

## CORRESPONDENCE.

## MORTALITY AMONG NEUTRALS IN WAR-TIME.

*To the Editors of the Journal of the Institute of Actuaries.*

DEAR SIRS,—It has occurred to me that readers of the review, in the April number of the *Journal*, of Dr. Hersch's "La Mortalité chez les neutres en temps de guerre" may be interested to know that the subject was also referred to by Dr. S. Dumas in his paper

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"L'Assurance du risque de guerre" published in 1911 in Volume 6 of the "Bulletin de l'Association des Actuaires Suisses."

Dr. Dumas' paper is primarily a paper on war risk, and deals only incidentally with the effect of a war on the mortality of the civil and non-combatant population. For this reason, Dr. Dumas, unlike Dr. Hersch, does not attempt to furnish statistics for different age groups. On the other hand, whereas Dr. Hersch confines his investigations to the "petits pays neutres et limitrophes des pays en guerre, tels que la Suisse, la Belgique et les Pays-Bas" and except in Table IV and diagrams 3-4 deals merely with the number of deaths in each year and not with the ratio of deaths to inhabitants, Dr. Dumas gives the number of deaths (male and female, and male and female combined, except in the case of Germany, where the total deaths only are given) for both combatant and neutral countries, and the number per hundred inhabitants for each year in groups of four years, these groups being taken so as to include the war of 1864—figures for Denmark only—the war of 1866—figures for Germany, Austria, and Hungary—the war of 1870-1—figures for France, Switzerland, Belgium, Holland, England and Wales, and Germany. In a further column Dr. Dumas gives the number of births in each year "pour montrer que l'augmentation de la mortalité correspond souvent à un fléchissement du nombre des naissances; on sait pourtant que la grande mortalité des nouveaux nés influe d'une manière très sensible sur le nombre total des décès."

In the hope that it may be of interest I reproduce here Table 17, page 93:

*Influence of the Franco-Prussian War on Mortality.*

N.B.—The figures for Germany include still-births.

Year	NUMBER OF DEATHS			Per 100 inhabitants	Number of Births
	Male	Female	Total		
<i>France.</i>					
1869	442,988	421,332	864,320	2.35	948,526
1870	553,037	493,872	1,046,909	2.84	943,515
1871	692,233	578,777	1,271,010	3.51	826,121
1872	409,811	383,253	793,064	2.20	966,000
<i>Switzerland.</i>					
1869	34,918	32,231	67,149	2.52	81,766
1870	37,625	35,213	72,838	2.73	83,300
1871	41,866	36,132	77,998	2.92	71,626
1872	33,469	30,273	63,742	2.39	84,313
<i>Belgium.</i>					
1869	55,768	53,839	109,607	2.21	158,687
1870	60,572	57,787	118,359	2.36	164,572
1871	75,070	70,676	145,746	2.81	158,760
1872	62,041	58,088	120,129	2.35	167,377

*Influence of the Franco-Prussian War on Mortality—continued.*

N.B.—The figures for Germany include still-births.

Year	NUMBER OF DEATHS			Per 100 inhabitants	Number of Births
	Male	Female	Total		
<i>Holland.</i>					
1869	41,751	40,802	82,553	2·29	123,789
1870	47,175	45,891	93,066	2·58	129,997
1871	54,303	52,675	106,978	2·95	128,305
1872	48,550	46,044	94,594	2·59	131,664
<i>England and Wales.</i>					
1869	254,863	239,965	494,828	2·23	773,381
1870	265,586	249,743	515,329	2·29	792,787
1871	265,563	249,316	514,879	2·26	797,428
1872	255,135	237,130	492,265	2·13	825,907
<i>Germany.</i>					
1869	...	...	1,154,303	2·85	1,594,187
1870	...	...	1,184,315	2·90	1,634,646
1871	...	...	1,272,313	3·10	1,473,492
1872	...	...	1,260,922	3·06	1,692,227

It will be seen that these figures strikingly confirm the conclusions arrived at by Dr. Hersch.

Dr. Dumas' remarks on this subject are referred to in a volume entitled "Versicherung und Krieg" being a collection of seven papers read at a conference held by the "Deutscher Verein für Versicherungswissenschaft" on 12 and 13 December 1913, and published by that Society in 1914. In particular Professor Dr. Florschütz showed that Dr. Dumas' figures were confirmed by the experience of the Gotha Life Insurance Company, for whereas the actual mortality was in 1865 only 91·57 per-cent, in 1867 only 90·87 per-cent, and in 1872 only 91·05 per-cent, of the expected, the percentage rose in 1866 to 114·82 per-cent, and in 1871 to 105·10 per-cent. As only 514 policyholders of the Gotha (of whom only 195 kept their policies in force) took part in the war of 1870–71, this striking increase in the ratio of the actual to the "expected" deaths must be put down to the effect of that war on the civil non-combatant population.

Yours faithfully,

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