

ART. III.—*On the Mortality of the Infantry of the French Army.\** By HENRY MARSHALL, Esq. Deputy-Inspector-General of Army Hospitals.

STATEMENT showing the Strength of the Infantry of the line, and the Royal Guard (commissioned officers excepted) from the years 1820 to 1826 inclusive, the number of deaths, and the annual ratio per cent. of the strength.

	Strength.	Died.	Annual ratio of mortality.
1820,	122,084	2582	2.1
1821,	115,287	1799	1.5
1822,	140,921	3354	2.3
1823,	77,737	3097	3.9
1824,	115,420	2250	1.9
1825,	117,425	1823	1.5
1826,	112,604	2302	2
Mean of 7 years,	114,497	2458	2.1

The ratio of mortality in 1823 was unusually high, in consequence of a number of the sick of the army employed in Spain having been transferred to the hospitals in France. By omitting this year, and limiting the calculation to the other six years, the result is shown by the following statement.

Mean Strength.	Mean annual deaths.	Ratio of deaths per cent.
120,624	2352	1.94

Statement of the Strength, Mortality, and Ratio of Mortality of the Infantry of the French army, divided into classes according to their ranks or occupations for a period of six years.

Classes.	Strength.	Mean annual number of deaths.	Ratio of mortality per cent.
Non-commissioned officers,	24,408	266	1.08
Drummers, -	3,917	34	.8
Musicians, -	918	14	1.5
Labourers, -	383	2	.8
Privates, -	90,978	2036	2.2
	120,624	2352	1.94

This table shows that the ratio of mortality in some classes of the army is considerably less than in others,—a circumstance

\* Vide Essai sur la Mortalité dans l'Infanterie Française Par M. Benoiston de Chateauneuf, Annales d'Hygiène Publique.—Annales des Sciences Naturelles, 1827. Recherches Statistiques du Département de la Seine.

which probably arises from the comforts obtained from higher pay, and from being less exposed to variations of temperature, especially on night duty. Non-commissioned officers and drummers are better paid than privates, and enjoy a comparative immunity from exposure to changes of weather, and the ratio of mortality is considerably lower in these classes than in the rank and file.

Statement of the Strength, Mortality, and Ratio of Mortality of the Royal Guard, divided into classes according to their employment during the six years already specified.

Classes.	Strength.	Mean annual number of deaths.	Ratio of mortality per cent.
Non-commissioned officers,	2,648	24	.9
Drummers, -	395	2	.5
Musicians, -	232	2	.8
Labourers, -	36	—	—
Privates, (rank & file,)	10,612	180	1.7
	<hr/>	<hr/>	<hr/>
Mean of 6 years, -	13,923	208	1.4

The Royal Guard receive higher pay and better rations than the infantry of the line; they are also better clothed, and enjoy more comfortable accommodation. To these meliorating circumstances may in all probability be ascribed the comparatively low ratio of mortality which occurs in that privileged branch of the army. The ratio of mortality in the classes of the Royal Guard least exposed to variations of weather and temperature, namely, non-commissioned officers, drummers, and musicians, is considerably lower than among the privates. These returns uniformly show the beneficial influence of attention to the diet and comforts of soldiers.

By a report of the Minister at War, it appears that the annual ratio of mortality in the whole French army, including the troops employed in Corsica, was, in 1822, 2.79, and in 1823, 2.83 per cent.

The foregoing returns show that the ratio of mortality in the infantry employed in France was, from the year 1820 to 1826 inclusive, 2.1 per cent. and by excluding 1823, it is reduced to 1.94 per cent. This latter ratio is nearly one-fourth higher than the mortality of the troops employed in the united kingdom, which may be estimated at 1.5 per cent. The mean annual strength of the troops employed in Ireland for a period of thirty-two years was 36,921, and the mean annual number of deaths 576, or 1.5 per cent. and the mean strength of the troops employed in the united kingdom for a period of ten years, includ-

ing the year 1828, was 46,460, and the deaths 721, or 1.5 per cent. To what circumstances are we to attribute the higher rate of mortality in the French infantry? Various causes may be assigned, but what degree of influence each may have it is difficult to determine. The rate of mortality among the whole inhabitants of France is higher than that of the united kingdom. In France the rate of mortality among persons of both sexes at 24 years of age, which I presume is about the mean age of the French army, is 1.3 per cent, (*Duvillard*.) The mean rate of mortality among males between the age of 20 and 30 in a number of the departments of France has been found to be 1.25 per cent. I should suppose that the mean period of life of the British army is about 28 years of age, and, according to the law of mortality at Carlisle, the ratio of mortality of this age is .87 per cent per annum.

The conscription, which has been emphatically called an impost of blood, and its consequences, both immediate and remote, must contribute considerably to increase the rate of the mortality of the French army. Conscripts join the army shortly after they reach twenty years of age, and serve six years. French soldiers seldom volunteer to extend their services after they have completed the compulsory period of service, consequently there are few men in the army above thirty years of age. The precise ages of 14,455 soldiers who died were well known, and of this number 12,455, or 83 per cent, were between the age of twenty-one and twenty-seven years. The rate of mortality among very young soldiers is commonly higher, even when the service is voluntary, than among men that have attained the vigorous period of life, and who have adopted the habits of the army, and become reconciled to the restraints of military discipline. With few exceptions the British army, especially the infantry, is composed of men between the age of eighteen and forty, consequently there is always a large portion of a corps in the prime period of life. The mean period of life of the men of a regiment I should estimate to be about twenty-seven or twenty-eight years of age. Under similar circumstances, with respect to age and climate, the rate of mortality seems, both in the united kingdom and in France, to be higher in military than in civil life. The aggregation of mankind into masses is unfavourable both to moral and physical health. Various reasons may be assigned for a higher rate of mortality among troops than in civil life, especially among recruits and young soldiers; such as great fatigue, either from remaining long in one position at drill and exercise, or in marching; night duty, and exposure to considerable variations of temperature; great change in the habits of life and diet; the restraints of military disci-

pline. To these circumstances may be added certain moral influences, such as—aversion to a military life, involuntary separation from former associates, despondency, love of home, intemperance, and other excesses. Many of these causes operate injuriously upon the health of individuals in proportion to their youth, and hence the propriety of not enlisting men until both mind and body be matured, so as to qualify them for the various duties of a soldier, and to enable them to endure the privations of a military life. Any exercise to which a soldier may be exposed which is disproportioned to his strength, is a fertile source of disease. “*Les soldats qui ont moins de vingt ans résistent difficilement aux fatigues de la guerre. Ce sont ceux qui ont péri les premiers dans la retraite de Moscou.*”—(*Sarlandiere.*) Conscripts are peculiarly liable to the moral causes of impaired health, many of which cannot be obviated, as they follow the victim wherever he goes, and under whatever circumstances he may be placed. This must obviously be more or less the case in all compulsory levies. Nostalgia seems to be much more frequent in the French than in the British army. During the seven years embraced in the foregoing returns, 97 men died from this cause. Suicide is also apparently much more frequent in the French army. Duelling, which never occurs among the non-commissioned officers and privates of the British army, occasions about one death annually for every 1000 men in the French service.

May not the comparatively low ratio of mortality in the British army be in part owing to greater care in the selection of recruits than obtains in the French military service? This is a very difficult question to solve. The rules and usages of the two countries in regard to the examination of men for the army are so dissimilar, that the results will not admit of close comparison. It may, however, be useful to give a brief account of the mode by which the respective armies of France and England are recruited, as far as health and efficiency are concerned.

Until the period of the Revolution, the French army was recruited by voluntary levies. Since 1798 it has been recruited both by voluntary enlistment and by conscription. Volunteers may be enlisted at eighteen years of age, and their period of service is eight years. A small portion of the recruits required is obtained by voluntary enlistment; for, on an average of thirteen years, the mean annual number thus engaged amounted only to about 3000. The total annual number of men required to fill up the vacancies in the army is about 60,000. Conscription is therefore the chief mode of recruiting the French army. According to the conscription law, every male upon reaching twenty years of age, is bound to enrol himself at the office of the municipality. Each canton is assessed with a certain number of con-

scripts, in proportion to the population, as taken by the last census. Under the direction of a municipal officer, a list of the conscripts is made up. The law exempts individuals, under particular circumstances, from serving; and conscripts who think they have a right to be exempted claim their privilege, and obtain it, if their claim be found relevant. Tickets regularly numbered, corresponding to the names on the list, are publicly deposited in an urn, and drawn out by the conscripts themselves, or by their friends. The lot falls upon those individuals who draw numbers below the amount of the contingent ordered to be levied from the commune or canton. The conscript who draws a number below the amount of the quota required is forthwith measured, and, by the law of 1818, should he not be 1 metre, 570 mil. (5 feet, 2 inches, English,) in height, he is exempted from serving. Should he be sufficiently tall, he is next examined by medical officers of the army, or by private medical practitioners, who give their opinion in regard to the fitness or unfitness of the men in question. Medical officers in this duty merely assist the civil authorities by giving their opinion. The final responsibility of either approving or exempting a conscript rests with the civil authorities. The whole proceedings of the authorities connected with the conscription are revised in open court by a board composed of civil and military officers, which may be called a recruiting board.

Statement showing the result of the Conscription in the Department of the Seine from 1800 to 1810 inclusive, (eleven years.)

Numbers which reached the age of the conscription, (twenty years,)	-	-	-	-	44,543
Amount of the different levies,	-	-	-	-	14,935
Exempted from serving on account of	}	Low stature,	4520	}	15,668
		Deformities,	1488		
		Infirmities,	9660		
Not drawn,	-	-	-	-	13,940
					<u>44,543</u>

Exempted from serving in consequence of	Relative ratio of the causes of exemption per cent.	Ratio of exemptions per cent. of the numbers examined.
Low stature, 4520	28.8	14.6
Deformities, 1488	9.6	4.9
Infirmities, - 9660	61.7	31.3
	<u>100</u>	<u>51.0</u>

} 36.2

From this return we learn, that 14.6 per cent. of the conscripts examined (30,603) had not attained the minimum height of soldiers during the war, namely, 1 metre, 544 mil., — 5 feet,  $\frac{7}{8}$  of an inch, English; and that 36.2 per cent. was found unfit for military service, in consequence of being deformed or infirm, defects which in this country are usually denominated medical objections.

Statement showing the operation of the Conscription in the Department of the Seine from the year 1816 to 1823 inclusive, (eight years.)

Numbers which reached the conscription age,	-	40,576
Total amount of the levies,	-	5825
Exempted from serving on account of	} Low stature, 1483 Deformities, 1021 Infirmities, 3401	
		5,905
Not drawn,		28,846
		<u>40,576</u>

Causes of exemption.		Relative ratio per cent. of the causes of exemption.	Ratio of exemption per cent. of the numbers examined.
Low stature,	1483	25.	12.6
Deformities,	1021	17.	8.7
Infirmities,	3401	58.	29.
	<u>5905</u>	<u>100</u>	<u>37.6</u>
			50.3

The minimum height of the conscripts was altered from 1 metre 544 mil. 5 feet  $\frac{7}{8}$  of an inch English, to 1 metre 570 mil. 5 feet 2 inches English, in 1818. The mean height of the approved conscripts belonging to the city of Paris from 1816 to 1823, was 1 metre, 683 mil. 5 feet 6 $\frac{1}{2}$  inches English. The mean height of man, according to the valuable experiments of Quetelet, is as follows:—

Age. 17,	Stature. 5 feet 4 inch	$\frac{1}{5}$ ,
18,	5 — 5	$\frac{1}{4}$ ,
20,	5 — 5	$\frac{4}{5}$ ,
25,	5 — 6	$\frac{1}{6}$ ,

A certain degree of stature is indispensably necessary to qualify men for being soldiers. It is required partly on account of appearance, but chiefly because stature is considered a tolerably accurate measure of strength, which is necessary to enable a soldier to surmount the fatigues incident to a military life. Until 1701, a man was not considered unfit

for military service in the French army on account of low stature; but about that time the minimum height of recruits for the infantry was fixed at 5 feet (French), 1 metre 624 mil. 5 feet 4 inches English, being two inches higher than the minimum height at the present time. The minimum height of the carabiniers and other dragoon corps was then fixed at nearly what it is by the present regulations. The following statement shows the minimum height of the different classes of the French army.

	French measure.			English measure.		
	feet.	inches.	lines.	feet.	inches.	eighths.
Carabiniers, -	5	5	6	5	9	$\frac{6}{8}$
Cuirassiers, Artillery,	5	3	6	5	7	$\frac{6}{8}$
Dragoons, Artillery, La- bourers, Engineers,	5	2	6	5	6	$\frac{4}{8}$
Chasseurs and Hussars,	5	1	0	5	5	$\frac{2}{8}$
Infantry, -	4	10	0	5	2	0

The mean height of the Inniskilling dragoons is 5 feet  $9\frac{2}{8}$ , so that the corps of French carabiniers are taller than the heavy dragoons in the British army.

The mean annual ratio of conscripts exempted from serving in the army on account of low stature and bodily infirmities has been for a number of years past about 54 per cent. At one time, it appears that the annual ratio of conscripts examined and found unfit in consequence of these causes was not more than 29 per cent. Even at the minimum height of 1 metre, 570 mil., 5 feet 2 inches English, which is the present regulation, some of the poor cantons, where the growth of man is stunted, and the period when he reaches his full height is retarded, have not been able to furnish the full quota of efficient men for the army. It has been found, by the operation of the conscription law, that the mean ratio of males which reach the age of twenty in France is about 1 to every 100 of the inhabitants of the whole kingdom. A French author, who has been much engaged in carrying into effect the provisions of the conscription law, and devoted great attention to the subject, endeavours to account for the higher ratio of exemptions of conscripts on account of low stature and infirmities, by alleging, that the people have become greatly degenerated, and chiefly by the effects of the conscription. He seems to think that Frenchmen in general have not now the vigour and strength they formerly possessed; and this, he thinks, arises from the finest of the youth being prevented from marrying during the prime of life. Future generations will, he thinks, continue to be deteriorated by the evil influence of the conscription.\*

\* Observations sur le Recrutement, par M. de Petigny, Conseiller de Prefecture de Departement de Loir-et-Cher.

But, notwithstanding the numbers exempted on account of deformities and infirmities, the surgeons of regiments allege, that very inefficient men are approved by recruiting boards, which statement may be more or less correct. The medical examinations of conscripts resembles much more the inspection of alleged disabled soldiers in the British service, than the examination of recruits. Unless it be evident, that a soldier or a conscript is *unfit* for service, the former is not discharged, and the latter is not exempted from joining the army. The onus of proving that a conscript labours under an infirmity seems in a great degree to devolve on himself; and, as the simulation of infirmities is much practised in France, and perhaps in every country where men are raised by compulsory assessments, medical officers are cautious in practically admitting the existence of disabilities which are not obvious. It is alleged that the conscripts are sometimes examined by civil medical practitioners, who are unacquainted with the duties of soldiers, and whose opinions, it is supposed, are sometimes influenced by bribes; that the young men are not invariably inspected in a state of nudity; that the examination is sometimes conducted in a hurried manner, and even with candle-light, for the purpose of allowing the recruiting board to proceed quickly to another station. When a conscript draws a number above the complement required, he and his friends are in high spirits; and when a number within the conscriptional assessment is drawn, the spectators, whose own prospect of escaping the impost is thereby improved, exult without any consideration for the feelings of the drawers. The interests of a great many conscripts may be involved in the approval or disapproval of a man who draws a number within the complement. Consequently, the exempting of an individual from serving becomes a business of some importance. The civilian members of the recruiting board are more numerous than the military members, by which means the latter are frequently out-voted when they wish to exempt an ineligible conscript whose prospective efficiency is doubtful. This circumstance may happen frequently, for there are many alleged disabilities, of which the members of a board may think themselves qualified to entertain an opinion. Such, for example, as when a surgeon considers a man ineligible on account of being a "*sujet mou*," or has a "*faible constitution*," or "*pieds tres-plats*," or "*jambes arquées*." In compulsory levies, many individuals, who are in every respect *fit* for military service, may be exempted from serving on account of the simulation of disabilities; and really *unfit* persons may occasionally be approved, when their infirmity is not obvious, and when they are unable to prove its existence by moral evidence. Medical offi-

cers, who have had much experience in the duty of inspecting alleged infirm soldiers as a preliminary measure to their being discharged, will easily conceive how difficult it must be, on many occasions, to appreciate the efficiency of conscripts, the great majority of whom are unwilling to serve. To obviate the successful simulation of disabilities, the medical officers who may be employed in this highly important duty of examining conscripts, are recommended by Beaupré to furnish themselves with probes, scoops, and sounds, a microscope, and some concave and convex spectacles. The latter instruments are essentially required to detect impostors, who feign shortness of sight. The fear of being deceived by the simulation of disabilities, may induce medical officers to approve of conscripts, whose efficiency is in some respects doubtful.

The British army, as is well-known, is recruited by voluntary levies. Volunteers, when they are required, may be enlisted at the head quarters of regiments, or regimental depots, and by soldiers acting under the orders of subdivisinal officers attached to recruiting districts, of which there are nine in the united kingdom, namely, London, Coventry, Bristol, Leeds, Liverpool, Scotland, (comprehending Glasgow and Edinburgh) Dublin, Cork, and Newry. The staff at each of these districts consists of an inspecting field-officer, an adjutant, a pay-master, and a surgeon. The elements of stature and period of life in volunteers belong exclusively to the province of the military branch of the service, while those of health and activity are usually left to the decision of the medical officer. The minimum age at which volunteers may be enlisted is sixteen years; but as soldiers, according to the regulations, are not entitled to reckon service, as a claim for a pension, before eighteen years of age, recruits commonly allege that they have reached that period of life. The maximum age is twenty-four years. As all the information which can be obtained respecting the age of recruits is procured from themselves, it is not to be presumed that the statements in that respect are always very accurate.

As a means of appreciating the efficiency of men in regard to strength, the stature of recruits deserves much consideration. For a similar purpose, I would suggest that recruits should be weighed as well as measured. The chief qualities which require to be attended to in the examination of volunteers for the army are age, weight, stature, health, and condition of the organs of sense, with agility of the limbs. A man may be the requisite height, but unless he is also a certain weight, he may not be able to perform the duties of a soldier, or to endure the fatigues incident to the army. Every specific means of appreciating the efficiency of a recruit, which would

be similarly interpreted by different examiners, is of much importance. Hitherto it has been customary to estimate the strength, indicated by the bulk of recruits by the eye; and until comparatively late years, the same indefinite plan was adopted in regard to the stature. As a measure of strength, perhaps the weight of young men is a better means of estimating their efficiency than stature. It is a definite quality which is of great importance where recruits are to undergo more than one inspection, and by different examiners. According to the investigations of Quetelet, the mean weight of young men at 17 years of age, is 116 lb. 9 oz. Avoirdupois.

18	do.	127	9 $\frac{1}{5}$
20	do.	132	7 $\frac{1}{5}$
25	do.	138	12 $\frac{1}{2}$

Consequently, when athletic efficient men are required, recruits should not be approved who weigh less than the medium weight of the respective ages. This measure would tend to obviate, perhaps, the most frequent objection which is made to recruits when they join their respective corps, namely, that they are "delicate and feeble." It ought to be recollected, that some individuals do not attain their full stature before they reach twenty-five years of age; whereas in males the maximum weight is not generally attained until about forty years of age.

Within a certain range, men of different heights may be deemed equally efficient, in as far as regards stature. Soldiers who are either what may be called very low in stature, or very tall, are not equally efficient for all the duties of the army as men of a medium height. Tall men are said to be deficient of energy, and comparatively incapable of enduring fatigue. Short men are commonly thicker in their proportions than tall men; consequently, although they are deficient in stature, they may be as heavy, and, as the matter of which they are composed is better distributed, they are thereby rendered more efficient.

"Les anciens empereurs de Rome s'étaient formé une garde d'Helvétiques et de Germains d'une haute taille, car ils avaient remarqué sans doute que ces hommes blonds d'une stature haute et épaisse, étaient, comme on dit, de grosse tête, incapable de trahison de ruse et de conspiration, et au contraire fidèlement attachés à quiconque les prend à sa solde, et leur procure abondamment le boire et le manger. D'ailleurs, cette sorte de prestance et ces larges épaules déploient plus richement l'appareil militaire; elles brillent surtout pour les parades, et imposent aux yeux de la multitude. Néanmoins, il est reconnu que les tailles moyennes ont plus de vivacité, d'énergie dans un jour de bataille, et les gros corps de septentrionaux se fondent comme le neige, disaient César et Végece dans les climats chauds, à la

moindre manœuvre militaire.”—*Dict. des Sciences Medicales*, Vol. lii. p. 498.

I presume the mean stature of the French infantry, will be about 5 feet 3 or  $3\frac{1}{2}$  inches English. It has already been stated, that the mean height of the conscripts belonging to the city of Paris, which were approved, was 5 feet  $6\frac{1}{2}$  inches English, but as the separation of the conscripts to the different branches of the service is chiefly regulated by stature, the tall men are apportioned to the cavalry and artillery corps. I should suppose that the mean height of the infantry of the British army may be about 5 feet 7 inches, or  $5\text{ feet }7\frac{1}{2}$ . This estimation is supported by the following statement:

Statement of the Strength and mean Height of eleven Regiments of local militia.

	Strength.	Average height in inches and 10ths.
Highland Lanark,	633	67.3
2d Edinburgh,	506	68.
Kinross,	210	67.2
Peebles,	224	68.3
2d Fife,	621	67.2
6th Lanark,	379	68.6
2d Argyle,	736	67.7
1st Argyle,	686	67.7
East Stirling,	647	68.
Annan and Eskdale,	493	68.1
Kirkcudbright,	596	68.5

General mean height,  $67.9 = 5\text{ f. }7\text{ 9-10th in.}$

It will be recollected that the minimum height of the local militia was 5 feet 4 inches, and that of the infantry of the line has for a number of years not been lower than 5 feet 6, so that in respect to the minimum height, the local militia had a disadvantage.

The mean height of the 68th Regiment, now in the Castle, Edinburgh, is 5 feet  $7\frac{5}{8}$ ; but perhaps this corps is a little taller than the medium height of the infantry of the army.

I should suppose that an army whose mean height was about 5 feet 7 or  $7\frac{1}{2}$  inches would be more efficient than a body of troops whose mean height was either materially higher or lower. If I am right in my conjecture respecting the average height of the infantry of the French and English armies, the British infantry will be about  $3\frac{1}{2}$  or 4 inches taller than the French infantry, and consequently, that the former will be comparatively better able to surmount the fatigue attendant on heavy duties

than the latter ; and, as M. Benoiston de Chateauneuf justly observes in regard to the duties of soldiers, “ Qu'il s'exerce au camp ou à la caserne, en campagne ou dans la garnison, le metier des armes est penible et dur. Partout pour le supporter il faut de la vigueur et de la santé.” Great and long protracted exertion, whether in marching with a heavy knapsack, or in military exercises, tends to exhaust the frame, by which means disease is induced, and the ratio of mortality is increased. When a body of men are obliged to act simultaneously, any exertion to which they are exposed may be easily executed by the general mass ; but commonly a portion of the men endure the fatigue with much difficulty, and the exertion of the whole must therefore be more or less regulated by the least efficient.

Volunteers who enlist at the head quarters of corps or depots are examined by the medical officers in charge of the corps or depot, whose approval is final, in men that enlist in the corps to which he himself belongs. The men that enlist with any of the parties belonging to a recruiting district are examined by the staff-surgeon attached to the district. According to a circular from the Director-General of Hospitals, bearing date 30th July 1830, which was issued with the concurrence of the Secretary at War, the approval of a recruit for the army by a district staff-surgeon is declared to be final. Such is the law, but not so the usage, for when a regimental medical officer disapproves of a recruit that had been approved at the head quarters of a recruiting district by the staff-surgeon, and reports the circumstance to his commanding officer, the staff-surgeon is eventually called upon by the Adjutant-General, and also by the Director-General of Hospitals, to explain the reasons which induced him to approve of the man in question. As the alleged infirm recruit is never remitted to the staff-surgeon for a second examination, and as he can in general have no recollection of the man, all the explanation he usually gives to the respective military and medical authorities, and indeed all the explanation he can give, is to state that on such a day he examined a recruit bearing the alleged name, and signed his attestation, because he thought him in all respects fit for His Majesty's service. In as far as staff-surgeons are concerned regarding the examination of recruits, the penal laws are greatly meliorated. They are not now called upon to refund all the expences which may have been incurred on account of alleged ineligible recruits which they had approved, nor are they by any means so liable to other heavy penalties as formerly.

The lowest ratio of men rejected in the following statement is 13.1 per cent., and the highest is 41.1 per cent. But this report comprehends only the men found unfit by the staff-surgeon

STATEMENT showing the Number of Recruits Examined at the Recruiting Districts for longer and shorter periods, together with the ratio Rejected per cent.

	Dublin.		Cork.		Newry.		SCOTLAND.				London.		Leeds.		Coventry.		Bristol.		Liverpool.		
	No. examined.	Ratio per cent. rejected.	No. examined.	Ratio per cent. rejected.	No. examined.	Ratio per cent. rejected.	Edinburgh.		Glasgow.		No. examined.	Ratio per cent. rejected.									
							No. examined.	Ratio per cent. rejected.	No. examined.	Ratio per cent. rejected.											
1804,	456	21.2																			
1805,	1501	17.8																			
1806,	1781	20.3																			
1807,	1776	21.1																			
1808,	1114	18.3																			
1809,	1423	22.4																			
1810,	1523	19.6																			
1811,	1793	17.4																			
1812,	3320	17.9																			
1813,	2984	15.1																			
1814,	1535	15.7																			
1815,	3413	19.4																			
1816,	2740	26.																			
1817,	1426	30.																			
1818,	1801	39.5					661	21.	613	17.4											
1819,	2783	27.4					614	24.1	593	22.5											
1820,	1886	31.2					597	32.7	805	22.3											
1821,	1986	30.					927	21.3	1138	21.3											
1822,	3233	29.6					629	36.	788	27.3											
1823,	3100	31.5					1041	26.5	1122	28.1											
1824,	3558	29.					866	34.9													
1825,	6229	22.3					832	25.2	1270	41.1											
1826,	4019	19.2	2300	25.9	1349	16.2	1406	14.5	2478	23.9											
1827,	2588	22.5					1457	14.2	1545	27.7	3023	14.6	1181	20.3	1471	16.5	706	23.7	2008	13.1	
1828,	1144	25.5	629	23.3	481	13.5	492	25.2	566	29.	1385	30.5	332	14.7	433	16.3	251	15.1	907	20.3	

at the head quarters of recruiting districts, and not the men that have been rejected at primary inspection in small towns and villages by medical practitioners. During the years 1825, 1826, 1827, and 1828, I examined at the recruiting depot, Dublin, 8281 town recruits, (primary inspections,) of which number I found 30.8 per cent. unfit for service; and, during the same period, 5668 country recruits, (secondary inspections,) 7.1 per cent. of which were finally rejected by medical boards. The ratio of recruits rejected at my primary inspections was about 6 per cent. lower than the ratio of conscripts exempted from serving in the army, on account of medical objections in the department of the Seine during the two periods included between the years 1800 and 1810, and the years 1816 and 1823; but no very definite conclusion can be drawn from the circumstance with respect to the comparative efficiency and health of the men approved. Every medical officer who may be employed in the duty of examining either recruits or alleged disabled soldiers, must be guided in his decisions by his own discretion, professional skill, and practical acquaintance with the duties and habits of soldiers. Whatever rules and regulations may be issued on the subject must have only a general application, and so far they may be highly useful, for it is impossible to frame specific instructions on a point of duty where sound judgment and experience must be the chief guide. And as the conclusions of individuals from the same premises are occasionally different, so there may be discordant opinions entertained by medical officers respecting recruits, without being a result of culpable inattention by any party.

On a general review of the circumstances connected with the examination of recruits for the British army, and of conscripts for the French army, I think it may be inferred that the recruits for the British army are better selected than the conscripts. One thing is evident, that the duty of the French medical officer is much more arduous and difficult than that of district surgeons attached to recruiting depots. The former have to be especially on their guard against the simulation of disabilities, which is frequently attempted, and sometimes with indomitable perseverance. "Il n'est rien que l'esprit n'invente, la malice ne trouve, et la ruse ne conseille, pour tromper le medecin et lui faire prendre le faux pour le vrai l'apparence pour le realite." The district surgeon is chiefly to be on his guard against approving of a recruit who is infirm, so as to render him unfit for the army. He is comparatively little exposed to be deceived by the trickery of recruits. Occasionally an instance occurs where a man conceals a disability, but this is not frequent. In a circular which was issued from the medical board, bearing date 1st June 1824, medical

officers were directed not to approve of men who had certain diseases that are not obvious, or which may be concealed, especially calculus or stricture; but as the non-existence of these disabilities could be ascertained only by the uniform use of instruments, I confess that I saw serious objections to the practice of invariably employing such means of examination in the case of persons voluntarily entering the service.

If I am rightly informed, the ratio of recruits rejected in some recruiting districts has increased lately to even as high a ratio as from 45 to 55 per cent. in the primary inspection, (town recruits,) and from 10 to 30 per cent. in the secondary inspections (country recruits.) Are we to attribute this circumstance to the same cause which is supposed to have led to an increased ratio of rejected conscripts, namely, a deterioration of the race, or to greater solicitude and caution on the part of the examiners?

There are several other circumstances connected with the French army, such as the diet, exercise, and lodgings of the men, and the severity and frequency of punishments, which may contribute to diminish the chances of life, and thereby render the ratio of mortality higher than in the British army. To discuss these topics in this paper would, however, extend it to much too great a length.

The influence of the melioration of the condition of soldiers in reducing the ratio of mortality is satisfactorily exhibited by the numerical statements at the commencement of this article. I should wish much to see the advantages which have resulted from an increased attention to the wants, the comforts, and other means of preserving the health of soldiers of the British army at home and abroad, and the improvements which have taken place during a period of fifty or sixty years in the administration of the different departments of the army similarly illustrated. I have little doubt but a diminished ratio of mortality would indicate the progressive influence of the numerous and important improvements to which I have alluded. Statistical documents would exhibit the beneficial consequences of these wise, humane, and liberal measures, in a light and with a force which could not be done so effectually by any other means.

The medical world is under great obligations to Dr Burke, Inspector-General of Hospitals, for his valuable observations on the mortality among his Majesty's troops in India, from 1826 to 1832, published in the last number of the *Edinburgh Medical and Surgical Journal*. He has set an excellent example to the principal medical officers in other foreign stations, which I sincerely hope will be universally imitated. It is of much importance in compiling materials for deducing the annual ratio

of mortality which occurs among a body of troops, that the strength (numbers) and the deaths should be carefully and accurately stated, whether the deaths took place in hospital or not, and from whatever causes. The column headed "number treated" in returns of sick possesses little interest; the mean ratio of sick in hospital would be of much more importance. When a patient in hospital is attacked with a new and apparently more serious disease, he should be discharged on the books, and re-admitted under the head of the new disease. Unless this circumstance be attended to, some diseases, such as venereal, rheumatism, and dyspepsia, may appear to be more frequently fatal than is really the case.

I entertain very sanguine hopes that the Statistical Society will soon collect and publish some highly valuable information in regard to the medical statistics of different classes of society. Hitherto little attention has been paid to this branch of study in this country. By condensing, arranging, and publishing some of the statistical details that may be accessible to the members of the Society, they will confer a great favour on the public, of which it is impossible to anticipate all the practical and beneficial results.

ART. IV.—*Remarks on the risk incurred, of Laceration of the Uterus, in Labours complicated with Deformity or Narrowness of the Inlet of the Pelvis.* By JOHN ROBERTON, Esq. Surgeon to the Manchester Lying-in-Hospital. ✓

WHEN labour is retarded, owing to disproportion between the superior aperture of the pelvis and the foetal head, a most difficult question presents itself to the mind of the accoucheur, viz. "How long may I, with safety to the mother, leave the event to nature?" That he may be in a condition to solve this query, it is necessary he should know, *firstly*, the source and the signs of danger; and *secondly*, what experience warrants in regard to the management of such cases. In touching on these topics, the reader will please to understand that I mean to avoid the ground long since occupied and cultivated with so great ability and marvellous industry by my venerable and respected colleague, Dr Hull, in his "Letters to Simmons," particularly his "Second Letter." I allude to such interesting points as these: What degrees of deformity require the Cæsarean section? What lesser degrees call for *embryulcia*? And again, what other degrees of deformity admit of delivery by the vectis or forceps, or, in rarer instances, of the labour terminating by the unaided efforts of nature? These are subjects of inquiry which Dr Hull