

XV. *A short Account of Mr. Kerseboom's Essay [intituled, Verhandeling tot een Proeve om te weeten de probable Menigte des Volks in de Proventie van Hollandt en Westfrieslandt. Hage 1738. in 4^{to}. door W. Kerseboom] upon the Number of People in Holland and West-Friesland, as also in Harlem, Gouda and the Hague; drawn from the Bills of Births, Burials, or Marriages, in those Places.*
By John Eames, F. R. S.

EVERY body knows to what useful Purposes the Bills of Births and Burials at the City of *Breslau*, the Capital of *Silesia*, have been applied, by a very learned and sagacious Member of the ROYAL SOCIETY; as also what curious Observations have been made, both Moral, Physical and Political, by Sir *William Petty*, upon the same Argument, several Years before, and Dr. *Arbutnot* and others since. Our industrious Author hath not only consulted them, but acquainted himself more particularly with Mr. *King's* Observations in *Davenant's* Essays, &c. in order to render himself more capable of making a just Estimate in this Matter. He begins with the Number of Inhabitants in the two Provinces of *Holland* and *West-Friesland*; these he makes at this time, viz. 1738. to amount in all to 980,000, and presents the Reader with the following Table of the Particulars. It exhibits the Number of People of

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all

all Ages, living at the same time, from the Birth to extreme old Age; which, because it shews the Chances of Mortality within the Ages mention'd, he calls the Table of Contingency of Life and Death.

The Table of Contingency.

Of above 90 Years old there are	500	
of 90	86 inclusive	2,500
85	81	6,500
80	76	13,000
75	71	20,300
70	66	27,300
65 to	61	34,300
60	56	40,800
55	51	47,000
50	46	53,000
45	41	57,800
40	36	62,500
35	31	67,600
30	27	58,400
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		491,500 the Sum above 27 Years.
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of 26	21	94,300
20	16	83,400
15 to	11	87,200
10	6	91,800
5 to	Birth	131,800
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		488,500 Sum under 27 Years old.
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		491,500
		488,500
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		980,000 Sum of all the Inhabitants.

This Table is founded upon three Principles, *viz.* Correct Observations upon the Tables of assignable Annuities in *Holland*, which have been kept there for above 125 Years; wherein the Ages of the Persons dying

dying are truly enter'd: Upon a Supposition that there are yearly born in the two Provinces 28,000 living Children; and lastly, that the intire Number of Inhabitants in any Country is to the Number of the Births as 35 to 1.

This Table was sent some time after its Composure to Professor *s'Gravesande*, F. R. S. to know his Thoughts, as well concerning the Justness of it, as its Fitness to ascertain the Value of Annuities on Lives; and, as he tells us, it met with the Professor's Approbation.

From this Table it appears, (1.) That about half the Number of People in the two Provinces are above 27 Years old, and consequently that near the other half are under that Age: (2.) Then, by following what hath been observ'd for more than 100 Years in *England*, and particularly in *London*, out of 35 Children born, 18 of them are Boys, and 17 Girls, the People in these two Provinces will consist of

}	504,000 Males.
}	476,000 Females.

980,000.

He farther remarks, that it appears from the assignable Annuities for Lives mention'd before, the Females have in all Accidents of Age lived about three or four Years longer than the same Number of Males; which he looks upon to be appointed as a Compensation for the continual Excess there is in the Birth of the Males above the Females.

Having consider'd the Quantity, he then comes to take Notice of the Quality of these 980,000 Inhabitants, and says he sees no Reason to differ from the Proportion of Mr. *King* in *Davenant's* Essays, who
with

with a great deal of Pains and Judgment hath divided the People of *England* in this manner :

The Proportion for every 100,000 Inhabitants is,	
Married Men and Women . . .	34,500.
Widowers	1,500.
Unmarried young Men and Children	45,000.
Servants	10,500.
Travellers, Strangers, &c. . . .	4,000.
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	100,000.

If this Proportion be admitted, then the Number of each Sort in *Holland* and *West-Friesland* will be as you have underneath. He adds, that the said Provinces can raise at this Time 220,000 able-bodied Men, deducting $\frac{1}{10}$ for Diseases and other Infirmities. But then he admits at 16 years of Age, whereas Dr. *Halley* admits none till 18, Persons under that Age being generally too weak to bear the Fatigues of War, and the Weight of Arms. He then proceeds to rectify the Mistakes of the learned *Isaac Vossius*, who makes but 550,000 in *Holland, West-Friesland, &c.* Disallows Sir *William Petty's* Account of the Number of People in *London*, because he makes them alone equal to the Inhabitants of *Holland* and *West-Friesland* together.

He closes the whole with a Table of the present Values of Annuities upon Lives, in Proportion to the ordinary or common Bonds charged upon those Provinces, and subject to the extraordinary Taxes raised at this Time, *viz.* 1738. You will find annex'd, the Degrees of Mortality or Fatality, said to be in the *Hague* and *Haagambagt*, as also the Numbers and
Con-

Conditions of the Inhabitants of *Amsterdam, Harlem, Gouda* and the *Hague*, not omitting *London* at this present Time.

The two Provinces of <i>Holland</i> and <i>West-Friesland</i> .	<i>Amsterdam</i> .	<i>Harlem</i> .	<i>Gouda</i> .	<i>Hague</i> .	<i>London</i> .	
Married Men and Women, }	338000	86156	17420	6900	14850	241800
Widowers,	14700	4218	760	300	720	13100
Widows,	44100	13858	2280	900	2380	45700
Unmarried Youth and Children, }	441000	93990	22700	9000	16190	215700
Servants,	102900	28318	5300	2100	4870	85000
Travellers, Strangers, &c. }	39300	14460	2040	800	2490	52300
Total	980000	241000	50500	20000	41500	536000

The Fatality of the Quarters. dead.

Spring to Summer . . .	307
Summer to the Autumnal Equinox . . . }	286
Autumn to Winter . . .	287
Winter to Spring . . .	286

The Fatality of the Months 31 Years, one with another.

	dead.
<i>January</i>	102
<i>February</i>	88
<i>March</i>	95
<i>April</i>	77
<i>May</i>	112
<i>June</i>	100
<i>July</i>	92
<i>August</i>	95
<i>September</i>	99
<i>October</i>	93
<i>November</i>	95
<i>December</i>	99

Hence it appears, that *March* is less fatal at the *Hague* and *Haagambagt* than *April*, and *April* than *May* and *June*; that *May* is the most fatal Month of all; that the remaining Months are nearly equal. It appears further, that three Parts or Seasons of the Year are very nearly equal; but that the other Quarter or Season,

Season, beginning at the Vernal Equinox, is more fatal than any of the rest by one fifteenth Part.

TABLE of Annuities for Life.

Let the Annuity be 100 Guilders a Year, upon a Life under a Year old.

			Guild.	Guild. Sti.
Its present Value is			1667	that is 6 <i>oper Cent.</i>
Upon a Life of	5 Years to	1 inclusive	1869	5 7
	10	to 6 . .	1835	5 9
	15	to 11 . .	1770	5 13
	20	to 16 . .	1667	6 0
	25	to 21 . .	1587	6 6
	30	to 26 . .	1515	6 12
	35	to 31 . .	1429	7 0
	40	to 36 . .	1334	7 10
	45	to 41 . .	1212	8 5
	50	to 46 . .	1093	9 3
	55	to 51 . .	971	10 6
	60	to 56 . .	840	11 8
	65	to 61 . .	709	14 2
	70	to 66 . .	570	17 11

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Question, Let it be desir'd to know the present Value of any Annuity for Life, for Instance, of 90 Guilders a Year, which was granted in the Year 1703, upon a Life then of three Years old.

Answer, The Life now (in 1738) is between 37 and 38 Years old ; hence the Number between 40 and 36 gives 1334, for the present Value of an Annuity of 100 Guilders ; hence $\left(\frac{1334 \times 90}{100} =\right)$ 1200 Guilders is the present Value of the Annuity for that Life.

There are other Uses mention'd ; but for these I refer to the Essay itself.