

CHAPTER XXVII.

Of some prominent features exhibited by the Law of Mortality.

247. Bearing in mind what has been stated in our foregoing pages, concerning the method of constructing a Law of Mortality, and of deducing from it many useful results; it may not be uninteresting for the reader to find here a synopsis of the prominent features which that law exhibits, including a few results susceptible of further extension by tabulating them referably to each year of age.

248. Confining this synopsis to the results, for each sex, of the general law applicable to an indiscriminate population, exemplified by that of France (see the paragraph 234th, 237th and 238th); the following are relative to *one million* of annual births, and to an equal quantity of annual deaths, supposed to occur under the hypothesis of such population being stationary.

RELATIVE POPULATION *and its distribution.*
(See chapter XXIV.)

	MALES.	FEMALES.
Permanent quantity of population, when stationary; to result from one million of births, annually compensating for an equal quantity of deaths; observing that a summation of all the terms of the decrement shall exceed that quantity by half a million. (See paragraph 48 th).	35 458 282	36 958 282

Permanent distribution of that quantity of stationary population; observing that the proportions of youthful shall exceed those here announced, when the population progressively increases, and the contrary when the population progressively decreases.

	MALES.	FEMALES.
Living at and above 5 completed years.	29 802 080	33 165 248
At and above 10 years.	26 700 472	29 901 223
At and above 15 "	23 711 199	26 743 503
At and above 20 "	20 813 581	23 665 696
At and above 30 "	14 378 646	17 793 908
At and above 40 "	10 597 002	12 471 423
At and above 50 "	6 522 193	7 881 660
At and above 60 "	3 276 407	4 171 266
At and above 70 "	1 152 730	1 605 898
At and above 80 "	224 959	328 829
At and above 90 "	25 389	33 854
Centenarians generally.	2 819	3 206

PERIODIC DEATHS.

(See chapter XV.)

First minimum of the relative quantity of deaths, referred to one million of annual births; which minimum takes place at 13 completed years, for the male sex, and at 15 for the female. .

3539.499	3125 548
----------	----------

Maximum of their relative quantity; occurring at 67 completed years for the male, and at 70 completed years for the female sex.

12855.779	13172.970
-----------	-----------

SPECIFIC INTENSITY OF LIFE.

(See chapter XVI.)

At the birth; being the quantity of those out of which one fails to complete a first year of age.

4.8705	5.6680
--------	--------

Its maximum referable to 13 completed years, for the males, and 14 for the females.

168.3791	200.4973
----------	----------

Its first minimum, occurring at 87 completed years for both sexes; after which the intensity increases to the 94th, and then declines at each subsequent year.

4.7489	4.5953
--------	--------

Its comparison for both sexes at similar ages; or the proportions of superior intensity attending either sex, with reference to those ages, only, at which such superiority — during the intervening periods — alternately rises to a maximum or falls to a minimum, until it is assumed by the other sex :

Proportions of the Females' superiority,	MALES.	FEMALES.
at the birth	1.1432	
at 4 completed years.	1.0529	
at 26 "	1.4278	
at 43 "	1.0364	
at 69 "	1.2178	
at 81 "	1.0025	
Proportions of the Males' superiority.	1.0192	at 82 comp. years.
—	1.0489	at 85 "
—	1.0193	at 89 "
—	1.0827	at 105, 106 and 107.
—	1.0999	at 117, 118 and 119.
—	1.1172	at 129, 130 and 131.
—	1.1349	at 141, 142 and 143.

COLLECTIVE INTENSITY OF LIFE.

(See chap. XII.)

At the birth, and then being identical with the Absolute intensity.

33.4583	36.9583
---------	---------

Its maximum, referable to the 5th completed year and all superior ages, for both sexes.

46.6857	49.4248
---------	---------

Its first minimum, referable for both sexes to the 85th and all superior years. . .

4.4560	4.2605
--------	--------

Its measure of years, referable to the probably oldest individual including any possibly older; that probable age being 128 years for a male, and 126 for a female.

2.5920	2.3358
--------	--------

Its measure referable to two joint lives, at the birth.

16.6574	19.5862
---------	---------

Its measure at the birth, with reference to either of those lives eventually surviving the other.

50.2592	54.3304
---------	---------

EQUATION OF LIFE.

(See chapter XIII.)

At the birth, the probabilities being then equal, of attaining, or not, the age of its maximum, referable for both sexes to the 4 th completed year of age.	51.885	59.671
Its first minimum, referable for both sexes to the 86 th completed year.	50.965	55.460
Its measure of years referable to the probably oldest individual, then having completed 128 years, if a male, and 126 years if a female.	2.956	2.856
Its measure referable to two joint-lives, at their birth.	1.827	1.675
Its measure then referable to the eventual survivor of those two lives.	2.188	2.997
	51.978	56.858

YEARS OF AGE.

At which the Specific intensity of life equalizes with the Absolute intensity referred to the population at large.	55	55
At which the Equation of life ceases to exceed the measure of its Collective intensity.	45	48
The utmost probably attainable by one individual only; —		
Amongst one million' born in any year.	128	126
Amongst those born during ten years.	154	151
Amongst those born during one hundred years.	159	136
Amongst those born during a thousand years.	145	140
At which the surviving females become more numerous than the males, although the births of the latter sex are understood to exceed those of the former;		
— First, supposing 21 male births to 20 female.	"	4 to 5
— Secondly, supposing 17 male births to 16 female.	"	17 to 18
At which the surviving males recommence being more numerous than the females;		

- First, supposing equal quantities born of each sex. 109 to 110 years.
- Secondly, supposing 21 male births to 20 female. 107 to 108 years.
- Thirdly, supposing 17 male births to 16 female, as experienced in France of late years. 106 to 107 years.

At which any quantity of individuals born are reduced, by the deaths:—		
To one-half.	51.885	59.671
To one-third.	54.227	58.687
To one-fourth.	62.010	65.562
To one-fifth.	66.014	69.595
To one-sixth.	68.615	71.927
To one-eighth.	71.962	75.158
To one-tenth.	74.128	77.145
To one-twenty-fifth part.	80.725	82.897
To one-hundredth part.	87.565	88.817
To one-thousandth part.	98.165	99.251

At which any quantity of couples simultaneously born would be so reducible, by the death of any one of each two joint-lives:—		
To one-half.	2.188	2.997
To one-third.	18.105	27.559
To one-fourth.	51.884	59.672
To one-fifth.	59.452	46.540
To one-tenth.	56.007	60.190
To one-hundredth part.	74.156	77.155
To one-thousandth part.	82.026	85.996
To a single surviving couple.	101 years.	102 years.

249. The above with other corresponding statements, all referred to each year of age, to each sex, and to Joint as well as to Single lives of each discriminated class, — together with the valuations, similarly referred, of contingencies variously described in our next chapter, — form numerous sets of Tables that convey information on important points concerning social life.