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Biodemography of the German linguistic islands of Southern Alps

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RESUMO

O objecto desta comunicação é o estudo da dinâmica da população de «ilhas» linguísticas, situadas a sul dos Alpes e o seu relacionamento com o meio físico e biótico. O método consiste em examinar o Censo Nacional e os registos paroquiais para um período de 100 a 150 anos, complementado com a representação gráfica dos dados e com a análise estatística de alguns desses dados. O que se conclui é que há um decréscimo generalizado da população, quer quanto ao número de casamentos, quer quanto aos nascimentos, sendo neste caso o decréscimo ainda mais acentuado. O número de casamentos entre indivíduos homónimos e consanguíneos diminui salvo os casos de algumas demes muito isoladas. O envelhecimento da população é geral em todos os isolados, embora com taxa variável. Diminui igualmente o número de indivíduos por família e, nalguns casos, essa diminuição é muito acentuada. Investiga-se também o estatuto sócio-económico: não há, em regra, relação estreita entre este estatuto e a demografia. Também não parece evidente a relação com o factor linguístico. Em conclusão, vários isolados tendem à contracção da população e, nalguns casos, pode mesmo ocorrer o seu desaparecimento. A «sex ratio», à nascença, é estatisticamente diferente de 1 somente em dois isolados que pertencem ao mesmo grupo étnico.

Palavras-chave: Biodemografia; Isolados linguísticos germânicos; Demoecologia.

ABSTRACT

The objective is the study of population dynamics of the German linguistic islands of Southern Alps related to environment, both physic and biotic. The method consists in the examen of the National Census and of the parrish registers for 100-150 years, followed by graphic representation of data and by statistic analysis of some of them. The results are a general decrease of population, of N° of marriages ond still more of N° of births. The N° of marriages between homonymous and consanguineous partners is decreasing, with exception for few very isolate demes. Senescesce increases in practically all isolates, though with a different rate. Also the N° of components per family is decreasing, in some cases very quickly. Socio-economic status is also investigated: in general there is no close relationship between the latter and demography. Also a relation with language is not clear. To conclude, several isolates tend to a contraction which in some cases can determine their extinction. Sex ratio at birth is statistically different from 1 only in two isolates belonging to the same ethnic unit.

Key-words: Bio-demography; German linguistic islands; Demoecology.

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The German linguistic islands of Southern Alps (Italy and Canton Ticino or Tessin (Switzerland)) are illustrated in Fig. 1, where their altitude is indicated. The number of inhabitants since nearly one century is decreasing (Fig. 2) as a consequence of emigration and other socio-economic factors. The number of marriages and still more of births is also decreasing during most of this century, varying according to regions and/or localities. There is no difference between German and Italian speaking isolates (Fig. 3-5). As far as the sex-ratio at birth is concerned, the only isolates with a sex-ratio higher than 1 in a statistically significative way are four, of which two belong to the High Plateau of 7 Municipalities (Luserna and Lavarone) and two to that of 13 Municipalities (Illasi and Selva di Progno). A possible genetic mechanism can be involved in this higher sex-ratio. Of these isolates, only one, Illasi, the lowest, belonged always to an Italian speaking population (VENETI; cfr. MARCUZZI & MARTINELLI, not published data). The number of marriages varies very much: among marriages we must distinguish those between consanguineous and between homonyms (Fig. 6-11). Isolation and situation at a high altitude in general favour consanguinity, but there is a difference, also in the last century, among the different regions or localities. My researches show absolutely no relation between consanguinity and homonyms as admitted previously by some students (LASKER and other). The number of components per family is various: it is small in Walser populations (Fig. 12), high in some Veneto population of lowland, with a very good economy (Fig. 13). The distances covered by a partner for the choice of the other partner for marriage vary very much. Those covered by males are by far greater than those covered by females. In mountainous, little accessible situations the distance is very short (Fig. 15); this contrasts with what we find in lowland localities (Fig. 15). The female fecundity has been studied very little, due to practical reasons. A research carried out by my co-worker Dr. GIOVANNA MENGOLI at Bosco Gurin (Tessin) has permitted to know for the first time in the Alps the intervals of age of mothers at the birth of the various order of children (from 1 to 9) (Fig. 17). Age pyramids vary very much in the different isolates: often there are clear signs of reduction of population, tending perhaps to a true extinction of the same (Fig. 18). Only in one locality, Illasi, characterized by very good economic conditions, the pyramid speak in favour of a steady state (Fig. 19). The senescense expressed by means of Vajani's index $I_e = \frac{\geqslant 65 \times 100}{\text{total popul.}}$ is represented in the following slides. It is evident how senescense increases in all islands with an exception for Gressoney-la-Trinité. It shows a maximum at Rima San Giuseppe, a highly deteriorated isolate (Vajani value = 20) and a minimum at Gresoney-la-Trinité and Luserna, followed by Macugnaga. The last demographic parameter, never studied before on the Alps, is longevity. To represent longevity in a quantitative way, I have taken into consideration the percentage with which the age classes from 65 onwards are represented in the total population. The classes 65-70, 70-75 and classes higher than 75 have been considered separately. The phenomen is studied only for the period 1951-81 for which we may find

detailed data in the National Census. In all islands there is a constant increase in the percentage of old people (or longevity): the highest increase from 1951 to 1981 has been observed at Palù (Mocheni)= 10,4, from 9,4 to 19,8%; the lowest at Gressoney-la-Trinité (Walser of Val d'Aosta), 11,8, from 11,6 to 13,4%. Each age class intervenes in a various way in the different German speaking islands. Today no generalization seems possible or opportune (cfr. Fig. 20 and 21, from MARCUZZI & NEGRO, not published data).

The conclusions are rather negative as far as the future of all German linguistic islands is concerned. Not only the language (a kind of dialect going back to mid high German) but also the populations show some signs of decline which can bring to the extinction of some isolates.

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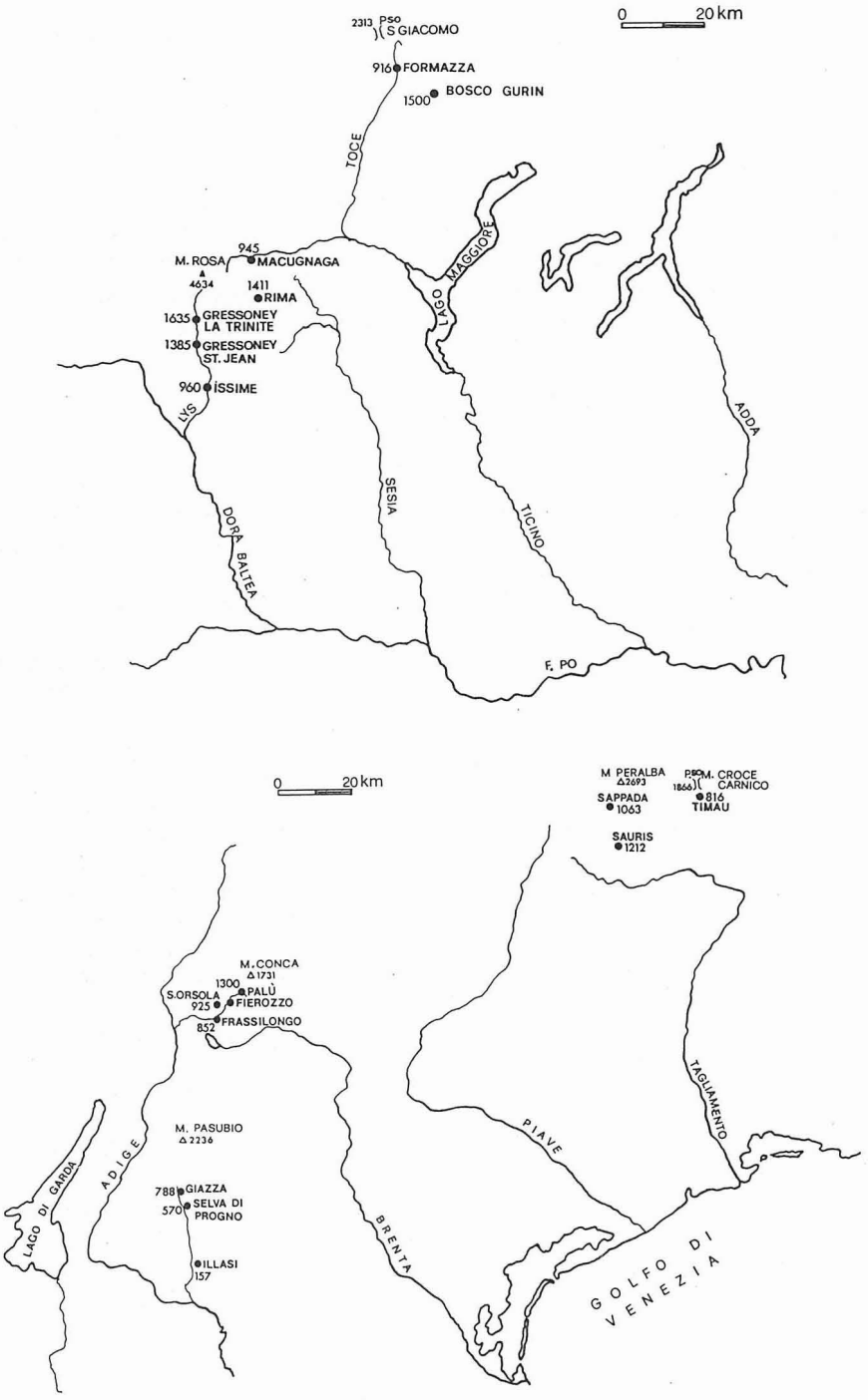

FIG. 1 — The diffusion in Italy and Canton Ticino (Tessin, Switzerland) of German linguistic islands; *a,* Western Alps; *b,* Eastern Alps

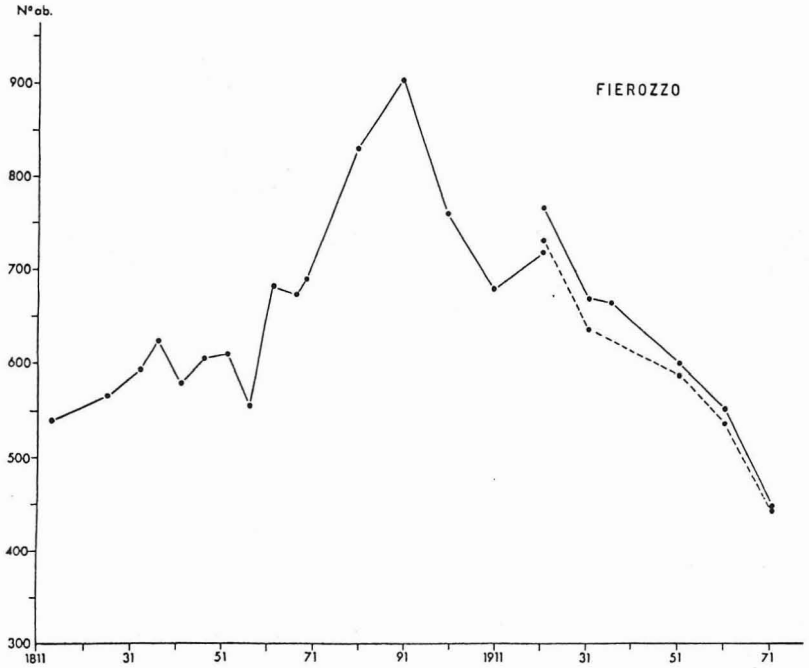

FIG. 2 — The number of inhabitants: the case of Fierozzo in the Mocheni Valley (Trentino)

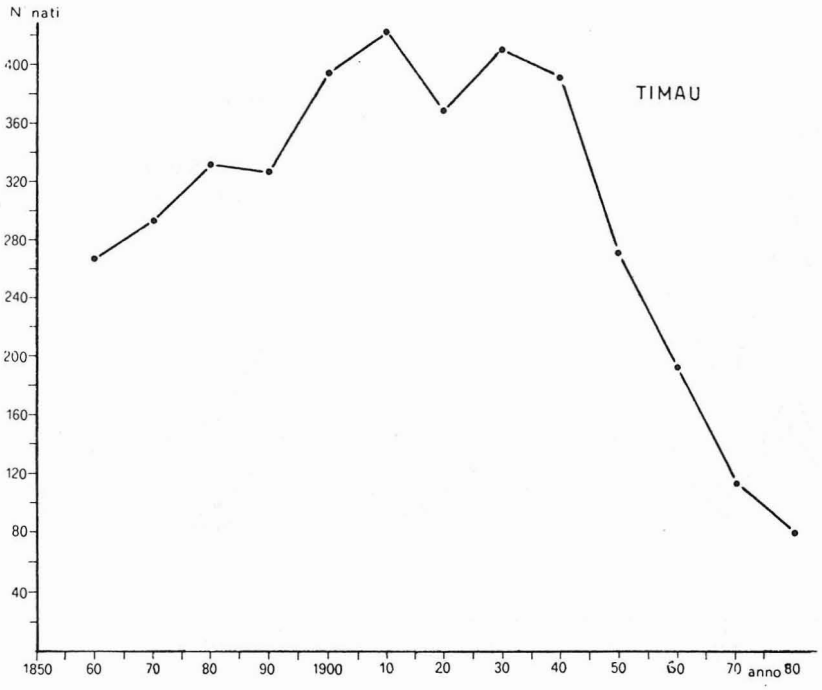

FIG. 3 — Number of births at Timau (Carnia): case of very strong decrease

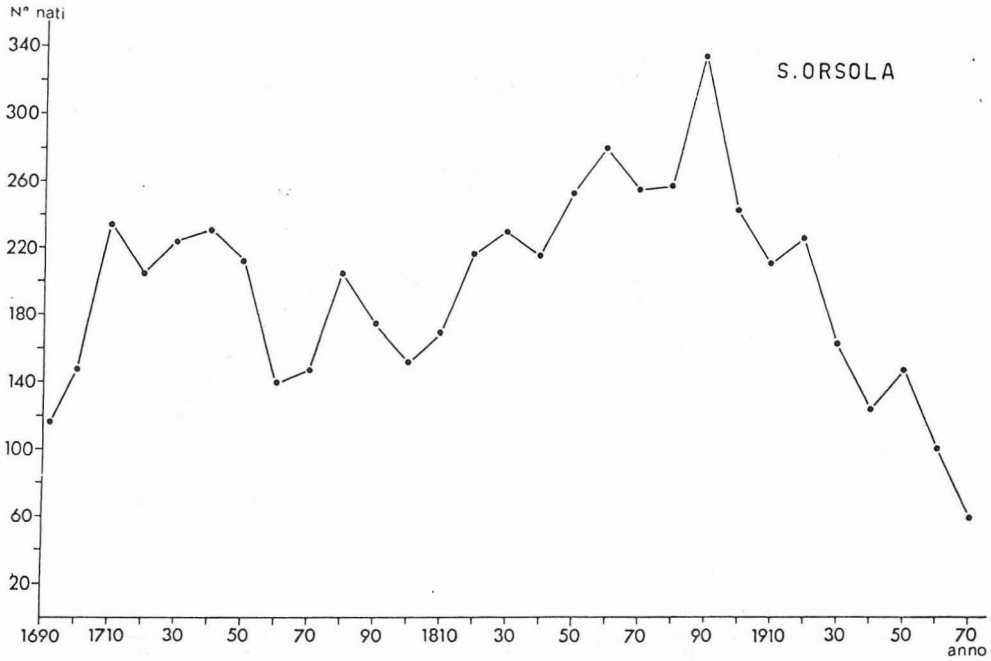

FIG. 4 — The same at S. Orsola (Mocheni Valley): case of slight decrease

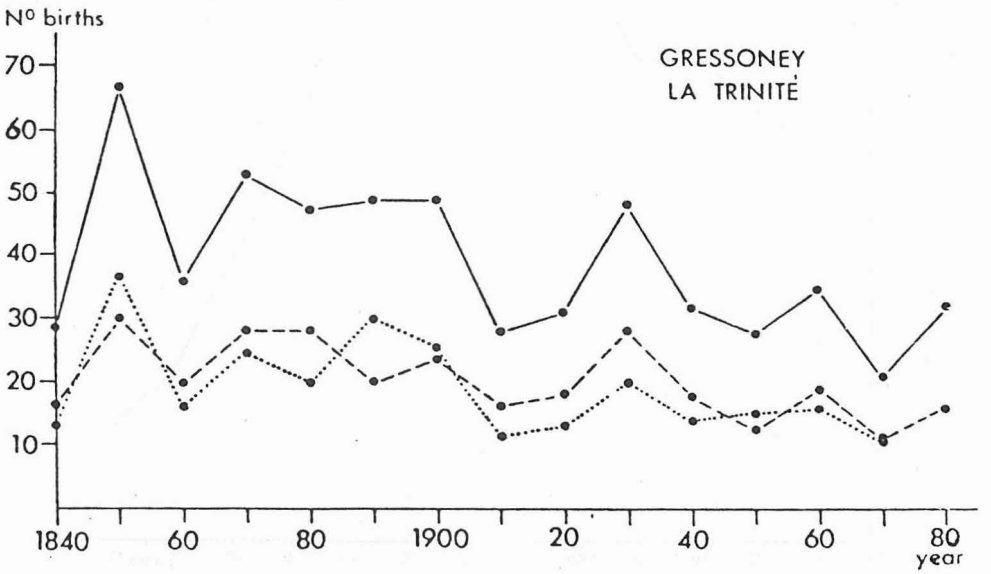

FIG. 5 — The same at Gressoney-la-Trinité; the only case of increase in the last decade

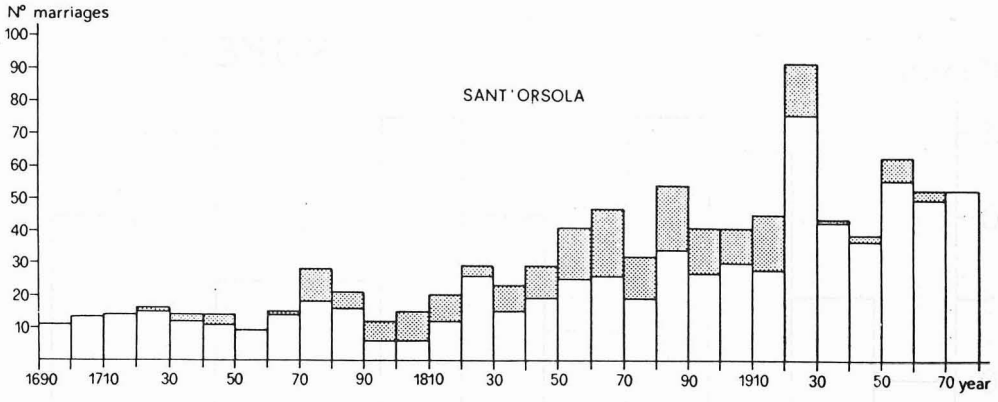

FIG. 6 — Number of marriages at S. Orsola (consanguineous dotted)

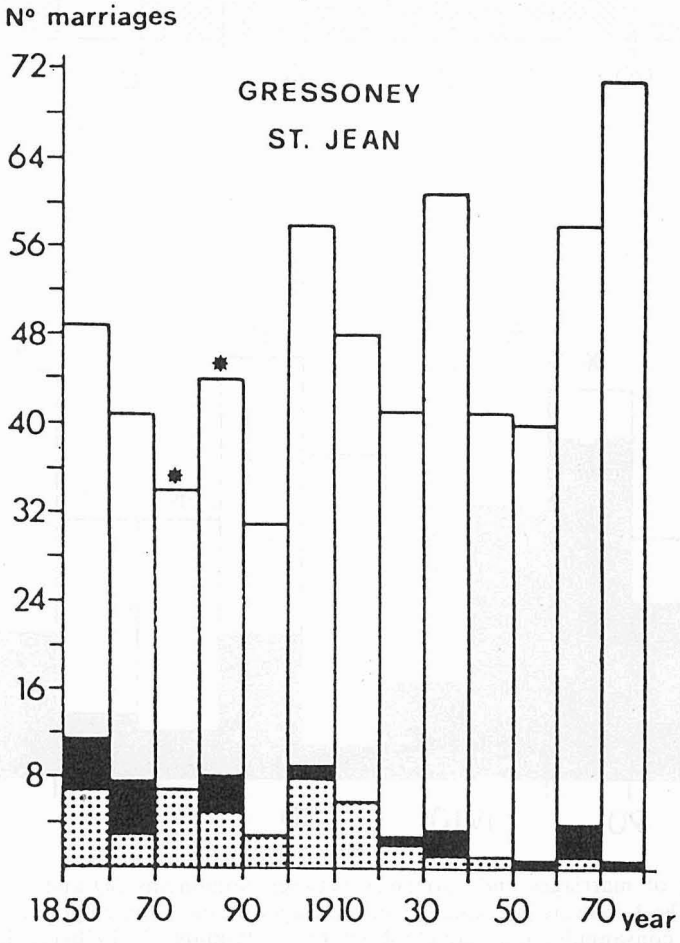

FIG. 7 — Number of marriages at Gressoney St. Jean; low consanguinity rate

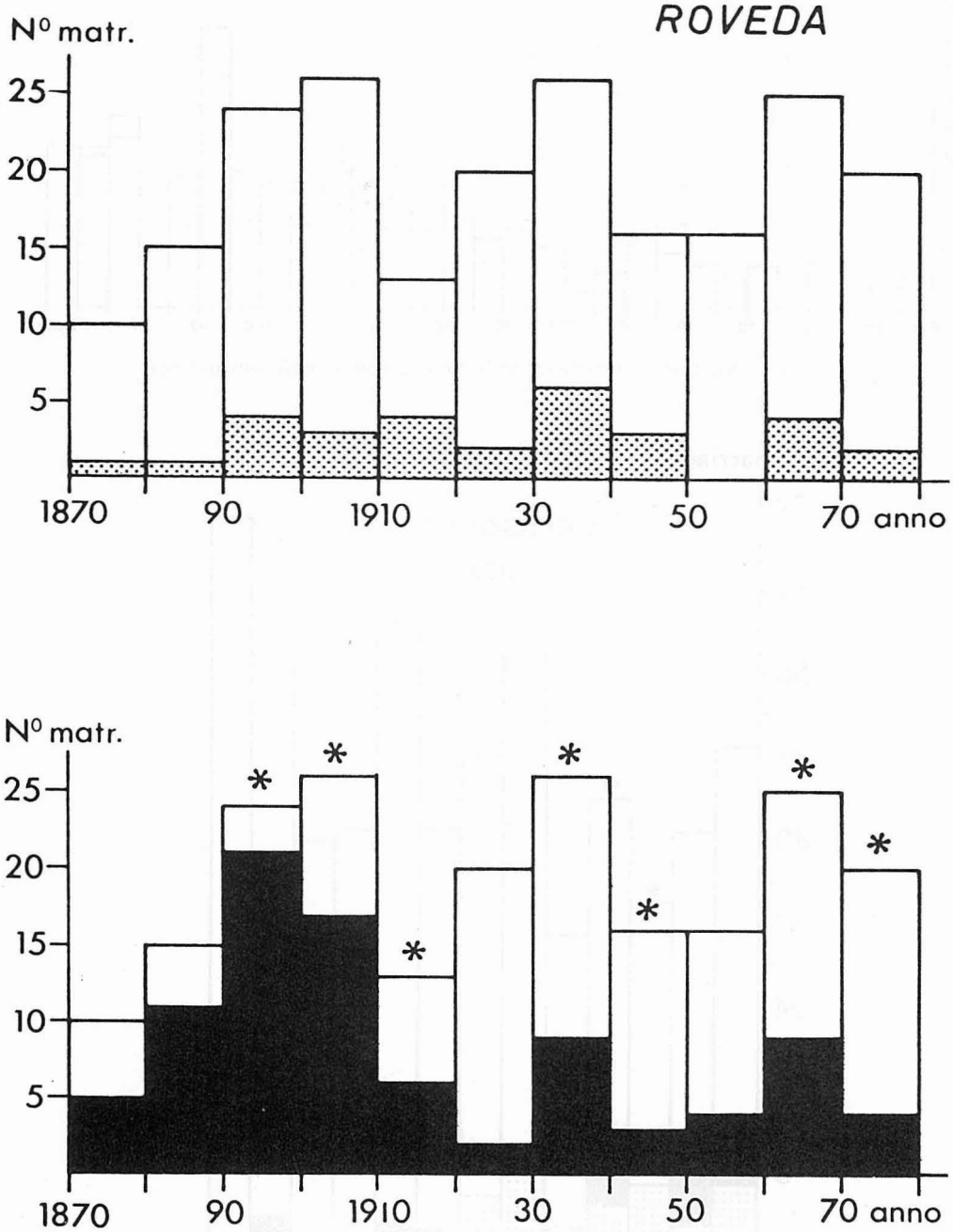

FIG. 8 — Total of marriages and marriages between homonyms *(a)* and consanguineous *(b)* at Roveda. The * indicates the number of marriages occured contemporaneously between homonyms and consanguineous, namely 1890-99, 2; 1900-09, 3; 1910-19, 4; 1930-39, 4; 1940-49, 2; 1960-69, 3; 1970-79, 1

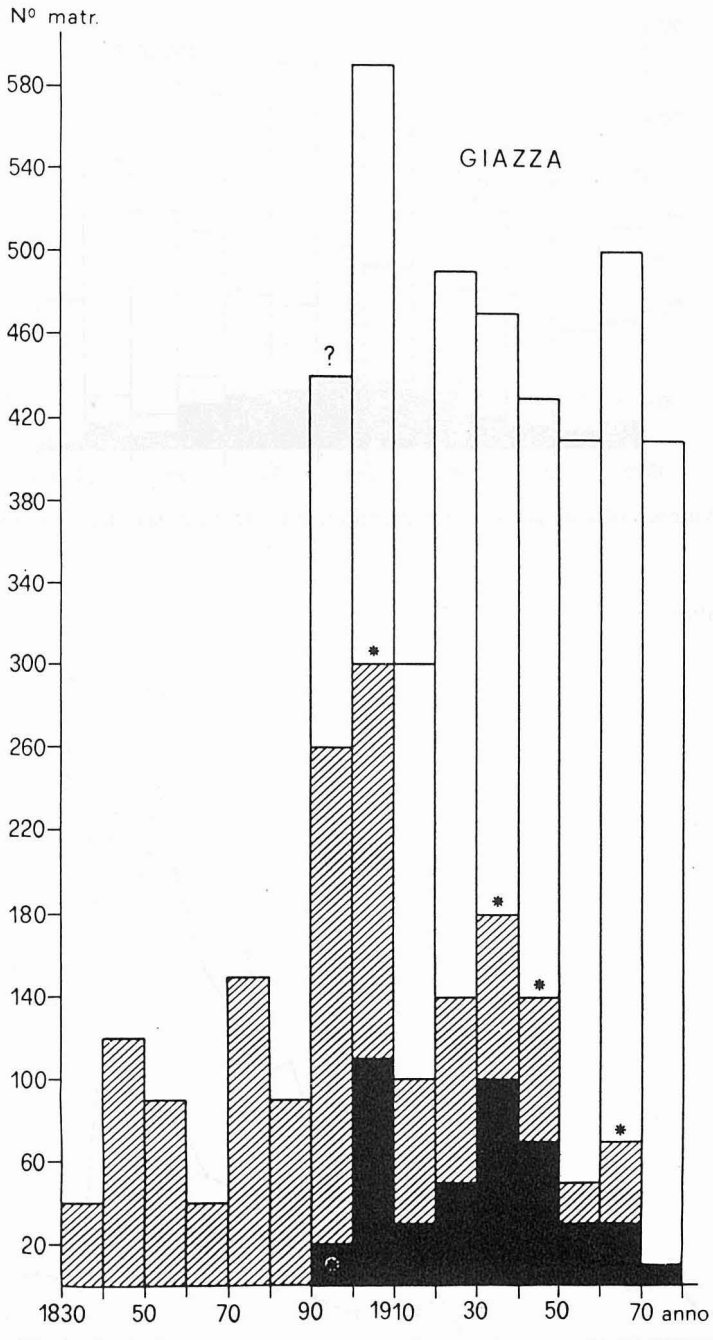

FIG. 9 — Total marriages and marriages between consanguineous at Giazza. The * indicates the presence of marriages occurred contemporaneously between homonyms and consanguineous, so that the total N° of marriages is lower than that indicated in the graph. The following are these numbers: 1900-09, 6; 1910-19, 1; 1930-39, 1; 1940-49, 3; 1960-69, 2

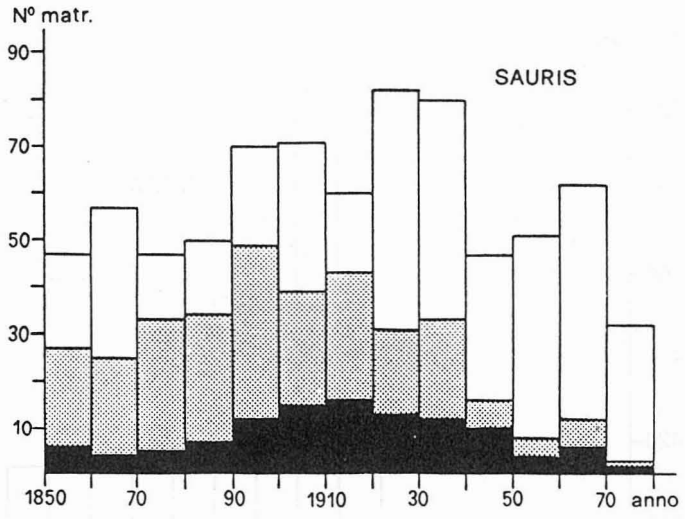

FIG. 10 — Number of marriages between consanguineous (dotted) and homonyms (black) at Sauris

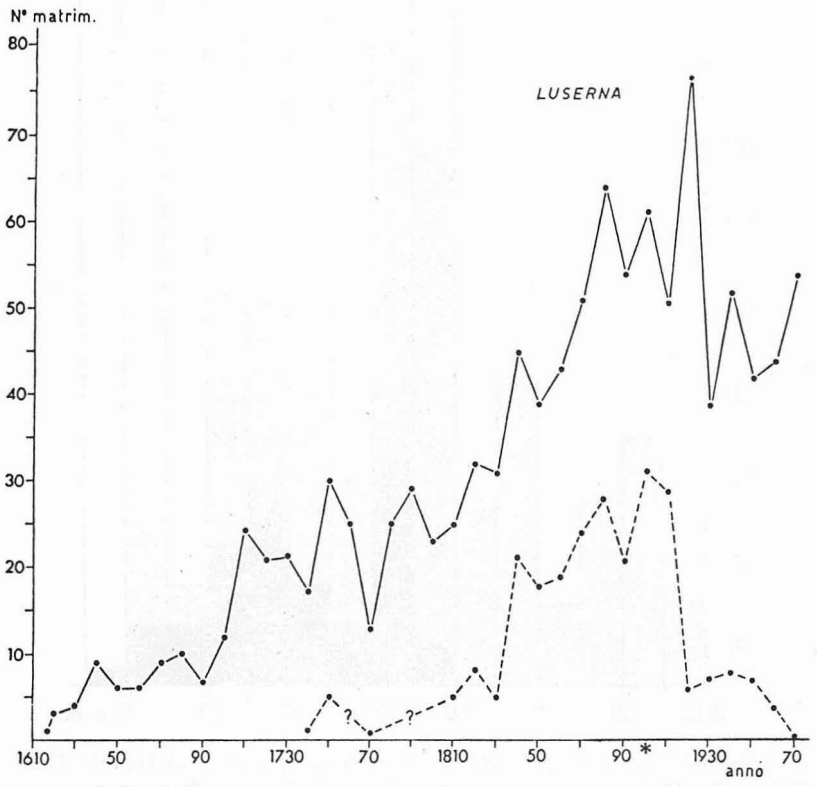

FIG. 11 — Number of total marriages and marriages between consanguineous at Luserna, a highly isolated locality (m 1330)

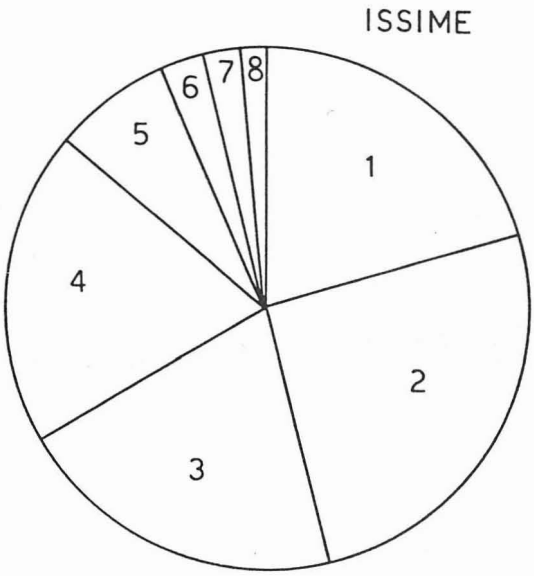

FIG. 12 — N.° of components per family in a Walser population: very small number of families with 5 or 6 children

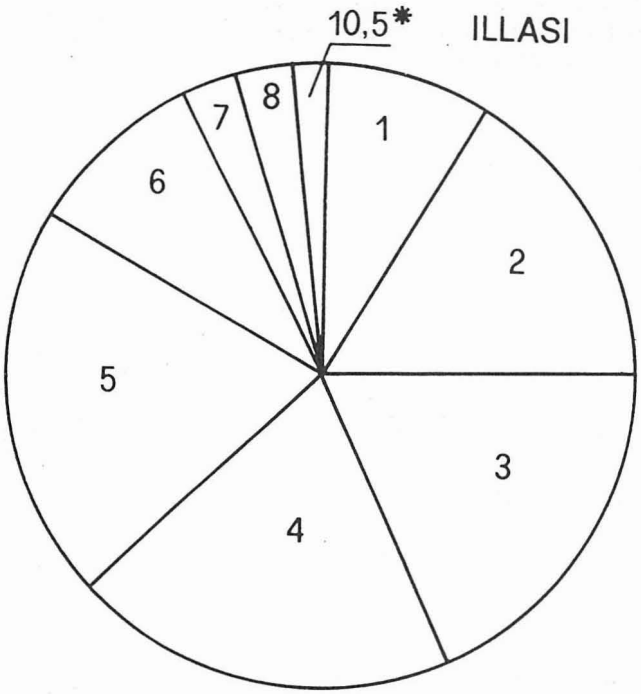

FIG. 13 — N.° of components per family in a lowland locality, with a very good economy, Italian speaking (Illasi near Verona)

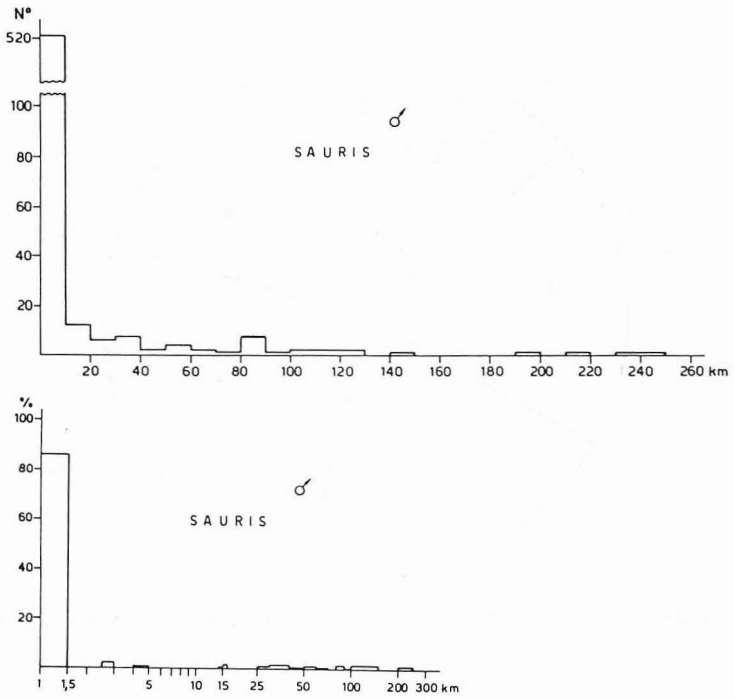

FIG. 14 — Distances covered by a partner for the choice of the other partner prior to marriage, in a montane highly isolated locality (Saurius, males). Top: distance on normal scale; bottom, distance on logarithmic scale

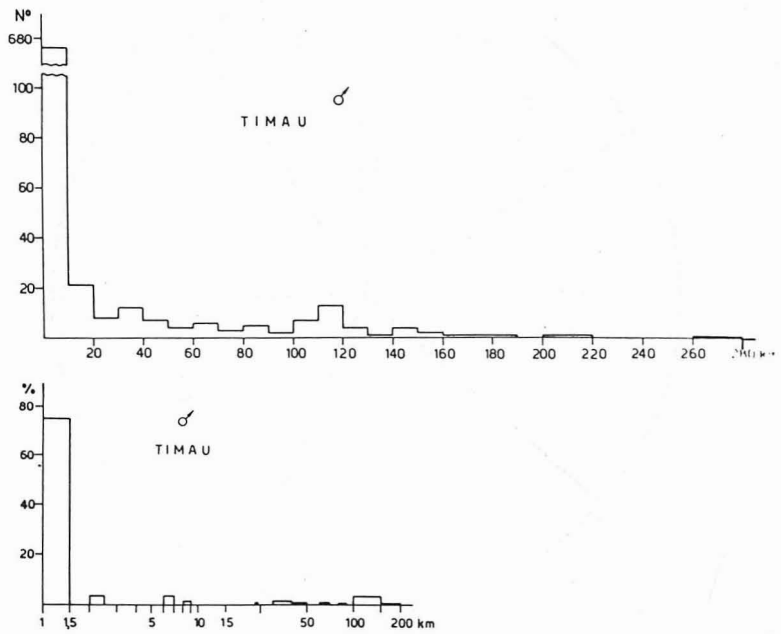

FIG. 15 — The same in a locality of the lowland (816 m), Timau, very easily accessible

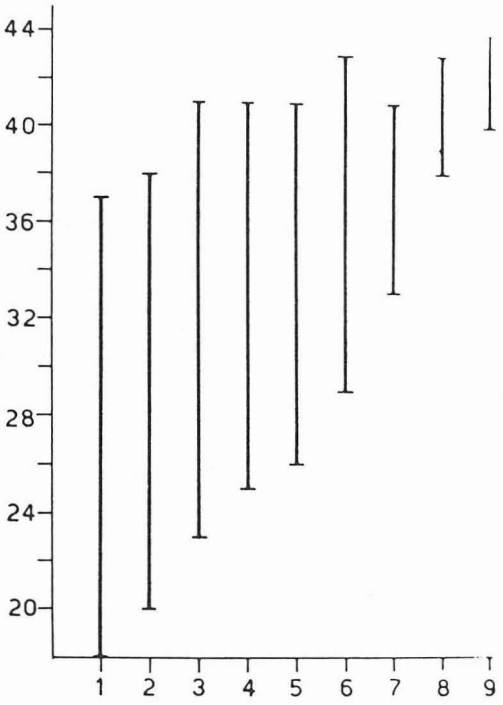

FIG. 16 — Intervals of age of mother at the birth of the various children (from first to 9th) at Bosco Gurin (Tessin)

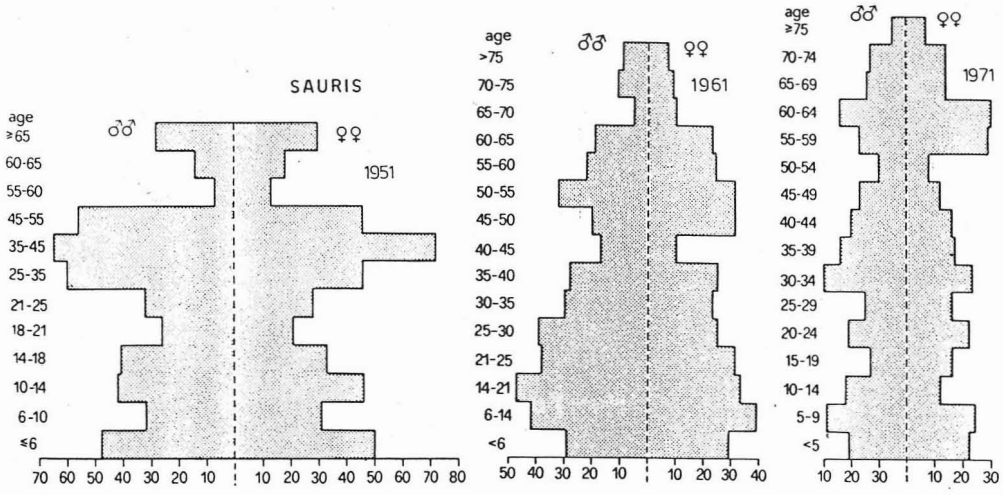

FIG. 17 — Age pyramid of a montane locality, Saurius, with signs of decline

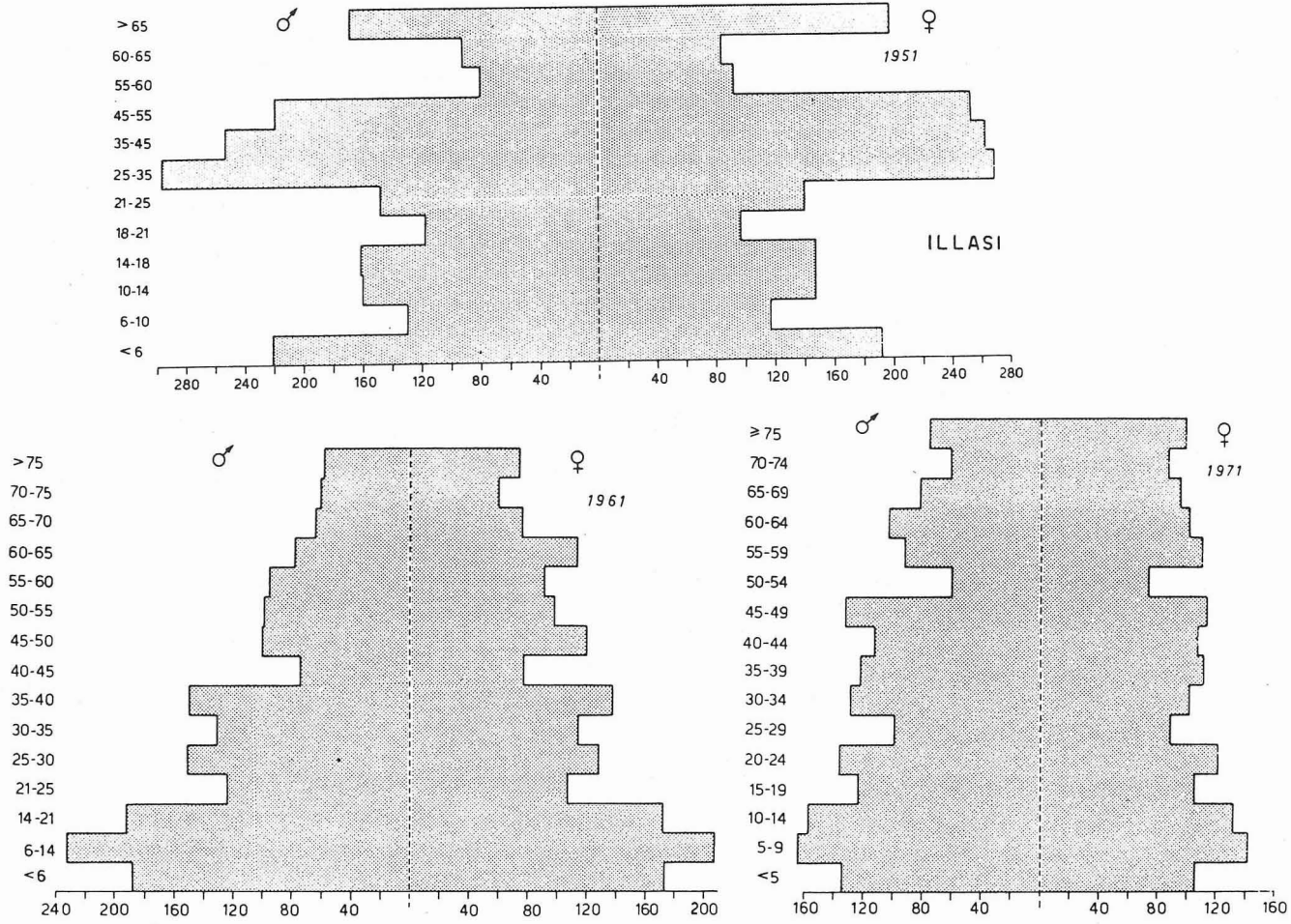

FIG. 18 — Age pyramid of a lowland locality, Illasi, with a population in a stady state, with a very good economy

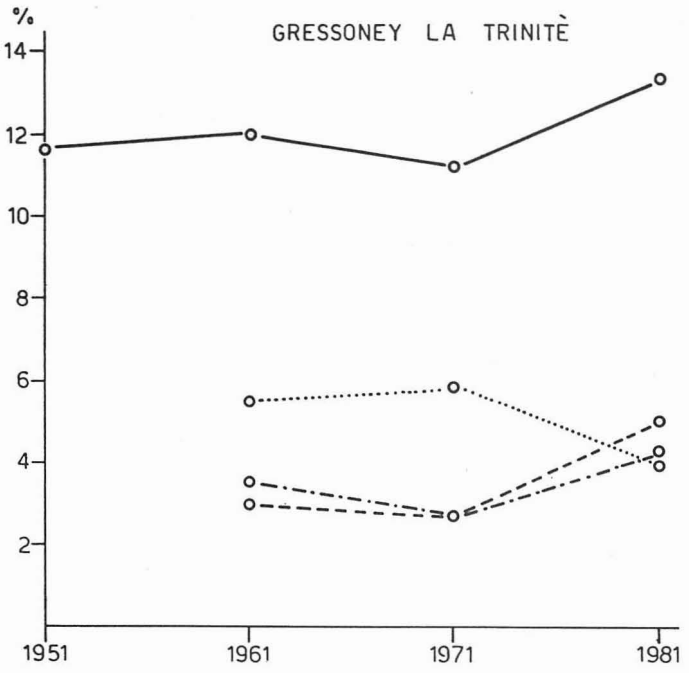

FIG. 19 — The longevity in a Walser population, Gressoney-le-Trinité: — — — 65-70 years; —.—.—. 70-75 years; ..... higher than 75 years

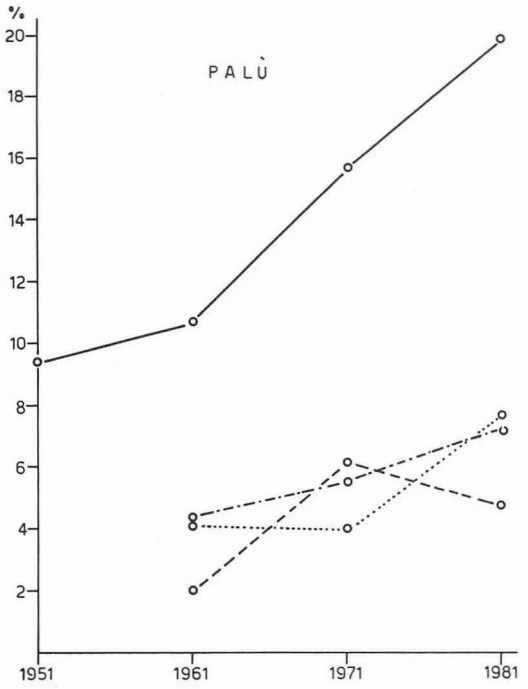

FIG. 20 — The longevity in an Eastern, Bavaro-Tyrolian locality, Palù (Mocheni Valley). Age classes as in Fig. 19