follow each other consecutively; and hence he insists, with proper emphasis, on the importance of removing the first manifestations of disease, and of avoiding the various exciting causes of congestion and inflammation as the only sure method of avoiding cancer: or, in other words, he maintains that cancers very commonly result from the neglect of proper remedial means while in their simple or primary state. Like the first part of the work, the second is also enriched with numerous cases illustrative of the views of the author.

Of the translation we have little to say. The task of translating the *ideas* of an author into a different language from that in which they are written, is always laborious, and often profitless to him who undertakes it; and hence we feel grateful to those who furnish us with a valuable foreign author in an English dress. In the present instance, the meaning of the author, generally speaking, is rendered with tolerable clearness. That the translation abounds too much in Gallicisms, is undeniable. Sometimes, indeed, it is too literal to be altogether intelligible. These, perhaps, are the unavoidable errors of a young writer in his first essay. But errors in grammar ought undoubtedly to be guarded against, such as the use of the relative *which* instead of *who*, when applied to persons; *became* for *become*, and the substantive form of the noun in place of the adjective derived from it, as *scirrhus* for *scirrhous*, and vice versa. The table of "*Errata*," which contains two examples, might have been very profitably extended from the typographical errors which occur throughout the work. As the book, however, is a truly valuable one, we hope it will soon reach a second edition, in which, no doubt, the translator will be careful to correct the errors to which we have adverted.

R. M. H.

ART. XVI. *Mémoire sur les rapports des sexes dans les naissances de l'espèce humaine*; Par Ch. GIROU DE BUZAREINGUES, Correspondant de l'Académie royale des sciences. Paris, 1836.

Memoir on the proportion of the sexes at birth in the human species. By Ch. Girou de Buzareingues, &c. &c. Paris, 1836.

In the year 1823, the author of the memoir above mentioned, read before the Royal Academy of Sciences of France an essay upon Generation, in which he set forth the following views in relation to the difference in the proportions of the sexes at birth in the human species.

The male sex is the result of the predominance of the motive power (*force motrice*) of the animal economy. In France, the variations in the proportions of the sexes at birth, maintain a relation with the proportion of ease to labour,—abundance to want,—refinement to rusticity,—manufacturing pursuits or of those which chiefly call for the exertion of the intellectual faculties to rural occupations or to those which demand the exertion of physical force,—libertine and dissolute manners to those of strictness and ansterity,—the influence exerted by city life compared with that of the country, or, in a word, of the sensitive to the physical power.

In the treatise upon Generation, from which these conclusions are drawn, the author specially designates the influences exerted by the relative conditions of the parents as to age, health, temperament and strength, both physical and moral, together with various other considerations connected with the employments of industry, as influencing one or the other sex.

In his subsequent publications upon the same subjects, the author has substituted for the expression sensitive force or power, used in opposition to motive power, the term nutritive power, as more particularly characterizing the female sex. In the present memoir which was communicated to the Royal

Academy of Sciences, he considers himself authorized to deduce the following conclusions as the result of laborious investigation.

"Every thing which tends to increase the muscular power of one sex, and particularly that of the male, but more especially that of both sexes, favours the procreation of males. Every thing on the contrary, which tends to lessen the muscular power, favours the procreation of females."

"Whatever tends to increase exclusively either the motive or nutritive power in one or the other sex, reduces the relative influence of the other force in the other sex."

"Every kind of power is increased by gradual, moderate, and prolonged exertion, and becomes exhausted by excess. Thus, institutions which maintain a discipline similar to that of the ancient Roman armies, tend to develop the muscular energies of a people, and secondarily also contribute to increase the relative number of male births; whilst, on the contrary, habits which serve to enervate the muscular strength render the lymph predominant over the venous blood, or the cellular tissue over the fibrous, and determine to the relative increase of female births."

For the support of his positions, the author lays down certain rules which have to be borne in mind by those concerned in the investigation of the subject. Among these are the following:—

No deduction should be drawn, in regard to a cause tending to the procreation of one sex, before ascertaining whether it is not associated with causes favouring the procreation of the other sex; for the capabilities of the father may be neutralized by those of the mother, and even in the same individual, the opposition of causes may prevent or diminish the effects.

The actual condition of a nation should not be judged of by its former state, since the conditions not only of individuals but of nations, alter with the age. During the increasing prosperity of a nation, the relative proportion of the sexes may not be the same as in the period of its decreasing prosperity.

The activity of industry is determined by the wants; but it frequently happens that the products exceed the wants, and then industry reposes to be roused again in turn.

In this alternation, the number and precocity of the marriages, and the proportions of the two vital powers do not remain constant.

The amount of labour performed in a state, must not be estimated from that of some one of its provinces.

If there be places where the manufacturing industry exacts a larger amount of the physical power than the rural employments, it should also exert a greater influence upon the procreation of the male sex.

The author is sustained in his general conclusions, so far as France is concerned, by the facts, that in those departments which contain the largest cities, the relative proportions of girls at birth rises above the general average for the whole nation, both in the legitimate and illegitimate births. This result exhibits itself conspicuously in Paris, especially in those quarters in which wealth most invites to repose. The following statements, made from official reports, of all the births during ten or twelve years, shows the influences manifested in some of the principal cities of France. The term placed on the right, exhibits the proportion of female births corresponding to 1000 males. It must be observed that the excess of males over the females at birth throughout the whole kingdom, is as 1000 of the former to 938 of the latter, the difference amounting to about 6.6 per cent.

In Lyons, the births from 1823 to 1832, were
in the proportion of

	Males	24,586	} 978
	Females	24,050	
Marseilles, from 1820 to 1832, (12 years,)	Males	27,378	} 962
	Females	26,262	
Bordeaux, from 1820 to 1832, (12 years,)	Males	21,827	} 977
	Girls	21,294	

Rouen, from 1830 to 1833, (13 years,)	Males	21,484	} 960
	Girls	20,627	
Nantes, from 1820 to 1832, (12 years,)	Males	14,371	} 953
	Females	13,700	
Lille, from 1823, 24, 26, to 32, (9 years,)	Males	11,439	} 978
	Females	11,086	
Monpellier, from 1822 to 1833, (11 years,)	Males	7,095	} 832
	Females	6,835	

The proportion estimated for Paris is 967 females to 1000 males.

The author has given the following results obtained by him from authentic documents, relating to the proportions of the sexes at birth in other parts of Europe.

At Strasbourg the proportion of females is 978 to 1000 males.

Orleans (in 1826), the female births were as 1058 to 1000 males.

Moulins, from 1823 to 1827 990 " "

Department du Nord, in 1827, 937, in 1829, 939.

Metz, from 1700 to 1810, 110 years, 961.

In Paris, from 1745 to 1788, inclusive, the proportion among the legitimate births was 960, and of the illegitimate 972; from 1789 to 1805, both the legitimate and illegitimate 956; from 1806 to 1816, legitimate 958, natural 975; from 1817 to 1827, legitimate 961, illegitimate 967. The proportion of female births was less during the republic than before or since.

At Geneva, in the years 10, 11, and 12 of the republic, 999.

In the Department of Leman during the same period, 921.

In Florence, from 1451 to 1550, (100 years,) 950; from 1551 to 1650, 962; from 1651 to 1750, 966; from 1751 to 1800, (60 years) 988; for the 360 years, 965.

City of Genoa, 1806, 7, 8, 10, 11,—953.

Department of Genoa during the same period, 915.

Department of Pô, from the year 12 to 1813 (10 years,) 928. In this department the rural predominates greatly over the manufacturing industry.

Naples, in 1821, 976. In 1826, 979.

Kingdom of the two Sicilies from 1821 to 1828, 8 years, 942.

Rome, in 1823, 980; in 1824, 977; 1828, 902. From Easter in 1829 to Easter in 1830, 10005.

At Leghorn, from 1818 to 1824, (7 years,) 971.

Plaisance, in 1823, 1045.

Vicenza, in 1820, 978.

Milan, in 1828, 959. In the other communes of the province of Milan in the same year, 908.

In the whole of Lombardy during the same year, 929.*

Barcelona, in 1821, 962.

Patriarchate of Lisbon, in 1801, 959.

Bishopric of Oporto, in 1801, 974.

Province of Minho, in which Oporto is situated, and in which the rich valley of Minho is highly cultivated, in 1801, 902.

Province of Alemtejo, of which only 2-9ths are cultivated annually, and only 1-9th in wheat, in 1801, 978.

Kingdom of Portugal, in 1801, 956.

London, in 1826, 23, and 30, 996.

* With the exception of Russia, there is no part of Europe where the male sex predominates so much at birth over the females, as in Lombardy and Denmark. Nor are there any states in which the rural employments predominate so much over the manufacturing industry. The proportions of the sexes are, for the communes of the province of Milan, 908; Denmark, 910; Russia 906 to 918.

Great Britain, 1801, 11, and 21, 954.

Sweden, 956.

St. Petersburg, in 1828, 994; in 1832, 956.

Moscow, in 1824, 948.

Russia, in 1812 to 1822, (10 years,) 906; in 1827, 898, according to M. Ferussac; from 1812 to 1827, and 1829, 918, according to M. Biekers. Whilst Russia thus presents the maximum proportion of males to females, Sweden offers the minimum. The author has pointed out the different coeditions of the inhabitants of these countries, which conspire to create the disparity.

Vienna, from 1801 to 1829, 964.

Inspreck, in 1827, 1000.

City and territory of Triesto, in 1825, 1014.

Austrian dominions, from 1787 to 1791, (4 years, incomplete,) 942.

Berlin, in 1827, 950.

Kingdom of the low countries, from 1815 to 1828, in the cities 948; country, 939.

Kingdom of Prussia, from 1820 to 1827 (8 years,) 944.

Cologne with Dentz, in 1827, 1021. Government of Cologno and Dentz, in 1827, 963. In the last mentioned government the rural population bears the smallest proportion to that of the cities of any other portion of the Prussian monarchy.

Kingdom of Denmark, in 1828, 910. City of Copenhagen, 937.

Munich, 1828, 29, 971.

Hamburgh, 1822, 1020.

Stuttgart, from 1815 to 1823, (14 years,) 1000.

Kingdom of Wurtemberg, from 1820 to 1828, (9 years,) 946.

Capo of Good Hope, from 1812 to 1820, (9 years,) among the christians 1026; slaves, 959, according to M. Ferussac.*

It is a singular fact that in the illegitimate births the predominance of the males is in a much less proportion than with the illegitimate births.

The *Annuaire* for 1833 gives the results of observations made upon more than thirteen millions and a half of births in France, (from 1817 to 1830,) of which 6,981,902 were boys, and 6,563,567 girls. The relative proportions of the sexes at birth thus stand as 17 males to 16 females.

When, however, the natural births are taken separately, the proportion of the sexes is changed. Thus, during the period of 14 years just mentioned, the illegitimate births amounted to 487,021 boys, and 466,119 girls, which makes the predominance of the males considerably less, or as 23 males to 22 females.

Another striking fact grows out of the separate observation of the illegitimate births; namely, that those which take place in the lying-in hospitals present a much larger proportion of males than those of the births occurring at private residences. The memoir under consideration states the proportion of the sexes in natural births occurring between 1817 and 1826, inclusive, to be as 1000 males to 957 females in the hospitals, and as 1000 males to 977 females at private residences. This result is supported by the official returns made by all the principal towns in France. Our author informs us that the observation holds good not only when the sum total of many years are included, but in the

* In the United States, the only estimates yet made which present on a large scale the relative proportions of the sexes at birth, are reported in this Journal for Nov. 1831, article Medical Statistics. From this we find that the births in Philadelphia for 10 years, show a predominance rather exceeding 7 per cent. In the new states, the excess of males at birth is still greater. In Alabama, Illinois, Missouri, Mississippi, and Indiana, all of which are but lately settled, the boys of 10 years of age exceed the girls of the same age as 100 to 92. Now, as under that age the deaths of males always much exceed those of females, the predominance of the males at birth, must exceed that exhibited of the 10th year.

estimate for each particular year, in Paris and all the large cities, as may be seen from the following returns of natural births:

In Paris, in 1827, births at residences, 986; in hospitals, 938.

1828,	do.	979;	do.	940.
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1829,	do.	945;	do.	917.
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1830,	do.	982;	do.	944.
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1831,	do.	939;	do.	928.
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Lyons, from 1823 to 1832, (9 years,) at residences, 1019; in hospitals, 944.

Marseilles, from 1820 to 1832, (12 years,) at residences, 991; in hospitals, 891.

Rouen, from 1820 to 1833, (13 years,) at residences, 984; in hospitals, 903.

Nantes, from 1820 to 1832, (12 years,) at residences, 1016; in hospitals, 824.

It is not a little curious to find that among the legitimate births the results last considered are reversed; namely, the births at private residences exhibit a larger relative proportion of males than those in the hospitals. This fact is strikingly presented in the following statements of legitimate births:

At Paris, in 1827, at home, 983; in hospitals, 1164.

1828,	do.	956;	do.	996.
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1829,	do.	952;	do.	1004.
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1830,	do.	978;	do.	985.
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1831,	do.	960;	do.	1084.
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1832,	do.	943;	do.	745.
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Lyons, from 1823 to 1832, (9 years,) at residences, 959; in hospitals, 1062.

Marseilles, from 1820 to 1832, (12 years,) at residences, 958; in hospitals, 980.

Rouen, from 1820 to 1833, (13 years,) at residences, 960; in hospitals, 972.

Nantes, from 1820 to 1832, (12 years,) at residences, 946; in hospitals, 949.

Our author attempts to explain the curious facts last mentioned, by observing that the mothers of the illegitimate children born in hospitals, come for the most part from the country, whilst those who lye-in at their homes, appertain almost exclusively to the native city population, to which also belong the mothers of the legitimate children who lye-in at the hospitals, the indigence of whom may perhaps be referred to intemperance or idleness, causes tending to increase the procreation of females.

Our author's conclusions have in many instances been called in question; but he has exhibited much ingenuity in their defence, and generally succeeded in designating the modifying causes which occasionally interfere to alter general results and create exceptions and incongruities. In his concluding remarks he recapitulates his doctrine, in doing which he states that anatomy and physiology teach us, that the fibrous tissue predominates in the male, and the cellular in the female; that the blood which is the vehicle of fibrin, prevails in the male organs of reproduction, and the lymph in those of the female, &c.

He observes that numerous observations made upon domestic animals, and the human species, have proved to him that all the circumstances which render the muscular powers predominant during the intercourse of the sexes, are followed by a predominance of males in the offspring; whilst on the contrary, all those under which this force languishes, are followed by an opposite result. Statistical documents embracing more than 80 millions of births attest, that under the influences of laborious employments, the number of male births increase, whilst under the influence of ease and luxury the proportion of males is diminished.

G. E.