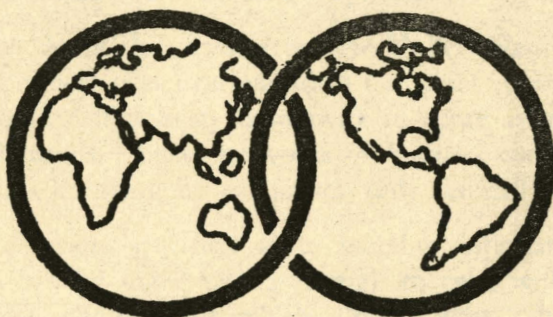


# INTERNATIONAL CARTELS AND WORLD PEACE



A Condensation of a Study Prepared for and Published  
by the Kilgore Committee

POST WAR WORLD COUNCIL

Price

15



## FOREWORD

THE DRIFT toward business combination, sometimes open, sometimes secret, has been a conspicuous feature of the national and international economy of the last two generations. Government has often attacked these combinations and, in other instances, has sanctioned them, as in the case of many international cartels, and with NRA in this country in the recent depression.

There is no doubt that, aside from the United Nations in the war emergency, business organizations form our chief international structure. No political diplomacy is so swift and sure as the working of international cartels. These networks of business combination reach across frontiers knowing no patriotism, only the call of profit.

There is a serious question as to whether international political organization can be made strong enough to cope with the international business organizations which already exist. If international economic agencies are set up to deal with currency stabilization, investment, food, and so forth, will they be strong enough to cope with the half concealed business groups which span national boundaries?

Because we believe that an understanding of international cartels is essential to an understanding of the post-war problems we face, the Post War World Council is pleased to offer this pamphlet as a valuable basis for study. It is a condensation of a report by Dr. Corwin D. Edwards, prepared for and published by the Subcommittee on War Mobilization of the Senate Committee on Military Affairs, Senator Harley M. Kilgore, chairman. Every effort has been made, while reducing the length of the original report drastically, to preserve its tone and spirit.

POST WAR WORLD COUNCIL

December, 1944

## INTERNATIONAL CARTELS AND WORLD PEACE

**C**ARTEL activities are arrangements among business enterprises engaged in the same type of industry to avoid some or all forms of competition.

International cartels are cartels which include business enterprises domiciled under more than one government and doing business across national frontiers. A cartel of this type may include the major enterprises operating in a given industrial field throughout the world, and may determine trade policies in that field in most of the world's principal markets.

Unless there is an international cartel, the power of a business group within a single country is limited by foreign competition, subject to whatever protection tariff policies and international shipping costs may provide.

### Principal Types of International Cartel:

1. *The Association*:—The international cartel association resembles a national trade association which is engaged in restrictive activities. The members of such a body are producing companies in various nations. The cartel arrangement is expressed in a more or less formal agreement to which all are parties or in the rules and regulations of the association itself. Such cartels may formally agree to fix prices; to limit and apportion output, sales, or exports; to allocate market territories; to re-distribute profits in accordance with an agreed formula; or even to sell through a jointly maintained sales agency.

2. *The Patent Licensing Agreement*:—Among large manufacturing enterprises, especially in industries in which technological progress has been rapid, the most common type of international cartel is the agreement as to patents and processes. Such an agreement rests upon the fact that the participants in the cartel hold patents and/or operate under patent licenses. In most countries the control of a patent gives the owner certain monopolistic rights.

A fully developed patents and processes agreement is a market-sharing arrangement based upon an arrangement for exchange of the results of scientific research. Each party to the agreement under-

takes to grant to the other the right to make use of the processes developed in its research, both past and future. The achievements of the research are patented in every country covered by the agreement, and the right to use is conveyed by assignment of the patents or by licenses under the patents. The allocation of markets is carried out by means of such assignments and licenses.

In addition to the allocation of territories and industrial fields which is involved in the scope of the patent licenses, the terms of these licenses may contain provisions as to the prices at which the licensees may sell, the quantities they may produce, the types of concerns through which they may distribute, and various other aspects of their business activities.

As a network of interrelated patents and processes agreements is developed, it necessarily requires a tacit if not an explicit acceptance by each company of a series of agreements to which that company is not a party. When Imperial Chemical Industries makes an agreement with du Pont, it must introduce into this agreement restrictions which adequately recognize and protect its commitments to I. G. Farben and Solvay. In dealing with other chemical companies, du Pont must likewise avoid commitments inconsistent with those it has made to Imperial Chemical Industries, and Imperial Chemical Industries must observe the limitations of its contract with du Pont. A series of mutually related undertakings such as this, governing progressively larger portions of the technology of the chemical industry, must make it increasingly difficult for any chemical company to follow an independent commercial policy without involving itself in such sacrifice of alliances and loss of information as must be too costly to be willingly accepted.

Since the significance of any single patents and processes agreement is thus enhanced by its relation to other similar agreements, the full effect of patent license controls within a given industry can be ascertained only by surveying the entire pattern of such controls, not by examining individual patent licenses.

Cartel arrangements based upon patents may endure far beyond the statutory limits of the patent grant. Contracts which cover both existing and future patents may continue in effect indefinitely, for new patents are invoked to support allocation of territories as the old patents expire.

3. *The Combine*:—The third form of cartel is the combine. It con-

trols international markets not by contract but by uniting competitors under a common ownership or management. Corporate structure thus becomes the basis for market control. In the simplest and most frequent case, a small corporate combination in a particular field of industrial activity is part of a larger cartel pattern maintained by intercorporate contracts of broader scope. In a few instances, the ramifications of one or two concerns are so extensive as to constitute the major portion of an international cartel arrangement.

The narrower types of cartelization through ownership may be readily and simply illustrated. As a part of a broader system of intercorporate arrangements, the du Pont Co. shares with a subsidiary of I. G. Farbenindustrie ownership of the Bayer-Semesan Co., through which both great corporations carry on all of their business in United States pertaining to seed disinfectants. In Canada, Canadian Industries, Ltd., is the jointly owned subsidiary of du Pont and Imperial Chemical Industries, which have mutually agreed that in Chemical fields occupied by both companies their chemical manufacturing and importing activities in Canada shall be undertaken exclusively by this subsidiary. Both in Brazil and in Argentina the same two great companies have organized subsidiaries known as Duperial, and in each case they have agreed to do business in the country only through this subsidiary.

The more extensive international combines resemble the great corporate structures which are familiar within any modern industrial country. In some cases they consist of groups of corporations bound together by elaborate interlockings of stock ownership. International Telephone & Telegraph Co., for example, is a holding company which holds all or most of the stock of a variety of cable, radio communication, and telephone companies throughout the world. It also holds the stock of International Standard Electric Corporation, which in turn is a holding company controlling companies throughout the world engaged in the manufacture of communications equipment. Similarly, there are in many different countries companies organized under the name of N. V. Philips engaged in the manufacture and distribution of radio equipment, electric light bulbs, and other electrical supplies. With so much of the field of electrical manufacture brought together under the ownership of Philips and International Telephone & Telegraph, it is a relatively simple matter for these two concerns and one or two other great organizations to complete

the pattern of world industrial cartelization by contracts among themselves.

### **Cartels as Devices to Control Markets:**

These three types of cartel arrangement frequently supplement one another. The communities of interest established by combination may be joined into larger interest groups by agreements as to patents and processes and by formal membership in cartel associations. The patent agreements may include provision for the operation of joint subsidiaries in particular markets.

Whatever their scope or type, international cartels are designed to enhance profits by reducing competition. This aim is typically sought by direct price fixing; allocation of production, sales, shipments, or trade territories, in order to destroy incentives toward price cutting; limitation of output in order to keep prices from falling; and measures intended to exclude nonparticipants from the market.

1. *Control over Prices:*—The central purpose of cartels is to maintain prices at levels higher than would otherwise obtain. Sometimes this result is sought by direct price-fixing agreements, but more frequently by controls of production and allocations of markets such as will be subsequently described.

Such price control has been widely defended as a useful stabilization of prices or as a necessity in order to prevent cutthroat competition. It has been attacked on the ground that to keep prices stable while underlying conditions change is merely to throw the burden of adjustment elsewhere, and that price fluctuation is preferable to idle machinery and idle men. Discussion couched in such broad and theoretical terms is necessarily inconclusive and will not be undertaken here.

The price policies followed during negotiations for the establishment of a cartel and at times when members of the cartel are attempting to intimidate or discipline independents must be distinguished from the price policies of a period when the cartel's control is unquestioned. The antecedent to a cartel agreement is often a price war which may drive prices down to absurd levels. In public apologies for cartels such wars are usually treated as impersonal disasters for which cartel organization provides a constructive remedy. In fact, however, such price wars are often deliberately undertaken as means to coerce rebellious elements in the industry to accept what the cartel group is willing to offer.

The level of prices established by cartels after their control of the market is assured differs from case to case in accordance with what the traffic will bear. New products which have a large potential market are frequently offered at progressively lower prices until a level has been reached which taps a potential demand; but thereafter further decline in price is likely to be slow and limited. When the organization of a cartel has been due to unusually low prices originating in unexpected changes in demand or in productive methods, the cartel price may be lower than that which formerly prevailed in the industry, even though probably higher than that which would be appropriate to the new circumstances under competitive conditions. Sometimes cartelization makes it possible to take advantage of imperative needs for the product and to establish prices at oppressively high levels which deprive many would-be purchasers of the opportunity to buy. The extremes to which prices may go under some cartel arrangements are best indicated by illustration.

Tungsten carbide is a hard-metal composition of great industrial importance in cutting tools, extrusion dies, and wear-resistant surfaces. It was sold in the United States in 1927-28 at \$50 per pound. At that time General Electric and Friedrich Krupp Aktiengesellschaft formed an agreement by which their patents were pooled. General Electric was given control of the sale price in the United States, and Krupp was obligated to observe this price upon its imports. Thereupon the United States' price rose promptly to a maximum of \$453 per pound. During most of the thirties the price range was from \$225 to \$453, and in 1940 the maximum price was still \$205 per pound. In April 1942, after an indictment under the antitrust laws, the price ranged from \$27 to \$45 per pound.

The effect of the high price was evidently to discourage the development of tungsten-carbide technology. A director of Krupp wrote in 1936 that Germany then consumed about 22 times more of this product per unit of produced steel than did the United States. The explanation for this lag in use was given in 1931 in a letter from a General Electric engineer which referred to the "absurdly fictitious prices which are being maintained for carboloy (tungsten carbide) tips." He asserted that the manufacturing cost was about \$8 per pound, and proposed vainly that the price be reduced to \$50 per pound.

The high price of certain dental plastics has been equally striking. As a result of cartel agreements among E. I. du Pont de Nemours & Co., Rohm & Haas Co. of the United States, I. G. Farbenindustrie,



Imperial Chemical Industries, and Rohm & Haas Co. of Germany, the two American companies participating obtained control of the United States market for acrylic products, including methyl methacrylate dentures. This control was used to fix prices upon dental plastics in the United States. Information is not readily available with which to appraise the basic price of 85 cents a pound which was used for the sale of methyl methacrylate powders to commercial molders, but it is obvious that, if this price covered costs, nothing but the power of the monopoly could account for the price of \$45 a pound which was charged in the sales of the same product for denture purposes to dental laboratories and dentists. At that time the total investment in methyl methacrylate manufacture at the Bell plant was \$986,000 and the net profit for the first 6 months of the year had been \$210,000.

Striking illustrations of the high prices which are sometimes established by cartel agreements are found in the field of drugs and pharmaceuticals. Atabrine, a synthetic substitute for quinine, is now sold to the United States Government for war purposes at a price of \$4.50 per thousand tablets.

The high prices obtained upon electric lamp bulbs in the United States by virtue of the interrelated restrictions of the American patent monopoly and the international lamp cartel are evident in the fact that, according to computations by the Department of Justice from figures supplied by the General Electric Co., from 1935 through 1939 General Electric's net profit on incandescent lamps varied from 64 to 88 percent of total costs and expenses in lamp manufacture and from 33 to 47 percent of the net worth of the company's lamp-producing investment.

The effect of cartel agreements on dyestuffs has evidently been a substantial increase in prices.

At a conference between du Pont and Imperial Chemical Industries in 1937, it was agreed that proposals for new capital investment in manufacture in South America should be tested by their likelihood of yielding, after payment of all South American taxes, a minimum rate of return of 15 percent in Argentina and 17½ percent in Brazil and Chile.

2. *Impairment of Quality*:—Though cartels seldom concern themselves directly with the quality of cartelized goods, a necessary effect of their monopolistic character is to diminish incentives to improve quality and to limit opportunities for the buyer to protect himself

against low quality. Instances are encountered in which cartel agreements maintain a market for relatively unsatisfactory goods because other participants in the cartel are bound not to accept the dissatisfied customers.

An example appears in the agreement as to military explosives which divided the European market between Nobel Industries, Ltd., and E. I. du Pont de Nemours from 1926 to 1932. Under this plan each company was allotted a fixed percentage of the sales of certain types of powder, and the sales agents of each company were assigned territories within which they were to act for both companies. The effect of this arrangement as to nitrocellulose powder was to maintain a market for Nobel in Europe through the forbearance of du Pont, in spite of the fact that du Pont's powder was generally regarded as superior. In other cases, a superior product may be degraded or withdrawn in order to prevent it from superseding a product already established.

The cartel arrangements concerning electric lamps illustrate the impunity with which quality may be degraded. Under international cartel agreements the American market has been reserved for the American manufacturing companies, General Electric and Westinghouse, and markets in other parts of the world have been allocated. Protected from foreign competition, American manufacturers have attempted to increase their business by reducing the durability of their light bulbs. They were able to find an excuse for their action in the fact that the efficiency of a light bulb is in inverse ratio to its length of life; but they were careful not to inform consumers of the decision to sacrifice durability, nor to allow an opportunity for the buyer to choose between more efficient and more durable bulbs.

One purpose for which quality may be deliberately reduced is to prevent a commodity sold at a low price from being substituted for another which the same vendor is able to sell at a higher price. Adulteration intended to accomplish this purpose was proposed in connection with the price differentials on methyl methacrylate which have already been referred to. Certain acute purchasers of dental supplies had discovered that they could obtain the methyl methacrylate for dentures at an incredibly reduced price by buying it as commercial molding powder. As a consequence, the producers undertook to develop some means of preventing such purchases, which they referred to as "bootlegging." On March 15, 1940, the Vernon-Benschoff Co. wrote to the American Rohm & Haas Co. as follows:

“Our discussion of the Pure Food and Drug Law and pulling the acrylic denture under it leads me to wonder if the manufacturers of the commercial molding powders might not add an ingredient which would not affect the molding properties, but which would disqualify it under the act.

“Under the very finicky regulations of the above act however, it may be the slightest trace of the right agent, too little to constitute harm to molding (or health either as a matter of fact) would suffice to have bootleg products in bad.

“A millionth of one percent of arsenic or lead might cause them to confiscate every bootleg unit in the country. There ought to be a trace of something that would make them rear up.”

3. *Allocation of Trade Territories*:—One of the most prevalent cartel methods is allocation of territories to individual concerns or groups. Each participant undertakes not to sell in territory assigned exclusively to others, and often agrees also not to sell to customers who are likely to export to such territory. The effect of such undertakings is to restrict investment abroad, to restrict exports not only by cartel members but by their customers, and to deprive consumers of imported commodities. The purpose of such agreements is to acquire a monopolistic position in markets which are regarded as peculiarly valuable.

Since the primary interest of American participants has consisted in the enjoyment of an unchallenged position in the rich domestic market of the United States, and perhaps the Canadian market, they have usually been willing to sacrifice possibilities of export and of investment abroad as the price of such a position. Similarly, foreign companies have been willing to purchase protection in other markets by foregoing sales in the United States.

The arrangements between Imperial Chemical Industries and du Pont involve allocations of territory for 20 or more different classes of products. With exceptions for certain special products du Pont is granted exclusive rights in the United States and Central America and Imperial Chemical Industries exclusive rights in the British Empire except Canada. The two companies have agreed that they will exploit the Canadian, Brazilian, and Argentine markets through jointly owned subsidiaries. Both companies remain free to sell in other portions of the world.

Territorial restrictions were applied to American manufacture of

Diesel engines in an agreement between Allgemeine Elektrizitaets Gesellschaft, General Electric Co., and Busch-Sulzer Bros. in May 1930. The license agreement provided that—"The territory in which such engines may be sold and used is the United States and all other countries of the world except Europe and the Dutch Colonies."

Such arrangements to divide world markets upon a territorial basis impose rigid limits to the territorial expansion of international trade in cartelized industries. Whether the total amount of such trade for any particular country is greater or less than it would have been in the absence of a cartel probably depends partly upon the strength and shrewdness of the parties to the bargain domiciled there and partly upon the importance which they attach to exclusive control of their home market.

4. *Restriction of Supply*:—In some cases cartel restrictions take the form of absolute limits upon the amount which may be produced, sold, or exported. This form of restriction obviously subordinates the consumers' demand for additional quantities to the industry's desire for additional profits. Cartels which are formed to meet the so-called overproduction created by a declining market or by the appearance of new capacity are peculiarly likely to undertake direct limitation of supply.

The tin cartel formed in 1931 was a conspicuous example, though it was peculiar in that it was organized by an international governmental convention. An unsuccessful attempt in 1929 to curtail the production of tin by purely private means was the origin of this quasi-public venture. A private association of tin producers, which at first controlled 21 percent of the annual output and subsequently attained control of between 50 and 75 percent, failed to restrict output because of differences of opinion as to policy and lack of sufficient authority. The governments of British Malaya, Bolivia, the Dutch East Indies, and Nigeria established an International Tin Committee in 1931 and made restriction of output compulsory by law.

The international steel cartel has also relied upon restrictions of output and of exports. In the late 1920's the producers of Belgium, France, Germany, Luxemburg, the Saar Valley, Austria, Czechoslovakia, and Hungary adhered to a basic production quota which was calculated from the output of the first quarter of 1926. Total permissible tonnage was fixed quarterly by a management committee

and was distributed among the participants according to agreed percentages. A fund was established from which compensation was to be paid to national groups which did not produce their full quota and fines were assessed upon groups which exceeded their quotas. Subsequently, during the 1930's, a new agreement as to exports was developed among producers in Belgium, Germany, Saar, France, and Luxembourg. Under this plan, a management committee made quarterly determinations of the amount of steel to be exported and divided the totals among national groups according to percentages based upon their past exports. Like the previous plan, the export controls were accompanied by fines and indemnities for those who exceeded or fell below their quotas.

5. *Allocation of Production and of Industrial Fields:*—Closely associated with industry-wide programs for the restriction of output are arrangements which set limits upon the amount or nature of production by certain particular concerns. Occasionally these limits are stated as fixed quantities. More frequently they are stated as percentages of the output by other specified concerns. Where one concern overshadows its fellows, such a system of allocation by percentages means that a decision by the dominant concern as to how much it will produce prescribes automatic limits for the others. In other cases, the assigned percentages deprive each producer of incentive to compete for more business against the others and thus tend to bring about a restriction of the total supply. Even more frequently the arrangement is to exclude particular concerns from producing designated types of commodities, so that control of the supply is left entirely in the hands of one or more enterprises to which each kind of commodity is assigned.

Many of these restrictions are imposed in connection with patent licenses and may be interpreted as expressions of the monopoly power enjoyed by the holder of a patent.

An instance of percentage limitation of a concern's output appears in the production of methyl methacrylate cast sheeting. A recent letter by a du Pont executive describes the way in which this limitation was temporarily set aside to prevent it from throttling the production of bomber noses and other war materials:

"I was up to see Mr. Haas Monday with respect to the licenses we hold to operate under his patents for making cast sheeting. You will perhaps recall that we are limited to 50 percent of his capacity. I

explained to Mr. Haas that we were booked up solid until October of the present year under this restriction and asked him whether he wanted us to tell the Government that we were limited by the license or whether he preferred to lift the restriction. He agreed to lift the restriction during the present emergency."

Agreements by which cartel members are excluded from the production of particular types of commodity reserved for others are extremely frequent. One of the most conspicuous is that established in 1929 between I. G. Farbenindustrie and the Standard Oil Co. of New Jersey. Standard described the result of this agreement as follows:

"The I. G. are going to stay out of the oil business proper and we are going to stay out of the chemical business insofar as that has no bearing on the oil business."

## **Cartels as Devices to Restrict Production and Technological Change:**

1. *Restriction of Capacity to Produce*:—Closely related to limitation of supply is restriction of new industrial capacity. Such restrictions are often undertaken when existing capacity is partly idle and there is a likelihood that new capacity will mean either larger production and declining prices or a further reduction in the output of established plants. Sometimes efforts are made to delay the construction of efficient plants to replace obsolescent ones. Sometimes restriction is intended to retard the development of a substitute product which might permanently reduce the market for an older product. Sometimes the primary concern is to keep out of the industry enterprises which might be unwilling to collaborate in cartel policies. Often a restriction is intended to deal with two or more of these problems at once.

In the nitrogen industry, European producers of synthetic nitrogen have resisted the construction of new plants in the United States for fear of so-called overproduction, while Chilean producers of natural nitrates have resisted the substitution of the synthetic for the natural product.

Productive capacity in the American magnesium industry was restricted before the present war by a cartel arrangement in which each participant accomplished a different purpose. The Aluminum Co. of America prevented the development of magnesium as an important substitute for aluminum. Dow Chemical Co. avoided the

construction of competing plants which might have jeopardized Dow's high prices. I. G. Farbenindustrie avoided the risk of American exports to Europe.

Similar restrictions were developed in the fabrication of magnesium in the United States by an arrangement under which the same cartel members cross-licensed each other but interposed obstacles to fabrication by others. In consequence, the production and use of magnesium in this country lagged far behind the development in Germany and there was a serious shortage of experience and equipment for fabricating magnesium at the outbreak of the present war.

2. *Restrictions Upon Invention and Technological Change*:—Desiring to limit expansion of output and avoid the development of uncontrolled substitute processes, cartels are necessarily suspicious of new technological developments. They readily undertake research to discover new uses for their old products but often discourage the development of new processes or new products.

In the desire to improve their patent position, large international concerns, which, acting together, can enjoy a monopoly of power based upon patents, usually spend substantial sums upon research. There is little doubt that the systematic conduct of experiments within a field of research which has already been laid out is expedited by such expenditures. There is dispute as to whether the routinized research of these large companies is equally successful in producing the basic inventions which open new fields of inquiry. Moreover, it is obvious that many of the inventions which take place in patent-controlled industries are not intended for industrial use, but are for the purpose of fencing-in an industrial field; that is, patenting the process in order to prevent others from making use of the invention.

In industries in which patents are used as the basis of industrial power, exchange of patents among the parties to a cartel agreement broadens the field of use of particular inventions and makes a larger portion of the technology available to each participating concern. In some cases in which companies are bound together by permanent agreement to exchange patents and processes, there is an interchange of the details of operating experience, described as "know how." If such candid exchanges were general, the situation within the cartel would approach that which would prevail in the economy generally if all new inventions were dedicated to the public use. Indeed, it would involve even less concealment of trade secrets. But in practice

the technical advantages of pooled information are subordinated to commercial considerations, and exchanges of information are often strictly limited. The exchange of information among parties to the cartel agreement is dependent upon the working out of methods to prevent them from competing. In some cartels a dominant company seeks to preserve and strengthen its position by discouraging research on the part of other companies.

Among cartel members the commercial application of technical progress is often retarded. When an invention of fundamental character appears likely to bring about sharp reductions in demand or a rapid obsolescence of established productive processes, a cartel is likely to delay introduction of the process so long as it dares.

The ingenuity of the research organizations which serve cartels is at times perverted to the development of techniques by which the power of a cartel may be preserved. If a cartel has achieved high prices in selling to one group of customers, its scientists may be asked to provide obstacles against efforts by these customers to buy cheaper goods elsewhere. This form of research is illustrated by the activities of one of the world's largest laboratories, engaged in organic chemical research for the du Pont Co. Du Pont had developed a pigment which could be used either as a paint or as a textile dye but feared that the latter use would upset the structure of prices upon textile dye-stuffs.

In June 1940 the laboratory reported: ". . . Mr. Chantler was of the opinion that pigment mixtures, unsuitable for textile printing would be very difficult to obtain." "Such substances as ground glass and carborundum were suggested for incorporation with the pigment. While these materials would undoubtedly scratch printing rolls, there is considerable doubt as to their effect in paints and lacquers."

Two days later the matter was thoroughly discussed in a conference with representatives of General Aniline Works. The resourcefulness with which research in methods of adulteration had been carried on appears in the following excerpts from a memorandum of the conference:

"Deteriorate Cotton—Compounds might be incorporated into CPC which when applied to textiles and followed by bleaching or heating treatment might increase the deterioration of the cloth. Compounds such as chlorates or aliphatic halides which would produce hydrochloric acid were specific examples. . . .



“Irritating Substances—It is known that certain resins and solvents are irritating to the skin, often causing dermatitis. It might be possible to formulate a CPC composition which will make textile materials irritating to the skin.

“Incorporation of Grit—It seemed too dangerous to attempt to add gritty material to CPC since, although it would interfere with the use of the material for textiles, it would also offer serious disadvantages in grinding on application of surface coatings.

“It was agreed that the mere dulling of the material would not be a satisfactory solution since dull shades are often used in the textile trade. . . .”

Information is lacking with which to estimate the relative proportion of the research effort of cartels which is devoted to the improvement of industrial processes and products, to the development of patents which are intended to keep others out of an industrial field without being used by the patent owner, and to study of methods for the worsening of products such as have been described above.

3. *Efforts to Weaken Independent Enterprises*:—An almost inevitable part of cartel policy is a concerted effort by cartel members to weaken independent concerns. The means available to a cartel are similar to those used by a domestic combination in restraint of trade—concerted efforts to cut off raw materials, organization of boycotts among distributors, exclusive dealing contracts, concerted refusals to grant patent licenses or permit access to technology, harrassment by litigation, localized price wars, and similar forms of pressure. The contracts already described, by which independents are deprived of the services of inventors or of the opportunity to license their inventions to concerns which deal with the cartel, express efforts to weaken independents. Threats of patent litigation are often successful in forcing an independent concern to come to terms with the cartel.

4. *The Relation of Cartelization to Efficiency*:—The effect of cartels upon the efficiency of industrial production cannot be directly determined without examination of comprehensive records of cost extending over considerable periods of time. Such evidence as is available, however, indicates that the characteristic purposes of cartels point away from efficiency and that their activities tend to diminish efficiency.

One of the most frequent purposes of cartelization is to prevent the destruction of relatively high cost enterprises. The endeavor is

to share the business among the available concerns, with the necessary result that the least efficient obtain a claim to continued existence and to a specified market upon the same basis as the most efficient. In the nitrogen cartel agreement of 1930, high cost concerns were actually given larger relative quotas than low cost concerns.

Except at times in German-controlled territory under the pressure of the Nazi government, price agreements by cartels have usually established prices at levels mutually satisfactory, that is, levels which even the highest cost concerns were willing to accept. Thus cartels often set aside the function of competition in spurring businessmen to greater efficiency and in eliminating the inefficient, but seldom provide alternative means to accomplish the same purpose.

In the development of technology, cartels tend to enhance efficiency insofar as this result follows from a pooling of inventions and exchange of know-how, and to retard efficiency insofar as they keep new processes from being adopted and deprive nonmembers of an opportunity to share in the benefits of technological progress. The claims of cartels to reduce the cost of ordinary business and industrial operations are very slight.

With the minor exceptions just mentioned, the cartel pattern typically consists of market arrangements which do not unify the managements of the various concerns. The opportunities to reduce the cost of production by such agreements are limited indeed. One is the chance to avoid some but not all of the costs which arise from fluctuation in the rate of output; for under a cartel, fluctuations based upon changes in demand must still take place sooner or later. Another possible saving, which, however, is not a true economy, may come from the lower purchase prices upon raw materials which the cartel members may sometimes obtain if they have a monopolistic buying position. Set against these factors are the increases of cost which ordinarily may be expected to result from restriction of output by the cartel.

But assuming that cartels increase efficiency, the value of the achievement is questionable so long as cartel control endures. The interest of the community in greater efficiency is ordinarily based upon the belief that lower costs will lead to lower prices and thus enhance consumption. Efficiency in a monopolistic combination redounds primarily to the monopoly's own advantage and may not contribute much to the advantage of the community.

## POLITICAL ASPECTS

International cartels involve agreements as to international trade among business enterprises domiciled in several nations. Frequently certain parties to such an agreement are themselves international corporate combines with properties in various nations and with subsidiaries and affiliates incorporated under the laws of these nations. In developing and executing cartel arrangements the participants necessarily formulate policies toward international trade and toward the exchange of information across national boundaries. Such policies necessarily have political implications.

National states, like cartels, may undertake to restrict trade. But whereas cartel restrictions are intended to serve the interests of cartel members throughout the world at the expense of outsiders, the restrictions imposed by national states are intended to serve interests in a particular nation at the expense of interests in other countries. Thus cartel restrictions may conflict with national restrictions; and to become an instrument of restrictive national policy in one country a cartel must be also a means of attack upon the national interests of other countries. Cartels may express the collective interests of producing countries in exploiting consuming countries; but since cartels are international, they might be expected to resist subordination to a particular producing country's national policy, and doubtless many of them do so. However, when a cartel is dominated by the enterprises of a single nation, the economic control expressed in cartel policy may take a political form as well, so that the activities of the cartel supplement and reinforce the activities of the national state in which the dominant concerns are domiciled.

The likelihood of such a result increases when the political purposes of the national state are consistent with the restrictive policies of cartel members in other countries, so that the national advantages thereby achieved do not involve any immediate business injury to foreign cartel members. A cartel may readily be used for political ends if one nation's participating enterprises are politically minded whereas those of other nationalities are concerned primarily with their business interests.

The likelihood that national politics will influence a cartel is greatest where the distinction between government and business is not sharply maintained. In democratic states, with a tradition of business freedom from governmental control, businessmen are seldom expected to

become the means of carrying out national policy and are likely, regardless of expectations, to follow their own line.

In the instances of conflict between cartel policies and national policies, two different types of motivation are evident. In some cases cartel members were pursuing their business ends without regard to the national interests of other countries or the national policy of their own country. In other instances, cartel members were consciously serving the political and economic purposes of a particular national state, sometimes willingly and sometimes reluctantly. Often both motives were present—some participants acted willingly while others acted for business reasons. In general, American concerns were unaware of or indifferent to the political significance of their acts, but took part in cartels for business reasons.

### **Cartels and National Commercial Policy:**

One of the most widespread of cartel activities is the allocation of trade territories and industrial fields among the members of the cartel. Such allocations necessarily express private international trade policies which often conflict with, modify, or supersede the trade policies of national governments. Cartel controls are supplements or substitutes for the State's control of trade by tariffs, export and import licenses, trade agreements, antidumping laws, and the rationing of foreign exchange.

The relationship of a cartel to the tariff may be readily illustrated from the chemical industry. Under an agreement between du Pont and Imperial Chemical Industries, the latter recognizes the United States market as the exclusive territory of du Pont for patented products and in practice abstains from selling unpatented products here as well. Imperial Chemical Industries controls almost the whole chemical industry of Great Britain; and its agreement with du Pont covers its entire line of chemical products, with a few important exceptions such as alkali. Thus the agreement is the practical equivalent of a prohibitory tariff upon the importation of British chemicals into the United States. Trade policy in the matter is made by the two great private companies and not by the American Government.

Whereas tariffs are ordinarily used in an endeavor to encourage the development or maintenance of manufacture within the country which imposes them, cartel regulations applicable to a particular national market are likely to limit or discourage manufacture. An instance

is the control exercised by the quinine cartel over the United States market. Before the present war the cartel followed a policy of allowing American manufacturers to make not more than half of our domestic requirements of quinine. Only two American companies were permitted to engage in manufacture, and both were required to purchase cinchona bark exclusively from the cartel. The exclusive assignment of foreign territories to particular members of a cartel necessarily defeats the policies of national governments which may be seeking to enlarge the flow of international trade between their countries and parts of the world not allocated by the cartel to their nationals.

Although private cartel arrangements may have the effect of tariffs, the promotion of higher national tariffs is often a part of the policy of those who participate in cartels. A tariff may strengthen a cartel member in his negotiation with other members for a larger share of the world market. Moreover, a tariff may give protection against independent enterprises which do not cooperate with the cartel and against cartel members who undertake price wars as a disciplinary or retaliatory device.

When the policies of a cartel and a particular national government are brought into harmony, the effect may be use of governmental restrictions to reinforce the power of the cartel or use of the cartel to accomplish the restrictive purposes of the government. In 1938, the French Government evidently undertook to give effect to the territorial allocations of the dyestuffs cartel. Various cartels dominated by German concerns during the period between the two World Wars were used by the German Government to maintain German exports and supplies of foreign exchange.

International cartels have usually acted as substantial deterrents to the industrial development of parts of the world which their members regard as colonial markets. Typically they have resisted the rise of new enterprises abroad as well as at home. Cartels also resist the establishment or the extension of undertakings by local capital. Such policies of discouraging industrial development usually run counter to the aspirations of the national governments immediately concerned. In Latin America they run counter to the good-neighbor policy and the development programs fostered by the Government of the United States.

Because of their international character, cartel arrangements often

become convenient means by which to circumvent the legislation of national states. Avoidance of import duties and other taxes, evasion of legal control over prices, and similar activities are, of course, frequent among domestic enterprises. In international cartels, however, the aid of foreign concerns is often available to create the pretenses under which evasion takes place. Among the most conspicuous examples of attempts to nullify national law by action taken beyond a nation's boundaries are the efforts of cartels to extend their control over the United States and yet evade the jurisdiction of the American anti-trust laws.

### **Cartels and National Security:**

In cartel policy, as in that of national states, trade relationships often have diplomatic and military as well as economic significance. The allocation of trade territories to German, British, or American interests establishes exclusive trading ties which facilitate the development of political understandings among the governments of countries thus bound together by cartel policy.

The security problems raised by cartels during the last quarter-century have centered upon the revival of the military strength of Germany and the political and military preparations of the Nazi government for the present war. With cartel members outside Germany often politically indifferent and in some cases subservient to dominant German enterprises, and with the German members of cartels increasingly subjected to the control of the state, cartel activities between the two wars contributed to the development of a rearmed and aggressive Germany and to the weakening of states which were likely to oppose German national policy.

1. *Cartels and German Rearmament*:—The reestablishment of cartel connections between German and Allied concerns in the munitions industries apparently aided in creating an atmosphere of acquiescence to the revival of German munitions production during the 1920's, in violation of the Treaty of Versailles.

2. *Cartels and Nazi Propaganda*:—After the Nazi government came into power, cartels were extensively used for trade penetration, political propaganda, collection of strategic information about foreign industries, and efforts to suppress the development of strategic industries in areas which might be hostile to Germany.

In some cases, the trade alliance created by an international cartel was so close that it resulted in the transmission of strategically important industrial information to German citizens and presumably to the German government, to the detriment of the military security of other nations. With public officials kept ignorant of the character of cartel arrangements as to the transfer of information, intimate details concerning technology, business operations, and even production for military use were sometimes sent abroad.

The effect of various cartel arrangements in strategic industries was also to prevent the development outside Germany of a substantial production of some of the most important new materials of war. This was the direct and necessary consequence of policies of restriction of output, restriction of new capacity, and suppression of new technology, such as are characteristic of cartels.

In the case of magnesium, a cartel arrangement between I. G. Farbenindustrie, the Aluminum Co. of America, and Dow Chemical Co. established Dow as the sole producer of the metal in the United States. A high-price policy, followed by Dow for its own purposes and under pressure of the Aluminum Co.'s insistence that Dow not offer a cheap substitute for aluminum, kept the output small. In 1938, when German production had reached 12,000 tons, United States production was only 2,400 tons. Moreover, Dow's exports were limited to a specified amount to a single customer in Great Britain, and to certain quantities which I. G. Farbenindustrie agreed to buy. Dow might not otherwise export to the European Continent.

In the case of aluminum, soon after the Nazi Government took power German aluminum producers, apparently acting under governmental pressure, insisted that they must no longer be bound by the restrictions imposed upon production by the international aluminum cartel. The apprehension of aluminum producers in other countries lest the increased German output reduce the European price was allayed by an agreement that if there should be any increase in German exports it would be fully offset by an equivalent increase in Germany's imports. Thus the cartel continued its price protection in non-German markets by cheerful acquiescence in a policy which assured to Germany a superiority in aluminum supply. The production of Diesel engines in the United States was apparently retarded by the arrangements between American Bosch and Robert Bosch of Germany.

## Cartels and Economic Warfare:

The outbreak of war in 1939 intensified the problem as to the relation between national policies and cartel policies. Most cartels recognized immediately that some modification of their pre-war arrangements was made necessary by the new obstacles to freedom of trade and free interchange of information. The cartel connections between companies in belligerent nations were often wholly or partly suspended under arrangements which contemplated the full renewal of the agreement as soon as political conditions might permit. Cartel members in neutral countries typically preserved their business connections with their cartel partners on both sides of the conflict, with some modification of contracts to fit the new trading conditions. As between belligerent cartel members, problems arose as to how far trade connections might be maintained without violation of laws against trading with the enemy. Cartel members in neutral countries found it necessary to determine how far they would collaborate in proposals designed to serve the interests of one belligerent as against another.

In some cartels in which the relation of German and American partners was very close, the American company undertook to safeguard its cartel interest and serve its German partner by forestalling British measures to blockade enemy trade. If the Germans had formerly enjoyed exclusive rights in the South American market, permission was given by German cartel members to their American partners to supply the South American customers during the emergency provided the American concerns agreed to withdraw from the field after the war. Less frequently the American partner assisted the German company in obtaining supplies for shipment to Germany or in borrowing funds abroad.

During the period prior to America's entry into the war, American participants in cartels or corporate combines sometimes found their European establishments or their European cartel partners and licenses in territory dominated by the Axis. Under these circumstances the desire to maintain a prosperous business, coupled with the cartel connections already established with German concerns, sometimes facilitated a decision to cooperate with the conquerors.

Steps were also taken in various industries to bring about transfers of property and assignments of patent rights which would convert foreign property into domestic property. Two motives appear. On



the one hand, there was a desire to avoid the difficulties of wartime communication by transferring to each member of a cartel the control over properties to which that member had easy access. On the other hand, there was a desire to conceal the foreign ownership of properties in order to forestall possible application of freezing regulations, seizure by Alien Property Custodians, or other impairment of property rights in the interests of national policy. Immediately after the outbreak of the war, in September 1939, Standard Oil Co. of New Jersey worked out with I. G. Farben a readjustment of business to avoid seizure of property in the countries in which the two companies had patents.

A peculiarly interesting attempt to safeguard an international combine by changing its apparent national character was made by the N. V. Philips organization. Before the war approximately 80 Philips companies located primarily in Europe and South America were controlled by a holding company in Eindhoven, Holland. Anticipating the invasion of Holland, Philips took advantage of the Corvo law, which apparently had been passed at its instigation, to move the head offices of the company from Holland to Curacao, in the Dutch West Indies. It entered into two trust agreements, respectively, with a British and an American bank, under which provisional trusteeships were established over the Philips companies. The Midland Bank was given jurisdiction over those in the British Empire, the Hartford Bank and Trust Co. over those in North and South America and in Spain and Portugal. The Curacao company was to continue to control the subsidiaries in the Dutch East Indies, Sweden, and Switzerland. The trust agreements sought to combine a formal transfer of authority to British and American nationals with an actual retention of power by the Philips executive so long as they retained their freedom to act.

The most dangerous aspect of cartelization in wartime lies in the continuance of mutual loyalties and of joint property interests which unite concerns lying on opposite sides of the battle lines. Such connections with enemy nationals provide a standing incentive for qualified allegiance to one's own belligerent nation. The existence of established contacts with enemy concerns through concerns in neutral countries affords a constant opportunity to promote trade interests by transmitting information and even supplies which may be of value to the enemy.

The problem is at its maximum in the wartime relationships of the subsidiaries and affiliates of a far-flung international combine parts of which lie in enemy territory. The problem for such a combine is not a simple conflict between patriotism and greed. There is a natural desire to maintain property and profits. This desire is reinforced by a persistent memory that if these can somehow survive the war a period will recur in which international trade and investment are generally approved and by knowledge that even the laws of war traditionally respect the property rights of private citizens except where they interfere with military operations. There is also an awareness that refusal by any part of such a combine to collaborate with the belligerent government controlling the country of its domicile would merely lead to measures enforcing cooperation. The sacrifice of property rights in a futile attempt to defeat the purposes of military government is felt to be quixotic. In cultivating round-about trade and exchange of information between belligerent countries, both parts of the combine are aware of a national interest in receiving what is obtained from the other country and sometimes even in maintaining national export trade. This view is reinforced by the fact that upon occasion belligerent governments tacitly consent to the barter of goods with the enemy through neutral intermediaries. With the steady pressure of self-interest on the one side, and the inherently complex character of patriotic duty on the other, it is easy for the directors of a corporate combine to persuade themselves that there is no treason in the pursuit of an obvious business advantage.

The peculiar conflict in the loyalties of an international combine becomes most evident in the activities of its branches in neutral countries. Such branches are sometimes subject to the direction of a central office maintained in the country of one belligerent but dependent for supplies and markets upon the territory of another belligerent. In such cases their continued existence depends upon finding means to evade managerial instructions or to obtain orders consistent with their continued prosperity.

### **Post-War Planning by Cartels:**

The trend of cartel activity after the war will be profoundly affected by the military outcome. Great German companies have been used during the war as the nuclei of international combines which, should they persist, necessarily will involve more extensive cartelization of the European Continent. The Hermann Goering Works, for

example, has grown through investments by the Reich, forced investment by private firms, confiscations of property, and purchase of property. In 1941, it controlled nearly 100 percent of Austrian and Rumanian iron and steel production and more than 50 percent of Polish iron and steel production. It also controlled nearly all of the output of copper in Yugoslavia, nearly 80 percent of the production of lignite in the Sudetenland, and more than 50 percent of the shipping on the Danube. It was established in armament manufacture, construction, and trade from Norway to Rumania. Similarly, the war has extended the control exercised by I. G. Farbenindustrie over the manufacture of dyestuffs in Europe.

Assuming complete defeat of the Axis, arrangements such as these presumably will not endure. The character of the cartel problem in a post-war world established by the United Nations may be partially forecast on the basis of the present activities and plans of those who support cartels.

Many cartel arrangements are still in effect, with modifications designed to meet conditions of war. Their continuance is evidence of an intention to maintain them in either an original or a modified form after the war. In many cases, however, post-war cartel plans are not matters of inference. Suspension of cartel arrangements in wartime and their renewal as soon as possible thereafter has been provided for by specific agreement.

Plans of cartelization after the war are not limited to the resumption of agreements previously in effect. There are a considerable number of ambitious proposals to form new cartel agreements and greatly extend the scope of cartelization.

Such plans are of two types: First, there are programs in particular industries to eliminate competition among some or all of the concerns engaged therein.

Second, various programs have been advanced for cartelization of all industries with the approval of the governments of the principal trading nations. In a recent discussion with the president of the United States Chamber of Commerce, Lord McGowan, chairman of the board of Imperial Chemical Industries, declared that he saw no hope for post-war cooperation between British and American business unless the American Sherman Act were repealed. One of the refugee executives of the N. V. Philips Co. in the United States has formulated a plan for general cartelization after the war.

The most ambitious of the publicly announced programs is that of the World Trade Alliance, which is promoted from England by Sir Edgar Jones, an executive of the international tin plate cartel. This organization is engaged in propaganda for an industry-wide series of governmentally sanctioned cartel agreements.





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QUALITY REPORT

1. Description of the work done during the period covered by this report  
2. Summary of the results obtained  
3. Discussion of the results obtained  
4. Conclusions  
5. Recommendations

The work done during the period covered by this report has been directed towards the study of the effect of the various factors mentioned in the preceding paragraph on the results obtained. It has been found that the results obtained are in general in agreement with the theoretical expectations, but that there are some deviations which may be due to experimental errors or to some unknown factors.

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