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- a , notation for the variable age, 8
 $b(a, t)$, age-specific fertility rates, 10
 $B(a, t)$, number of babies from mothers of age a , 10
 $B(t)$, births, 10
 $B_m(t)$ and $B_{nm}(t)$, births of married and unmarried women, 38
 $b_{ma}(t)$ and $b_{nma}(t)$, fertility rates for married and unmarried women, 37
 $C(u, v)$, covariance between u and v , 11
 $C(v, \acute{u})$, compositional component of change, 68
 $c_f(a, t) = \frac{N_f(a, t)}{N(a, t)}$, female ratio, 10
 C_m , C_c , C_a , and C_i , indexes of proportion married women, contraception use, induced abortion and lactational infecundability, 40
 CBR , crude birth rate, 10
 $CBR_m(t)$ and $CBR_{nm}(t)$, crude birth rate for married and unmarried women, 37
 $D(a, t)$, number of deaths at age a , 9
 $d(a, t)$, number of deaths in the lifetable, 110
 $D(t)$, total number of deaths during the year, 9
 $d(t) = \bar{\mu}(t)$, crude death rate (CDR), 9
 $D_i(a, t)$, number of deaths of causes of death i , 110
 $e^\dagger(t)$, average number of life-years lost as a result of death, 79
 $e^o(0, t)$, life expectancy at birth, 32
 $e_F^o(0, t)$ and $e_M^o(0, t)$, female and male life expectancy at birth, 81
 $e_i^o(t)$, subpopulation life expectancy, 71
 $f(a, t)$, probability density function describing the distribution of deaths, 78
 F_{ijk} , expected frequencies, 58
 $i(t)$, crude net migration, 43
 $I[0, t]$, net migration, 43
 $I_a(x)$, indicator, 9
 k_1 and k_2 , constants, 127
 $L(x_a, x_{a+1}, t)$, persons-years lived between two years x_a and x_{a+1} , 33
 $m_a(t)$, age-specific death rates, 9
 $m_{ac}(t)$, age- and country-specific death rates, 21
 $N(a, t)$, age-specific population size at age a , 8
 $N_{ac}(t)$, population size defined over age and country, 21
 $N_f(a, t)$, female population size at age a , 10
 $n_i(a, t)$, age-specific subpopulation size, 102
 $N_i(t)$, size of subpopulation i , 71
 $O_{xz}(y)$, occurrences of the event under study (deaths, births, etc.), 23
 P_j , parity progression ratio from parity j to

- parity $j + 1$, 60
 $R(a, t)$, accumulated growth rate from age 0 to a , 44
 $r(a, t)$, age-specific growth rates, 44
 $r(t)$, crude growth rate, 43
 $R^*(t)$, residual function of $R(a, t)$, 47
 $r_B(t)$, births weighted population growth rate, 76
 $r_D(t)$, deaths weighted population growth rate, 74
 $r_i(a, t)$, age-specific subpopulation growth rates, 102
 $r_i(t)$, i th subpopulation growth rate, 71
 $r_k(t)$, age- and country-specific growth rate, 106
 $s(a, t)$, period survival function from 0 to a , 44
 $s_c(a, t)$, cohort survival, 48
 t , notation for the variable time, 7
 $T(a, t)$, persons-years above certain age, 33
 TF , natural fecundability, spontaneous intrauterine mortality and permanent sterility, 40
 TFR , total fertility rate, 39
 TFR^c , cohort TFR , 41
 $U^*(t)$, matrix of death rates, 122
 $V(t)$ and $W(t)$, vectors, 120
 $v(x, t)$, some demographic function, 7
 $v_{x,z}(t)$, variable cross-classified by three factors x , z and t , 20
 $w(t)$, integral over all the values of $w(x, t)$, 8
 $w(x, y)$, weighting function, 7
 $w.(t)$, sum of all the values of $w_x(t)$, 8
 x , variable, 7
 x_i^k , k th power of the independent variable x_i , 56
 x_{ik} , K independent variables, 52
 y_i , dependent variable, 52
 z , variable, 8
 Δ_D , Arriaga's direct component, 34
 Δ_I , Arriaga's indirect component, 34
 Δv , difference operator, 12
 $\acute{v} \equiv \acute{v}(x, t)$, relative derivative or intensity with respect to t , 11
 α_i and β_{ik} , intercept and parameter estimates, 52
 α and β , are the lower and upper limit of childbearing, 39
 \bar{v} , average change, 68
 \bar{a} , average age of the population, 68
 $\bar{a}_i(t)$, average age of subpopulation i , 102
 $\bar{d}_E(t)$, CDR of selected European countries, 21
 $\bar{r}_i(t)$, total subpopulation size, 102
 $\bar{v}(t)$, expectation operator, 7
 $\bar{v}_F(t)$ and $\bar{v}_M(t)$, averages for females and males, 72
 \bar{x}_{ik} , mean of the k th explanatory variable in the i th group, 52
 \bar{y}_i , groups' means, 52
 $\dot{\bar{v}}$, change in the average, 68
 \dot{v} , derivative with respect to t , 10
 $\ell(a, t)$, survival function at age a , 32
 ϵ_a , residual term at age a , 39
 η , scale factor in the log-linear model, 58
 \dot{v} , relative difference operator, 12
 $(w)^{1/2}$, square root of variable w , 25
 $\mathcal{H}(t)$, entropy of the survival function, 33
 $\mu(a, t)$, the force of mortality at age a , 9
 $\mu_i(a, t)$, force of mortality at age a , time t and cause of death i , 35
 $\nu(a, t)$, relative change in population size as age increases, 44
 ω , highest age attained, 9
 $\pi_{ka}(t)$, proportion of persons with characteristic k , at age a and time t , 37
 $\rho(a, t)$, rate of progress in reducing mortality rates, 32
 τ , parameters of main effects and interactions in the log-linear model, 58
 $\tilde{v}(y)$, average of averages, 23
 $\tilde{v}(y)$, alternative averaging procedure, 20
 $\varphi(a, t)$, accumulation of changes in the cohort age-specific mortality rates, 45