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THE IMPORTANCE OF MINERALS IN INTERNATIONAL RELATIONS

by

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Before beginning the discussion on the subject of this morning's conference, there are certain basic factors which I feel must be brought to your attention. Some of them might be termed platitudes, yet without having in mind these certain facts there would be no object in my attempting to refresh your memory on the importance of minerals in international relations.

The unequal geographic distribution of mineral deposits makes international trade inevitable. A truth which is often overlooked in a discussion of mineral resources is that minerals differ from agricultural products, for when once removed from the ground they can never be replaced. You may re-use that which you have already mined, but you can not create new mineral resources. Likewise, no political subdivision or nation has within its confines, a supply of minerals adequate to meet our present day industrial demands.

Minerals are essential to modern industry. The reserves available to any given nation constitute a factor which limits its industrial ambitions. Nations such as Italy or Japan, lacking as they do adequate resources of essential minerals, and with a rapidly increasing population, causing an ever-advancing menace to domestic tranquility, must as time goes on face the problem of obtaining, at any cost, sources of essential minerals, or an outlet for the excess population. Of course, it may be said that the logical remedy rests in birth control, but as this involves so many, at present, unsolvable problems, for the immediate future we can not count on its benefits. Past history lends weight to the possible fact that should the possessor nation withhold mineral raw materials from those not so fortunate, when a time comes for action, they will select a weaker nation possessing some of the natural resources desired; and when world conditions seem advantageous, resort to conquest by force. At present we have the example of Japan in China, and Italy in Abyssinia.

So often when we are attempting to straighten out the affairs of the world - and most of us rather enjoy this diversion - we forget that we are dealing with human beings actuated by hereditary characteristics. Let us assume that our early ancestors were actuated by the desire of self-preservation.

This motive possibly took three material forms: food, shelter and raiment and the means of self-preservation. A perusal of early history indicates that human cupidity has played a most important part in our development. If we believe that our neighbor has something which is essential to our welfare, we may make the attempt to obtain that which he has either by fair means or foul. The success of the Roman Empire might be attributed to the looting of the hoarded wealth of various nations. It is true that here there were workable mineral deposits, such as those of the Iberian Peninsula, easily accessible, and the wealth was thus created within the Empire. Caesar's success might be attributed, in part at least, to the superiority of the weapons used by his cohorts. When I say this I hope I am not belittling military training.

Another point that I should like to make is that in this modern world of ours, consideration must be given to the thought that international friction is but the end reaction to the economic problems arising from modern commercial practice. Consideration of what has been said, I hope makes clear that legislative enactments as to minerals are of the utmost importance, not only from the standpoint of industrial prosperity, but of international relations as well.

Let us consider as a premise, the theme of self-preservation. In order to bring out clearly the important part played by minerals in our industrial and social development, it would seem necessary to briefly review the position occupied by our present world powers from the standpoint of self-preservation. Periods of peace are apt to give any nation a false sense of security and smugness, which is not warranted, and only when rudely awakened by war does it become evident that there are major gaps in its security which can only be filled by importation from countries which it may not control politically.

It has been said that after the Battle of Hastings, England was greatly distressed because of the lack of yew for the making of the long bow (yew coming from Germany). After the Battle of Trafalgar, areas were set aside for the protection of oak in order to maintain a home supply for the building of frigates.

Anyone prior to 1914 making the statement that the United Kingdom was not self-sufficient in its iron ore reserves for modern demands would no doubt have been scoffed at. Nevertheless, the facts are that owing to a lack of Bessemer ore the output of shell steel was not sufficient to take care of the war demands. It has been estimated that during the war England

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imported annually over 6,000,000 tons of low phosphorous iron ores, two-thirds of which came from Spain. This condition has not materially changed, and while the British Empire has within its political confines sufficient high grade iron ore to meet almost any demand, the transportation of this essential commodity depends upon the maintenance of sea lanes and, therefore, upon the supremacy of the British navy. Little has been said of the fact that the production of steel in Great Britain, during the war period, was materially retarded by the loss of its source of magnesite used as a refractory in the lining of furnaces. Previously, Austria had been the main source of supply. The facts are that the United Kingdom depends upon its various dominions and colonies for the major part of the essential minerals which form the basis of industrial development; the only exception of great importance being coal. Just as we had to protect our trans-continental lines by military force during the war in order to assure delivery of essential materials at manufacturing centers, just so the United Kingdom must protect its sea lanes, and is forced to do so by maintaining a naval strength sufficient in the opinion of the admiralty to protect the Empire.

A study of the resources of the British Empire indicates that from the standpoint of the Commonwealth of Nations, near self-sufficiency can only be attained by combining its resources with those of the United States.

Much has been said of the self-sufficiency of our country. A little thought will indicate some glaring deficiencies; as for example, consider for a moment the many raw materials necessary for rendering the telephone a useable instrument. Without international trade, the development of this means of communication might never have taken place. The manufacture of steel, one of our greatest industries, would have to be materially modified if foreign sources of manganese were eliminated.

It is all very well to suppose that substitution will take place, but if time is an element in modern warfare, you can readily see that changes in normal practice can not take place over night, and the necessary time for the training of personnel might well mean success or failure.

The position of Russia is an ever changing one, but any study of its industrial development must take into consideration the fact that some time must elapse before anything approaching intelligent labor will be available. Russia may well be considered among the three Great Powers from the standpoint of its national resources, but from the standpoint

of the ability to handle and develop these resources, it must take a position well down the scale.

The German Empire, as it is now constituted, is greatly deficient in mineral raw materials. Its position is very different from that prior to the World War, and its loss of coal and zinc reserves has materially crippled its industrial development.

It seems to me that until the question of the Ruhr is solved, there will always be an armed peace between France and Germany. To divert for a moment - Based upon our present day knowledge there are few localities throughout the world where a modern steel plant could operate. I have pointed out that even England depends upon foreign sources for a part of the material necessary for the manufacture of modern steel. Broadly, there are now five, or possibly six known districts where the various types of steel could be manufactured commercially. These are the Lake area of the United States; Birmingham, Alabama; the Ruhr district, Continental Europe; the United Kingdom, and possibly at some later date, the Central Provinces, India.

It is unfortunate from the standpoint of peace, that the Ruhr district is divided by political boundaries. In the Franco-Prussian War, an attempt was made by Bismarck to heal this sore. Unfortunately, the Commission of Geologists appointed to determine the boundary between France and Germany failed to recognize the character of the iron deposits and therefore left in the hands of the French the larger part of the iron ore reserves. In this way, Germany had control of the fuel (metallurgical coke), and France the iron ore. There can be no question but that the Franco-Prussian War was largely due to conditions of the Ruhr, which have not as yet been solved satisfactorily. You might say - "Of what importance is this to us?" But I believe that upon the prosperity of the Ruhr depends a large measure the buying power of Continental Europe, and therefore, exports from our own country may fluctuate according to the degree of prosperity enjoyed by that district.

France's struggle to maintain a steel industry based upon the importation of coal is well known. Its attempt to obtain self-sufficiency in petroleum makes interesting history. Shortly after the World War, certain companies of the United States obtained permission of the French authorities for the building of oil refineries. The thought back of it was to provide an outlet for the ever increasing production of crude. These refineries were built under certain specifications as to storage capacity as prescribed by the French authorities. Shortly after the completion of these plants, the French merchants found it difficult, if not impossible, to obtain payment for their goods in Rumania, because of the monetary exchange. The French Government received in payment for these frozen assets a large tonnage of petroleum from Rumania, and the foreign companies operating in France were forced by the French Government to refine this material. As you all know, France is interested in the Iraq field, having nearly a one-fourth interest. A few years ago France requested the British Government to assist in providing transportation for Mosul oils. This was refused. France has built a pipe line and is obtaining a portion of its crude from this area. I think it is fair to say that at present the American refineries are operating entirely on crude obtained from sources other than the United States.

Owing to the lack of natural resources Italy must import its mineral raw materials principally from countries not politically controlled by it.

Spain can not be considered an industrial country. For years it has supplied a part of the requirements of Europe in such materials as lead, pyrite, copper, iron ore, etc.

I hope this brief review indicates some of the needs of the industrial countries. I believe that with the possible exception of the Commonwealth of Nations, the foreign policy of these countries has not given sufficient weight to the necessity of controlling in fee essential raw materials. I think anyone reading the history of Great Britain would agree with me that this country is the exception. There is evidence on every hand as to the fulfillment of an underlying policy of the British Empire; namely, the acquiring of this, that or the other raw material in any portion of the globe where there is a semblance of a chance of obtaining it without disrupting European peace. It has been said that the Empire has in moments of absent-mindedness acquired some of the most valuable mineral deposits now known.

When I am asked regarding the importance of minerals in international relations, this thought always occurs to me - "What would be the policy of the United States if Great Britain for any reason should say 'We can not afford to ship you any more tin'". "What if the supply of nickel, rubber or manganese were eliminated?"

During the past few years there has been growing up an ever increasing use of chromium. The resources of the United States are inadequate to meet the demand, yet we go ahead blindly using this material, making ourselves ever dependent upon foreign sources for a metal which I believe will soon play a very important part in our industrial development.

There is always a chance that technological advance or new discoveries of sources may render a deficiency mineral one of surplus at any time. An example of this may be found in the history of nitrates; also in the fact that the United States is now self-sufficient from the standpoint of potash; thus in one place breaking the monopoly of Chile, and in the other, rendering the cartel of the German monopoly harmless as far as our needs are concerned.

A partial insight into the important part played by minerals in international relations may be attained by considering for a moment the British situation in South Africa. Gold and diamonds played their part in the South African war. The development of the Rand by the British has resulted in an annual production of gold of more than \$200,000,000. This output is made possible largely by the utilization of black labor. I feel that I may be wrong in making this statement, but to me the handling of the blacks in South Africa by the British is but a refinement of slavery. I can not help but feel that aside from the great interest the British Empire has in Lake Tsana, Abyssinia, the real interest in the present Abyssinian-Italian war is a fear that the results may materially influence and alter its holding upon Africa. A bit of unwritten history which I believe to be true is that when Abyssinia entered the League of Nations there was an agreement or treaty drawn up by France, Italy and Great Britain. Abyssinia was zoned, allocating to the three parties at interest certain areas over which they would act as guardians. Abyssinia was not consulted. The control of the sources of Atbara River and also the Blue Nile River is said to be under British jurisdiction. Should the Abyssinians be forced to retire within the zone supposedly controlled by the British, and if armed forces of the Italians should penetrate this district, it would be a declaration of war. They can not enter this territory and disarm the Abyssinians. Therefore, this area constitutes a safety zone for the Abyssinian and will no doubt prolong the present war to a point where, I am informed, Italy will probably

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be defeated. Italy's problem, as I see it, is how long will the Government be able to supply the necessary war material?

When attending military college many years ago, I took a course in military strategy. We were told that it had required more than a man's weight in lead to render him hors de combat. The maxim rapid fire gun had just been adopted by our War Department, and it was estimated that this arm would expend more than double the amount of lead to accomplish the same results as did the old small arm. It has been estimated that an Artillery Corps (2nd and 89th) in the Battle of the Argonne, November 1, 1918, expended in eight hours a larger tonnage of projectiles than was used by the Artillery and Infantry of both armies engaged in the three-day Battle of Gettysburg.

A few days ago I was told that so far it had been necessary for the Italian troops to use the equivalent of one ton and one-half of high explosives for every Abyssinian killed. If Italy and Abyssinia were supplied with war material on the basis of cash payments, time would unquestionably defeat Italy.

I believe the attempt of Abyssinia to grant oil and mineral concessions to United States interests was for the purpose of establishing credits, and also if Italy should be successful, to inhibit it from being able to offer as collateral to any nation this or that part of Abyssinia from the standpoint of natural resources. Abyssinia was trying to place a cloud on the title of its own territory, making it evident to a loaning nation that it would have to deal with the United States, and (if successful) not Italy.

The upheaval in the negotiations for peace, known as the Hoare-Laval Proposal, brings out with great clarity the fact that Hoare unquestionably believed that an oil embargo would force Italy to attack Great Britain.

If a Continental war should result from the Italian-Abyssinian question, it would have been brought on primarily by the pressure of population. If actual warfare is precipitated, it must be attributed to the proposed oil embargo. If on the other hand, the Ethiopian forces triumph over the Italian army, it may mean the collapse of Italy and the peace of Europe, as well as the effect it may have on the British

holdings in Africa. Thus petroleum will have played a major role in the problem of world peace.

May I leave with you the query - "Can Great Britain afford to have the Blacks successful? Can Great Britain fail to assist the Blacks?" A revenue of more than \$1,000,000,000, largely from Africa's mineral resources is at stake.

Germany's threat to Russia is largely based upon the desire to obtain sources of minerals for which the nation involved is deficient and can not maintain or advance its industrial civilization without the control of the sources of the raw materials. To me it is a fact that at present, a study of territorial acquisitions by any of our nations, such as Japan in Manchukuo, and France in Indo-China, and Italy in Abyssinia would illustrate with crystal clearness the importance of mineral raw materials in international relations.

The British interests in Abyssinia have been a matter of negotiation for upwards of seventy-five years. It was not until after 1860 that the sources of the Nile were known. The exploratory work was done by Sir Samuel Baker and the various sources of the Nile, such as Lake Victoria, were named by him. For many years he attempted to impress the British Government with the importance of the control of the tributaries of the Nile, and in 1868 he published a book entitled "The Nile Tributaries of Abyssinia". It was not until after 1890 that the British took an active part in the control of the sources of the White Nile. At this time the Italians were making every effort to obtain a protectorate over Ethiopia, and an agreement was drawn up between England and Italy; included in this agreement was a clause which bound Italy not to construct on the Atabara River any work which might sensibly modify its flow into the Nile.

Owing to the activities of the French in 1898 in the Abyssinian area, the English Minister Colonel Harrington persuaded the Emperor Menelik to sign an agreement which contained the following clause: "Not to construct or allow to be constructed any work across the Blue Nile, Lake Tana or the Sobat which would arrest the flow of their waters into the Nile except in agreement with his Majesty's Government and the Government of the Sudan".

The agreement to which I have referred, which was supposed to have been entered into in 1925, the text of which has never been published, indicates what I have stated as to the division of Abyssinia by the three powers at interest without consultation of the Abyssinians.

Gold appears to be the only mineral worthy of serious consideration at the present time. By organized exploitation of the known mines and exploration in the unknown areas it may be possible to increase the present output many times.

Next in importance are the potash deposits necessary for agricultural purposes. Mica and construction material are also important in a small way. The opinion of most geologists and engineers is that there is little or no chance for discovering petroleum reserves of importance either in Eritrea, Ethiopia or Somalia.

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