Walther Rathenau, "The organization of raw materials supply"

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Meine Heeren!

I would like to report to you about a sector of our economic warfare that is without historical precedent, one that will be a great influence on the course and success of the war and that is expected to have an impact well into the future. It is an economic event that touches closely on the methods of socialism and communism, and yet not in the sense that radical theories have predicted and promoted it. It is not the theoretical structure of a rigid system that I would like to give you, but a piece of lived life, one which initially played out in obscurity, then moved in larger and larger circles, eventually led to an entire reformation of our economic life, and gave rise to an agency that grew out of the walls of the old Prussian War Ministry to put the German economy in service to the war.

I would like to give you more than a sense of the operation, but also the romance that garbs its being and growth, that ensued from the interaction of a number of people who were connected by nothing other than a community of sensibility and work. Men came together from all districts and occupations in order to act without obligation and condition in free labor for the best of their country, and to share what they possessed in experience, labor power, and ingenuity.

Commodity enterprise! An abstract, colorless phrase, like so many labels of our time, whose language does not have the creative power to create figurative words for tangible concepts; a lifeless phrase, and yet a notion of great gravity, if one visualizes it fully. Look around at what surrounds us: equipment and construction, means of food and clothing, weapons and transport, all contain foreign components. Because the economy of the nations is inextricably intertwined; on rail and waterways wealth of all zones flows together and combines in service to life.

This is what gives the notion of commodity [i.e. raw materials] supply its hue, and this hue becomes the more intense when it comes to the issue of armaments and defense. A further deepening of the concept occurs when this defense becomes necessary in a closed, locked country.

Every day we hear talk of the nation's food supply difficulties. And yet this nation's food supply relies on a productive force which meets more than eighty percent of demand. Enclosure can restrict us, but it cannot destroy us. It is different with the other materials which are indispensable to our warfare—blocking them can mean annihilation.

Scan the map of Europe and the position of the Central Powers in it; it is as if a demonic hand has drawn the contours so that with the occupation of a few points these enormous national territories would lie cut off. Yes, we admittedly border on three oceans, we and our allies, but what are they? Inland lakes. The Baltic Sea, only accessible via a strait. The North Sea, cut off by the channel through the Orkney and Shetland Islands. The Mediterranean, locked in by the two bases in the east and west [presumably meaning the Bosphorus and Gibraltar]. And behind

these inland lakes in the north extends a needy country with a low supply of essential materials, while to the south behind the Mediterranean basin extends a stretch of desert through which no railways and roads lead to the production centers of the world.

On August 4 last year, when Britain declared war, something monstrous and unheard-of took place: our country became a besieged fortress. Enclosed by land and by sea, it now relied on itself, and the war lay ahead of us, unforeseeable in time and extent, in danger and sacrifice.

Three days after the declaration of war I could bear the uncertainty of our situation no longer, I asked to report to the Chief of the General War Department, Colonel Scheuch, and on the evening of August 8 he kindly received me. I explained to him that our country could probably be supplied only for a limited number of months with the essential materials of the war economy. He estimated the duration of the war to be no shorter than I did, so I had to ask him the question: What has been done, what can be done to avert the danger of strangulation for Germany?

Very little had been done, and yet much was done, for the interest of the War Department was piqued. When I returned home distressed and anxious, I found a telegram from War Minister von Falkenhayn, who ordered me to his office the next morning.

It was Sunday, August 9. I thanked the minister and told him I was amazed that in this time of mobilization he was in a position to waste his time dealing with someone's else schemes. He responded by pointing to his desk: You see, this table is empty.

The major work is done, the mobilization is over, there has not been a complaint, and I have time to receive visitors.

The conversation lasted part of the morning, and when it ended, the decision was taken by the minister of war to create an organization, however large and by whatever means, that had to be effective and had to solve the problems posed to us. At this crucial moment the bold and responsible decision of the Prussian War Ministry brought the turning point in the domain about which I shall speak to you.

I wanted to excuse myself; the minister of war kept me there, making the unexpected suggestion that I should take over the organization of this work. I was not prepared, and I wanted to ask for time to think it over, but this was not permitted, I had to give my consent and in a few days I found myself set up in the War Department.

The "war commodities department" was established by ministerial decree, and it had a two-member board consisting of a retired colonel, an experienced man who to a certain extent provided military cover and embodied the experience of the War Department in our young department, and me, whose task was to create the organization. We sat in four small rooms for three of us with a rotating Privy Secretary who was assigned to us, and whose practical experience we learned to appreciate amid the pitfalls of operating procedures.

It was mid-August. Outside my window a beautiful maple spread out its branches and overshadowed the roof. Below was the beautiful garden of the War Department, with its guard slowly walking to and fro, and two old cannon standing on the lawn in the sun. And behind this

peaceful quiet was a high chimney pointing toward the gigantic expanse of the German economy that spread out beyond it, all the way to our flaming borders. This expanse of thundering trains, roasting food, glowing furnaces, whirring spindles—this immeasurable economic expanse stretched out before the mind's eye, and we were given the task of unifying this world, this bobbing and soaring world, putting it in service to the war, imposing a uniform will upon it and arousing its titanic forces for defense.

The first thing that had to happen was to find people. I approached friends, and won as deputy board member my colleague from the General Electric Company (AEG), Professor Klingenberg. I also managed to win my friend [Wichard] von Moellendorf as an employee, who in friendly conversations had first put a finger on this serious wound to our economy. Now there were five of us, the work could begin.

The first question that confronted us was the question of coverage. We had to know how many months the country was supplied with essential materials—every measure depended on this. The opinions of the industrialists contradicted each other and sometimes differed by a factor of ten.

I raised a significant point: What's the situation, can we get statistics on these things? "Yes," they told me, "these statistics can be assembled." When? "In about six months." And what if I have to have them in a fortnight, because the situation demands it? I was told, "There aren't any here." But I had to have them, and I did within a fortnight.

A bold approach was needed, a hypothesis, and this hypothesis has been proven itself. It was assumed that the coverage ratio of the German economy would have to be on average nearly the same as for a good-sized, arbitrarily chosen group. The War Ministry had 900-1000 suppliers. If we organized a questionnaire with these suppliers and inquired after their coverage ratio in the various materials, then we could expect with some probability to get the order of magnitude of the coverage for the country. It was not a matter of individual details—it was about the main features. The experiment succeeded. After fourteen days the darkness lifted, and after three weeks we knew for certain. For a few materials the coverage far exceeded the then-applicable year-long term needed for the war, while for the most part it was considerably lower.

The group of materials that we had to manage originally seemed small. Foodstuffs and liquid fuels were excluded, and everything deemed "war raw materials" was included. The official definition was: "those substances that serve the national defense and cannot be obtained long-term and in adequate quantities within the country." In the beginning less than a dozen were recognized as inadequate, and later the number rose from week to week and at the end it was a generous hundred.

What we had now still wasn't much, but it offered a basis. We knew now what the nation's coverage was like, and gradually the task took on its full outlines, though the solution was of course not yet on hand.

Four routes were possible and had to be followed in order to transform the domestic economy, to enforce the state of defense.

First, all the nation's commodities had to become compulsory, no longer could they be subject to individual will and individual caprice. Every material, every semi-finished product had to flow so that nothing found its way to luxury or incidental demand. Its pathway had to be curbed by force, so that it automatically resulted in those finished products and forms of application needed by the army. This was the first and most difficult task.

Second, we had to channel, so far as possible, all the available materials beyond the borders into the country, whether by purchase in neutral countries, or by collection in the occupied countries. Some flowed in by purchase, and later quite a bit of essential material flowed in by collection in occupied countries, of which I will speak later.

The third possibility revealed to us was fabrication. We had to take care that everything that was produced domestically was essential and unobtainable. We also had to take care that new production methods were found and developed where the old technology was not enough.

And now the fourth way: difficult-to-obtain materials had to be replaced by other, more easily producible ones. Where is it written that this or that object must be made of copper or aluminum? It can also be made of something else. Substitutes had to serve, long-familiar brands [i.e. "makes"] had to be created from new materials. If the old ones show themselves to be unmanageable with respect to their materials usage, then this obstinacy must be broken, and one has to secure the kinds of brands that are less picky in terms of means of production.

These were the methods that had opened up to our view. Not the solutions, to be sure, but the pathways, the possibilities, the hopes.

On the other hand, the obstacles could not be overlooked.

Wartime economic legislation stood roughly at the level of the economy in the time of Frederick the Great. What the War Powers Act freed up for us was, if one divests it of its theoretical expression, about as much as when I say, if a cavalry captain arrives in a village, he can have the mayor provide him with oats, and if the mayor makes difficulties for him due to tardiness, then he may in certain exceptional cases take the oats himself. This was roughly the essence of the legislation as we found it.

There were, however, other difficulties as well.

To solve the problem imposed on us we needed the cooperation of many agencies. In the early days we managed to persuade the three non-Prussian war ministries to make a very conciliatory statement, namely that they would leave it to Prussia to create the organization. This brought about a great simplification. But besides this there were many other authorities with which to negotiate and to work.

Many difficulties were created by the fact that the problem was entirely unfamiliar. Even today the German people believe that the raw materials supply runs all by itself. People talk about foodstuffs all day, while the problem of raw materials is somewhere off to the side. But the way things were at the beginning of the war is once again difficult to imagine. For the first six months no one had any idea why we were really there. The Reichstag, which met in November 1914,

regarded us as a kind of trading post which had to ensure that shoe leather and wool would be cheaper. That we were dealing with questions upon which war and peace, victory and defeat depended was unfamiliar to anyone, and to this day it has not yet become familiar to everyone. We had to suffer under these conditions. We had to fight for the requisitions in Belgium because there was a perception that made theoretical concerns prevalent. Our surveys in industry have been perceived in some places as an unacceptable disturbance of the economy. More decisively, the interruption of isolated peacetime enterprises was blamed on us.

Step by step we had to pave our way. But I can say that in the last analysis all the authorities have supported us and we have gained understanding everywhere and seen that our public organization is suited to address even the most difficult problem and solve it by novel means. But the beginnings were difficult.

Now come the difficulties that lay within us.

We had begun with the five of us. People were being sought, and the staffing levels of the economy were emptied out. Everything was at the front, everything went to the front. I stormed into factories and banks: give me people. Yes, I was sometimes given people who ran away after two days because they couldn't stand working from nine in the morning to midnight, and indeed free of charge and in a matter about which they did not know exactly what they were serving and where it was leading. Others stayed and took pleasure, and so in the end a circle was formed, a band of volunteers came together, which was exemplary in its cooperation, and which I have left with a heavy heart. Rock-solid people, enthusiastic, happy and hardworking, coming from the most diverse professions, and all of them aspiring in the end to the same goal. It was remarkable there how we all became fiscally prudent, for this is a quality of the German, that wherever you put him, he flourishes with his task and forgets his entire former existence. Our industrialists in these positions soon became so fiscally prudent that we got to hear many words of reproach from our own industries.

There was an electrical engineer who had all the leather industry under his charge, a metallurgist who had the chemical industries, a macroeconomist who had textiles; only the rubber industry was granted a fellow specialist as overseer.

Almost every day new forces had to be put into place. For in every department a hierarchical pyramid grew downward, affiliates were created, individual tasks grew into powerful work areas. In a few months the normal scope of an agency was exceeded and the circle of responsibilities stretched even further.

All these people had to be recruited and trained. It cost time and labor before salespeople and technicians were transformed into officials, before they pick up the habits of agency interaction, rocky operating procedures, the bureaucratic correspondence system, and especially their own newly-created sphere of operations.

The greatest difficulty, however, lay in space and time.

In space. The War Department had initially made four rooms available to us, and that was no small thing, because the War Department was extremely tight for workspace. We requested twenty rooms and they were approved. Soon there were moves that were difficult and lasted for weeks. Then we needed sixty rooms. Departments had to yield space which had gone without moving for decades, and which set off with 60,000 files. This was a matter of months. During this time our corridors were packed with people who waited long mornings for clearance. The hiring of new staff was temporarily suspended, and delays emerged in the settlement of transactions, which threatened to suffocate us. In the end we had no alternative: we had to rent, equip, and occupy apartments in Wilhelmstrasse at our own responsibility, which were subsequently approved as offices by the Ministry. Today the department fronts an entire street in the Hedemannstrasse extension and will perhaps soon have the next street over.

And now time.

This meant creating new organizations daily and hourly, drafting, revising, and adapting instructions, conducting negotiations with industrialists, convening meetings, managing correspondence of two thousand daily items, besides getting on with the authorities, training the newcomers to hold the flood of visitors, inquirers, and petitioners at bay—it demanded a 48-hour day. But one thing benefitted us. I have spoken of the general misunderstanding of our role as a disadvantage. But it was also useful, because the public criticism that has intruded in the food problem today leaves us relatively undisturbed. What we were doing was indeed regarded as a kind of unwelcome and unnecessary harassment of industry, but in the end it caused us little trouble.

Now and then professors showed up and said we were doing it all wrong, and we would have to start everything from scratch. There were also Reichstag members who said that we were doing it wrong, mind you, and that what the professors had said was also wrong, it should be changed again. Apart from some horrific paperwork it did not hurt us.

Now we come to the solution.

For the solution it was first of all a matter of creating new legal concepts. I have told you already about the incompleteness and imperfection of our legal foundation. The basic concept had to be found which enabled us to transform the economic cycle. We created a new concept of requisition, with some arbitrariness to be sure, but the law of siege stood on our side, and later everything was also sanctioned independently of the state of siege. This notion of requisition does not mean that a product passes into state ownership, but only that it adheres to a restriction that it can no longer do what it or its owners want, but rather what a higher power wants. This product may only be used for war purposes, you may sell, process, and transport it, put it in any form, but what it is also subject to is that it will always remain encumbered by the law that it can only serve the war effort.

At the beginning it was difficult to come to terms with this concept, and we were often told that this had not been correct, we should have confiscated everything. I mention this not to contradict again, because the claim falls apart. If we had requisitioned the goods of even a single economic group, such as metals, and thus all the copper, tin, nickel, aluminum, antimony, tungsten, and

chromium, we would have become owners of millions of individual lots of merchandise, and every day countless inquiries would have come in: What should be done with this and that lot? May it be rolled, drawn, cast? Who should get it? It is urgently needed. And on the other hand, all of the processing would have come to a standstill until a new distribution was made. And the monitoring and allocation of unknown lots worth billions would have been a burden to us.

The concept of requisition has proven itself and will not disappear from our war economy. But the new legal structure has led us through grave dangers. For the moment where a commodity was seized was when the peacetime economy ceased. When metals were seized from a metal industrialist, he was not able to do more peacetime work, and he had to rely on war orders. He had to reconfigure his plant and machinery, his working methods and products for war work, and he had to begin a new economic life. It was a terrible trial for the industries, especially in metallurgical, chemical, and textile production.

In those difficult weeks late last year, when the decrees were issued, my AEG colleagues came to me and said, "Do you know what you've done? This could mean 60,000 unemployed workers for us."

And so it went. For two months we allowed industry certain exemptions, albeit with a heavy heart, for who could know whether or not the ton of saltpeter [nitric for gunpowder] released here would be the decisive factor in a besieged fortress or a battle. At some point you have to take the responsibility, and that's what we did.

After two months the transformation of our industry was complete. German industry has brought about this redesign, without talking about it, without a breakdown, in silence, generously, confidently, with high energy and desire to achieve. That, gentlemen, is a glorious chapter of German industry which must never be forgotten! Neither France, nor England, nor the United States, nor any of the hostile and semi-hostile nations are copying it.

That was the concept of requisition, and its effect was the economic transformation. And now I come to the second tool.

We knew that the economy had to be reborn, and we knew that it had to distribute and keep ready its material in some kind of new form. How should this come about?

The full leeway of the Army and Navy Administration to give their contracts where they wanted had to be maintained. We could not say to any agency, we are prescribing to you where you have to make your orders. On the other hand, anyone authorized by the agency had to get the materials he needed. Organisms had to be created for absorbing, hoarding, and distributing this stream of products which rolled through the veins of German commerce in a new form of motion and with new inputs. Once again a new concept had to be created, the concept of military economic corporations. Today this is something one speaks about as if it were handed down for generations. Many of these military corporations are the talk of the town—you know them and perceive them as something that has been around a long time. But the paradox of their existence seemed so great that even in our closest circle, which had otherwise thought through our

measures in great unanimity, a split about the possibility and feasibility of this creation came about.

On the one hand a decisive step had been taken toward state socialism, with the flow of goods no longer obeying the free play of [market] forces, but becoming compulsory. On the other hand, self-management of industry was the aim, and to the greatest extent this was indeed sought by the new organizations. How should the conflicting principles be made consistent?

We have also been told afterwards with greater or lesser good will how it should have been done differently. We should not have founded the [military economic] corporations, but increased the regulatory apparatus. Today the voices of criticism are silenced. For anyone who still has doubts, I recommend a visit to the war metal or war chemical corporation. Once one sees the thousands of people at work and has this beehive before his eyes, with its stream of visitors, correspondence, shipments, and payments, he will say to himself, this task could no longer have been imposed within agency confines, they had to be left to economic professional forces and to self-management.

Thus the concept of war corporation emerged from the nature of self-management and yet not unlimited freedom. The war corporations have been established with tight regulatory oversight. Commissioners of the Imperial authorities and ministries have unrestricted veto, the corporations are non-profit, and they cannot distribute either dividends or liquidation profits. Besides the usual organs of public corporations, executive and supervisory boards, they have another organ, an independent commission, led by Chamber of Commerce members or officials, the Evaluation and Distribution Commission. In this way they stand as a connecting link between the stock corporations, which embody the free capitalist economic form, and an official organism—an economic form that perhaps points towards the times ahead.

Its task is to channel the inflow of raw materials into one hand and to guide its movement so that each facility will be provided with material in accordance with its official orders at fixed prices and conditions.

The new commodity corporations were not always thoroughly welcomed by the industrialists as well.

The metal industrialists were fairly forthcoming. Although they asked, what's the point of a corporation that earns nothing, what are we supposed to start with? We have supplied our economy so far and we can keep going. Nevertheless, they agreed, perhaps partly as a favor to me, perhaps also because they said there is not much to lose.

It was another matter with the chemists. These are very major figures from the Rhineland, confident, bearers of great responsibilities, chiefs of countless battalions of workers. For them the new creature was initially not completely dubious [but nearly so]. One influential gentleman drove around in the Rhineland and warned of the new experiments. But it finally came to a constituent assembly in the Hofmann House [seat of the German Chemical Society in Berlin; named for one of the developers of aniline dyes]. Initially it ran peacefully, but towards the end it became passionately agitated. When the men saw that the saltpeter could not be left to them

without constraint, they became dissatisfied, and there was a scene that from afar reminded one of a Paris ballroom in 1789. Nevertheless the foundation did come about, and today we have to thank the chemists all the more deeply and joyfully for their cooperation as well as their achievements. For this model German industry indeed had a harder time of it with the initial measures, but by initiative and ingenuity, by boldness and persistence it has perhaps attained the highest position of our economic warfare.

Almost every week brought new founding initiatives. First came metal, then came chemicals, and then came jute, wool, worsted wool, rubber, cotton, leather, hides, flax, linen, horsehair, partly stock corporations, partly accounting departments. All these creations demanded weeks of preliminary negotiations, agreement among the industrialists, understandings about the conditions, procuring new manpower, directors, recruiters, and offices, and all this within an economy in which ever scantier responsible manpower was available.

Today the official personnel of the corporations, subsidiary companies, and affiliates number in the thousands, and their gross turnover numbers in the hundreds of millions.

So we were hard at work. On the one hand the mountain of requisitioned goods swelled and made continual negotiations with business leaders necessary, while on the other hand our organizations came into being and required training, supervision, cooperation. Between both tasks we fought for the expansion of our department, for space, people, order, and procedure—and then a new task of enormous scope came up, one that was long-awaited and very welcome to us.

Our victorious armies had driven through Belgium and part of France was subdued, and in Russia it was also looking brighter.

Now it was a matter of distributing [literally "emptying out"] the commodities in the possession of these three national territories over the fourth [i.e. Germany]. By buying in neutral countries we had gotten some things into the country, but soon the British ensured through their counter-organizations, through their terrorism on land and at sea, that the input subsided. Now the power of German arms had opened up three rich provinces to our economy. In a piece of geographical luck, almost at the same time all the centers of the continental wool trade fell into our hands, including large stocks of rubber and saltpeter. Now we had to enhance these valuables and make them useful and guarantee law and order in the process, maintain oversight and not destroy the countries' economies of countries at one blow.

This was a task that was comprehensive in material terms and yet was not as difficult as the previous one, because it leaned upon existing experience. Pervading a country with organizations, creating subsidiaries, and surrounding them with branch offices, having warehouses researched and recorded, enacting requisitions, making arrangements for transshipment and tariffs, granting railroad clearances, all these were things that required time and people, but which no longer played out on the shaky ground of unexplored economic and legal conditions. With certain exceptions, for in Belgium the question of transfer of ownership was not an entirely simple one. The spirits were fighting over the question of compensation for

months after we had already taken possession of the substance. But nevertheless, this problem was largely to be solved essentially with the experience at hand, and it was solved.

Now a massive commodities business was affiliated with our department, which had already grown by that time to the size of a global mercantile enterprise. Here new serious threats arose. And in order to describe these risks I want to briefly dig into the most profound manufacturing problem and I want to tell you something – I will not mention figures – about the nitrogen problem that presented itself to us.

You know that the indispensable explosives of warfare rest on the foundation of saltpeter compounds, that saltpeter is a nitrogen compound, and thus that the war is in a sense a nitrogen problem.

Our nitrogen account at the beginning of the war was not unfavorable. I want to fabricate numbers that are wrong, but give the relations. Suppose there were ninety tons of nitrogen domestically, and suppose we would have certainly expected fifty tons in Ostend and Antwerp, that would be 140 tons altogether. At a monthly consumption of ten tons we could have gone for fourteen months. I stress that these are only proportional numbers.

The coverage ratio thus looked quite good. It was early September and the war was developing. We kept reworking our calculations, and frequently compared them with the documents given us by the consumption sites. Again and again the answer came back: this coverage is right.

Then suddenly there were flickers of concern: What if the war in the East takes on the same dimensions as in the West? If the war becomes more stubborn and more extensive than we can imagine? What happens then with the nitrogen coverage? We had no answer to this.

There was an uneasy morning when I submitted this objection to the Deputy Minister of War, and asked his permission to have a number of chemical factories built, and namely as many as chemistry could afford.

The war minister, His Excellency von Wandel, in his generous, quiet, and determined way immediately gave the authorization to negotiate with the chemical industry.

Highly valuable preparatory work has been achieved in technical terms. His Excellency [Emil] Fischer and Privy Councilor [Fritz] Haber had comprehensively worked out in a very commendable way the problem of saltpeter extraction, and the chemical industry was not at all surprised when it was faced with the question of creating these enterprises.

The construction of a large number of factories was agreed upon, and the chemists, bold, confident, and trustworthy, joined on the condition that the factories had to be in place before I was in a position to send them the approved Imperial Treasury contract. The factories were in place even before the contract was signed, which was around Christmas. Nitrogen fabrication had become a German production, a world problem was solved, and the most serious technical threat of the war was averted.

But while these factories were rising up, the news came from the front: we no longer need ten tons, but sixteen, not sixteen but 21, not 21 but 27, and here I do not want to say (again not to show proportions) to what multiples the demands of the front escalated. But this much may be indicated, that the original coverage had been reduced to a fraction. If we had only begun with the construction when these relations had become comprehensible, two or three months later, a considerable interim would have entered, and precisely at the time when the Galician breakthrough demanded a huge munitions expenditure.

If the chemical manufacturers, particularly the nitric acid plants, have been and remain the most important assets of our newly created goods producers, so have a further number of extensive production facilities put themselves at their side. Metal refining and recovery systems were installed, mining production was lifted, electrolytic and electro-thermal plants were built and expanded, partly through direct intervention by the War Raw Materials Department, partly through the mediation of the commodity corporations.

In the midst of this activity we took on another task that only indirectly had to do with the nation's defense capacity, but from general economic reasons could not be turned away and could hardly be solved by anyone other than us.

I mentioned that in November the Reichstag had the sort of idea about us that we were a place for discounting market prices, and a meeting of the big joint commission was not very pleasant for those listeners who could not defend themselves. The gentlemen were rightly displeased with isolated sharp increases in commodity prices, which gave us pause as well. It was not known, however, that we were first obliged to avert the far more pressing concern about the danger of shortages before we could approach the important yet secondary questions of costs. Immediate remedy was required.

We had already found ways and means, however, and the solution was almost at hand. We had started with setting maximum prices for metals. It was not easy, because not only the majority of the more important metals were considered, but also their alloys, scrap metal, and pre-processed products. After lengthy negotiations, a table had been generated which to be sure did not please everyone in all positions of industry and especially trade, but against which there was ultimately not much to object, and which was adopted by the Bundesrat. The maximum prices for a group regarded by experts as insurmountable—wool and woolen products—was then dealt with.

Here it was the diversity of origin multiplied by the number of qualities, with the product of these quantities multiplied yet again by the number of processing stages. This resulted in a multiplicity which numbered in the hundreds of positions, but finally an information sheet was put together which did not entail too much hardship for the owners and met the needs of the war economy.

With the fixing of maximum prices already approaching an excursion into the general economic domain, the procurement and introduction of commodity substitutes and surrogates was a part of our very own tasks.

Prussian uniforms had to be changed in their physical composition. The fabrics were stretched by use of worsted wool and other products. One learned how to make helmet fittings, buttons, and other items without using scarce metals. In the munitions industry certain rarer metals were replaced by zinc and steel, and electrical technology had to replace some of their wiring and holders with unusual metals, and succeeded in reducing many product prices. In the chemical industry large installations were created which delivered partly familiar substitutes, and partly newly tested substitutes. Even in the textile industry the system of recovery and replacement has extended itself. Only a few industries can say that they still work consistently with the original material they were accustomed to before the war, and many have also taken advantage of this form of conversion.

In brief strokes I would now like to give you a picture of the War Raw Materials Department as it looked roughly at the beginning of this year. A central section was responsible for the overall policy and initiatives of the Department. It led the negotiations with the authorities, handled each new organizational measure and decree, prepared the reports to the Minister, negotiated with industry groups, legislators, and interested parties, examined economic and legal issues, added to the staff, summarized the department's correspondence, assembled the quarterly reports, and bore responsibility for the organism.

Alongside this extended the domain of the various units. The units dealt with the individual commodities areas partly in comprehensive fashion, and partly separately, and behind them stood the registration sites and commodities corporations, executing and cooperating along with their aid organizations and daughter institutes.

There were units for metals, chemicals, cotton, wool, jute, rubber, leather, hides, woods, and organic products. This domain of the units made up the actual economic body of our department.

The requisition site stood next to this, the one site that regulated the flow of requisitioned commodities, drafted the legislation of the requisitions and voucher bills, conducted the commerce with the owners of the goods, and monitored compliance with the measures with a system of auditors. Originally this site also conducted the statistics, which were later split off and transferred to a number of registration sites. The requisition site worked with a considerable bureaucracy, their forms and printed materials went out daily from the General Command throughout all Germany.

The goods business required a separate freight-forwarding, accounting, and monitoring department. Billions worth were transported from the occupied territories. Tens of thousands of double eagles [military trains] rolled over our tracks and filled over 200 German warehouses. The warehouses had to be set up and monitored, while the goods had to be shipped, delivered to the warehouses, unloaded, checked, distributed and charged to the commodity corporations.

A shipping office was responsible for transportation and used its own trust corporation to monitor the cargo rates, a clearinghouse—perhaps one of the largest which the German goods business has to show—kept a record of each goods shipment that Lille or Roubaix or Antwerp released, of its arrival at the transshipment sites in Haspe, Frankfurt, and Mannheim, of its entry into storage, and of the departure for the widely dispersed sites of consumption.

On 1 April 1915 I was able to hand over the department to the Prussian War Ministry as a going, integrated, finished work. It is a joy that most of my fellow employees have remained at the agency. Under the leadership of my highly esteemed successor, Major Koeth, the department has gained enormously in size, it has created many new organizations, and it has been perfected in bureaucratic terms. In terms of personnel, space, and work domain it stands second only to the War Ministry and Ministry of Railways among Prussian agencies, although it differs from all the others in that it came into being in eight months. In a matter of days the fifth hundred of officials on site could be surpassed, and the employees of the commodities corporations and their branch offices are estimated at several thousand.

When His Excellency von Falkenhayn came to Berlin in the spring and asked about the state of our supplies, I could tell him that we are covered in all essentials, the war is independent of raw material procurement.

The chancellor confirmed this to the Reichstag. That there is a product with which we live from hand to mouth, you all know. [Presumably a reference to oil.] The coverage of the rest is in part an absolute: there will be as much produced as consumed, and for all others it is enough for a war whose length is at the discretion of our opponents. In some areas we could also have to take care of our allies.

The British blockade of raw materials has become ineffective. Even more than that, its effect has turned against England itself. Unrestricted free enterprise is England's greatest concern today. England can buy and it buys and it fears every purchase that one of its foreign subjects completes. For every purchase, whether it is tea or saltpeter, worsens the balance of payments. Each purchase requires a means of payment, and since the payment cannot be fully paid in goods, because the export industry has been converted in part to munitions work, every purchase drives British asset values abroad. Our forced domestic economy, with which we have learned to deal, has caused some concern and had some disadvantage, but it has given us the strength so that now we can also claim the full cycle of resources for us. Our goods are produced and consumed domestically—the only thing that passes beyond our borders is what our cannons are expelling, and that is enough to make our presence noticeable. The state pays cash for the counter-value of its consumption, while the cash comes back to it as a loan and enters again into circulation. Our economy is the closed economy of a closed trade state.

In the future our methods will work in many directions. I would prefer not to touch on general social issues. To what extent the forms of work that have been created here will have an effect on the overall economic domain, on the question of the capitalist economic system and its possible reform, lies beyond the scope of this paper. But we will already experience one long-term effect: a new concern for management, a new conception of commodity. Much will be replaced which was thought to be irreplaceable. In many places where one employed foreign metals, domestic ones will be employed. It is my hope that in the future we will be spared the need for some foreign products like Chilean saltpeter. Foreign sulfur will no longer need to cross our border. Our economy will become independent in a double sense, because we will not depend any more on the goodwill of the seller or the goodwill of the creditor we have to pay, who is sometimes in a position to devalue the means of payment for our goods by raising his tariffs.

These considerations will become increasingly important and lead to a new concept in the business world, the concept of resource protection. The more decisively foreign economic domains shut us out, whether by protective tariffs or by nationalist agitations, the more attention we have to devote to our balance of payment and trade. If we buy abroad excessively and without restraint, we must involuntarily repay by exports, and this involuntary export can be permanently loss-making, because it leaves the way free for our neighbors to burden and devalue our finished products via tariff protection, while we must freely let their raw commodities in. This creates a new mercantilism, not to increase exports beyond measure, but to keep them profitable. We knew product protection earlier, the so-called protective tariff, but a question of raw material protection has not come up until now. In the future the state may no longer be indifferent to whether saltpeter comes from Chile, when it can also be obtained cheaply or almost as cheaply from German air. It cannot be indifferent to whether a metal is bought and paid for in America, or whether another metal is used as an equivalent substitute and procured domestically.

The concept of resource protection will become common and achieve currency in Germany for the benefit of our economy.

These are concerns about the future of the general economic domain, but there are also future issues for the continuing influence of the organization, the structure, which I have described to you.

The raw materials department will also not cease to exist in peacetime, it will form the core of an economic general staff. Maybe it will change its name. I would prefer that instead of War Raw Materials Department it be called “War Economic Department” in the future, because that is what it already is in some sense. Never again can it happen that we enter into a war inadequately prepared in economic terms. All the future years of peace must serve this preparation at highest alert. We must not only constantly know what essentials we have domestically, but we must also constantly ensure that we have as much as we need. Huge warehouses must be maintained, and the law must attend to these warehouses, which need not to be state-owned. They must have support, but also be monitored. This will yield an extensive and ongoing statistical and administrative effort. It must also be ensured that the reconfigurations that the war has so violently brought about will proceed, automatically and undisturbed, in the future. A general economic mobilization plan must be created and updated continuously. Economic muster orders have to be developed for distribution by the thousands. They would say something like: on the second day of mobilization you must report to this and that house in Behrenstraße, there you will take over the chairmanship of this and that commodities corporation that has to be founded, the statute will be issued to you, and you have to guide the founding process and form such and such committees. The same applies to machine tool factories and other enterprises. They receive a notification that says you have to evacuate this and that part of the factory on the third day of mobilization, and such and such machine tools are to be made available. They simultaneously have to take over an order for so and so many products of this kind. Workplace provisions and furloughs must also be addressed in peace. Every factory site must know that such and such indispensible people will remain available, while the others must be released. A trade policy division must ensure that the kinds of agreements and organizations are made with neutral countries that work against the violation of export by hostile states. Commercial sites which centralize import and export and process transactions must be permanently maintained.

The post-war legislation will require special attention, and I could imagine that an economic general staff would be appointed to cooperate here as well.

It is not permissible that our shipping capacity be employed indiscriminately after the war to carry those goods at the fastest clip across the ocean which the cleverest person has ordered and purchased. We must take care that calibrations take place here. We must take care that the external accounts which the German Reich has to pay, whether as a state or as the sum of private individuals, not bring our balance of payments into disarray, but is uniformly regulated according to a thoughtful plan.

If we survey the work now and ask the question, how could this structure have succeeded, how was Germany able to do that which England despaired of, that which Lloyd George failed at, I arrive at the following answer.

The first is that it was started at an early stage, that the War Ministry at the first suggestion declared with bold decisiveness that it would identify itself with this matter to the utmost, while all the other economic issues still rested untouched in the lap of the gods; and that the War Ministry with the hereditary genius characteristic of this agency gave itself over to this comprehensive task.

The second is that the unity of the leadership was maintained, that this organization did not fall into the hands of commissions, committees, and occasional experts, that it did not fall prey to bureaucratic fragmentation, but that a uniform will has led it, backed by the powers that be. Commissions are good for consulting, not for creating. A consultation takes place on Tuesdays from 4pm to 7pm, and then the gentlemen go home. Whatever doesn't get done can wait until the following Friday. This way one can control [in the sense of verification], but not organize. This is so simple, but still not common fare.

The third is a German product, namely the idealism of a number of people who entrusted themselves joyfully to a collective leadership, without remuneration, without promises, without obligation, without contract, people who devoted their powers, their experience and ideas in tireless and enthusiastic work, because they felt that their country needed them. In civil, collegial, and friendly community, with little notion of a superior in charge, with little notion of fealty, this chosen band of volunteers has propagated a new economic life and a new network of industrial regulations throughout Germany.

They were supported by the youthful power and flexibility of our industry, which was devoted to every decision, coped with every stress test, and achieved the peerless.

The last and the greatest which this quest has sealed, however, and without which it would not have been able to come into being and grow, this is once again something purely human, because the human stands high above everything mechanical, and it alone has the power to create and bear upward toward the light. This human aspect was trust.

I must profoundly thank the three Prussian war ministers who evinced this trust steadfastly from first to last with people and organizations. Genius also lies in this trust, and indeed moral genius.

This trust would be difficult to find in another country and harder to justify. It is once again a glory of the German and also the Prussian system that such a human relation to completing economic evolutions and avoiding common dangers could have been given and received.

Translation: KH