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"Il sait les mots" is a current expression among his neighbours, who believe he communicates through some mystic form of speech with the desolate nature spread out before him. *Le Berger* in France is a lonely wanderer, intimate solely with his flock, his dog, and in hilly regions, often with a goat, who is supposed to be no stranger to the dark practices of his sorcerer's calling. For the shepherd is almost universally reputed as unholy.

When you have read M. de Glouvet's *Berger*, you have mastered the secrets of certain modes of life, among the more uncanny French populations. You have penetrated the recesses of those brooding, sombre souls, wherein lie mirrored the gruesome features of the nature that surrounds them; you have seized in their entire suggestiveness the often inexplicable motives of rustic crime.

To any one desirous of fathoming the curious mental condition of the untutored in the country otherwise most hypercivilised, I would strongly recommend the perusal of Jules de Glouvet's *Rustic Romances*. In Madame Sand's works there are many admirable pictures of peasant life, but they deal with the more conventional side of the peasant population; they paint them from the outside, whereas Jules de Glouvet is concerned with the sources whence they immediately derive their inner life, and with the direct unescapable "suggestions" (it is the only word) of wild nature acting upon the primeval man. There are vast uncultivated territories peopled by uncultivated beings, of whom few thinkers in France, and none beyond her frontiers, have the remotest knowledge, and the dramas dependent on their instincts, their passions, their confused impressions and their visions, are as extraordinary and as interesting as any of the more apparently unearthly legends of Calabria, or Iceland, or the vampire-haunted provinces of the Danube.

One of their characteristics is that they are unshackled by what we moderns term "humanity," hence their peculiar submissiveness (for evil as for good) to their Ideal. No one has seized this with the same directness as M. de Glouvet. His creations belong to a kind of intermediate race, unmodified by what their compatriots call "the acquired." They come almost from the Spirit world and are connected with the superstitions of prehistoric ages, which the writer of these *Rustic Romances* takes such pains to describe.

B. DE BURY.

The palpable revelation of the mysteries of the *Unknown* is as natural—as inevitable—in the case of the dark mind of the shepherd as it might be to the instructed one of either M. Charcot or Charles Richet or the whole host of our present school of psychological scientists.

THE PHYSIQUE OF EUROPEAN ARMIES.

"THE principal point of greatness in any State," wrote Lord Bacon, "is to have a race of military men. Neither," he continued, "is money the sinews of war, where the sinews of men's arms are failing." The fact thus enunciated by England's great philosopher was confirmed, two centuries later, by the experience of one of her greatest soldiers. "The power of the greatest armies," said the Duke of Wellington, "depends upon what the individual soldier is capable of bearing and doing." But it is almost superfluous to quote individual authority for a maxim which has universal recognition. We all believe that England's position among nations is due primarily to the manly vigour of her sons, and to that high courage which Lord Wolseley tells us is generally the concomitant of bodily soundness. It would be hard indeed to explain the remarkable equanimity with which Englishmen all over the world regard the extraordinary armaments of foreign powers and their own comparative helplessness, if it were not for their implicit faith in the power of British pluck to fight its way through every difficulty and against any odds whenever the necessity may arise. This absolute self-confidence, born of an unshakable belief in our superiority of breed, is an important trait in the national character. It appears, no doubt, in the bumptiousness, so offensive to foreign eyes, of the "brutal Englishman." But it appears also in that supreme contempt of the English soldier for his foe which half gives him the victory before the battle is begun. It contributes, far more than does the "silver streak," to that feeling of security at home, which, in enabling our commerce to develop almost unchecked by wars and rumours of wars, is an essential factor of the national prosperity.

Breed, then, manifests itself in two ways, distinct but not independent. We may, if we please, define them as its physical and psychical manifestations. In a horse they are called stamina and spirit. The synonyms for the same qualities in man are strength and courage.

It has been asserted, although this is very doubtful and has been denied by many competent authorities, that under modern conditions of warfare there is less need for personal courage than formerly. But however this may be, it can scarcely be gainsaid that the English soldier of to-day—liable to service under all the extremes of climate of an empire on which the sun never sets, now pressing forward by forced marches under an Indian sun, now suffering the privations of an African desert—is called upon for at least as great a

measure of endurance (which is the highest test of physical fitness) as was required in the time of Bacon or even of Wellington. It is, therefore, somewhat disquieting to hear the complaints frequently made by English officers of the deterioration in the physique of the army owing to the difficulty in obtaining suitable recruits.

An examination of the facts unfortunately does not tend to remove these apprehensions. The following table shows the proportion per 1,000 men of different heights enrolled in 1845 and in 1887.

Year.	Under 5ft. 6in.	5ft. 6ins. to 5ft. 7ins.	5ft. 7ins. to 5ft. 8ins.	5ft. 8ins. to 5ft. 9ins.	5ft. 9ins. to 5ft. 10ins.	5ft. 10ins. to 5ft. 11ins.	5ft. 11ins. and upwards.
1845	105	473	204	111	74	16	17
1887	528	163	126	88	53	22	20

Thus more than half the men who enlist nowadays are below 5 feet 6 inches, which in old times was the minimum height admitted. Many of these, of course, are youths who have not yet attained their full growth, but it is a mistake to suppose that the recruit is, on an average, younger than he used to be. Thus, in 1845, out of 1,000 recruits as many as 750 were under twenty years of age, whereas in 1887 the proportion was barely 639 per 1,000; and in a paper read some fifteen years ago before the United Service Institution, Surgeon-Major Leith Adams stated that the youths of seventeen enlisted in 1845 were superior in physique to the majority of the recruits of eighteen accepted in 1873. To a great extent this falling off is due to the reduction of the legal standards of height and chest measurement; but those alterations were dictated by the fact that it was found impossible to obtain a sufficient number of men fulfilling the higher requirements. The effect upon the whole army is shown in a report recently issued by the War Office, from which it appears that, out of every 1,000 non-commissioned officers and men serving on the 1st of January 1889, 481 were under 5 feet 7 inches, as against 412 in 1873, while 641 had a chest girth of less than 37 inches, as against 608 in 1875.

Several causes have contributed to bring about this unsatisfactory state of affairs. Of these perhaps the most influential has been the rise in wages during the last thirty or forty years, and the consequent improvement in the condition of the labouring classes. The attractions of "the service," on the other hand, are no greater than they were, and the abler-bodied young men now find in other callings a better market for their vigour. In support of this contention it may be remarked that in counties where the rate of wages remains low the physique of the recruits is frequently above the average. Thus we find that the men enlisted in Somersetshire are exceptionally tall, although it appears from the extensive enquiries made a few years

ago by the Anthropometric Committee of the British Association that the average stature there is lower than in most English counties.

The continuous stream of emigration may also have something to answer for, and this is undoubtedly the case as regards Ireland. If the emigrants are, as a rule, of a low class, many of them are at any rate among the best of their class in point of physique; and this seems the only way of accounting for the fact that the American statistics of the soldiers who took part in the Civil War show a higher average stature for Irishmen at nearly every age than is obtained from the recruiting returns at home. It is noticeable in this connection that, in the British army, the number of recruits of Irish birth has dwindled since 1860 from 32 per cent. to barely 13 per cent. of the whole.

A third influence remains to be mentioned, which, if less immediate in its effects, must be considered even more serious, in that it points to a degeneracy, not only of the English army, but of the English race. However great may be our admiration for the principles of free trade, its warmest supporters can hardly deny that since the repeal of the corn laws we have been undergoing a rapid transformation from an agricultural to a manufacturing people; and it is, unfortunately, no less incontestable that the gradual absorption of the rural population into the large towns, which is a necessary feature of the process, is attended by a material decrease in the vigour and development of our men and women. On this point the results of recent investigations are sufficiently convincing. According to the returns obtained by Dr. Beddoe, the natives of Edinburgh and Glasgow are on an average from one to two inches shorter, and about fifteen to twenty pounds lighter, than the rural population of various parts of Scotland; and the statistics of the Northumberland Light Infantry Militia give 5 feet 6.20 inches as the height of the natives of Newcastle, rising to 5 feet 6.63 inches for men born at North Shields, Tynemouth, and the other suburbs, 5 feet 7 inches for Berwick and Tweedmouth, and 5 feet 7.19 inches for Morpeth and Alnwick and the rest of the county, with corresponding gradations in weight; while the rural volunteers (chiefly farmers and artisans) have an average height of from 5 feet 8½ inches to 5 feet 10 inches, and are of course much heavier than the townsmen. The cutlers of Sheffield, to take another instance, are considerably shorter than their fellow-workmen born in the surrounding towns and villages, and these again fall very much below the general population of Yorkshire. Coming south, we find the natives of Exeter to be about an inch shorter and fifteen pounds lighter than the inhabitants of the rest of South Devon, and at Bristol the difference appears to be even more marked.¹ But

(1) Dr. Beddoe states that thirty natives of Bristol employed as rivet-shoemakers yielded an average stature and weight of 5 feet 4.90 inches and 125.67 lbs., while the

perhaps a more remarkable illustration of the physical effect of town life cannot be found anywhere than that of the Spitalfields weavers, whose average height is given by Dr. Beddoe as 5 feet 1·4 inches with shoes, while the naked weight is only about 100 pounds. No doubt their diminutive stature is, to some extent, due to their French descent and to insufficient nourishment; but they are shorter by far than their kinsmen of the Cevennes. It seems, too, that the difference in chest development between the townsman and the countryman is proportionately greater than the difference in stature. Mr. Henry Marshall has given statistics of the chest measurement of town and country recruits fifty years ago, tabulated according to height, and in every case the men born in the country were found to have better chests than men of the same stature who were natives of towns.

Other influences, no doubt, have been at work in the same direction, such as the prevalence of drunkenness and the practice of smoking in boyhood and early youth; but these three—the better prospects abroad, the better prospects in towns, and the better wages everywhere—appear to be the principal factors in that physical deterioration of which our army statistics give evidence. It will be seen that these factors, so far from disappearing, are likely to operate with increasing force; so that it may before very long become a pressing question whether any remedial measures can be found. And, if there be a remedy at all, then, surely, the sooner it is applied, the better for the country.

How is it faring in the meantime with other European States? How do their soldiers compare in physique with ours? Are they, too, showing signs of decadence, or is there any tendency towards improvement? In the latter event can we obtain any useful hint for the management of our own case? These are questions which, apart from their anthropological interest, have, as it seems to me, a special claim to discussion in this country in view of the facts I have cited.

Before attempting to institute any comparison between men of different nationalities it is necessary to make due allowance for differences of breed, by which term I mean to signify the product of all the influences of race, climate, food, and employment, on the physical characteristics of mankind. The chances are that a short man who belongs to a people of low stature will prove to be physically superior to a man of the same height whose countrymen are tall. For example,

same number of men born in the county of Somerset, and employed in the same place and manner by the same firm, yielded averages of 5 feet 6·74 inches and 134 lbs.; and that, of the men employed in the Netham Chemical Works, fifteen natives of Bristol averaged only 5 feet 5·76 inches and 135·70 lbs., and thirty of the suburban parish of St. George's 5 feet 6·24 inches and 138·13 lbs., while twenty-seven from the rural parishes of Bilton and Hanham rose to 5 feet 8 inches and 145·16 lbs. All these figures include shoes and clothes.

a Frenchman measuring, say, 5 feet 1 inch, which is rather above the minimum standard for admission into the French army, would, in all probability, be more fit for military service than an Englishman of equal height. To take a more general illustration, we should, as a rule, expect the average Teuton to be taller than the average Kelt, the Kelt to stand higher than the Finn, and the Finn in his turn to overtop the Lapp. And the Lapp of five feet would in most cases be physically superior to the Teuton of that height.

It is desirable, therefore, before pronouncing on the military efficiency of a people, to arrive at some conclusion as to what their physical characteristics are, or, in other words, to ascertain as nearly as possible the typical proportions of a native of average health and vigour. To this end extensive enquiries have been made during the last fifty or sixty years, especially in England, France, Germany, Belgium, and America. In the enormous mass of statistics so obtained there is much contradiction, and considerable difficulty arises from uncertainty in many cases whether the persons examined were of suitable age, whether they were fairly representative of the race or class in which they were included, whether they were measured in their shoes or not, and so on; but there is, nevertheless, sufficient concurrence of testimony to justify certain general deductions as to the effect of the differentiating influences to which I have referred.

The most remarkable differences, of course, are those of race. As between the great divisions into which naturalists divide mankind, these differences are too conspicuous to escape the least attentive observer. Perhaps the gap is greatest between the broad-chested Scotch Borderer of Anglian or Pictish descent, whose average height seems to be not much under six feet, and who weighs some fifteen or sixteen stone, and the puny Bushman of South Africa, who seldom grows so tall as four feet six inches. If we confine our attention to the Caucasian group, we are struck by the marked peculiarities of its Teutonic, Keltic, Slavonic, and Indic varieties. The stalwart, fair-haired, blue-eyed Norseman of Scandinavia seems almost a different creature from the small and sallow Portuguese; and either of them presents a strong contrast to the brawny Muscovite or the attenuated Hindoo. And even among the native population of a single country, or indeed of a single district, there appears a diversity of racial characteristics which is readily recognised. In spite of the mixture of races in England, it is still possible to detect the Anglian type in Northumberland, the Scandinavian in the North and East Ridings of Yorkshire and in Lincolnshire, and the Kymric (or Welsh) in Somersetshire, Devonshire, and Cornwall. The inhabitants of the hundreds of Flegg, on the coast of Norfolk, owe their fine physique to their Danish descent, and traces of the same blood are to be found in the natives of Norfolk generally (excepting

Norwich), and extend, through Nottinghamshire, Leicestershire, and Yorkshire, as far as Westmoreland; while the Saxon element predominates in the shorter and slighter men of Sussex, Berkshire, and Oxfordshire. Going up to Scotland, we find side by side in Caithness and the Shetlands the Scandinavian type of Teuton and the Gaelic type of Kelt; and Dr. Beddoe may be partially right in ascribing the comparatively low stature observed in the Isle of Lewis to an aboriginal substratum of Finns. In France, again, it has been elaborately demonstrated by MM. Broca and Boudin that a line drawn across the country from Cherbourg to Nice would almost accurately define the boundary between two entirely distinct races, the people to the south-west of it (the Keltae or Galli of Cæsar's Commentaries) being swarthy and considerably inferior in height to the others (Cæsar's Belgæ and Cimbri), in whom appear frequently the light hair and blue eyes of the Teuton.¹ So in Germany the Westphalians are noticeably finer men than the Prussians, who, if we are to believe M. Quatrefages, have Finnish blood in them; in Italy the Tuscans and the Venetians are taller than the Neapolitans and the Sardinians; and, as will be seen later on, the various peoples of Austria show an unmistakable relation between stature and race.

But the assertion, advanced principally by French writers, that stature is almost entirely an affair of race (*"étroitement subordonnée à la race,"* says M. Boudin) seems to overlook the fact that racial characteristics, if indeed they are not entirely evolved by climatic and other physical surroundings, as M. Quatrefages and other supporters of the monogenistic theory insist, must at any rate be in great measure accentuated by such influences continued through many generations. Probably the most remarkable, and certainly the most obvious, illustration within the reach of history of the evolution of a new type under altered conditions of life is presented by the American of the Southern States, who in the course of ten or a dozen generations has developed distinctive features (notably the length of the neck and of the extremities) that are easily recognised by acute observers. Even among the Americans themselves physical differences

(1) Some confusion has arisen from the fact that these people are called "*Kimric*" by French writers, the name being derived, no doubt, from the ancient Cimbri. It is the people in the west and south-west of France (and of them perhaps the Auvergnats and Low Bretons have best preserved their ancient characteristics) whose ancestors spoke the Kymraeg tongue, forms of which still survive in Wales and Cornwall. The taller people of the northern and eastern provinces, as well as the Belgians, are probably Kelticized Teutons. The fact that they speak the Romance tongue, imposed by the Romans on the conquered Gauls, and afterwards adopted by the victorious Norsemen who displaced the Romans, exemplifies how little value attaches to mere language as an indication of race. Possibly in some similar change may lie the true solution of the difficulty in accounting for the large average size of the Cornish, who in many respects resemble the Welsh, and whose dialect is closely related to that of the old Bretons. There are certainly two distinct types now existing in Cornwall, and it seems not unlikely that the Kymri, whether as conquerors or conquered, gave their language to the bigger men, who may have been military refugees from other parts of Britain.

are already appearing between men of the same stock and nativity, reared in different States; and Dr. Gould's elaborate statistics indicate that the States which produce the tallest men also tend most strongly to increase the stature of those who remove thither during the period of development. The fact that, according to the military statistics, the average height of the German Swiss of Appenzell is less by two and a half inches than that of the French Swiss of Geneva can scarcely be explained by any racial theory. There seems no way of accounting for the marked physical superiority of the Kroats to the other Slavs of the Austrian Empire, and even to the Austrian Germans in point of height, if we refuse the explanation afforded by the genial climate and richly-wooded hills of Kroatia and the freshening breezes of the Mediterranean. It is, indeed, scarcely possible to accept M. Broca's verdict that the sea air has no effect on the development of the human body, in the face of the abundant evidence now existing that there is a fringe of higher stature round the coast of England from Norfolk to Cornwall, and that men dwelling on or near the coast are taller than men of the same descent who are some way inland. Dr. Beddoe expresses some surprise that the men of Upper Galloway, where the climate is rather mild than severe, should be taller than other Scotchmen, and that Kerry, which has the mildest climate in Ireland, should produce people physically superior to those of Connaught. But, in spite of the authoritative opinion expressed by the British Association that the inhabitants of the more elevated and colder districts in this country are the taller, it seems to me that Dr. Beddoe's results are such as might be expected. The effect of a mountainous air and rigorous climate is to stunt the growth, but at the same time to expand the chest, and so to produce short, stout, thick-set men. The Welshman is shorter and broader than the Englishman, not only because he is a Welshman, but also because he continues to dwell amid surroundings which helped to make his fathers short and broad. We read that the Tartars of the mountainous regions of Thibet are low of stature but have huge chests, and the physique of the Swiss mountaineers furnishes a familiar example nearer home. M. Alcide d'Orbigny's researches among the South American Indians seem to establish conclusively that the inhabitants of the plains, provided that the climate is dry, are almost invariably taller than those who dwell in the mountains, and the home of the aboriginal Peruvians, whose average stature does not exceed 5 feet 3 inches, is described by him as mountainous, barren, and cold. On the other hand, damp air and fen land seem to be nearly always prejudicial to growth. The British Association tells us that a lower stature is observed in the river valleys of England than in the surrounding districts; and I should prefer to ascribe the short stature observed in the Isle of Lewis to the humid climate than to the Finnish origin

of the inhabitants. The Polynesian, who is, I believe, grouped ethnologically with the feeble Malay, must surely owe something of his superior development and vigour to the fine climate and equable temperature of his islands.¹ In Iceland, too, although the temperature is affected by the vagaries of icebergs, the winters are often mild, and the average height of an Icelanders has been put as high as 5 feet 8½ inches. It is almost unnecessary to say that the mountains in the interior are uninhabitable on account of the eruptions, and the people are therefore confined to the neighbourhood of the coast. In fine, it is the dry and bracing air of a country like Sweden which produces tall and vigorous men. When to these conditions are added the severities of arctic or mountain life, there is generally a loss of stature, with a compensating increase in chest girth and probably in muscular development. The influence of sanitary surroundings is sufficiently illustrated by the debilitating effect of residence in crowded cities, to which I have already referred.

The interesting question to what extent the development of the human frame is affected by alimentary conditions has been much debated by anthropologists. Villermé considered that the height of a population was in great measure dependent upon abundance or need of the comforts of life; but the influence of any such circumstances, short of actual starvation, has been hotly contested by M. Broca, and Dr. Gould holds that it cannot operate "in any controlling degree." On the other hand, M. Quatrefages refers the feeble physique of the inhabitants of Sligo and Mayo to the expulsion of Irish Kelts by Cromwell and William III. from the fertile plains of Armagh and Down, asserting that their degeneracy is due to two centuries (or about eight generations only) of semi-starvation on the barren soil of their new home on the west coast. The difference between the stature of the Bedouins, or nomadic Arabs, and that of their kinsmen on the Nile, is ascribed by Volney to the "natural effect" upon the latter of a more liberal diet than the desert affords; but Dr. Beddoe observes that the Keks on the Upper Nile, although they are said to live "in a state of chronic starvation and skeleton-like emaciation," are nevertheless tall, and long of limb. Still it would be difficult, I think, to meet with a well-covered specimen of humanity among the fellahin of the Lower Nile; and, indeed, the climate seems to render food a secondary consideration. My own experience is that it is quite possible, even for a beef-eating Englishman, to exist in the desert for a day or two on a few biscuits and the juice of a piece of sugar-cane, without feeling any need for more substantial nourishment. But in this country, at any rate, an

(1) The same remark applies if we accept the theory that the Polynesians are descended from the ancient Peruvians, since their physique is far superior to that of the Peruvian Indians of to-day.

abundance of nourishing food is generally regarded as essential to physical fitness, and Dr. Parkes goes so far as to assert that the soldiers' allowance of three-quarters of a pound of meat a day is "far too small to enable the growing lads who form our recruits to attain their proper growth." It is certainly very difficult to follow M. Boudin in attributing the remarkable difference of development between the upper and lower classes in every country in Europe¹ entirely to the influence of heredity and sexual selection; and the low average stature of sailors, which is a matter of common observation and is fully established by American statistics, may be partially explained on the assumption that their growth is arrested by the privations and exposure of a nautical life. Whatever may be thought as to quality of food, it seems incontestable that positive insufficiency and undue exposure during the period of growth must have a stunting effect, which is intensified by repetition of those conditions from generation to generation. It would be out of place here to enter into the medical aspects of the question, or of the kindred theory that calcareous districts, by furnishing a larger supply of lime for the bones, promote their development, and thus tend to increase the stature.

I pass on to the influence exercised by occupation, which is certainly not less important than those already considered. It has at the same time the chief claim upon our attention, because it is least of any a matter of speculation, and is most within our power to control. Dr. Beddoe gives the following results of his analysis of the recruiting statistics for England and Scotland:—

Occupations.	Number of Men Examined.	Average Stature.		Average Weight.
		ft.	ins.	lbs.
Miscellaneous Outdoor .	174	5	7·56	142·11
Clerks and Shopmen, &c. .	242	5	7·28	136·74
Masons, &c.	100	5	7·13	139·12
Labourers	834	5	7·11	140·36
Ironworkers	209	5	7·11	140·22
Woodworkers	200	5	7·08	137·07
Bakers	34	5	6·91	142·06
Miners	67	5	6·91	138·21
Tailors and Shoemakers .	135	5	6·89	134·49
Miscellaneous Indoor . .	335	5	6·77	132·53
Grooms	101	5	6·57	138·72

(1) According to a table compiled by the Anthropometric Committee of the British Association, the difference in average height between the professional and the working classes in England is upwards of 2 inches. Mr. Roberts, in his *Manual of Anthropometry*, gives the corresponding difference in mean weight as 24 lbs. at the age of 17, and 14 lbs. at full growth, and the difference in mean chest girth as 4½ inches at the age of 17, and 3½ inches at full growth; so that the development of the artisan appears to be retarded as well as permanently arrested. But here, no doubt, the influence of employment is considerable.

It will be seen that the clerks and shopmen, who belong to the lower middle class, are above the average height, but their weight is less than for any of the trades specified, except the tailors and the shoemakers. These last are both undersized and light, as the cramping nature of their employment would lead us to expect. Short men are, no doubt, preferred for the stable; but, their occupation being fairly healthy, the grooms show a fair weight in proportion to their height. The masons and ironworkers are both taller and heavier than the miners, while the bakers, although short, are much above the average of weight. But, as Dr. Beddoe points out, these differences would have been very much more marked if there had been no minimum standard of height for the army, since it is obvious that, the lower the average stature in any trade, the greater will be the proportion of its members shut out from the comparison. Thus, it appears from the private returns obtained by Dr. Beddoe at Bristol that the shoemakers there average 5 feet 5.25 inches in height, and 128.9 pounds in weight, and the tailors 5 feet 5.23 inches in height, and only 122.6 pounds in weight, although these results all include shoes and clothes.

An interesting table of the same kind is given by Drs. Chassagne and Dally, in their *Influence Précise de la Gymnastique*, the subjects of examination being 401 pupils at the Military School of Gymnastics near Joinville, and their average age twenty-three years. They are divided into five classes: the first consisting of men who had followed rural occupations; the second of masons, builders, sawyers, and wheelwrights; the third of smiths, farriers, mechanics, bakers, and carpenters; the fourth of shoemakers, tailors, and watchmakers; and the fifth of students, architects, and clerks.

A glance at the table suffices to show the physical superiority of the countryman at all points. Looking more closely, we find that, although the townsmen who had followed outdoor pursuits were shorter and lighter than the rest, they were able to lift and carry much greater weights. The men of the study and counting-house, although less developed and much weaker than any other class, excepting the sedentary operatives, were disproportionately heavy, which was probably due to an excess of fat from lack of sufficient exercise. The arms of the blacksmiths and bakers were bigger and stronger even than those of the outdoor labourers, but their lower limbs, which are little exercised in their respective trades, were not nearly so good. Finally, the shoemakers and tailors, and other men whose trade necessitated a constrained or stooping posture, were found to be in all respects weak and ill-developed.

As it is important to my present purpose to show the extent of this remarkable relation between employment and physique, I venture to take one more example—this time from the recruiting statistics of Switzerland. The examination, which included all the

male population born in 1868, was made in the autumn of 1887, so that the average age of the examinees may be taken as $19\frac{1}{4}$ years.

The butchers and bakers have much the best development, both of arm and chest, the carpenters, blacksmiths, and masons coming next. The bakers are not so tall as the butchers, blacksmiths, and carpenters, and the masons are very much shorter, but their arms are proportionately better developed than those of the carpenters and blacksmiths. The agricultural labourers and cheesemen are next in order, and then follow the wheelwrights, saddlers, and sedentary operatives, the weakest men of all being the weavers, while the tailors are the shortest and are scarcely less feeble. The students, probably because they belong to a superior class, are unusually tall, but their sedentary life tells its tale in the other measurements. The watch-makers are as tall as the butchers, but only 8 per cent. of them have a girth of arm exceeding one-sixth of their stature, as against $32\frac{1}{2}$ per cent. of the butchers, and the disparity in chest girth is almost equally striking.

These results speak too clearly to need extended comment. The strongest men are those who have daily need to make good use of their muscles; the feeblest men are those whose occupation tends to contract their chests and to interfere with healthy muscular development. It is true that artificial selection may in some measure account for a correspondence between a man's muscular development and the requirements of his craft. A small, weakly man is scarcely likely to become a butcher or a smith, while a big man is not so well fitted for the work of the last or the loom. But it would be difficult to maintain that the distinctive characteristics running through the results I have cited are capable of satisfactory explanation in that way; and, even if full allowance be made for heredity, it seems incontestable that a man's physique is determined by the nature of his employment to a far greater extent than is generally supposed.

I have now reviewed briefly what appear to be the principal forces that promote or retard the development of the human body. It remains to investigate, by the help of such military statistics as are available, the resultant effect of those forces upon the physique of the peoples of Europe. It is, however, necessary to use these statistics with the greatest caution, and for purposes of actual comparison between one nation and another they are of little or no value. The differences in the limits of height and girth and in the systems of measurement adopted by different States, in the conditions of recruiting, in the degree of medical laxity or strictness, in the ages of the recruits and in the ages at which maturity is attained by different nationalities, all combine to render any attempt at relative calculations a waste of labour. An average man measures nearly three inches more round the chest when his lungs are inflated

by a deep inspiration than when they are empty, and the "play of chest" of some of the American soldiers was found to be as much as 7 inches. Smaller variations are induced by altering the posture of the arms, and the precise position of the tape is of importance to accuracy. Therefore, when we find that the Germans measure their men "after a maximum inspiration," and the Austrians "during the pause between the two motions," and that, while the English recruit stands for measurement with his arms by his sides, the Frenchman stretches them above his head, and the German extends them horizontally, we may well despair of obtaining any useful results from comparing the statistics. In England the inferior limit of age for a soldier is seventeen years, in Switzerland nineteen years, and in Russia twenty-one years. In most other European countries the liability to serve commences at twenty years of age; but many men who are not found fit for service when first examined are put back for one or two years or even longer; and, to take a single example, there seems little doubt that the Austrian Poles reach their full stature at a later age than their fellow-countrymen of other races. A further complication arises from the fact that, in countries like England and Sweden where there is no compulsion to serve, the upper classes are excluded from the recruiting statistics.

At the same time, it does not follow that Herr Bischoff is entirely right in asserting that "the materials, which the statistics of recruiting apparently afford on the grandest scale for estimating the condition of a people as regards development and health, and for comparing it with others, are practically as good as useless, and have consequently already led to many false deductions." While granting his contention that, when a war is in progress or even imminent, men are likely to be pronounced fit for service who would be rejected in quieter times when there is no need for them, I think, nevertheless, that some interesting and instructive results may be obtained by comparing the military reports made at different periods on the same country—at any rate to the extent of a general indication whether its physique is improving or deteriorating. I shall endeavour to show that such indications are more favourable for those countries which require every able-bodied citizen to be a soldier, than we have seen them to be under our own system of voluntary enlistment.

The statistics of height are clearly less likely than other corporal measurements to be affected by variations of method, and it is therefore necessary to consider for a moment to what extent they may be accepted as a sufficient criterion of general progress or decline. From the earliest times superiority in height has been regarded as an essential attribute of a soldier. The Egyptians represented their kings and generals as of colossal stature; Saul was selected to be the

warrior monarch of Israel because he was "higher than any of his people from his shoulders and upward"; Agamemnon, "king of men," towered above the other Greek chieftains. The mania of Frederick William of Prussia for gigantic soldiers is notorious, although his famous brigade of guards was no doubt intended chiefly for ornament; and at the present day most countries require a higher standard of height for the favourite regiments. Sir Robert Christison was of opinion that "if allowance be made for exceptional instances of short men possessed of massive muscle, and tall men very spare in that respect, stature on the whole rules strength, and work, if not skilled."

This statement certainly needs limitation; for, as observed by Dr. Gould, "the testimony is overwhelming that very tall men do not bear the fatigues of a campaign so well as persons of ordinary stature; that they are less capable of performing long marches, and are more frequently on the sick list at other times." We have, too, the opinion of Sir George Ballinghall that "tall men are more subject to disease generally, and especially to diseases of the chronic class, than men of medium size, and they are frequently the first to fail under fatigue." M. Boudin quotes with disapproval an official report of the recruiting in the Sardinian states of Italy, which seeks to establish "a direct relation between the stature and the sanitary condition of the recruits"; and he cites, in opposition, the disparity between the exemptions from military service in different departments of France on account of insufficient height and on account of other physical deficiencies. M. Boudin's contention is fully borne out by the recruiting statistics published last year. For instance, in the department of Gironde the proportion of recruits not exceeding 1 m. 62 c. (5 ft. 3 $\frac{3}{4}$ in.), in height was only 14 per cent., being much less than in any other department, while in the Hautes-Alpes it reached 60 per cent. But nearly 12 per cent. of the Gironde recruits were put back for a year, and 1 $\frac{1}{2}$ per cent. were finally rejected, on account of "feebleness of constitution," while in the Hautes-Alpes the proportion of "ajournés" was only 5 per cent., and no one was absolutely rejected. So, again, it appears that in the Nord, where only 18 per cent. of the men examined were under 5 ft. 3 $\frac{3}{4}$ in., 12 $\frac{1}{2}$ per cent. were adjourned, and about 1 $\frac{3}{4}$ per cent. were rejected, for feebleness; while in Corsica, although 56 per cent. were below the height given, the adjournments for feebleness were barely 5 per cent., and only four individuals were rejected on that account.

The Italian statistics for the year 1887-8 are equally convincing. In the three provinces of Cagliari, Sassari, and Basilicata, where the conscripts were exceptionally short, the percentages of rejections on account of physical deficiencies were as follows:—

Province.	For Insufficient Height.	For Insufficient Girth of Chest.	For other Physical Reasons.	Total Rejections.
	per cent.	per cent.	per cent.	per cent.
Cagliari	14.08	3.86	9.39	27.33
Sassari	12.08	2.91	8.59	23.58
Basilicata	11.58	2.80	7.14	21.52

In the three provinces of Mantova, Livorno, and Firenze, where the conscripts were much above the average in height, the corresponding percentages were :—

Province.	For Insufficient Height.	For Insufficient Girth of Chest.	For other Physical Reasons.	Total Rejections.
	per cent.	per cent.	per cent.	per cent.
Mantova	2.75	8.46	12.35	23.56
Livorno	1.99	6.70	11.12	19.81
Firenze	2.47	7.24	9.73	19.44

In Austria it is interesting to notice that the Germans of "middle height" (5 ft. 3¼ in. to 5 ft. 7½ in.) are found to be the most useful soldiers; but of the other races the taller men generally prove to be superior in other respects also to their comrades. The Germans are the strongest men, although the Kroats are the tallest. On the other hand, the Poles are both short and weak; and the natives of Hungary, who are shorter than the Austrians, are also inferior to them in general fitness for military service.

The fact is that a true standard of comparison is not to be obtained from any one measurement. Within certain limits, physical fitness is much more a matter of proportion than of size, and we have seen that there are wide diversities of proportion even between people dwelling in different parts of the same country. It is hardly too much to say that a well-proportioned man of one race would be out of proportion if he belonged to another. The average Welshman is about an inch shorter than the average Englishman, and about two inches shorter than the average Scotchman; and it has sometimes been urged that the minimum height for admission into the army should be varied in accordance with the nationality of the recruit. On the other hand, an Englishman should not be expected to be either so broad-chested or so heavy as a Welshman. From the last report of the British Army Medical Department it appears that the average height of the recruits finally approved for service is 5 feet 5.8 inches, and the average weight 9 stone 0.2 lbs.; but a Madras Sipahi, whose average height is about 5 feet 6¼ inches, can barely turn the scale at 8 stone. On the other hand, in the Russian army, according to Dr. Seeland's examination of 8,372 soldiers of

different armies in 1870, a man whose height is only 5 feet 3 inches weighs from 8 stone 11·5 lbs. to 9 stone 1·9 lbs., or about the same as a British recruit nearly three inches taller; and the German recruits examined by Dr. Fetzer in 1877, with an average height of 5 feet 5·75 inches, had an average weight of no less than 10 stone 3·3 lbs. Dr. Fetzer even suggests that, save in cases of exceptional fitness in other respects, men weighing less than 60 kilogrammes (about 9 stone 6¼ lbs.) should not be admitted into the German army at all—a restriction which, if adopted in this country, would exclude considerably more than half of the men now being accepted for service, and, indeed, more than half of those between 19 and 21 years of age.

The British Association tells us that the typical Englishman measures 5 ft. 7½ in., with an empty-chest-girth of 36½ in., that he weighs 10 stone 10 lbs., and that he can draw (as in drawing a bow) a weight of 77½ lbs. No doubt the tables giving these results were compiled with great care; but the chest measurement seems very high. I have before me a summary of the results of 8,000 examinations for admission to appointments in the English Post Office, from which it appears that men of twenty-five years of age and upwards, measuring 5 ft. 7 in. and 5 ft. 8 in., had a chest-girth, before inspiration, of 32·8 inches and 33·2 inches respectively. For men of the same heights, between the ages of twenty and twenty-four, the average measurements were 31·9 inches and 32·2 inches. As regards weight, the results accord very closely with those of the British Association. But, even assuming the absolute accuracy of the figures given, it is clear that a standard of proportion suitable for a Yorkshireman would not apply fairly to a native of Sussex; and, until anthropologists are able to furnish special tables for every sub-division of the human species, it is hopeless to attempt a scientific system of comparison.

In the meanwhile it may be conceded that, given a particular locality, any change in the average stature of the inhabitants is likely to be attended by a corresponding change in their physical characteristics generally. If they are becoming taller, they are probably becoming finer men; if they are losing in height, the chances are that they are in other respects on the decline. And, supposing this theory to be true for each one of a number of localities which together make up a country, it must also hold good for them collectively, that is, for the whole country. Therefore it expresses the extent of the assumption involved in accepting statistics of height as an indication of the general physical variations of a people. In the following comparisons I rely mainly on statistics of height, because other measurements, even when available, are unquestionably open in a much greater degree to the objections pointed out by Herr Bischoff.

A Frenchman becomes liable to military service on attaining the age of twenty years. From 1831 to 1871 the legal standard of height remained at 1m. 56c. (about 5 feet $1\frac{3}{8}$ inches). In 1831 the exemptions for insufficient height were $9\frac{1}{4}$ per cent. of the whole number of men examined; in 1841 the proportion was $7\frac{1}{4}$ per cent.; in 1851 it had fallen to 6 per cent.; in 1861 it was below $5\frac{3}{4}$ per cent.; and in 1871 it was only just 5 per cent. In 1872 the standard of height was reduced to 1m. 54c. (about 5 feet $\frac{5}{8}$ inch), so that it would be misleading to continue the comparison. The proportion of exemptions at once dropped to about $2\frac{1}{4}$ per cent., and is no longer of much use as a guide. According to the latest statistics the average height of a Frenchman twenty years of age is 5 feet $4\frac{7}{8}$ inches, which exceeds the average in 1872 by about one-eighth of an inch. The conclusion seems unavoidable that the French as a nation are gradually improving in stature. It may be, no doubt, that the French army of 1831 would have compared favourably in point of physique with the army of 1890; but it must not be forgotten that the smaller number of men then required left a much wider margin for selection. The minimum girth of chest allowed is $30\frac{7}{8}$ inches.

It is to be regretted that the German Government does not publish detailed statistics of its recruiting examinations. The age of enlistment is twenty years; but recruits who do not fulfil the requirements of the physical examination are kept on the lists for one or two years, or even longer, if there is a reasonable chance that they may eventually become serviceable. Most of these men, who correspond to the French "ajournés," are ultimately drafted into what is called the "Ersatz Reserve." The following table gives the percentages of men finally rejected on account of physical unfitness in each of the ten years from 1878 to 1887:—

1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
24·7	26·0	25·3	20·6	19·8	18·8	18·6	17·9	17·6	16·3

Thus, for every three men whom it was found necessary to reject in 1878, only two were rejected in 1887. It follows that the quality of the 400,000 young men who each year present themselves for examination is steadily improving, unless it be assumed that the medical staff are now much less strict than they used to be, and are admitting inferior material into the army. The general verdict of competent observers is altogether at variance with such an assumption; and one of these has recently remarked, in the pages of this Review, that "the quality of German troops has in no way fallen off since 1870." The legal minimum of height is 1m. 57c., or about 5 feet $1\frac{1}{2}$ inches, and the minimum girth of chest, after expiration,

is fixed at 80c. ($31\frac{1}{2}$ inches). The average stature of 60,000 Germans who took part in the American Civil War was 5 feet $6\frac{3}{4}$ inches, which is the minimum prescribed for the Prussian Guards, and is probably little, if at all, above the average for the German race. From results published by Dr. Vogl and other army doctors the mean stature of recruits (mostly twenty years of age) appears to be 5 feet $5\frac{3}{4}$ inches, with a corresponding chest-girth of $33\frac{3}{4}$ inches and a weight of 9 stone 12 lbs.

The official statistics of Austria-Hungary are much more communicative; but it will suffice to point out that, whereas in 1870 as many as 141 of every 1,000 conscripts were rejected as being under the standard height of 1m. 554mm. (5 feet $1\frac{1}{2}$ inches), the proportion had fallen to 108 per 1,000 in 1886, and to 103 per 1,000 in 1887. In 1888 only 102 per 1,000 were under the standard, and of these 2 per 1,000 were passed notwithstanding; so that the actual rejections were just 10 per cent. of the whole number of men examined. The regulations as to age are the same as in Germany; and, taking into account all the diverse nationalities which make up the Austrian Empire, the mean stature of a recruit between twenty and twenty-two years of age appears to be about 5 feet $5\frac{1}{4}$ inches. For the Poles, Ruthenians, and Magyars it does not exceed 5 feet 4 inches.

The following table indicates that a similar improvement has taken place in the physique of the Italians, although the altered limits of the kingdom no doubt affect the value of the comparison:—

	Under 4 ft. 11½ in.	4 ft. 11½ in. to 5 ft. 2½ in.	5 ft. 3 in. to 5 ft. 6½ in.	5 ft. 7 in. to 5 ft. 10½ in.	Taller than 5 ft. 10½ in.
	per cent.	per cent.	per cent.	per cent.	per cent.
1846—1857 . . .	4·50	28·00	53·00	14·00	0·50
1887—1888 . . .	3·00	25·91	54·95	15·35	0·79

The standard is 1 m. 55 c. (5 feet 1 inch), and the average height of an Italian conscript twenty years of age is 5 feet $4\frac{1}{2}$ inches. The average height of the men accepted for service is 5 feet $4\frac{1}{2}$ inches. The limit of chest-girth is the same as in Germany ($31\frac{1}{2}$ inches).

I have been unable to obtain sufficient statistics of the recruiting in Russia for a trustworthy comparison; but it may be interesting to mention that the standard of height is 5 feet $0\frac{3}{8}$ inches, and the age of enlistment 21 years. The mean height of the recruit is not more than 5 feet $3\frac{3}{4}$ inches, but he is broad-chested in proportion; and it is noticeable that the chest-measurement required is half the height *plus* $\frac{7}{8}$ of an inch (although some margin is allowed in cases of men otherwise fit), whereas the Austrian limit is barely 30 inches. Of the 387,608 men examined in 1887 only 1·19 per cent. were rejected on account of insufficient height, and 2·62 per cent. on account of

constitutional weakness and narrow chests, while 20·03 per cent. were put back for a twelvemonth. The districts which produced the smallest proportions of serviceable men were Esthonia (inhabited by Letts), St. Petersburg, Vologda, and Poltava, while the most satisfactory recruits were found in Luban, Stavropol, and Siberia.

It seems, then, that so far as statistics are available, or may be accepted as a guide, there is a general tendency on the Continent towards physical improvement. At any rate, there are no such serious indications in the opposite direction as those which have caused natural disquietude in this country. The fact has to be faced that, while the physique of the English army is deteriorating under influences already considered, the material from which foreign armies are drawn is on the whole becoming better and more vigorous; and this—be it remembered—has come about in spite of tremendous wars in which every Continental power of the first rank has sacrificed much of the flower of its youth.

I do not know how such a result can be satisfactorily explained if we disregard the remarkable part played by military training in promoting the development of the body, and the generally received doctrine that acquired physical conditions are transmitted from generation to generation.¹ Bearing in mind the important influence which, as has already been seen, a man's employment exerts upon his body, strengthening whatever powers are brought into use, and weakening those which are neglected or interfered with, it seems little short of a truism that a system of exercises which makes an equal but not excessive call upon every organ and every muscle cannot but improve both health and strength.

If there were any room for doubt on this score, evidence is not wanting of the extraordinary effect of a course of gymnastics regularly continued for only a few months. Mr. Maclaren has given some valuable statistics of the measurements and weights of a detachment of non-commissioned officers sent to him to be qualified as military gymnastic instructors. The men ranged in age from 19 to 28 years, in height from 5 feet 5 inches to 5 feet 11½ inches, and in weight from 9 stone 2 pounds to 12 stone 6 pounds; so that various types were represented. After less than eight months' training, they were found to have gained, on the average, 10 pounds in weight, 2½ inches in girth of chest, ¾ inch in the size of the fore-

(1) It would be impossible within the limits of this article to discuss to any purpose the theory favoured by Professor Weismann, and to some extent supported by Mr. Galton's statistics, that acquired faculties are not inherited. It may suffice to say here that the question whether the observed repetition of physical peculiarities in families is due to their direct transmission from parent to child, or to the existence of like predispositions in cognate germ-cells, seems, so far as it concerns our present enquiry, to be of technical rather than practical interest, since Professor Weismann himself assumes that agencies which affect the development of the body have a corresponding influence upon its germ-cells, and therefore eventually upon its offspring.

arm, and $1\frac{1}{4}$ inches in that of the upper arm, while there was in every case a slight increase of height. One man, 28 years of age, had grown from 5 feet $7\frac{3}{4}$ inches to 5 feet $8\frac{1}{4}$ inches; his weight had increased from 10 stone 10 pounds to 11 stone 9 pounds, and he measured 40 inches instead of 37 inches round the chest, $11\frac{3}{4}$ inches instead of $10\frac{1}{2}$ inches round the fore-arm, and $13\frac{3}{4}$ inches instead of $12\frac{1}{2}$ inches round the upper arm. Another man, aged 24 years, had grown from 5 feet $8\frac{3}{4}$ inches to 5 feet $9\frac{1}{4}$ inches, and weighed 11 stones 6 pounds instead of 10 stone 8 pounds, while his chest had expanded from 35 inches to 40 inches (a gain of no less than 5 inches), and the fore-arm and upper arm had gained 1 inch and $1\frac{1}{4}$ inches respectively. A third pupil, aged 28 years, had added 16 pounds to his weight, with corresponding developments of arm and chest; and the smallest gains of each kind were 5 pounds in weight, 1 inch in chest, $\frac{1}{4}$ inch in the fore-arm, and 1 inch in the upper arm. We are told that the muscular additions to the arms and shoulders and the expansion of the chest produced a ludicrous and embarrassing result; for, before the fourth month was out, several of the men could not get into their jackets and tunics without assistance, and when they had got them on they could not make them meet down the middle by a hand's breadth. In a month more, they could not get into them at all, and were obliged to go to and from the gymnasium in their great coats until new clothing could be procured.

It is impossible to estimate the advantage gained by these men from the expansion of their chests, and the additional scope thereby given to their hearts and lungs. According to Dr. Lagneau, gymnastic exercises are one of the surest means of diminishing the frequency of phthisis. And, as Mr. Maclaren justly observes, "before this addition could be made to the chest, every spot and joint of the frame must have been improved also, every organ within the body must have been proportionately strengthened."

The statistics given by Drs. Chassagne and Dally, to which I have already referred, show that 76 per cent. of the pupils at Joinville gained, on the average, 1 inch in girth of chest in the course of five months' instruction. In twelve cases the increase reached 2 inches, and in two cases it was as much as 3 inches. Similar observations by Dr. Abel in Germany disclosed an increase of from 1 to 2 inches in the chests of three-fourths of the men examined. It is true that several of the weaker men, both in France and Germany, were found to have made no progress, or even to have lost ground; but any risk on this account can no doubt be obviated by proper medical supervision, care being taken that no man's strength or stamina is overtaxed.

I do not here dwell on the concurrent advantages of the mental discipline so closely associated with regular physical training. That

men subjected to such training, whether in a gymnasium, or in a boat, or on the parade-ground, gain conspicuously in courage, self-confidence, presence of mind, and general moral tone, will be readily admitted by those who have had any experience in the subject. But I am disposed, for the present, to let the case rest purely on physical grounds. Amid the growing anxiety of our rulers and philosophers to enforce the cultivation of the mind, the body is in serious danger of being altogether neglected. In the earlier part of this article I have indicated certain economic changes which appear to be steadily detrimental to the health and vigour of the nation; and, unless the Anglo-Saxon is content to abandon the proud position among mankind bequeathed to him by his fathers, it is surely high time that our present system of compulsory education should be supplemented by some measure for preventing further deterioration of physique.

At present physical education is practically confined to the upper and middle classes, with the result shown by the figures I have quoted. The remarkable increase in the height of English ladies which has attended their recent admission to the benefits of active exercise in the open air is another piece of evidence in the same direction. How long will it be before public opinion determines to extend similar advantages to the labouring and industrial classes, who already form more than 85 per cent. of the community, and who are notoriously multiplying at an exceptional rate? Until this question has been answered, it is futile to enter into the wider question whether, the need for physical training being admitted, it would not be as well that men should at the same time become fitted to be defenders of their country. In old times, to bear arms was regarded as a duty owed by every individual to his King or to the State. Now the situation is reversed, and it is the State which performs a duty to the individual in requiring him to submit himself to such physical discipline as is imposed by military service.

In suggesting that the Englishman is physically on the decline, I am not unmindful of the charge of unpatriotism hurled by M. Boudin against the French writers who, a few years before the Franco-German war, ventured on similar statements as regards their countrymen. But, if there are good reasons for believing that, in spite of the depletion caused by long wars which England has escaped, the Continental armies are every year recruited with better and more vigorous material, and that this improvement may fairly be ascribed to the salutary influence of universal military training, then it would seem that the dictates of individual self-interest, no less than of patriotism, demand that we should at once set about that physical education of the masses which the decay of agriculture and the unhealthier conditions of manufacturing life now render more than ever necessary.

WALTER MONTAGU GATTIE.

ON MARRIAGE: A CRITICISM.

MRS. MONA CAIRD'S article in last month's *Fortnightly* seems to have shocked some people very much. It seems to have been considered very daring and very revolutionary. But having read the article carefully more than once, I will venture to affirm—at the risk of seeming offensive and patronising—that it contains much less that is novel, and much more that is sensible, than might at first appear, or than evidently does appear to many readers. Mrs. Caird's meaning is often one in which the majority of her readers would agree with her if they clearly understood it; but she has not, I think, been quite successful in expressing it; it is lost amid denunciations and generalities, and to the average careless reader becomes alarming in proportion as it becomes indistinct. And where she is distinct Mrs. Caird is not always moderate. She inclines to sweeping assertions, and since sweeping assertions are apt to be not only the whole truth but a good deal more, they carry with them the usual weakening effect of over-statement. For instance, every reader is aware that marriage does not universally shut out friendship. Soberly stated, the fact is that in many cases—possibly in most—marriage tends to supersede other friendships; just as when no marriage intervenes, a close friendship tends to supersede a slacker one. But stated thus the fact would not go far in supporting an attack upon marriage. The reader feels this vaguely, and it arouses his distrust. Then, too, Mrs. Caird's style is apt to be figurative. "Similes," as Charles Reade points out, "are not arguments"; and most people are not at all advanced in clearness of perception by passages like the following: "It is a simple truth that the ugly skeleton of fact in the edifice that we call society, above all in the institution which is said to hold it together, is kept out of sight by a mouldy growth of irresponsible sentiment; and we are so taken up in admiring the pleasing details of the ornamental vegetation that we do not consider the rotten rafters on which it grows. That few people *do* know what they are supporting is evident from their criticism of husbands as logical as Guido Franceschini. The mould confuses them!" It may be the mould which confuses Guido Franceschini's critics; but it is the metaphors which confuse Mrs. Caird's.

Carpings at mere manner apart, what is it that remains when we have cleared away from Mrs. Caird's paper all that extraneous rhetoric which we might venture to call, in her own words, "a growth of irresponsible sentiment"?