THE RELATIONS OF RACE AND NATIONALITY TO MORTALITY

IN THE UNITED STATES.*

[PLATE XLIV, Fig. 3.]

BY THE COMPILER OF THE ATLAS.

THE gross incompleteness of the Returns of Deaths, in a census of the United States, is shown in Mr. Elliott's paper, "An approximate Life-table," etc., which accompanies Plates XXXVIII and XXXIX (Part III); and the Compiler has, in a note to that paper (page 1), sought to state the main reasons for the omissions which are admitted to occur in enumeration.

What, it may be asked, can be the value of statistics confessedly so imperfect? Can any deductions be made with confidence from returns of mortality, which omit one-third or more of the deaths which occurred within the period which the returns profess to cover? I shall attempt to answer this question only so far as relates to the immediate subject of the present discussion, the Relations of Race and Nationality to Mortality in the United States.

Can we assume that the omissions acknowledged occur so uniformly among the several races and nationalities represented in a census of the United States, as to allow conclusions to be founded with assurance upon the relations which are disclosed by the body of deaths actually reported?

I answer that the several elements of our population, with respect to race and nationality, are *not* so placed that we can assume that error is quite as likely to occur in the enumeration of one as of another, and consequently that, in covering so large a field, errors may be relied upon to balance each other, leaving a result of substantial accuracy. On the contrary, the tendency to omission in the enumeration of deaths varies with the intelligence of the several communities, the density of settlement, the prevailing occupations of the people, and the habits of life, so far as these affect the permanence of residence. It is notorious that the several elements of our population are, the country over, variously placed with reference to these conditions. Hence we may not assume an equal liability to omission in all. Undoubtedly, some of the elements we are to consider are more concerned in the defects of the census law than others; and these differences I believe to be sufficiently great to invalidate conclusions based on anything like a nice determination of preponderance in the census statistics of mortality.

To enter into such a discussion of this subject as would serve to establish, even provisionally, the order in which the several elements sustain loss from the causes indicated; much more, to seek to determine the exact degree of such loss within each such element, would occupy more of space than remains at my disposal. I will, therefore, content myself with expressing the conviction, arising out of a long and careful examination of the subject, that in no case, the most extreme, do the proportions disclosed by the census statistics of mortality by race and nationality depart, *as between any one element and another*, to the extent of five per cent. from the real facts of mortality as they existed during the census year; while in the great majority of cases, one, two, or three per cent. would amply cover the margin of disturbance due to the causes indicated. If this belief be correctly founded, the results arrived at in the following discussion may be accepted as true, for I shall restrict myself at the present time to the exposition of those relations which are determined by preponderances too large to come within any reasonable limits of error.

The total number of deaths reported in the census of 1870, when reduced to thousandths, was distributed as follows, among the several elements of population which it is proposed in the present paper to take into account: Native white, 726; native colored, 137; total native, 863; total foreign, 134, of which there were, Irish, 55; Germans, 38; English and Welsh, 15; Swedes, Norwegians, and Danes, 4; Scotch, 4; French, 3.

The total population of the United States at the date of the enumeration, when likewise reduced to thousandths, was distributed as follows: Native white, 730; native colored, 126; total native, 856; total foreign, 144, of which there were, Irish, 48; Germans, 44; English and Welsh, 16; Swedes, Norwegians, and Danes, 6; Scotch, 4; French, 3.

Comparing, now, the number of deaths returned for each enumerated element of population, with the number of living inhabitants representing the same, we have the number of deaths in each to each 1000 living persons, as follows: Native white, 12.7; native colored, 13.9; total native, 12.9; total foreign, 11.8; Irish, 14.6; Germans, 11; English and Welsh, 11.4; Swedes, Norwegians, and Danes, 9.2; Scotch, 12.5; French, 14.

Figure 3, Plate XLIV, exhibits to the eye the proportions above expressed, with others which are deemed essential or advantageous for the discussion of the relations of race and nationality to mortality.

The first four vertical lines, counting from the left, relate to the number of living inhabitants on the 1st of June, 1870, the first representing the aggregate population; the second, third, and fourth, the population, respectively, above ten, above twenty, and above thirty years of age. The fifth line represents the aggregate body of deaths reported as occurring during the census year as above. The group of twelve lines next succeeding represent the body of deaths occurring within each important group of diseases. The group of twenty-one lines which complete the diagram represent the body of deaths occurring within each of the enumerated special diseases or subordinate groups of diseases. The thirty-eight vertical lines described are crossed by lines which show the division of each of the thirty-eight subjects represented, among the larger elements of the population which have been taken for our present consideration. The scale of the diagram will not allow the lines representing the Swedes, Norwegians, and Danes, the Scotch and the French to be laid down. These proportions are also, for further convenience of comparison, expressed in parts of 1000 in the following table, in which the nationalities omitted from the diagram appear:—

TABLE I.—A.

Groups of Diseases.	Aggregate.	Native White.	Native Colored.	Total Native.	Total Foreign.	Irish.	Germans.	English and Welsh.	Swedes, Norwegians, and Danes.	Scotch.	French.
All Diseases	**1000**	**726**	**137**	**863**	**134**	**55**	**38**	**15**	**5**	**4**	**3**
General Diseases—A	1000	772	139	911	87	25	29	9	7	2	2
General Diseases—B	1000	662	122	784	214	97	59	19	5	6	5
Diseases of the Circulatory System	1000	684	96	780	217	94	60	29	4	6	6
Diseases of the Urinary System and Organs of Generation	1000	599	125	724	274	121	79	30	6	7	6
Diseases of the Respiratory System	1000	711	179	890	109	45	31	12	3	3	3
Diseases of the Digestive System	1000	782	119	901	97	37	27	12	5	3	3
Diseases of the Organs of Locomotion	1000	796	106	902	95	46	22	11	3	4	3
Diseases of the Nervous System	1000	795	108	903	95	36	28	13	2	3	3
Diseases of the Integumentary System	1000	751	182	933	66	27	15	11	1	2	1
Conditions not necessarily associated with general or local diseases	1000	741	124	865	130	63	34	13	2	4	3
Accidents and Injuries	1000	582	178	760	222	94	56	28	7	5	5
Other and Unknown	1000	674	227	901	89	41	22	8	3	2	2

TABLE I.—B.

Special Diseases.	Aggregate.	Native White.	Native Colored.	Total Native.	Total Foreign.	Irish.	Germans.	English and Welsh.	Swedes, Norwegians, and Danes.	Scotch.	French.
Bright's Disease of the Kidneys	1000	522	35	557	438	253	93	48	6	12	3
Apoplexy	1000	672	62	735	259	99	85	36	3	7	9
Cancers	1000	684	61	745	253	104	78	30	3	10	10
Consumption	1000	661	111	772	226	108	59	19	6	5	22
Rheumatism	1000	648	157	805	193	76	55	20	8	6	7
Paralysis	1000	760	63	823	173	71	44	30	2	7	5
Cerebro-Spinal, Enteric, and Typhus Fevers	1000	718	135	853	144	43	48	13	13	3	3
Pleurisy and Hydrothorax	1000	597	260	857	142	54	42	14	3	5	6
Bronchitis	1000	769	90	859	137	73	31	12	2	3	4
Small Pox	1000	632	228	860	131	27	58	5	3	*	3
Pneumonia	1000	688	193	881	117	48	33	14	3	3	3
Diarrhœa, Dysentery, and Enteritis	1000	762	123	885	113	44	31	13	7	3	3
Erysipelas	1000	851	36	887	109	39	34	15	3	5	3
Intermittent and Remittent Fevers	1000	647	255	902	96	32	32	8	3	2	4
Encephalitis and Meningitis	1000	804	144	948	51	17	15	6	2	2	1
Scarlet Fever and Diphtheria	1000	928	27	955	44	8	13	8	3	1	*
Measles	1000	734	223	957	42	7	10	5	11	2	*
Scrofula	1000	700	266	966	34	10	7	4	3	1	1
Hydrocephalus	1000	918	50	968	32	9	7	4	*	1	1
Croup	1000	828	153	981	19	3	7	3	1	*	*
Hooping Cough	1000	796	191	987	13	2	3	2	2	1	*

* Less than one in each 1000.

We have previously expressed the belief that the statistics of mortality as reported in the census approximately *represent* the facts of mortality throughout the United States, notwithstanding the considerable omission which is acknowledged to take place in the aggregate number of deaths. It is a different question, however, whether the facts of mortality as they exist in the country can, without important corrections, be held to represent, even approximately, the relations of the several elements of the population, as respects their vitality or their liability to specific forms of disease. Indeed, examination will disclose that two very important corrections require to be made before the several elements of the population can fairly be put in comparison with each other as to their respective vitality, or their liability to specific forms of disease. It is to the discussion of these corrections that this paper will be mainly devoted. The necessity of the first correction is discovered by observing the proportions in which the deaths from children's diseases, represented by the seven vertical lines on the extreme right of the diagram, are divided between the native and the foreign population. The abruptness with which the lines representing the foreign elements here rise and almost run out at the top of the figure, would convince the most casual observer, either that the returns of the census are exceedingly defective in respect to deaths from these diseases, or else that some important correction requires to be made before the several foreign elements can fairly be brought, in these respects, into comparison with the native white and native colored elements of the population. Reference to the series of figures on Plate XXXIX, shows that a most important correction does require to be made on account of

The Excessive Disproportion between the Number of Adults and of Children within our Foreign Population.

Giving our attention first to that disproportion as it exists with reference to children under ten years of age, we have the following facts: Number of children under ten years of age in each 1,000 of the total population, 268; number of children under ten in each

* This paper is in substance identical with that read by the author before the American Public Health Association at its meeting in New York in 1873, and published in the Transactions of that year.

1,000 of the native population, 306; number of children under ten in each 1,000 of the foreign population, 47.

If, now, the liability to death were observed to be the same in each period of life, no correction on account of this relative deficiency of children of foreign birth would need to be introduced in a comparison of the grand elements of native and foreign, in respect to their relative vitality; but if there is observed to be an excessive liability to death at early ages, we must either eliminate all deaths at such ages before making comparison of these elements, or we must assume to add to the foreign population a corresponding number of children and to the foreign deaths a corresponding mortality among such children. As matter of fact we find that 41.4 per cent. of the whole body of deaths occur under five years of age, and 46.7 per cent. under ten years of age, while of the total living inhabitants only 14.3 per cent. were found to be under five years of age, and only 26.8 per cent. under 10 years of age. Vol. on "Vital Statistics," Ninth Census, 1870. Cf. Pl. XLIII.

Let us seek to exclude the deaths occurring under ten years of age. We do not know the distribution of the deaths within this period of life between the native and foreign elements; but the foreign population under ten is relatively so small that it makes very little difference in the adult mortality what per cent. be taken (within reasonable limits) for the unquestionably greater liability to fatal diseases of the children of foreign birth. If we assume the proportion of deaths to living persons to be greater by 30 per cent. in the foreign than in the native population under ten, and thereupon reject from consideration *all* deaths occurring in this period of life, we shall have the following ratios:

Deaths to each 1,000 living inhabitants over 10 years of age:

NATIVE 8.84
FOREIGN 11.2

But this correction on account of the number of children of foreign birth requires to be made not alone in the aggregate of deaths from all causes as above, but is even more imperatively demanded in treating of the body of deaths occurring within most special diseases, and groups of diseases. Thus it is evident that where the distribution by age and sex of the deaths occurring from any specified disease or group of diseases conforms substantially to the distribution of the total body of deaths by age and sex, there the correction already indicated will serve approximately for such disease or group. But where diseases or groups of diseases vary widely, as in fact most do, from the type afforded by the aggregate of deaths from all causes, in respect to the proportion of deaths occurring under ten years of age, the effect of the deficiency noted in the number of children of foreign birth will be greater or less, according as such diseases or groups of diseases are found to be more fatal or less fatal in the early periods of life than are the whole body of diseases taken together. Thus, referring to the series of figures numbered 2 on Pl. XLIII, while of all diseases, 467 deaths in each 1,000 are under ten years of age, of the deaths from the Febrile Group of General Diseases (General Diseases "A"), not less than 603 in each 1,000 occur under ten years of age. It is evident, therefore, that the share of the foreign element in the deaths from these diseases should be less than its share in the whole body of deaths from all diseases; and accordingly we find (Pl. XLIV, fig. 3) that, while of all diseases 134 deaths in each 1,000 occur among the foreign population, only 87 in each 1,000 deaths from this group of diseases occur among the foreign population.

On the other hand, of deaths from the Constitutional Group of General Diseases (General Diseases "B"), only 108 in each 1,000 occur under the age of ten years. Now, as the foreign population consists much more largely than the native of persons within that period of life, namely, above ten years, in which diseases of this group are found to be more fatal, we should expect to find the share of the foreign element in deaths from diseases of this group much greater than their share of the total body of deaths, and of course much greater still than their share of deaths from General Diseases "A." Accordingly we find that of 1,000 deaths from diseases of the Constitutional Group, 214 occur among the foreign population. That, over and above the proper effect of the deficiency in the foreign children, peculiarities of stock, breeding, and condition may tend to produce a larger proportion of deaths from the diseases of the Constitutional Group than of the Febrile Group, among the foreign population, I do not question; but it is evident that the astonishing disproportion which appears at first sight between the deaths within the foreign population from these two groups of causes (that is to say, 87 in each 1,000 from the Febrile Group to 214 in each 1,000 from the Constitutional Group), does not wholly represent real differences in the liability to peculiar forms of disease, but mainly this abnormal distribution of the foreign population by periods of life.

Proceeding to examine in the same manner the most important remaining groups of diseases in this respect, we find that of each 1,000 deaths from all diseases of the Nervous Group, 591 occur under the age of ten years. Unless, therefore, the foreign population have some very marked and urgent predisposition to diseases of this class, we should expect to find their share of this body of deaths less than their share of the aggregate mortality of the country; and accordingly we find that only 95 in each 1,000 of the deaths from this group occur in the foreign population.

Strongly contrasted in this respect with the diseases of the nervous system, are the diseases of the circulatory system, from which only 129 deaths in each 1,000 occur under ten years of age. Unless there is some marked indisposition of the foreign population to diseases of this class, we should expect to find their share of this body of deaths far greater than their share of the deaths from all causes, and slightly greater than their share of the deaths from General Diseases "B," in which, as we have seen, 108 deaths only in each 1,000 are under the age of ten years. The results correspond to the conjecture. Of 1,000 deaths from diseases of the circulatory system, 218 occur within the foreign population.

Again, of the deaths from the diseases of the respiratory system, 503 in each 1,000 are under the age of ten years, and the proportion of deaths from this class of causes within the foreign population sinks to 109 in each 1,000.

On the other hand, of the deaths from diseases of the urinary system and the organs of generation, including affections connected with pregnancy, only 40 in each 1,000 occur under the age of ten years, and as the foreign population consists much more largely than the native of persons within the period of life within which the great bulk of deaths from these diseases occur, their share in the mortality from causes of this class is found to be much greater than their share of the aggregate mortality, being not less than 286 in each 1,000.

Of the deaths from diseases of the digestive system, lastly, not less than 686 occur under ten years, and the deaths within the foreign population from diseases of this group sink to 98 in each 1,000.

For the purposes of this comparison, I have also taken nine special diseases or subordinate groups of diseases, in which the proportion of deaths under ten exceeds that of the general body of deaths. The following table exhibits the proportions maintained in these cases, the first sum against each title of disease representing the number in each 1,000 deaths from such cause or causes which occur under ten years of age, the second sum representing the number in each 1,000 which occur within the foreign population.

TABLE II.

NAMES OF DISEASES.	Number under Ten Years of Age, in each 1,000 Deaths.	Number within the Foreign population, in each 1,000 Deaths.
All Diseases	**467**	**134**
Small Pox	564	132
Bronchitis	577	137
Diarrhœa, Dysentery, and Enteritis	761	113
Measles	804	42
Diphtheria	854	41
Scarlet Fever	906	45
Hydrocephalus	925	32
Hooping-Cough	985	13
Croup	988	19

Now, if the reason of the comparatively small number of deaths occurring within the foreign population from the above mentioned diseases, is found alone in the deficiency of foreign children, it is evident that, inasmuch as the proportion of deaths under ten is here greater than the proportion of deaths under ten from all diseases, the share of the foreign population in the deaths from each and all such specified causes should be less, and less in a degree corresponding generally to that excess of the total number of deaths under ten. If, on the contrary, we find that, as the proportion of deaths under ten increases in respect to any disease, the share of the foreign population in the whole body of deaths from that cause remains nearly the same or becomes greater than the share of the foreign population in the whole body of deaths from all causes, we have a very strong assurance that the foreign population has a decided liability to this form of disease.

Applying this principle, it will be observed that in eight of these nine cases, the proportion of deaths from such causes among the foreign population is less than the proportion of deaths from all causes within the foreign population. This is as was to be expected, except upon the assumption that the foreign population had a peculiar predisposition to such forms of disease. In one case, however, that of bronchitis, while the proportion of deaths under ten years of age is greater by 110 in each 1,000 than the proportion of the whole body of deaths, the share of the foreign population in this body of deaths is greater by three in the 1,000 than its share in the deaths from all causes, proving conclusively the exceptional tendency of the foreign population to this form of disease in a fatal degree. In two other cases, namely, those of small-pox and of the group, diarrhœa, dysentery, and enteritis, while the share of the foreign population in deaths from these causes is less than its share of deaths from all causes, it is not less in any such degree as to correspond to the increased proportion of mortality under ten years of age; and I think it, therefore, perfectly safe to conclude from this exhibit, without further inquiry, that the foreign population have also a very distinct predisposition to these forms of disease in a fatal degree.

Looking at the six remaining cases in the above table, we can, without deeper investigation, determine certain relations, as, for example, that scarlet fever is relatively more fatal to the foreign population than measles or diphtheria; but we cannot with assurance determine as to the comparative mortality of the native and of the foreign populations from these forms of disease without additional information, which is given in the following table, the analysis in respect to these diseases being carried down below the period of five years, the several years under five being taken separately, and the figures relating to each year under each title of disease being compared with the proportion of the total population in each such period of life which is of foreign birth, and the figures being also given separately for each five years upward to twenty.

TABLE III.

PERIOD OF LIFE.	Proportion of Foreign to Total Population.	DEATHS IN EACH 1000 FROM					
		Measles.	Diphtheria.	Scarlet Fever.	Hydro-cephalus.	Hooping-Cough.	Croup.
Under 1	.005	202	160	103	447	492	455
1	.010	241	158	146	259	231	197
2	.015	136	126	161	99	118	130
3	.020	79	117	144	43	59	88
4	.026	42	87	113	26	33	53
5 to 10	.036	104	206	239	51	52	65
10 to 15	.043	40	53	56	18	9	6
15 to 20	.082	39	22	16	10	2	2

Now, since 103 deaths in each 1,000 from scarlet fever, to take an instance from the above table, occur under the age of one year, and as but .005 of the population within that

period of life are of foreign birth, it will follow, if we assume no more than an equal liability to this disease on the part of this element of the population, that of these 103 deaths, but .515 (fractions being preserved throughout this computation) occur among the foreign children. As 146 deaths additional in each 1,000 occur between the ages of one and two, and as but .01 of the total population within this period are of foreign birth, it would follow, that of these 146 deaths, but 1.46 occur among the foreign children. In the same way we should find that, of the 161 deaths from this cause between the ages of two and three, but 2.415; of the 144 deaths between three and four, but 2.88; of the 113 deaths between four and five, but 2.938; of the 239 deaths between five and ten, but 8.604; of the 56 deaths between ten and fifteen, but 2.408; and of the 16 deaths between fifteen and twenty, but 1.312 occur among the population of foreign birth, making the proportionate share of the foreign population in the 978 deaths enumerated out of each 1,000 from this disease, but 22.532. If we assume the mortality among this element of the population from this cause to be 30 per cent. greater than that of the native population, the contribution of foreign children to the 978 deaths which occur under twenty years out of each 1,000 deaths at all ages from scarlet fever, would still be but 29.6, leaving even at this extreme assumption, out of each 1,000 deaths from this cause among all classes not less than 15.4 deaths among the foreign population above twenty years of age. But as only 22 deaths in each 1,000 from this cause occur above twenty years of age, among all classes of the population, and as the foreign element constitutes but 24.6 per cent. of the total population above twenty, it would follow that their proportional share of this latter body of deaths would be but 5.412. Hence we must conclude either that the mortality among the foreign population from this cause under twenty years must be greater than that of the native population by much more than the 30 per cent. assumed, or else that the mortality from this cause among the adult foreign population is excessive in a most extraordinary degree.

Subjecting to the same analysis the figures relating, severally, to the remaining seven diseases on our list, we have results which appear to establish a mortality among the foreign population from croup and hydrocephalus, proportionally greater than that of the native population, while measles, diphtheria, and hooping-cough would seem to be less fatal to the foreign than to the native population.

On the other hand, there are eight special diseases which may be taken for the purposes of this comparison, in which the proportion of deaths under twenty is less than that of the general body of deaths, and the share of the foreign population is accordingly greater, often in a very important degree, than its share of the aggregate of deaths from all causes.

The following table exhibits the proportion maintained in these cases, the first sum against each title of disease representing the number in each 1,000 deaths from such cause which occur under twenty years of age, the second sum representing the number in each 1,000 occurring within the foreign population.

TABLE IV.

Names of Diseases.	Number under 20 Years of Age in each 1,000 Deaths.	Number within the Foreign Population in each 1,000 Deaths.
All Diseases	**541**	**134**
Cancers	58	253
Paralysis	59	174
Apoplexy	78	260
Bright's Disease of the Kidneys	140	440
Consumption	174	226
Hydrothorax	204	112
Rheumatism	236	193
Pleurisy	247	216

Applying to the above figures a method of analysis similar to that applied to the figures in Table III, we seem to establish beyond controversy the excessive fatality among the foreign population of Bright's disease of the kidneys, the somewhat greater liability of this element of the population to deaths from cancers, pleurisy, and apoplexy, and, on the other hand, their comparative immunity from death from paralysis, rheumatism, and hydrothorax. In respect to consumption the foreign population of the country would seem to stand in about the same relation as the native population within corresponding periods of life.

A second important correction, however, requires to be introduced before we can make satisfactory comparison between the reported mortality of the Colored and the Foreign elements of our population. This correction is on account of

The Complemental Location of these Two Elements.

Speaking broadly, where the blacks are found in the United States, the foreigners are not. There are only five (5) States in which the two elements, each in any considerable degree, are found together. These are Delaware, Kentucky, Maryland, Missouri, and West Virginia (the District of Columbia falls in this group), with an aggregate population of 4,521,929, of whom 411,558 are foreign, and 599,850 are colored. South and southwest of these lie eleven (11) States, with an aggregate population of 9,487,386, of whom 210,684 are foreign, and 3,939,032 are colored. Again, to the north and northwest of the first mentioned States are eighteen (18) States with an aggregate population of 23,544,365, of whom 4,626,809 are foreign and 334,653 are colored. The Pacific States and the territories are excluded for the purposes of this comparison. I cannot satisfy myself from the data given, whether any correction needs to be introduced on account of this complemental relation* of these two elements of the population, before comparison is made between the (aggregate) mortality of the colored and the foreign elements. But it is clear that the apparent liability of these two elements to certain forms of disease may be very greatly affected by this complemental location. If there are diseases which especially prevail at the South, it is to be expected that the colored population, being so largely found within that section, will suffer more from such diseases than the native white population which is distributed with greater uniformity over the whole country, and still more, in a high degree, than the foreign population which is scarcely represented in the lowest group of States described. On the other hand, the foreign population may, by the mere force of its location, and not by any constitutional liability, sustain a greater loss from diseases specially characteristic of the northern group of States.

Let us compare the mortality from intermittent and remittent fevers with that from consumption. The population of the northern group of States being 61 per cent. of the total population of the country, we find 69.5 per cent. of the deaths from consumption and 30.1 per cent. of the deaths from intermittent and remittent fevers occurring in this group. The population of the middle group of States being 11.8 per cent. of the total population of the country, we find 11.9 per cent. of the deaths from consumption, and 14.1 per cent. of the deaths from intermittent and remittent fevers occurring within this group. The population of the southern group of States being 24.6 per cent. of the total population of the country, we find 16.2 per cent. of the deaths from consumption and 53.7 per cent. of the deaths from intermittent and remittent fevers occurring within this group.

It is clear, therefore, that the diseases thus taken for comparison are in a high sense complemental as to their range. There is a middle belt, in which the two are in a degree found together, a northern group in which the first is found in a very high, and the second in a very low degree, and a southern group in which these relations are reversed.

It is evident, therefore, that in respect to these diseases, the colored population of the South ought to be compared with the foreign population of the South, and not with the foreign population of the whole country; and, on the other hand, the foreign population of the North ought to be compared with the colored population of the North, and not with the colored population of the whole country.

I have treated according to this plan four important diseases and subordinate groups of diseases, which are known to have exceptional relations to temperature,† with the following results:—

TABLE V.

Names of Diseases.	The United States.			The Northern States.			The Middle States.			The Southern States.		
	Native White.	Native Colored.	Foreign.	Native White.	Native Colored.	Foreign.	Native White.	Native Colored.	Foreign.	Native White.	Native Colored.	Foreign.
Population	**727**	**127**	**144**	**789**	**14**	**197**	**776**	**133**	**91**	**563**	**415**	**22**
Consumption	662	112	226	697	32	271	659	200	141	537	400	63
Diarrhœa, Dysentery, and Enteritis.	763	123	114	847	13	140	804	102	94	530	418	52
Intermittent and Remittent Fevers.	648	256	96	831	18	151	782	94	124	505	441	54
Pneumonia	688	194	118	799	27	174	746	168	86	475	501	24

The greater liability of the colored population to malarial than to intestinal diseases in the northern and in the southern States, with the reversal of this proportion in the middle group, the high rate of mortality among the colored population from consumption in the northern States (32 : 14), being rapidly reduced as we pass through the middle belt (200 : 133) until it falls below average (400 : 415) in the congenial climate of the South; the wider liability of the same race to the acuter form of lung disease, not so excessive in the North, but more fully sustained through the transition southward (27 : 14, 168 : 133, 501 : 415); the increasing fatality of each specified form of disease as the foreign population moves southward, most marked, however, as is natural, in the case of the two groups of diseases especially characteristic of the South; and finally the uniformity with which the native white population contributes to the mortality from each specified cause in each section of the country by turns, as contrasted with the fluctuations among the colored and the foreign elements of the population,—these are the most noticeable features of this table. As the diseases mentioned are the cause of 32.1 per cent. of all the deaths occurring in the country, the importance of this discussion of their complemental relation cannot be exaggerated.

In the use of the above table, it should be noted that while before comparing the foreign population within any geographical section, with either the native white or the colored population of that section, the correction heretofore noted as required on account of *the deficiency of foreign children* must be made, the foreign population in one section may, without any such antecedent correction, be compared with the foreign population of any other section,‡ as the deficiency of foreign children may, for the purposes of so large a comparison, be assumed to be uniform as between sections.

Such being the readiness and the (comparative) certainty of comparisons between the several constituents of the foreign population, we present in the following table the contributions, in parts of 1,000, made by each specified foreign nationality to the total number of deaths from each enumerated cause, within the total foreign population.

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* The correction on account of the deficiency in foreign children must, however, still be carried through in comparisons between these two elements, as the colored population of the United States is of normal growth, and contains its due proportion of persons of the early periods of life.

† The statistical proof that these diseases sustain important relations to temperature, is exhibited graphically in the appropriate figures in Series No. 2, Pl. XLIV.

‡ The native white and the colored population may be compared with each other in any section, without any important correction, both elements being of normal growth.

TABLE VI.—A.

Groups of Diseases.	Total Foreign.	Irish.	Germans.	English and Welsh.	Swedes, Norwegians, and Danes.	Scotch.	French.
All Diseases	**1000**	**410**	**282**	**108**	**34**	**27**	**25**
General Diseases—A	1000	282	329	101	78	22	23
General Diseases—B	1000	454	276	90	24	26	23
Diseases of the Circulatory System	1000	431	279	134	18	26	30
Diseases of the Urinary System and Organs of Generation	1000	442	289	108	22	25	21
Diseases of the Respiratory System	1000	408	287	112	29	27	29
Diseases of the Digestive System	1000	379	280	121	51	28	27
Diseases of the Organs of Locomotion	1000	477	231	108	28	38	33
Diseases of the Nervous System	1000	378	292	142	21	36	27
Diseases of the Integumentary System	1000	417	236	160	17	27	22
Conditions not necessarily associated with general or local diseases	1000	478	260	101	12	32	27
Accidents and Injuries	1000	424	251	125	30	23	22
Other and Unknown	1000	461	243	88	38	23	20

TABLE VI.—B.

Special Diseases.	Total Foreign.	Irish.	Germans.	English and Welsh.	Swedes, Norwegians, and Danes.	Scotch.	French.
Bright's Disease of the Kidneys	1000	576	213	110	13	28	8
Apoplexy	1000	381	328	139	9	28	34
Cancers	1000	412	307	117	11	41	39
Consumption	1000	478	262	84	25	24	20
Rheumatism	1000	392	284	103	39	30	36
Paralysis	1000	409	253	173	11	41	26
Cerebro-Spinal, Enteric, and Typhus Fevers	1000	302	322	90	88	20	24
Pleurisy and Hydrothorax	1000	380	299	99	19	36	43
Bronchitis	1000	534	228	87	16	25	31
Small Pox	1000	203	441	36	25	3	24
Pneumonia	1000	413	284	116	27	29	29
Diarrhœa, Dysentery, and Enteritis	1000	384	271	118	66	30	28
Erysipelas	1000	358	309	133	29	44	23
Intermittent and Remittent Fevers	1000	328	335	83	34	18	45
Encephalitis and Meningitis	1000	332	301	121	38	34	21
Scarlet Fever and Diphtheria	1000	192	283	189	75	28	7
Measles	1000	175	240	123	255	39	8
Scrofula	1000	287	218	113	78	17	26
Hydrocephalus	1000	277	231	139	15	23	31
Croup	1000	163	366	159	64	25	10
Hooping Cough	1000	153	254	161	178	68	..

The following appear to be the most noteworthy features of this table:—

Among the Irish, a comparative exemption from all the General diseases of the Febrile Group, and from diseases of the digestive and nervous systems; and, on the other hand, a marked liability to General diseases of the Constitutional Group, including consumption, but with exception of rheumatism, scrofula, and cancers, and to diseases of the organs of locomotion and of the urinary system, with extraordinary mortality from Bright's disease of the kidneys.

Among the Germans, a reduced mortality from General diseases of the Constitutional Group, and a decided liability to those, especially small-pox, of the Febrile Group (being an exact reversal of the relations of the Irish thereto); a comparative immunity from diseases of the organs of locomotion and of the integumentary system, and otherwise a general evenness in the distribution of the body of deaths among the several groups of diseases, and through the list of special diseases.

Among the English and Welsh, a liability to the diseases of the nervous, circulatory, digestive, and integumentary systems contrasted with comparative immunity from General diseases, both of the Febrile and the Constitutional Groups; of the special diseases, scarlet fever, diphtheria, hooping-cough, hydrocephalus, croup, erysipelas, apoplexy, and paralysis being relatively most fatal, and consumption, intermittent and remittent, cerebro-spinal, enteric, and typhus fevers, bronchitis, and small-pox, least fatal.

Among the Swedes, Norwegians, and Danes, a marked liability to diseases of the digestive system, especially, dysentery, diarrhœa, and enteritis, and an extraordinary mortality from General diseases of the Febrile Group, notably measles, scarlet fever, diphtheria, and typhus, enteric, and cerebro-spinal fevers, with comparative immunity from General diseases of the Constitutional Group, and from diseases of the circulatory, nervous, urinary, and integumentary systems, and of the organs of locomotion, the deaths from cancers, apoplexy, paralysis, bronchitis, hydrocephalus, and Bright's disease of the kidneys, being remarkably few.

Among the Scotch, an evenness in the distribution of the body of deaths among the several groups with marked exception only of the diseases of the nervous system and of the organs of locomotion, the most noticeable exemptions among the special diseases being small-pox, scrofula, and the fevers; the most noticeable instances of liability, cancers, paralysis, erysipelas, measles, and hooping-cough.

Among the French, a general evenness in the distribution of the body of deaths among the several groups of diseases, with somewhat more of irregularity as to the distribution among the special diseases than among the Scotch.