of several organs -; with the catastrophe situation developing within a short period, thus with the upset of the salt- and water metabolism etc. Besides, at old age the period of recovering and the period of therapy necessary to reestablish a certain balance, respectively, are much longer than at young age. That's the reason for the lengthening of the hospitalization period. It can be also stated, however, that there is a great difference in the number of the days of hospitalization depending on the number of beds

available in the region. E.g. in Budapest the incidence of hospitalization of the 0 year old children and persons over 70 years is nearly the same, while in Szabolcs county the incidence of the hospitalization of 0 year old children is higher than that of the older age-group. The situation is similar in respect of the days of hospitalization, too.

The population over 60 years makes use of 32.8 per cent of the total of the hospitalization possibilities of in-patient health institutions. There is a great difference between the data of the capital and those of the whole country. The share of persons over 60 years in the total number of hospitalization days was 41.8 per cent in the capital and only 27.3 per cent in the surrounding Pest county. Surveys carried out in hospitals also show that 17 per cent of the patients treated in internal divisions would have needed to be admitted, instead of the active internal divisions, to the divisions for chronic diseases, or to a social home.

At the morbidity surveys carried out in Balassagyarmat data were obtained on the most frequent latent diseases in the area examined, at the age of 40-59 years and over 60. According to this it can be stated that among males of 40-59 years the incidence of the diseases of the circulatory system, respiratory system and of the locomotor diseases is the highest, among the females, beside the diseases of the circulatory system and the locomotor diseases, neoplasms and the diseases of the genitourinary system are the most frequent. The tendency is similar over the age of 60 years, too. /Table IV/.

The development of death in Hungary can be summarized as follows:

In 1980 76 per cent of the deceased persons were 60 years old and older and 58 per cent were over 70 years. As compared to 1960 the mortality of males increased in all age-groups, except

for those of 85 years and older. During the same period the life expectancy of the females lengthened in all age-groups, except for those aged 40-59 years.

At the study of the causes of death it can be stated that the number of persons died with infectious diseases fell, but the number of those whose death was caused by diseases of the circulatory system and neoplasms grew. /Table V/.

In the third part of my report I want to speak of the gerontological prevention. As I mentioned in my introduction, the main purpose of gerontological research is to lengthen the duration of the active, productive life. On basis of our present knowledge the process of ageing could be influenced from 3 directions:

a/ One of the possibilities is to prevent the development of the cause of ageing. For this a basic research is required which reveals the cause of the greater disposition to diseases with age, of the physiological changes during the ageing process. Though studies of this kind are in progress in many institutes, unfortunately, we don't know yet the cause of ageing, therefore we are not able to influence ageing on this level.

b/ The other possibility is to try to prevent the development of physiological, biological changes occurring in the organism at old age and to set back these changes, respectively. In this field many experiments were and are carried out, at present, however, I don't want to treat this question.

c/ Finally, the third possibility of lengthening the duration of the active life is the organization of the gerontological prevention of which I should like to speak in more details.

Our present opinion is that the gerontological prevention is the only way of postponing the biological ageing to a possibly latest date, and of insuring an active, productive old age. The gerontological prevention has the following possibilities:

1. Early diagnosis of diseases frequent at old age and their early efficacious therapy. This may help elderly people to survive in health and full activity till old age. Namely the different diseases cause a too early ageing. The various screening examinations aim at the early diagnosis of the diseases. Due to the progress in medical sciences the development of many diseases can be prevented by means of a right medicinal treatment in an early stage of the sickness. Therefore the screening examinations play a great role in the gerontological prevention. The recent data of our special literature show that especially the screening examination of hypertonia and diabetes is important because these two diseases can be treated well, and a therapy in due time may be successful.

2. Another important possibility of the gerontological prevention is the preparation for the retiring age, the purpose of which is the maintenance of the physical and mental activity and the prevention of the "psychical trauma" of retiring. In our opinion this preparation must begin at the age of 50 years because at that time the personality is not yet rigid, the individual can be still formed. This can be realized in a most efficacious way if we can deal individually with the persons retiring. It is necessary to deal with these persons separately because people get old according to individual variation possibilities of a very wide scale. This is caused presumably by the peculiarities of the personality characteristics of the individual persons. With age the personality characteristics become stronger and the features characteristic of the individual get more and more pregnant. A harmonic old age can be ensured by means of analysing the personality of the individuals before old age and, on basis of the knowledge gained, by drawing up a life plan for old age which beside the general directives envisages individual tasks, too.

3. The third possibility of prevention is the preparation for ageing. Within the framework of informative lectures we must

deal with the healthy manner of life, speak of the adequate alimentation, the necessity of physical exercise and how to develop a new life rhythm, a rational pace of life connected with retiring. We have to deal with the optimum quantity and right form of rest which should be included in the life order of the individual. We must draw the attention to the fact that it is important to maintain the activity of the nervous system which contributes to conserve the mental freshness. We have to advise to decrease the physical burden but at the same time to maintain the activity which does not tire the organism.

The preparation for the pensioner's life as well as for ageing can be realized within the framework of gerontological consultation. In the Centre of Gerontology there is a gerontological consultation, working already for many years.

4. The fourth possibility of the gerontological prevention is the "university of the third age". Its establishing is not a medical task but it is worth-while to mention it because it renders a great help to the conservation of old people's activity, mental freshness and to the useful spending of the leisure time. An initiative of this kind came from the Teachers' College in Eger.

In my brief paper, without striving after completeness, I summarized the change in old people's morbidity and mortality in Hungary as well as the possibilities of the gerontological prevention.

In the recent years Hungary solved a lot of important and difficult questions. This year when all over the world people try to reveal the problems, improve the situation of old persons, I think that in Hungary, too, we must deal intensively with the tasks resulting from the increase in the number of old people and with the solution of these tasks.

Tables

I. Average life expectancy at birth
/Years/

	Males	Females
1920 - 1921	41,0	43,1
1930 - 1931	48,7	51,8
1941	54,9	58,2
1949	59,8	64,0
1960	66,4	70,6
1970	66,8	72,6
1979	66,7	73,6

Source: Magyar Statisztikai Zsebkönyv /Statistical Pocket Book of Hungary/. Hungarian Central Statistical Office. Budapest, 1981. 46. p.

II. Percentual distribution of pensioners in selected age-groups by number of their chronic diseases

	55-59	60-64	65-69
		Males	
Not sick	21,5	48,9	48,8
One disease	45,8	32,2	29,8
Two diseases	22,9	13,9	15,3
Three or more diseases	9,8	5,0	6,1
Total	100,0	100,0	100,0
	50-54	55-59	60-64
		Females	
Not sick	19,1	45,6	46,0
One disease	49,5	34,3	33,5
Two diseases	19,7	14,2	15,1
Three or more diseases	11,7	5,9	5,4
Total	100,0	100,0	100,0

Source: A nyugdijasok életkörülményei. Statisztikai Időszaki Közlemények /Life conditions of pensioners. Statistical Periodical Reports/. Volume No. 435. Hungarian Central Statistical Office, 1978, 60. p.

III. Proportion of the days of hospitalization of old people to the total number of days of hospitalization by branches

	60-X	70-X
	year old	
	%	%
Internal medicine	54	28
Medicine for rheumatism	32	12
Chirurgy	36	16
Traumatology	33	18
Orthopedy	20	8
Urology	51	25
Ophthalmology	51	29
Otorhinolaryngology	12	5
Medicine for infectious diseases	20	9
Neurology	23	8
Oncoradiology	52	24
Dermatology and medicine for venereal diseases	39	21
Intensive division	47	22
Phthisiotherapy	43	21
Psychiatry	40	19
Division for chronic diseases	72	56

IV. Number of latent diseases per 1000 population of the corresponding age and sex

Major groups of diseases		40-59	60-X
		year old	
Neoplasms	Males	215	230
	Females	530	567
Mental disorders, psychoneurosis and pathological disorder of the personality	Males	203.3	131.6
	Females	177.4	144.3
Diseases of the circulatory system	Males	356.5	628.3
	Females	453.9	837.6
Diseases of the respiratory system	Males	447.4	605.3
	Females	331.8	319.6
Diseases of the digestive system	Males	167.5	197.3
	Females	205.1	185.6
Diseases of the genitourinary system	Males	14.4	36.2
	Females	350.4	444.7
Bone- and locomotor diseases	Males	308.6	319.1
	Females	338.7	402.1

V. Mortality by age and major causes of death
1980 /per cent/

	Of the died persons					
	Under 1 year	1-6	7-14	15-39	40-59	60 year old and older
		year old				
Total	2,3	0,4	0,3	3,9	16,7	76,4
Of which:						
Tuberculosis /excluding late effects/	-	-	-	3,0	24,9	72,1
Viral hepatitis	3,9	-	-	9,8	23,5	62,8
Malignant neoplasms	0,1	0,3	0,2	2,9	23,3	73,2
Heart- and hypertensive diseases	0,0	0,0	0,0	2,0	16,4	81,6
Cerebrovascular diseases	-	0,0	0,0	0,8	10,1	89,1
Influenza	3,4	0,7	1,3	8,1	14,2	72,3
Pneumonia	9,8	2,8	0,6	5,4	15,5	65,9
Peptic ulcer	-	0,1	-	2,6	21,4	75,9
Chronic liver disease and cirrhosis	-	-	-	6,8	42,4	50,8
Other diseases of the digestive system	0,5	0,1	0,1	5,1	28,8	65,4
Diseases of the genito-urinary system	0,1	0,3	0,5	4,4	13,3	81,4
Congenital anomalies	70,4	10,5	4,1	8,0	5,8	1,2
Certain conditions originating in the perinatal period	100,0	-	-	-	-	-
Accidents, poisonings and violence	0,7	1,3	1,4	21,7	27,5	47,4

Source: Magyar Statisztikai Zsebkönyv /Statistical Pocket Book of Hungary/. Hungarian Central Statistical Office. Budapest, 1981. 51. p.

Dr. Vera NYITRAI, Secretary of State, President of the Hungarian
Central Statistical Office

DEMOGRAPHIC SITUATION AND PROBLEMS OF THE OLD POPULATION
CLOSING SPEECH

In the last two days sociologists, demographers and physicians treated again a significant social problem of growing importance, the situation and worries of old people and the way of mitigation of these problems. This discussion was topical not only because 1982 was declared by the United Nations as the year of old people but also because of the development of the Hungarian demographic situation. The Hungarian participants of our conference remember that last year we discussed the main timely questions of population policy in a similar circle, and that discussion declared definitely that population policy is a complex question covering the field from birth to death, and within this revealing the old people's problems and seeking their proper solution are urgent tasks nowadays. In my opinion the present conference met this requirement.

In the light of the demographic situation, on basis of international experiences this meeting discussed in a very various way the social, economic, health and humanitarian aspects of ageing and of old people. I find the most important the warning that the society must prepare itself in due time for the challenge which means the "ageing of the population". The question is not only that we have to provide better for our old persons living in our society, to improve their life, - and even if we can't make it careless but we should try at least to make it calmer -, but that we have to face one of the greatest global social problems of the following decades. The outlines of the importance of these worries are rather well defined for a long range, too, because the old persons of the following

generation are our contemporaries and ourselves. Also the old persons of the 2-3 generations following us are already born. The very large age-groups born in 1950-1954 will be 65-69 year old in the second half of the second decade of the following 2000s. By the year 2020 the number of persons belonging to this age-group will be nearly 650 000, almost by one fifth higher as compared to the number of persons of similar age at present. Almost one quarter of our population will belong to the 60 year old and older age-group. I want to mention that mortality may develop more favourably than supposed by the projections, the average life expectancy will be surely longer after the turn of the millenary. Namely it is an international experience that even the projections made with the most developed methods in general under-estimate the increase in the number of old people. Besides, the development of fertility possibly less favourable than expected at present, may increase even to a greater extent the proportion of old persons and through this the burdens, worries of the active age-groups of that time.

Not only the number of old persons but also the number of years survivable at old age will grow. It is scarcely necessary to prove that the content of the nice slogan "let us give life to the years" depends first of all on the fact to what extent we can give health or at least a bearable health condition, an adequate surrounding, a content of activity to these years.

It was also mentioned that old people need much more health provision than any other group of the population. The increase in the number of diseases connected with ageing requires a considerable part of the capacity of health provision. In consequence of the lengthening of the duration of life chronic diseases with complications occur much more frequently among old persons of an even higher age.

It is known that the placement of old persons in hospitals is often necessitated by their social situation; at home there is nobody to nurse them and provide for them. But the practical experiences showed that at old age the physical and mental abilities can be conserved, the psychical disorders and many other troubles and diseases can be prevented best of all at home, within the family. This gerontological fundamental truth is a great dilemma for the solution of the growing number of problems related to old persons. It is more and more necessary and required to provide for old people within the family but at the same time the families have fewer and fewer possibilities to realize it. /This, too, is an international problem./

A socio-demographic process strictly related to the ageing of the population is the decrease in family size, the reorganization of the stages of the family life cycle; the reproduction period gets shorter and is limited only to some years, and the period after the departure of one-two children begins to become longer than the period of rearing. The women living in marriage being younger than the husband and having a more favourable mortality and a higher life expectancy may count upon living during about further ten years after the death of the husband. At present 27 per cent of the 60 year old and older females live quite alone, among them four women out of five are widows. In the present household structure the number of families living together with the old parents or with the widowed mother who remained alone, decreased to a very low level.

In the families the ability to keep together the different generations declined significantly. The rapid social changes put the generations of the parents and children within a very short period in a different world, in another social class or stratum, in another regional surrounding, and last but not least, under housing conditions

which cannot ensure a place for old persons even in case of the best intentions.

We often say that the family is the basic cell of the society but we are inclined to forget that one of the main characteristics of the basic cell is the cohesive force which holds the generations together, and the provision for their old relatives should belong to its functions. For this a natural requirement is a more favourable housing situation than the present one, which permits the generations to live together and contributes to the maintenance of communities consisting of several generations. The participants of our conference know the social discussions concerning the housing question where also the possibility of solving the living together of several generations was a question of the day. The recent meeting of the Central Committee of the Hungarian Socialist Workers' Party took up a position in this topic and the Government will take measures in this sense. The dwelling, however, only affords a possibility for several generations to live together, but in itself this is not sufficient. In order to increase the cohesive force of the family in the present situation of different generations more is needed: a change in attitude and even a labour division of a new kind between the older and younger persons. I think that change in consciousness requires a longer period and, maybe, also more publications and informative work from the specialists. The Conference ending now is of great importance in this respect, too. The papers and discussions of the last two days are especially significant because our meeting took place within the preparation work of the Conference on Ageing convened by the United Nations for this year. Our Conference was organized jointly with the Hungarian National Preparatory Committee and the Hungarian Society of Gerontology. Also with the proceedings of the Conference we should like to contribute to the enrichment of the preparatory materials of the international programme of action to be prepared in order to ensure the social and economic safety of old people.

Finally I only want to mention: we must realize that "the year of old people" does not end with 1982. It is the duty of the active age-groups of all periods to care for their elders, it is their obligation and humanitarian task to fulfil this duty as far as possible on a higher level than their ancestors did. Our Conference uttered this intention of the state-, scientific and social organizations, the harmony in the mentality of representatives of different disciplines. This is a firm basis for the practical work of the following years.