BRITISH STILLBIRTHS AND FIRST WEEK DEATHS, 1950-57

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It is well known that in the 1950s the incidence of stillbirths has continued to fall in Scotland but has stopped falling in England and Wales (*e.g.* Heady and Heasman, 1959). Here the incidence is studied with reference to sex, with an unexpected result, as is that of first week deaths. The sources of the data are the Annual Reports of the Registrar General for Scotland (1950-57) and the Statistical Reviews of the Registrar General for England and Wales (1950-57). As in the report of the Biological and Medical Committee of the Royal Commission on Population (1950), a comparison is made with the corresponding Netherlands figures, and a similar comparison is made with the Danish figures.

SEX RATIO OF STILLBIRTHS

SCOTLAND

Sutherland (1949) pointed out that in Scotland the sex ratio of stillbirths fell from 1939, the year in which they first became registrable. This trend was reversed in 1947 (Table I), but was then resumed, until in 1956 and 1957 the sex ratio of Scottish stillbirths was lower than that of Scottish live births. In both these years the Scottish live birth sex ratio was 1.06.

ENGLAND AND WALES

Sutherland (1949) pointed out that in England and Wales the sex ratio of stillbirths fell from 1928, the year in which they first became registrable. This fall stopped in 1938 (Table I), but began again in 1952. The remarkable steadiness of the stillbirth sex ratio in England and Wales in 1939-51 stands in very striking contrast to the two-wave fall in the Scottish stillbirth sex ratio which occurred during the same period (Table I). Unfortunately no attempt can be made to find the reasons for this potentially illuminating contrast, as the causes of stillbirths in England and Wales are not registered.

TABLE I

SEX RATIO OF BRITISH STILLBIRTHS, 1938-57

Year of Occurrence of Stillbirths	Legitimate plus Illegitimate Stillbirths					
	England and Wales			Scotland		
	Male	Female	Ratio M : F	Male	Female	Ratio M : F
1938	13,349	11,380	1.17			
1939	13,105	11,204	1.17	2,112	1,720	1.23
1940	12,296	10,483	1.17	2,117	1,682	1.26
1941	11,268	9,608	1.17	2,065	1,628	1.27
1942	11,868	10,515	1.13	1,956	1,645	1.19
1943	11,469	9,793	1.17	1,835	1,657	1.11
1944	11,493	9,813	1.17	1,741	1,477	1.18
1945	10,367	8,966	1.16	1,518	1,427	1.06
1946	12,357	10,558	1.17	1,808	1,673	1.08
1947	11,792	10,003	1.18	1,912	1,645	1.16
1948	9,937	8,462	1.17	1,575	1,391	1.13
1949	9,129	7,818	1.17	1,402	1,261	1.11
1950	8,693	7,391	1.18	1,319	1,237	1.07
1951	8,669	7,316	1.18	1,292	1,186	1.09
1952	8,368	7,268	1.15	1,249	1,180	1.06
1953	8,311	7,370	1.13	1,197	1,107	1.08
1954	8,467	7,733	1.09	1,243	1,157	1.07
1955	8,303	7,526	1.10	1,229	1,098	1.12
1956	8,609	7,796	1.10	1,170	1,156	1.01
1957	8,613	8,002	1.08	1,195	1,183	1.01

SEX INCIDENCE OF STILLBIRTHS

ENGLAND AND WALES

That the sex ratio of stillbirths in England and Wales fell from 1952 onwards, after having been stationary since 1938, is very largely due to one fact. This is that, while the male legitimate stillbirth rate in England and Wales was slightly lower in 1954-57

as a whole than in 1950-53 as a whole, the female legitimate stillbirth rate was higher in each of the 4 years from 1954 to 1957 than in any of the previous 4 years (Table II), and was indeed higher even in 1957 than in any year from 1947 to 1953. These secular differences, like others mentioned here, are too large to be due to simple binomial chance fluctuations in the proportions (Brass, 1959), and it is interesting to compare their trend with that of the corresponding rates for the Netherlands (Table II). (In the Netherlands stillbirths are counted from the 26th week, in Britain from the 28th week.) Moreover in England and Wales the female illegitimate stillbirth rate was higher in 1956 and 1957 than in any other year since 1948. Unfortunately, the absence of registration of the causes of stillbirths in England and Wales precludes the possibility of identifying the cause or causes responsible for the rise.

SCOTLAND

The male and female stillbirth rates in Scotland were both considerably lower in 1954-57 than in 1950-53 (even so they were still considerably higher than the rates for England and Wales), but from 1953 onwards the female stillbirth rate fell only minimally—from 24.5 per 1,000 female births in 1953 to 24.2 per 1,000 female births in 1957. In Denmark the legitimate female stillbirth rate was 16.4 in 1950-53 and 16.5 in 1954-57.

SEX INCIDENCE OF FIRST DAY DEATHS

SCOTLAND

The death rate in the first 24 hours after birth in Scotland was slightly lower for females in 1954-57 as a whole than in 1950-53 as a whole, but in 3 of the 4 years from 1954 to 1957 the male first day death rate was higher than in any of the previous 4 years. In Scotland, unlike England and Wales, the number of deaths in the first 30 minutes after birth and in the rest of the first day respectively are not recorded separately.

ENGLAND AND WALES

In England and Wales the male and female death rates in the first 30 minutes after birth were both considerably lower in 1954-57 as a whole than in 1950-53 as a whole. The death rate from 30 minutes to 24 hours after birth was higher for males in 3 of the 4 years from 1954 to 1957 than in any of the previous 4 years and was also very slightly higher for females in 1954-57 as a whole than in 1950-53 as a whole (Table III, opposite).

In the Netherlands there was a continued fall throughout 1954-57 in the proportion both of male and female babies dying on the same calendar day as that on which they were born (Table III). That the rise in the first day death rate in England and Wales was much greater in males is of special interest in view of the fact that the rise in the stillbirth rate was confined to females.

TABLE II
LEGITIMATE FEMALE STILLBIRTHS IN ENGLAND AND WALES AND IN THE NETHERLANDS, 1950-57

Year of Occurrence of Legitimate Stillbirths	Netherlands			England and Wales		
	Legitimate Female Live Births + Stillbirths	Legitimate Female Stillbirths		Legitimate Female Live Births + Stillbirths	Legitimate Female Stillbirths	
		Absolute Number	Per 1,000 Legitimate Female Births		Absolute Number	Per 1,000 Legitimate Female Births
1950	111,519	2,090	18.7	328,113	6,916	21.1
1951	110,880	1,975	17.8	319,860	6,847	21.4
1952	112,532	1,915	17.0	318,917	6,814	21.4
1953	110,760	1,878	17.0	323,505	6,930	21.4
Aggregate, 1950-53	445,691	7,858	17.6	1,290,395	27,507	21.3
1954	110,798	1,840	16.6	319,149	7,307	22.9
1955	111,961	1,789	16.0	316,107	7,100	22.5
1956	112,601	1,841	16.3	331,446	7,307	22.0
1957	113,937	1,854	16.3	341,705	7,491	21.9
Aggregate, 1954-57	449,297	7,324	16.3	1,308,407	29,205	22.3

TABLE III
FIRST DAY DEATHS IN ENGLAND AND WALES AND IN THE NETHERLANDS, 1950-57

Year of Occurrence of First Day Deaths	Deaths in the Netherlands on the Calendar Day of Birth				Deaths in England and Wales between 30 minutes and 24 hours after Birth			
	Absolute Number		Per 1,000 Live Births		Absolute Number		Per 1,000 Live Births	
	Male	Female	Male	Female	Male	Female	Male	Female
1950	936	676	7.9	6.1	2,556	1,858	7.1	5.5
1951	907	681	7.7	6.2	2,578	1,814	7.4	5.5
1952	842	638	7.1	5.7	2,503	1,907	7.2	5.8
1953	891	662	7.6	6.0	2,485	1,909	7.1	5.7
Aggregate, 1950-53 ..	3,576	2,657	7.6	6.0	10,122	7,488	7.20	5.64
1954	837	623	7.1	5.6	2,579	1,899	7.4	5.8
1955	785	626	6.7	5.6	2,585	1,834	7.5	5.7
1956	740	547	6.2	4.9	2,656	1,885	7.4	5.5
1957	611	478	5.1	4.2	2,817	2,015	7.6	5.7
Aggregate, 1954-57 ..	2,973	2,274	6.3	5.1	10,637	7,633	7.48	5.68

SEX RATIO OF DEATHS IN THE FIRST WEEK

ENGLAND AND WALES

Takahashi (1954) showed that the sex ratio of first week deaths in Japan in 1941-42 and 1947-49—and also, according to data of Pfaundler (1942), in Germany—was highest on the third day after birth. In England and Wales, however, in both 1950-53 and 1954-57, the sex ratio of deaths rose very steeply from birth to the fourth day after birth (Table IV), after which it fell to the seventh day. It is particularly interesting that in England and Wales the sex ratio of deaths in the first 30 minutes after birth has been lower than that of deaths in the rest of the first

day in every year since 1931, when the distinction was first recorded.

SCOTLAND

The sex ratio of deaths in the first week in Scotland was highest on the third day after birth in 1950-53, and on the fourth day after birth in 1954-57 (Table IV). The sex ratio of deaths fell from the third to the seventh day in 1950-53, and from the fourth to the seventh in 1954-57.

SUMMARY

In England and Wales the sex ratio of stillbirths was virtually stationary from 1938 to 1951. Since 1952, however, it has fallen, owing largely to a rise

TABLE IV
SEX RATIO OF BRITISH STILLBIRTHS AND DEATHS IN THE FIRST 4 DAYS OF LIFE

Country of Occurrence	Time of Occurrence	Deaths in 1950-53			Deaths in 1954-57		
		Male	Female	Ratio M : F	Male	Female	Ratio M : F
England and Wales	4th Day	2,400	1,257	1.91	2,177	1,223	1.78
	3rd Day	3,431	2,131	1.61	3,177	1,907	1.67
	2nd Day	4,127	2,865	1.44	3,917	2,725	1.44
	30 Minutes-24 Hours ..	10,122	7,488	1.35	10,637	7,633	1.39
	First 30 Minutes	1,474	1,213	1.22	1,352	1,211	1.12
	Stillbirths	34,041	29,345	1.16	33,992	31,057	1.09
Scotland	4th Day	265	173	1.53	249	139	1.79
	3rd Day	496	288	1.72	490	298	1.64
	2nd Day	739	539	1.37	646	484	1.33
	1st Day	1,914	1,403	1.36	2,074	1,439	1.44
	Stillbirths	5,057	4,710	1.07	4,837	4,594	1.05

in the female stillbirth rate in 1954-57 compared with 1950-53—a setback accompanied by a rise in the male death rate in the period from 30 minutes to 24 hours after birth. In 1950-57 the sex ratio of deaths in England and Wales rose steeply from birth to the fourth day after birth.

The fact that the female stillbirth rate and the male first day death rate rose in England and Wales in 1954-57 compared with 1950-53 is contrasted with the fact that in the Netherlands both these rates fell appreciably in 1954-57 compared with 1950-53. Regret is expressed that, in the case of female stillbirths, no attempt can be made to identify the cause or causes responsible for the rise, because the causes of stillbirth in England and Wales are not registered.

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APPENDIX

INCIDENCE OF DEATHS FROM THE SECOND TO THE SEVENTH DAY

ENGLAND AND WALES.—Both the male and female death rates were lower in 1954-57 than in 1950-53 for each day from the second to the seventh day after birth.

SCOTLAND.—The second day female death rate, after falling from 1950 onwards, rose in 1956 and

1957, and the third day female death rate was very slightly higher in 1954-57 than in 1950-53. Both the male and female death rates were lower in 1954-57 than in 1950-53 for each day from the fourth to the seventh day after birth. In all these respects the numbers were very small.