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A RECTORIAL ADDRESS

*DELIVERED TO THE STUDENTS IN THE
UNIVERSITY OF ST. ANDREWS*

22ND OCTOBER 1902

BY

ANDREW CARNEGIE

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Seaborn Elkins
with regard
Andrew Carnegie

THIS meeting has been looked forward to with unusual pleasure that I might thank you in person for the honour conferred by electing me your Rector without a contest. A peculiar charm is said to pervade everything connected with St. Andrews. I have often read of this, and not seldom heard old St. Andrews students dwell upon it, and now your Rector, 'bearing his blushing honours thick upon him,' has already fallen completely under its sway. It is in the very air you breathe here, and I am hereafter one more St. Andrews man who will proclaim the indefinable charm under whose potent spell I now stand before you.

My position is in itself peculiar, for you never had a Scoto-American as Rector in all your long history, although one celebrated American, worthy of the honour, James Russell Lowell, was your choice, but much to his regret was prevented from serving.

My annual voyages across the Atlantic rarely yield much time for reading. I am so fond of the deck and the bridge that my time is usually spent there, revelling in the tumbling sea, the higher the

waves the greater being the exhilaration, for I can say with the poet :

‘And I have loved thee, Ocean! and my joy
 Of youthful sports was on thy breast to be
 Borne, like thy bubbles, onward : from a boy
 I wantoned with thy breakers—they to me
 Were a delight ; and if the freshening sea
 Made them a terror—’twas a pleasing fear ;
 For I was as it were a child of thee,
 And trusted to thy billows far and near,
 And laid my hand upon thy mane—as I do here.’

But the volume of Rectorial Addresses of my friend Professor Knight fortunately came to me, and I read it through with increasing interest during my last voyage westward. I found that my distinguished predecessors invariably expressed their desire to make the best possible return to their young constituents—so wise beyond their years as they appear to their rectors. This was also my first thought. What subject of address will enable me to do this? The prompt reply was : tell these young untried sailor cadets who are about to launch upon the voyage of life what you have found perilous upon that dangerous sea. Warn them of its dangers, its storms, currents, rocks and shoals ; advise them how to avoid or to deal with these, how out of the nettle Danger to pluck the flower Safety. That is the service which will be of most value. And so probably it would be, but my predecessors have not failed to do this in the wisest manner, and to give most salutary advice.

Now good advice is the one article, young men are prone to think, which belies that principle of political economy under which supply and demand are held to alternate, and thus to establish an equilibrium. Here the demand rarely seems to overtake the supply and produce the needed scarcity in the stock always ready for service, so I shall refrain from perhaps overstocking the market still further, but looking into your earnest young faces, I must say just one word, anxious as I am to be of real service to you.

Let me commend as your rule of life one line from Burns :

‘Thine own reproach alone do fear.’

You are responsible only for action in obedience to the Judge within. What your conscience tells you to be right, your only standard ; action contrary thereto, your only wrong. All revelations through books, with their inevitable mistranslations, omissions, admissions, and errors are useful only as they may lead you to the good and the true. The Court in which the Lawgiver speaks directly to the Conscience of Man, is the Kingdom of God within Man. Therefore, if you receive a verdict of approval from the Judge within, you have no other Judge to fear either here or hereafter ; if this condemns, there is no other Judge to absolve. You weave a web every thread of which affects its character for ever. It is true, therefore, that we

must give an account of every word spoken or deed done. The universal laws under which we live

‘ Know neither wrath nor pardon ;
Ever true their measures mete—
Their faultless balance weighs.’

I beseech you, my young friends, keep this ever in mind.

I thought that I might interest you by considering a subject now attracting wide attention—the economic changes which have come, and are impending, in the relative position and power of nations, since it has been necessary for me, during my business career, to watch and study these and to base action upon them. The growth of nations in wealth and population, the social condition and aptitudes of their people, natural resources, prospects, ambitions, national policy, all bore directly upon our problem.

It was upon no easy task that the American manufacturer entered when he determined to struggle for place for his country among manufacturing nations, and it behoved those who risked their capital, or incurred debt in the attempt, to keep a wary eye upon the doings of their established competitors, and weigh future probabilities of development in other lands.

In studying the manufacturing world, Britain claimed more attention than all other nations together, for here was the seat and throne of manufactures. We examine the globe and note

how much is marked red under the Union Jack, and speculate upon what would be left if this were obliterated. But in viewing the world's material development we should consider what would be left if her inventions were deleted, a greater void still would be found in this nobler field of conquest, for this island has also been the seat and throne of invention, the work not of the barbarous sword, but of the brain of civilised man. That development rests upon the steam-engine of Watt, one arm of which embraced the sea through the steamship of Symington, another covered the land through the locomotive of Stephenson. Here is the great triad which has created the modern material world. This audience will not fail to note with satisfaction that all of these magicians were Scotch (the first two native-born, the last by descent), a remarkable fact, and not to be readily accounted for except upon a hypothesis which national modesty prevents a born Scot from suggesting here in the presence of so many distinguished members of other nations. Arkwright, Hargreaves, and Cartwright, through their inventions, brought economical spinning and weaving of textiles; those of Nelson and Cort, cheap iron; Bessemer, Siemens, Martin, and Thomas, cheap steel, the most important article of all, since it is the basis of so many other articles. It is the inventions of these men based upon steam that have revolutionised the conditions of

human life upon the earth, and, in passing, will you be good enough to note how many of these, and indeed of the supremely great in other fields as well, have at first worked with their hands. Whatever the future may have in store, nothing can rob Britain of the credit of having given to the world the means for its surprising development. Material Progress is Britain's child. At the time of which I speak, she was the only important manufacturing nation, for here naturally her inventions were first utilised. The reward obtained from this monopoly—for such it was—made her the richest of all peoples *per capita*. Her realised wealth is still unequalled. Forty odd years ago she made more iron and steel, manufactured more machinery, mined more coal, wove more cloth, than all the rest of the world. It was Britain in the one scale, the world in the other, the world kicking the beam. In the dawn of this prosperity came Cobden and Bright, who ensured cheaper food for the workers, which further stimulated manufacturing and ensured Britain's pre-eminence. The theories of these great men and their school were justified in their day, one being that the various nations of the world were created with different qualities and resources, all so beautifully arranged that one was to supplement the other. Britain's destined part clearly was to manufacture the raw materials of other lands. Interchange, of raw and finished and of different products, was evidently Nature's intention,

thus uniting the nations in the noble task of supplying each other's wants. Nations were destined to be co-operating parts in one grand whole, and thus Commerce became the golden chain to bind the world in bonds of peace and good-will. There was only one flaw in the entrancing theory, but that was fatal—the various members were not satisfied with the parts assigned to them in the beneficent drama. On the contrary, each evinced the strongest desire to develop its resources and manufacture its own raw materials as far as possible. None relished being the mere hewers of wood and drawers of water to another nation: all wanted to play Hamlet, and as is usual in the most talented companies of performers, all believed themselves destined by nature for the great part. There came to the aid of the new ambitious lands, automatic machinery, and scientific methods which largely solved the question of skilled labour. A few managing Britons, or Americans, can now readily be obtained to establish manufactures in any part of the world, and educate the natives to become satisfactory workers. In my travels round the world I carefully noted this weighty fact. I saw the peons of Mexico weaving cloth in factories, and engaged in iron and paper works, at two and three shillings a day in silver, worth only one-half value in gold; the people of India, the Japanese, and the Chinese, all doing excellent work in cotton and jute mills; the negroes in the United States steadily rising in

the scale and becoming good workmen in mines, and in iron and steel works ; the Russian, Hungarian, and Italian, Swede and Norwegian, all making good workmen. Capital, management, and skilled labour have become mobile in the extreme. The seat of manufacturing is now, and will continue to be more and more, simply a question where the requisite raw materials are found under suitable conditions. Capital and skilled labour have lost the power they once had to attract raw materials ; these now attract labour and capital. The conditions are reversed. The cotton industry, for instance, was attracted from Old to New England, and is now attracted from it to the Southern States alongside the raw material. The jute industry, once centred in Dundee, is now also established in India, near the jute supply. Another factor is clearly seen : the most patriotic people of every land consider it a duty to develop their resources. Hence Canada to-day gives twelve shillings a ton bounty for every ton of pig-iron produced, and Australia has a scale of bounties, and has just offered a large one for the manufacture of steel rails. They are not content to be dependent even upon the Mother-land for manufactured articles. Germany, Russia, and America give protection, and all the Colonies tax your productions, thus giving their home-producers incidental protection.

Another element enters. Business methods have changed in the past twenty years ; manufacturing

especially has been revolutionised by new inventions, improved machinery, and new and enlarged demands. The old rule of thumb has given place to scientific precision. The Technical Schools furnish the young foremen and superintendents. Automatic machinery has developed a new class of workmen, more intelligent than the old. The size of works has increased tenfold, and instead of partnerships devoted to one process, all processes, from the minerals in the mine to the finished articles, are combined in one. Railroads are constructed and fleets of steamships built and worked, all the needed materials are owned, the company is its own insurer, and everything entering into the product or needed to maintain the works is made by it. One by one subsidiary branches or new departments are added, and from a score of small streams of profit, unknown to the small producer of the past, the main stream is fed. So rapidly does one improvement follow another that some parts of the huge concerns are constantly undergoing reconstruction. Old established works are seriously disadvantaged by the new order of things, especially if under joint-stock ownership, because it is difficult to get from numerous small owners the capital needed for modern improvements. Hence the old countries, and particularly Britain the pioneer, have been disadvantaged, and the new American land, with a clean slate to begin upon, much favoured.

The causes specified have already changed the

positions of Britain and America as Industrial Powers. America now makes more steel than all the rest of the world. In iron and coal, her production is the greatest, as it is in textiles—wool and silk. She produces three-fourths of the cotton grown in the world. The value of her manufactures is just about three times that of your own; her exports are greater. The clearing-house exchanges of New York are almost double those of London in amount. She furnishes you with most of the necessary food-products you import. She has two-fifths of the railway mileage of the world. Thus she has become the foremost nation in wealth, manufactures, and commerce, and promises soon, in some branches, to occupy the position which Britain occupied when it was Britain versus the world. She already does this with steel. Although no Briton can be expected to see with satisfaction his country displaced from first place, there is yet cause for rejoicing that supremacy remains in the family. It is not altogether lost what the Race still holds. Macbeth's fate is not Britain's. The sceptre of material supremacy has been wrenched by no unlineal hand. It is her eldest son, the rightful heir, who wears the crown, and he can never forget, nor cease to be proud, of the Mother to whom he owes so much.

The relative position of Germany has also changed. She has forged ahead, her product of steel being

now second to that of the United States. In other departments her rate of increase is also great. She promises to run Britain close, perhaps by the end of the decade, for second place as a manufacturing nation. During the ten years previous to 1900 she added five and a half millions to her population, and almost doubled her production of iron, and increased that of iron ore from eleven to nineteen millions of tons.

In comparison with these three countries others are of trifling moment in the production of staple articles for export, always excepting that giant of the future, Russia, whose latent resources are enormous, and whose growth is so steady, not only through increase of population, but through accretions of contiguous territory. She must occupy a great position, but not in our day, nor perhaps in the next generation: if she hold together, she will be a continent under one government like the American Union, although, as far as known, not with comparable resources and conditions. She has employed more than one of my former assistants to construct and manage steel-works, and is vigorously developing her resources in many lines. Her production of iron has doubled in the last twelve years. Coal mined in 1890 was six million tons, and in 1900, ten years, sixteen millions—an extraordinary increase. The cotton industry has also developed during the ten years. It is probable that she will soon

supply many of her own chief wants, great as these are to be; but as these will be largely additions to present world needs, this will not greatly lessen the trade now tributary to other nations.

Belgium, for its size, is the most wonderful of all manufacturing nations, but too small and fully developed, to play a greater part than now in the world's trade. One notes with surprise the magnitude of her commerce. Exports and imports *per capita* much exceed those of Britain, exports being as 11·4 per head to 6·14—almost double, even her imports are greater.

France occupies a unique position. She may be said to have, in the artistic quality, substantially, a monopoly most difficult to break. Till women reach the height of wisdom attained by man, and establish a uniform and unvarying style of dress, and as long as articles of luxury are in demand, and till men reach the wisdom shown by women in regard to French wines, so long will France remain in the first class of nations, although much further increase of her trade is not probable. I might also say that as long as the French people remain so industrious, frugal, and free from the vices of other lands, gambling and drinking, so long her position is secure. It is significant that the silk trade of Britain has passed entirely into her hands, and that in motor machinery she is pre-eminent in Europe. The Swiss Republic may be included in

what has been said of France. It is a wonderful little manufacturing centre. A splendid race the Swiss, who are often described as the Scots of continental Europe, and very highly valued in America.

In our survey of the world the efforts of Canada and of Australia to manufacture were not overlooked. Nothing ever found or heard of in either of these lands was calculated to deter us from going forward without fear. If the United States had not transcendent resources, and an unequalled home-market that enables it to sell its surplus to Canada, cheaper than Canada can possibly produce, manufacturing might be established to some extent there. Under present conditions the outlook is not favourable. In Australia so little has been done, and, so far as I know, so little has been found of a favourable character, that it need not be reckoned with at present. Neither is ever likely, as far as yet seen, to be important factors as manufacturers for the world's trade.

In India, China, and Japan, the textile industry has taken firm root, and in the latter an attempt is being made to build warships from domestic products; but in none of those countries did I see much prospect of rapid or extensive development, except in textiles, one reason for this being that while the home-market for these is great, it is small for machinery, steel, and other branches of our diversified industries of the west. The absence of a large home demand is a serious, almost

fatal bar to the introduction of any new article of manufacture which must be produced upon a great scale.

From what has been said it will be inferred that the manufacture of staple articles for the world is to be chiefly conducted in our time and in the next generation by the three countries, Britain, Germany, and the United States, France retaining her own domain, although the smaller countries will increase their industries and supply a greater part of their own wants.

In the race for the world's trade between these countries several considerations are important. *First*, let this vital fact be noted, the most powerful weapon for conquering foreign markets is a profitable home-market. It might almost be taken as an axiom that the nation fortified by the best home demand for any article, will finally conquer the world's trade in that article in neutral markets. In economic circles 'the law of the surplus,' as I have ventured to call it, attracts increasing attention. Manufacturing establishments are increased year by year until they become gigantic, simply because the more made the cheaper the product, there being a score of cost accounts divisible by product. By giving men constant employment, and having a reputation for never stopping, the best men are attracted and held—an important point. The manufacturer upon a large scale can afford to make many contracts in distant parts of the

world, and even some at home, at a direct loss in times of depression, knowing that, upon the whole, the result will be less unprofitable by running full than running short time, or stopping. Hence those possessing the most profitable home-market can afford to supply foreign markets without direct profit, or even at a loss whenever necessary. I speak from sad experience on this point, for, during most of my life, we have had to encounter Britain's surplus in our markets in times of depression here, to the great disadvantage of the home-producer, and advantage of the British manufacturer. This position the United States now in turn occupies toward Britain and other manufacturing countries, since it has the greatest and most profitable home-market, not only for steel but for most articles. Invasions of Europe, and especially of Britain, by American manufacturers are not to be apprehended to any considerable extent, except at rare intervals. It is not the amount imported, however, that discourages the home-producer; the knowledge that he is open to serious competition from abroad, a small amount of which will break his market, is what makes him loth to invest the great sums sometimes necessary to keep him in the front, and robs him of the do-or-die resolve, which often is of itself the secret of victory in the struggles of life.

Second, the question of population bears directly upon the industrial development of nations, since

increased numbers expand the home-market. There are to-day seventy-eight millions of people in the American Union. More than 600,000 immigrants from Europe land on her shores this year. Her rate of increase between 1880 and 1890 was just about three times that of the United Kingdom. Last decade it was not so great, although more than double, having fallen, because of five years of depression caused by an agitation upon the standard of value, the most disturbing of all economic questions. Nevertheless she added thirteen and a half millions to her population. This decade, even at no greater native rate of increase than the last, will add more than fifteen millions. Every morning the sun rises it greets more than four thousand new faces added to the Union.

Germany's population is fifty-six millions; she added five and a half millions last decade. The increase of the United Kingdom was three millions six hundred thousand. It is a serious disadvantage to Britain in the contest, that her home-market cannot expand as rapidly as the American, or even the German. Size of productive territory, as affecting population, is a prime factor in the race for first place among nations in material production.

Third, we see proofs of another important law. Just as raw materials now attract Capital and Labour to any part of the world, so untilled fertile soil increases and attracts population. We note the rapid increase in the Mississippi Valley, and that

America is consuming more and more of its own food-supplies. It already manufactures as much of its enormous total cotton crop as Britain imports, and not more than 10 per cent. of all its field crops, except cotton, are ever exported. Wherever food-products can be grown profitably, people will increase, until the limit of food-supply is reached. Where exceptional conditions exist, such as valuable minerals, population may remain in excess of the food-supply, as with this favoured island; but permanently to maintain population beyond food-supply, a nation must be able to supply needed articles to so much better advantage than the purchasing nations can produce or procure them, as to enable it to endure the disadvantage of higher cost of food.

It seems clear that the spread of manufactures will be so general that the leading nations will finally supply most of their principal wants—at least to a much greater extent than hitherto. It follows that exchange of articles between nations, ‘Foreign Commerce,’ is not to increase as rapidly as exchange of articles within nations, ‘Home Commerce.’ But the unceasing growth of the world will, nevertheless, probably keep British, Belgic, and French Foreign Commerce and manufacturing at their present figures.

There is a great difference between a home and a foreign market, which is not much dwelt upon in Europe, to which I invite your attention.

Exchange of products benefits both buyer and

seller. With British Home Commerce both are Britons; with Foreign Commerce one only is a Briton, the other a foreigner. Hence, Home Commerce is doubly profitable, and this is not all, when the article exported, such as machinery or coal, for instance, is used for developing the resources or manufactures of the importing country, and enable these to compete with those of the exporting country, the disadvantage of this Foreign Commerce to the seller, except the profit upon the sale, is obvious. How different when the machinery is sold at home, and develops home resources continually.

Here is another important point. The relative importance of the two markets is often lost sight of. The home-market of America takes ninety-six per cent. of all manufactured articles; only four per cent. goes to foreign markets. Even Britain's home-market takes four-fifths of her manufactures; only one-fifth goes abroad. Politicians give far too much attention to distant foreign markets, which can never amount to much, and far too little to measures for improving conditions at home which would increase the infinitely more important home-market. If the people of the United Kingdom could spend even one pound per head more per year, her Home Commerce would be increased more than the total value of her exports to all of Australasia, British North America, and China combined. Truly Foreign Commerce is a braggart always in evidence, Home Commerce the true King.

In studying the industrial positions of nations, Imports and Exports are misleading. The undue attention still generally bestowed upon these by writers upon Economics here is surprising. Arguing as they do who judge of a nation's prosperity by its foreign trade, America's prosperity to-day is lessened, because her manufactured exports have for the day declined, which is on the contrary the best proof of extraordinary prosperity, for America at present needs all its manufactures in some branches for its own development. So with its food-products, more of which are being consumed at home. Happy country whose steel builds railroads, ships, and other structures in its own territory, and whose rapidly increasing population consumes more of its food-products. It is not what is exported but the amount produced that shows a country's condition, and what is not exported but put to profitable use at home is, as we have seen, doubly profitable.

So with Imports, which may decrease because more of the articles hitherto imported are now being made at home, as is the case with America; or may increase because more food-products are needed from abroad, which is the case with Britain. Imports increasing may not indicate prosperity, nor decreasing prove depression.

The habits, conditions, intelligence, and spirit of the masses are important elements in the industrial race, and we gave close attention to these as bearing upon our task. The German, as we know him at

home and in the United States, is a valuable man, steady, sober, methodical, thorough, self-respecting, of fine domestic tastes, an admirable workman and superintendent. Thanks to the conscription of Germany, among other causes, we had many thousands of Germans in our service, of whom at least four, whom I recall, became partners, and earned the millions of dollars they obtained. They fled from the conscription of their sons, and to-day the son of a German who left his country largely for the same reason, is at the head of the greatest manufacturing corporation in the world. We owe a valuable invention to one of these men. The value of the German element to America can scarcely be believed, except by those who, like myself, know it by experience. The total emigration from Germany and Austria-Hungary has about equalled that from Great Britain and Ireland. It may be accepted that if ever Britain resorts to conscription, the Republic will be still more enriched than it has yet been by one class of emigrants who will come in greater numbers than ever, even more valuable per man than the German—the Scot; and that many more than ever, of the most valuable men of England—a splendid strain when they reach the ‘open mind’—will leave their shores for the land which knows not conscription.

One is not wrong in believing that it is the ablest and most ambitious who leave their own

land, men who have saved enough to enable them to reach and to start in the new; that they have saved being the best possible proof of their value. One such emigrant is worth to America a score of inert stay-at-homes. One census showed that more than half the total number of Scotch emigrants were engaged in manufacturing. The three most celebrated pioneer manufacturers of iron in the United States were Scotch—Burden of Troy, Dickson of Scranton, and Chisholm of Cleveland. The American is efficient beyond other men, because compounded of the best of other nations, and developed in a climate under political and social conditions all stimulating beyond any to be found elsewhere.

In comparing Britain with the Continents of Europe and America, much is seen unfavourable to Britain's industrial position and to the comfort and happiness of her people, both employers and employed. The former fail to give business the unremitting attention, and to display the energy and enterprise of the founders of the practical monopoly of the past. They generally regard it as only a means to win entrance to another rank of society. The employed think too much of how little they need do, too little of how much they can do. Both classes still take life easily in this day of competition, which only the day of established monopoly could support. Employers would find it much to their own interests to give to their

ablest employees shares in the business. The more given in this form the more would flow to the employer. The great secret of success in business and of millionaire-making is to make partners of valuable managers of departments. The contest between the old and the new lands to-day resembles that between professionals and amateurs. It is in their workmen that the Continent has one of its chief advantages over Britain, and America over the Continent, for even the German has to yield the palm to the compound British-German which makes the man of the more stirring New World. He could not be more thorough or methodical than the German, but he is more active and more versatile. Wages of skilled labour, though higher in Britain than in Germany, are not so much so as to rank in importance with the factors stated; the difference between the two is trifling as compared with that between Britain and America. It is not the lowest, but the highest paid labour, with scientific management and machinery, which gives cheapest products. Some of the important staple articles made in Britain, Germany, and America are produced cheapest in the last, with labour paid double.

The two Continents have another decided advantage over Britain in the sobriety and regular habits of their workmen. The broken days of Britain both handicap the employer and injure the workman.

In viewing the immediate future of Britain without misgiving, as far as maintaining her present trade is concerned, I count upon the inherent qualities and capabilities of our race, which, lulled to drowsy inactivity by prosperity under highly favourable conditions, are bound to be again aroused by adversity, more or less severe, under strong competition. There is such wide scope for improvement that the most despondent may be encouraged; nor does the reform imply want or suffering, or less desirable conditions of life for either employer or employed—far otherwise. That the drink bill of this country, now reaching the incredible figure of one hundred and sixty millions sterling, should be cut in half, or only a quarter or less of it left, or better still, if only twenty millions were left, implies not the degradation but elevation of the people. That the sums risked by both masters and working-men in gambling, and the greater injury wrought in the waste of their time and thoughts, should become evils of the past, would improve the poor slaves of this habit. That they should smoke less would not render life less happy nor health less robust. Thirty-two millions per year are now spent upon tobacco; better if half or more were saved. And so with many of the rude sports; better if these were abandoned. From these evils the Continent and America are comparatively, and in some cases almost entirely, free.

The Peace Expenditure and Debt Charge of the four principal Powers stand thus *per capita* :—

	Expenditure.	Debt Charge.
United Kingdom,	£3, 10s.	8s. 6d.
Germany,	2, 1s.	1s. 7d.
Russia,	1, 15s.	5s. 2d.
United States,	1, 8s.	1s. 10d.

Germany's position financially is remarkable; that of Britain in contrast deserves careful attention.

That Britain's present population, wealth, or trade in the aggregate are to decline is unlikely; I believe these may even increase somewhat in the immediate future. Her wealth, climate, geographical position, and resources are superior to those of any country in Europe, some of which, because of these very advantages, are allowed to furnish her with products which she herself could produce. They get the crumbs which fall from her more luxurious table. That busy hive, Belgium, for instance, sends her articles to the value of twenty-one millions sterling yearly, three millions of this being cloths and yarns; one and a half millions, iron and steel. Germany is permitted to send one million worth of cloth goods and one million value of butter and eggs. France sends silk and woollen manufactures to the value of eighteen millions sterling; leather goods, one and three-quarter millions. Little Denmark, with a population not much exceeding two millions, supplies Britain to the extent of nearly twelve millions, almost as

much *per capita* as your total exports. Seven millions sterling are paid to Denmark yearly for butter, and three and a half millions for bacon and eggs. The latter item equals the total value of all you send her. Norway and Sweden, and Holland, send each one and a half millions worth of butter, and the latter also sends gloves and glassware valued at a million sterling. Here are sixty millions worth per year of foreign supplies, most of which Britain could herself produce, and will produce if ever she fails to find more profitable occupation for her own people, as she now does, or if ever her people become as industrious as those of the Continent, thus obtaining a permanent home-market almost equal in amount to one-quarter of all her foreign exports.

Thus Britain alone among European nations holds in reserve an important home-market capable of yielding profit equal to at least one-third or more of all her present export trade, since home commerce is doubly profitable. Here lies an untouched mine of wealth. She has in her unrivalled supply of coal, as far as Europe is concerned, another mine of vast wealth.

There is one dark cloud upon her horizon which cannot be ignored. From the best information I can obtain, in twenty to twenty-five years the supply of Cleveland iron-stone will be practically exhausted at present rate of production, except that two concerns will then still have sufficient for

some years longer. The Cumberland supply is already nearly exhausted. This will bring dearer iron and steel. Without cheap iron and steel the construction of ships and machinery of all kinds, and of the thousand-and-one articles of which steel is the base, would tend to decrease ; but the loss in this trade may be compensated for by increase in other branches, caused by the ever-growing wants of the world. Britain is not alone concerned in the iron-stone supply, for, as far as I know, the supply is soon to become precarious in some of the other manufacturing nations before many decades pass, unless new sources of supply are discovered. Even the United States has a proved supply of first-class ore only for sixty to seventy years, and a reserve of inferior grades which may keep her supplied for thirty years longer, say for a century in all, unless the rate of consumption be greatly increased. The enormous extent of territory in the Republic over which ore can hopefully be looked for encourages the belief that new deposits are sure to be found. It is upon new discoveries that Britain depends, the outlook in her case being less hopeful. Germany has to-day, as far as proved, the most enduring supply, although its ore is not nearly so rich as the American.

Years of painful lessons may be, and probably are, before the people of Britain, but the discipline will be salutary, leading to their improvement and elevation, and hence to make life here truly happier,

because freer from degrading tastes than ever before.

The evils of poverty receive unceasing recital, but there are evils of long-continued prosperity, of no mean order, which pass without the attention their poison warrants. The decay of great states is traced, not to poverty and want, but to the reign of luxury and the vices it breeds. A Britain filled with people possessed of the valuable qualities of our race, and becoming as temperate and industrious as the French, German, or American, has nothing to fear in the struggle for maintenance of a place among industrial nations. She needs no sympathy since her destiny is in her own hands. Fortunate, indeed, may be the verdict of her future historian, if sheer necessity at this epoch in her history compelled her to discard the vices engendered by a long season of extravagant gains, and consequent spread of the evils which luxury brings in its train, and led her once again to tread the toilsome path of self-improvement. A nation's position often depends upon the character and attainments of the leaders it produces—the exceptional men who lift their fellows. May it be the part of the historian to record that in inaugurating, and by example, precept, and exhortation, conducting this great campaign for the improvement of the habits of the people, rich and poor, noble and commoner, rulers and ruled, there was one body of men distinguished above all others for the

enthusiasm, labour, ability, and sacrifice, displayed in every part of the field—the students, graduates, and alumni of Scotland's oldest University.

To summarise in one paragraph the laws bearing upon the material position of nations, as described, may not be amiss:—

(1) The chief nations of the world have greater capacity to supply their own wants than was supposed.

(2) Skilled labour has lost its power to attract capital and raw materials, which under favourable conditions now attract capital and labour.

(3) Nations will develop their own resources to the greatest possible extent as a patriotic duty, offering inducements to the enterprising to risk time and capital in the task.

(4) The country with the largest and most profitable home-market has an invincible weapon for the conquest of foreign markets, as the 'law of surplus' operates in favour of the largest producer in competing for the trade of the world.

(5) As nations are more and more to supply their own wants, home commerce is to increase much more rapidly than foreign commerce.

(6) Nations tend to increase in population according to their capacity to produce cheap food.

(7) The tendency to enlarge areas under one Government must continue, otherwise the small nations become mere pigmies industrially, and play no part in world-wide affairs.

These laws have already given some proofs of their sway, to which I beg to direct your attention.

We hear of huge industrial combinations on land and sea, but the combination of forty-five States, some of them larger than the United Kingdom, forming the American Union, which promises soon to equal Europe in the production of many of the staple articles, and is already producing more than the rest of the world of the article of prime importance, is a portent of infinitely more consequence to the world than any possible Industrial combinations, the latter being trifling in comparison. At the present rate of progress America will, in the lifetime of many present, have a population equal to that of Europe to-day, excluding Russia.

The influence of a united Continent upon the smaller separate nations of the world is already felt. Europe sees its Art treasures and its Shipping Lines, and the Centre of Finance, passing to the new land as primacy in Manufacturing, in Wealth, and in Commerce have already done, under the law of gravitation, which operates in every field, even in that of literature. Eight copies of the *Encyclopædia Britannica* find their home in the new land for every one in the old land of publication. The manufactures of the new land invade the old and compete in the world's markets. These facts have not escaped the attention of the nations. Austria's Premier was among the first to direct attention to the situation, and he has been followed by others

in authority. Europe is alarmed at the threatened consequences, and the search is now directed to the discovery of countervailing forces. The first necessary step in this task is to compare the two Continents, and note the points of difference which create the dangers feared. We have treated of the positions of different nations hitherto; now we must contrast Europe and America as units—Continent against Continent.

There are some portentous contrasts.

First, we find Europe an armed camp, every man's time and labour for years taken for military training, not merely unproductive labour, but labour costly to the State. Nearly nine millions of men are thus called to military duty. The American Union, on the other hand, has only an army of 66,000 men,¹ and there is no conscription. Its men are in the Industrial, not in the Military Army, constantly adding to the material wealth of the country. She is further enriched through the operation of conscription in Europe.

Europe has 410 battleships, cruisers, and coast defence ships; America, 35.

It would be difficult to overestimate the effect of this contrast upon the industrial development of the two Continents.

Second, America is one united whole, at peace with itself, and enjoys immunity from attack by neighbours, or even by Europe, since she supplies

¹ Since reduced to 58,600 men.

so many parts of it with necessary food-products, that non-exportation of American products would produce not only famine prices, but actual famine itself, and compel peace. Hence industrial development has one indispensable condition, peaceful security. In Europe this is lacking, for it is divided into hostile camps. That its huge armaments cannot go on unceasingly growing is evident—an explosion must come. That this is considered imminent is evident from the measures taken by the nations to protect themselves from its consequences. If rulers and statesmen did not see the inevitable result impending over their heads—a Damocles sword—they would strain less violently in preparation. It is impossible for industrial development to proceed satisfactorily under the shadow of this dreaded catastrophe. There is nothing so timid as capital.

Until these contrasts cease, anything approaching equality of power between the industrial armies of the old and the new worlds is unattainable.

Third, since his continent has less than thirty people per square mile, the American has a constantly expanding home demand, urging him to extensions, and justifying costly improvements and the adoption of new processes. He has also a continent under one Government. He establishes his several works at the centres of the various markets. If a needed ingredient be found in one State, another somewhere else, if it be desirable to construct works

for one part of a process here, or there, or ply ships, or build railroads in any part of this broad area, he proceeds without hesitation, dreading neither interference with supplies, hostile legislation, or national antipathies. 'No pent-up Utica contracts his powers,' the boundless continent is his, as are all its markets, free from tariff. His operations are free from start to finish.

The result is that every process of manufacture in the Union flows naturally to the localities best adapted for it, there being no barriers to free selection. The best places also are selected for assembling materials, raw, or partially prepared, for their final forms. In short, it is free, unrestricted trade in everything under the same conditions, same laws, same flag, and free markets everywhere over an expanding continent, advantages which only those experienced in industrial trade will estimate at their full value.

The European manufacturer finds obstacles to such varied expansion, in a continent divided into hostile and warring States, with different laws and exactions and tariffs at every boundary, the fear of war overhanging all. He is almost compelled to confine his investments and works to the small area of his own country and its small home-market.

One of many telling advantages which industrialism receives from political union in America is that a great home demand for any article from one united people occupying a continent, evolves

standard forms, the evolution of the best types, which justifies the manufacturer in erecting special machinery and running it exclusively upon each part of the type. Railway, Electric, Harbour, Bridge, Engineers in these and other branches adopt the standard forms : hence whenever a huge bridge, for instance, is needed promptly in any part of the world, Egypt or India, America is applied to—the steel-maker has his bridge construction, and bridge erection departments managed by specialists who know best what is best much better than any general engineer can possibly do. The proper plans for the standard bridge required are taken, and the work begins instantly. Note here that the steel-maker is also the bridge-contractor, a vital point. The bridge is probably open for traffic before the European engineer could have submitted plans and the bridge-maker had contracted with the steel-maker. A new bridge in Europe is a new creation in which several separate contractors have participated; in America it is from standard patterns evolved from experience, and completed from start to finish by one contractor.

In greater or less degree this exists in the manufacture of the principal articles of which America is now the greatest producer. Consider agricultural machinery. One of the leading English manufacturers once told me that he had been compelled to abandon foreign markets and finally to cease business. The American manufacturer had

triumphed. While here three or four hundred machines were sufficient for the season's demand, his friend in America put in hand seven thousand. Megalomania again. This output justified the automatic machinery used in every process of manufacture. If my memory be correct, it was twenty-two men in Britain for two men in America in one of these processes; that is, the machinery did twenty men's work. Why then not adopt it in Britain? you say. Small home demand is the adequate reply, and that demand itself open to the American competitor.

Here is an illustration of different character. The Republic has now more than ten thousand miles of connected river and lake navigation which supplies the cheapest inland transportation of materials in the world. Having one government, these lakes and rivers were easily improved and joined, harbours deepened, and rivers rendered navigable by means of movable dams and locks. The work still goes steadily on under Government naval and military engineers. Some years twelve millions sterling have been devoted to it. In one day recently 226 barges, containing 200,000 tons of coal, passed through the Ohio River lock at Pittsburgh for western and southern cities. All articles can be thus floated or towed to points three and even four thousand miles distant for a few shillings per ton.

The iron-stone from Lake Superior mines is transported over part of this water system to the

coal of Pennsylvania for nine hundred miles, at a cost of two shillings per ton—one of several elements in the making of cheap steel. So much for water transportation through the action of Government; now consider land transportation by railroad through private agency. There is free trade in railroad-building—five men in Pennsylvania, for instance, can meet and organise a company under the general Railroad Law, by satisfying the county court that it is a *bonâ fide* enterprise, and that the capital is subscribed and one-tenth paid in, a charter issues costing eight shillings, and the work begins. Railway traffic rates per mile do not average over one-half, sometimes one-third those of Europe, for long distances, often for three thousand miles, merchandise is carried by rail in bulk, without transfer, at rates that would surprise you.

Pause to consider for a moment what such facilities by land and water mean as bearing upon the area of the home-market which the gigantic producer of any article can reach and supply—and then carefully note how impossible to acquire these except through the action of one central government, disregarding of the rival claims of its petty parts, and dealing with the problem solely from the national point of view, always intent upon developing one unbroken system of transportation.

Let us go to Germany for another proof that magnitude tells. She is supreme in speed upon

the Atlantic ; no steamships like hers. And why ? Because these monster ships start from Germany after draining the passenger travel of northern and eastern Europe. Not content with this, they touch at Southampton and compete for British travel, and still unsatisfied, cross to Cherbourg, and drain France and southern Europe. On their homeward trips from New York they are filled with passengers for all these ports. It is not subsidies which enable the German to conquer here, for their lines are not paid more than half what British lines on the Atlantic receive. It is magnitude ; the two hundred and fifty millions of people the German lines serve is equivalent to a great home demand. This justifies their ocean greyhounds, as the American home-market justifies unequalled manufacturing establishments.¹

Germany, in herself, furnishes proof of the necessity in this age for consolidation of small areas. As long as she was cut up into petty divisions, with different laws and tariffs, she had no international position industrially—it was impossible she could have. United into one Empire, with free trade over the whole area, giving a home-market of fifty-six millions of people, she only needed to encourage the

¹ Since these lines were penned we have strong proof of the law of the surplus. To support the smaller market in the unequal struggle with the greater, your Government has found it necessary to give £400 per day from the national revenue, for two Atlantic greyhounds under your Flag. The German gets four of these without this aid, because the greater home-market supports such ships of itself. There is no escape from the influence of magnitude, which gathers as it rolls, and must finally conquer.

development of her resources, which was wise statesmanship, to become the dangerous rival of Britain, and even to outstrip her in the most important article of all, steel.

One more illustration. Switzerland was the land of watch manufacture by hand. America introduced machinery having an enormous home demand—there being scarcely an American adult without a watch. Now one concern there makes more watches than all of Switzerland, as one American constructor makes more locomotives than any European country, and one agricultural implement maker makes more machines than all Britain.

Another proof of the value of home demand can be given from Britain. One important department in Europe is unequalled by the American—ship-building, which also obeys the law of great home demand. Since Britain has been the great exporter and importer of the world and the greatest naval power, naturally the building of ships has taken firm root there; and in the world's market she remains supreme. Having the enormous home demand, she conquers the foreign.

Europe has to make its home-market cover a united peaceful Europe, before its manufacturers have the needful security, and can prudently adopt the scientific means to produce upon a gigantic scale primarily for that home-market, which, now divided among all and restricted by tariffs, to the petty political divisions, is of little avail. Union

would dislocate some of the present industries, for each portion of the Union would, under free trade, prove its capacity or the reverse, to manufacture to the best advantage, the result, however, finally being that complete plants, equalling the American, would soon develop to meet the one great continental home demand for standardised articles—the prelude to participation in the world's demand. The plants would be fewer in number, one giant instead of ten pigmies.

More and more clearly must the truth be realised that the Industrial struggle among nations is bound up with the Political, the question of magnitude being at the bottom of supremacy in both. A nation cannot be small in size and in population and remain great in material products or material power. To maintain first rank industrially, commercially, or financially, small nations must merge with others, and become prosperous parts of one great federated power. Once the race was between separate nations, henceforth it is between continents.

Ask yourselves this question. If America had been composed of petty, independent, jealous States, as Europe is, each afraid of the other, and armed to the teeth against expected attack, and had erected tariff barriers against the products of each other, would Europe ever have heard of the American Industrial Invasion? To ask the question is to answer it—never.

The deepest and most powerful of all contrasts

between the two is that the one Continent is one harmonious, peaceful, co-operative whole, its power and energy directed to industrial progress; the other divided into hostile camps, the power and energy of each directed to military protection and commercial isolation.

Ask yourselves another question. Can Europe, as long as she remains divided into hostile camps, ever hope to conquer foreign markets, or even to repel the American invasion? That question also answers itself—never.

Such the chief contrasts between the two Continents and their effects bearing upon Industrialism. What must Europe do to dispel them? There is only one answer. She labours in vain until she secures some form of political and industrial union, and becomes one united whole, as the American Union is in these respects, for this is the only foundation upon which she can ever contend successfully against America for the trade of the world, or each of her separate nations hold its own home trade in manufactures, except under a system of protection which will handicap her in the race for the trade of the world.

Should her rulers ever reach this conclusion, the way seems easy to an American, but difficult though it prove, it should not be impracticable to go so far as to ensure peace and free exchange between its parts, without which nothing of importance can be gained. With this ensured, the load of

militarism would cease to press upon her, for a very small percentage of the cost of the present defensive armaments of the Powers would suffice to protect her from foreign attack. Europe is a body whose members war against each other ; her enemies those of her own household. A sorry spectacle.

The consolidation of Europe has proceeded apace within a century. Napoleon abolished more than a hundred independent centres of quarrel in Germany alone. In our own day we have seen Germany emerge, through Federation, into one of the strongest of powers, and reach the front rank industrially, Italy reconstructed and enlarged, France adding Savoy and Nice. Several smaller changes in territory have taken place, but no student of international affairs assumes that Europe has yet reached its final forms. It is still in a state of flux. Hence the Great Powers sleep upon their arms, mistrustful of each other, and in every successive budget devote huge sums to increase their war power, thus from year to year giving that fearful note of preparation, which keeps capital alarmed, and prevents rapid and thorough scientific industrial development and free exchange. No end can be safely predicted to the struggle once begun. Twenty wars and peaces may find Europe still in flux, if its final forms are to be determined by the sword. Fortunately consolidations have reduced the centres of disturbance until to-day there are only five in Europe, and, as a result, even Europeans are now

sometimes permitted to rest from the slaughter of each other for a generation, guiltless of their neighbours' blood, and this although Europe is an armed camp and the Powers still busy increasing their destructive agencies. We should hail the Triple and the Dual Alliances, since these are defensive agreements, and reduce war-making centres practically to two, a contest between which would be of such stupendous magnitude as to give the most reckless gamester pause. But the merely negative influence of these Alliances is clear. They cause not one moment's cessation in the race for additional armaments, proof that the Powers still fear each other in spite of these consolidated agreements, and dread the coming of an inevitable struggle, which is to end only when the Map of Europe is greatly changed. Hence the military army exacts its conscripts from the industrial army, and progress halts in all the fields of peaceful development. Security is absent. Some have predicted that no permanent peace is possible until the division among the Great Powers be effected substantially upon racial lines. Such drastic reconstruction means generations of strife, or of preparation for strife, almost equally disastrous to industrial progress, and would still leave three rival Powers. Such a solution should not be thought of. One exclaims instinctively, 'Take away the sword—States may be saved without it.' The most important gain of all to the cause of Peace among men

is to be credited to the enlightened and peace-loving Emperor of Russia. The Hague Conference, called by him, established a permanent Tribunal composed of the ablest and best men of the various nations, a selection from which can be made by nations to settle their differences.

Its value has not been realised. Wars in South Africa and the Philippines arose and absorbed attention. In both of these our race was offered by its adversaries arbitration through this agency, which was ultimately rejected, but the time comes when we shall begin to appreciate what the world has gained thereby. Two international disputes have already been submitted to this high court of humanity, and the example, once set, is bound to be followed and crystallised into custom. A thousand years from now the historian will probably cite as the most important event of the century, the first creation of a Tribunal whose object was to banish from the earth its deepest stain, and from human beings their most inhuman practice, the settlement of international differences by the killing of each other. Such the part played by the present Emperor of Russia. Such his unimpeachable title to rank with the few supreme benefactors of men. It is something gained that Europe might relieve itself of internal wars among its parts, as if by magic, by simply agreeing to appeal to this Tribunal.

Though we cannot shut our eyes to the fact that it has been only by the sword hitherto that con-

solidations have come in Europe, there are some cheering indications that peaceful means may still give her lasting peace. The three leading powers, Russia, France, and Germany, took joint action in regard to a question in the Far East, and more recently Britain joined them in joint action in China, the United States co-operating to some extent. These are all cheering signs, indications that perhaps the era of continuous joint action is not so far distant as might be feared. The Triple and Dual Alliances, or a new grouping of parties, might guarantee the *status quo*, and agree to cease increase of armaments, which would not change the relative positions of nations. Perhaps a second resolve might soon follow that these should be rateably decreased, but this being a positive, not a negative measure, would be more difficult. Still, much seems possible in the direction of peace, since there are now only two organisations to be harmonised.

‘A great man has arisen in England, Sire, called Cromwell,’ said Richelieu to the King. We might say, ‘A great man has arisen in Germany, the Emperor.’ It is impossible to follow his doings without feeling that here is a personality, a power potent for good or evil, in the world. So far he has given Germany a much-needed stimulus to industrial action; both on sea and land, his influence has been decisive. The German ships are first in speed upon the Atlantic. The inland watercourses of Germany, according to his plans, are soon to play a more

important part in her internal development. She is now second in the world as a manufacturer of steel, which means much, since that is the basic element of a thousand articles, and her product of iron is soon also to be second. The Emperor's head and hand, heart too, are in all these triumphs. He is at once the Emperor and the vital force of the Empire. One wonders whether, after having proved the efficiency of the German Constitution, he may not devote himself to its further extension. All that Germany has gained by consolidation into an Empire, Europe would gain, and more, if merged into one. A combination of the German and American Constitutions, satisfactory to most, if not all, European nations, seems not impracticable, and the union only of the most important is required to ensure peace. France, Germany, and Russia would suffice, and these have taken joint action already against Japan. Why are they not to do so hereafter in the greater issue? Under both the German and American systems small nationalities are sacredly preserved, as in the Union of Scotland and England; hence the perfect welds. The kings of Saxony and of Bavaria are German. Every State in the American Union is in itself sovereign with its elected governor. Wherever suppression has been tried, trouble has arisen. Imagine the effect of an attempt to destroy Scotland's nationality and stamp out the sentiment which lies in the core of every Scottish heart, which no

words can ever express but 'Scotland forever.' With this precious national patriotic sentiment properly recognised and protected, consolidations of nations will be easy, and wholly advantageous. The smaller merged nations will lose little and gain much by becoming members of larger areas. Such consolidations are certain to come, and should be hailed as steps in the world's progress and harmonisation, precursors of that coming federation of the world, the poet's dream of to-day, but the reality of the morrow

The coming century is probably to look back upon the present petty political divisions of Europe, with the feelings we of to-day entertain for the one hundred and fourteen little States of Germany and their pigmy monarchs of the past century, with their thirty-four tariff barriers to commerce and travel on the Rhine, resembling the Likin of China.

The Emperor of Russia having taken the first step toward the peace of the world in the Hague Conference, the other mighty Emperor might, some day, be impressed by the thought that it is due to himself and to Germany to play a great part upon the wider stage of Europe, as her deliverer from the incubus which oppresses and weakens her, the appalling and paralysing fear of a war of ruin between the members of her own body. Seldom comes to the world one who is both Emperor and ruler, and the few known to history have made their mark upon the world, from Cæsar and King

Alfred to Charlemagne—no ordinary task contented them. One cannot help believing that 'one of the supremely great' in the Emperor's position could influence the few men who to-day control Europe to take the first step, not to federate, but by alliance to ensure internal peace, which is all that can be expected at present. What the separate nations of Europe, Russia excepted, have to look forward to in the not distant future, if they do not agree so far as to enjoy peaceful security and free trade among themselves, and act in wars, Military or Industrial, as one Power, is to revolve like so many Lilliputians around this giant Gulliver, the American Union, soon to embrace two hundred millions of people of the English-speaking race, capable of supplying most of the world's wants, both in manufactures and food-products, at lowest and yet to it profitable prices. The most sanguine predictions in regard to her advantages and coming triumphs industrially and commercially, are, in my calm judgment, probably to be exceeded. Even if European nations were reconciled to 'play the subordinate rôle indicated, there remains the impossibility of their enduring for ever the present military strain under which some already begin to stagger. The load must sooner or later prove too great, and force reconstruction.

Let us therefore assume that Continental Europe will be finally compelled, after greater or less sacrifice, through ruinous wars, or peaceful negotia-

tions, if not to federalise in some form, yet to adopt means to ensure peace among themselves which would lead to some form of federation under free trade. It would then be Continent against Continent—Europe *versus* America: with the former relieved from militarism there would be equality so far, and both could prosper with a large home-market, and participate in the ever-increasing trade of the world. There is little room to-day for operations upon a small scale either in Industrialism, or in Nationalism—nation against nation was once well enough. Britain and France, Italy, Germany, Austria-Hungary were each once of sufficient size to rank as great powers, but the American Continental Union, forty-five States in one, has changed all that. The solid mass of this great body in action will by mere momentum force its way through small industrial warring units in opposition. There is also huge Russia to be reckoned with, which likewise threatens to overshadow the small nations.

The closing paragraph of Morley's *Life of Cobden* is most pertinent to to-day's conditions:—

'Great economic and social forces flow with a tidal sweep over communities that are only half-conscious of that which is befalling them. Wise statesmen are those who foresee what time is thus bringing, and endeavour to shape institutions and to mould men's thought and purpose in accordance with the change that is silently surrounding them.'

The question arises, what would Britain do if Continental Europe be thus relieved from internal dangers and under free trade possessed of the indispensable home-market, and were finally to be federated into one zollverein or great power? Would she remain a small separate island nation of forty-five or fifty millions, against the hundreds of millions of the Continent? Or, if invited, become a member of the European Consolidation—our race submerged by Slav, Teutonic, and Latin races? Or would the Mother-heart, beating fast within her, turn her gaze longingly to her children, then hundreds of millions strong, across the sea, in Canada, and in the United States, and, grasping their outstretched hand, murmur, ‘Whithersoever thou goest I go, thy people are *my* people.’ The English-speaking race thus becoming again as it was before—for offence never, for defence ever—one and inseparable.

It is for essays upon this momentous question that I shall offer the usual Rector’s prizes.

Students of St. Andrews,—My subject has been the Industrial Ascendency of the World, once yours, and now passed to your lineal descendant, who bears the industrial crown. The old home is too small to produce, under any conceivable conditions, material things rivalling in amount those of a continent almost as large as Europe. It is physically impossible, and not even Britain can perform impossibilities, incredible as have been

her achievements, nor, for the same reason, can she hope to equal the production of Germany in the near future, much less of Russia in still later days. The Union of the Empire would not change the situation, for neither Canada nor Australasia gives promise, unfortunately, of much increase either in population or industrialism. Their slow growth in population, only eleven hundred thousand in the last ten years, is significant, if not ominous. All thought of material ascendancy, even with the Empire united, must therefore be abandoned.

But, gentlemen, in this audience, assembled in Scotland's oldest University, the thought that fills your heart and appeals to mine, is, of what value is material compared with moral and intellectual ascendancy, supremacy not in the things of the body but in those of the spirit! What the barbarous triumphs of the sword compared with those of the pen! Peace hath her victories much more renowned than those of war: the heroes of the past have been those who most successfully injured or slew, the heroes of the future are to be those who most wisely benefit or save their fellow-men. What the action of the thews and sinews against that of the Godlike reason, the murdering savage armies of brutal force against the peaceful armies of Literature, Poetry, Art, Science, Law, Government, Medicine, and all the agencies which refine and civilise man, and help

him onward and upward ! Shakespeare and Milton, Burns and Scott, Newton and Hume, Bacon and Locke, Cromwell, Hampden, Pym, Sidney and Russell, Burke, Gladstone, Bright, Tennyson, Browning, Arnold, Carlyle, Ruskin, Darwin, Watt, Symington, Stephenson, Bessemer, Arkwright, Hargreaves, and others of the past ; and all the leaders of to-day who march in the train of the white-robed angel of peace and good-will among men.

What matters what part of the world makes the most Steel, Iron, Cloth, or Ships, if you produce the highest Poets, Historians, Philosophers, Statesmen, Inventors, Teachers ? Let others make more of the food for the body of man, if from you come the best books for his soul, or the highest examples of lives grandly lived. Let more of the millions of the people of the world be clothed by other lands and other hands, as long as you educate and apparel the minds, leading men in the higher paths.

There is an ascendancy of the world and that the highest, where neither unbounded fertile territory, immense store of minerals, nor numbers, nor ought material, are of value, where megalomania reigneth not. For the crown of this realm you have no cause to struggle, it is already yours, it has never been lost, it remains here in the old home. Nor has the blast yet been blown of any challenger from either of the four winds of heaven. The

crown of the material world, physical reasons prevent your wearing, although man for man you may remain the equal or superior of any. There is no reason why you should lose the other. See to it that you do your best to guard it well against all comers, men of St. Andrews, for precious it is beyond all others, and blessed among and beyond all other nations is she whose brow it adorns.

Let other nations therefore distribute among themselves as they may the victories of materialism. Precedence for Britain, the dear old home of our race, in the things of the spirit, the modern Greece, and more than Greece ever was to her world, at whose shrine all that is highest and best of the nations of the whole world will dutifully attend to testify their gratitude, admiration, reverence, and love.

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