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SECOND CONSULTATION MEETING OF THE IRON AND STEEL INDUSTRY

New Delhi, 15-19 January, 1979

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Latin America and the Lima target

Argenis Gamboa
Chairman of the Board and President
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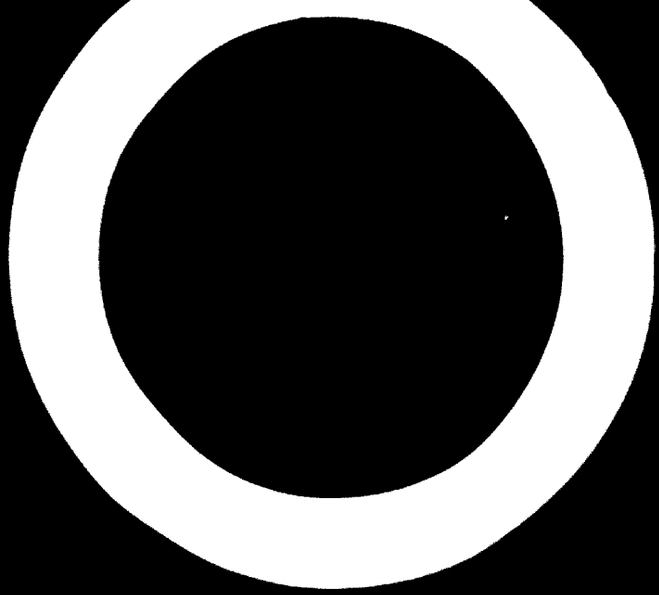

Dr. Argenis Gamboa

Latin America consists of 10 countries in South America, 6 in Central America, Mexico in North America, and several island states (Cuba, Dominican Republic, etc.). The total area covered by the 17 continental countries is approximately 20 million square kilometers, with a population of slightly over 300 million inhabitants. Spanish is the official language in 16 of these countries and in Brazil it is Portuguese. There exists a great similitude between both tongues.

All countries belonging to this geographic area are considered developing countries, but there exist considerable economic differences as well as differences in geographic extensions and population. Argentina, Brazil, Mexico and Venezuela together occupy 72% of the territory and their total population makes up 70% of the population of the region. Incomes per capita differ greatly from one region to another and also within each country, which is a well known feature of developing areas.

The birth of steelmaking on an industrial scale was the consequence of a series of events and factors which affected our countries in varying ways; but the most decisive ones were the same in each one and go to explain the origin and growth of the industry in the Forties.

Up to then, the development of the region had been based solely on the production and export of raw materials and food products and the income generated by this trade made it possible to import capital goods, including iron and steel products. This outward oriented economy grew without problems until 1930 at which time it was seriously affected by the world economic crisis. This crisis and the consequences of the Second World War rocked the production structures of our countries to their foundations and exposed their vulnerability, forcing a change of the then current way of economic thinking. Thus, arose a new concept of economic development in intellectual and political circles: The State was assigned a more dynamic role and this led to the adoption of a model of inward oriented growth and to the substitution of imports by domestic industrial production. This process of industrialization required the protection from external competition via tariff barriers, the establishment of an infrastructure and the creation of basic industries by the State, including of course, the iron and steel industry.

Thus, steelmaking started not merely out of economic reasons but also thanks to the need of stimulating a deliberate process of industrialization. For this reason, costs and benefits were considered jointly with other, more qualitative variables. For instance, in some cases iron and steel plant were destined to create regional development poles; this is the case of SIDOR in the Guayana region of Venezuela. In other countries, they were devised with the purpose of stimulating the growth of other sectors that depend on an adequate supply of steel; and still in other countries the iron and steel industry was devel-

oped as a strategic factor for military defense. In some others, it was conceived as a means for increasing the value of domestic mineral resources.

The end of World War II concurred with a period of intense activity in this sector. Steel production started at Altos Hornos de México in 1944; in 1945 at Altos Hornos Zapla in Argentina and in 1946 at Companhia Siderúrgica Nacional in Brazil. Compañía de Acero del Pacífico of Chile initiated activities in 1950; Acerías Paz del Río of Colombia in 1955 and the Chimbote Planta in Peru and Hojalata y Lámina in Mexico, in 1958. SOMISA in Argentina began three years later; and during the following couple of years SIDOR in Venezuela and USIMINAS and COSIPA, both of Brazil, appeared on the arena.

The rapid development of integrated plants influenced the establishment of other semi-integrated and rolling plants, fact which is evidenced by an increase in the production of steel that grows from 4.7 million tons in 1960 to approximately 30 millions at the beginning of the Eighties.

Profile of the present state of the industry.

Though being quite wide spread, 94% of the iron and steel industry is concentrated in Argentina, Brazil, Mexico and Venezuela. There exist 18 integrated plants in Latin America which account for 80% of the total steel production. The largest plants of this type are almost entirely State owned. 60 semi-integrated plants produce 20% of the total steel output; they are concentrated mainly in Argentina, Brazil and Mexico; most of them are private enterprises.

In 1977 steel production in Latin America reached 21.600.000 tons with an increase of 2.6 million tons as compared to the previous year, e.g., 14% more whilst world steel production decreased 3 million tons −0,5%− during the same period of time.

Steelmaking as well as primary ironmaking procedures exhibit a special technological profile in our region. Thus, the main steel producing installations are oxygen converters accounting for 40% and electric arc furnaces contribute with a share of 31%. 62% of primary iron comes from coke based blast furnaces, 22% from charcoal based furnaces; direct reduction processes produce 13% and electric reduction furnaces 3%. We believe that the importance of direct reduction and electric furnace processes will increase; in my country, for instance, we have initiated Development Plan IV in SIDOR which will augment the production of this company to 5 million tons per year and incorporate direct reduction and electric furnace steelmaking processes to an unprecedented degree.

The preliminary figures of Table I show that Latin America produced last year slightly over 24 millions tons of steel −11% more than during 1977−

thus confirming the sustained development of the region in this sector and also the fact that in spite of being touched by the critical situation of the world economy, this activity is affected to a lesser degree than the iron and steel industry in industrialized countries.

Table 1

Latin America: Steel production and apparent consumption
(in thousand tons of ingots)

	Production		Estimation of apparent consumption	
	1977	1978*	1977	1978
Argentina	2.682	2.807	3.780	2.430
Brazil	11.164	12.214	12.300	13.320
Colombia	330	388	700	750
Central America	62	64	725	770
Chile	548	512	513	580
Ecuador	–	–	290	302
Mexico	5.601	6.798	6.150	7.000
Peru	379	374	600	482
Uruguay	19	9	110	118
Venezuela	854	848	3.670	3.771
Others	–	–	120	130
Total	21.639	24.014	28.958	29.653

Source: ILAFA
* Preliminary figures

In 1977 our steel consumption amounted to approximately 29 million tons and comparing it with production, there was a deficit of 7.3 million tons. In other words, we produced only three out of every four tons of the steel we required. Our deficit decreased in 1978 to 5.6 million tons, which means that we have advanced with respect to our self supply having covered 81% of our consumption.

Short range panorama.

The most recent projections (Table 2) indicate that Latin America will consume 36 million tons of steel (expressed in ingots) in 1980, figure that will be very close to reality considering such short a period of time as well as the adjustments made in recent months which show a considerable narrowing of the objectives previewed a year ago. On the other hand, projects presently in development will increase production capacity to approximately 35 million tons that year. Considering however that these installations will enter operations

during the latter part of 1980 and that the older ones are not being fully utilized, production will reach only some 30 million tons, thus maintaining the present deficit in relation to the demand in our region.

During the mid Eighties demand will move up to 58 million tons and expansion plans indicate that there will be a capacity for producing over 60 million tons. Therefore our dependency from imported steel will continue (or grow maybe).

Table 2

Latin America: Steel demand and production capacity

	Demand		Capacity	
	1980	1985	1980	1985
Argentina	4.500	8.600	4.150	8.070
Brazil	15.000	24.000	14.661	28.276
Colombia	930	1.300	560	1.500
Central America	830	1.160	90	150
Chile	680	1.050	1.000	1.500
Ecuador	333	490	–	300
Mexico	8.032	12.131	11.430	14.000
Peru	819	1.461	600	1.000
Uruguay	140	180	30	130
Venezuela	4.950	7.435	2.500	7.710
Others	150	210	–	200
Total	36.364	58.017	34.931	62.836

Source: Estimates made by ILAFA

Long range prospects: year 2000

Considering the present world economic situation and the conditions of change in the steelmaking geography, it would be venturesome to outline a horizon exceeding a period of three years. But the objectives of this Consultation Meeting compel us to present the prospective scenario of Latin America at the end of this century.

With this in mind, we shall present three growth alternatives of the demand between the years 1979 and 2000:

- *a minimum growt rate of 6% per year;*
- *the most probable one of an average growth rate of 7,5% during that period of time and which corresponds to the one of the last 15 years, from 1963 to 1978;*
- *the maximum, with a mean annual growth of 9,5%.*

Table 3

Year 2000: Consumption and production alternatives

Alternatives	Consumption	Production capacity
Minimum 6%	106.856	118.729
Most probable 7,5%	145.564	161.738
Maximum 9,5%	218.363	242.626

Source: Author's estimate

In spite of the fact that some countries in the Region have considered generating a certain net surplus for exporting steel, we are absolutely conscious of the financial limitations of Latin America; thus in order to estimate the production capacity of Latin America be the end of this century, we shall suppose that the region as a whole will only compensate the required extra-regional imports. In each case an equally high and fixed capacity utilization of 90% is supposed. Using these cautious figures in Table 3, it follows that capacity could very from approximately 120 million tons up to slightly over double that quantity, estimating that the most probable alternative will be somewhat over 160 million tons of steel.

Reaching this capacity which only means self-sufficiency, implies additional capacities for 133 million tons until the end of this century, creating in other words, a growth of 5.8 millions year after year, and this without taking into account the substitution of equipment that will become obsolete during that period of time. Such growth requires iron and steel plant investments (strictly speaking without considering infrastructure) of about US$ 6.000 million per year, whereas in 1977 Latin America invested only 2.600 million dollars in iron and steel making equipment.

Favourable conditions and obstacles for steel development in Latin America.

Table 4 shows that the region concentrates 28% of world iron ore (percentage of recuperable iron) and its reserves are the largest of the world; they can be compared only to those of the USSR.

Latin American ore mining is one of the most advanced ones in the world; its production amounted to approximately 113 million tons in 1977 of which over 84 million tons were exported; this quantity represents about one third of the iron ore overseas trade.

There are expansion plans under construction and other short range projects which make it possible to foresse that the region will increase its importance in the world iron ore market even more; this situation is favoured by the

Table 4

World Iron Ore Resources

(millions of tons)

	Reserves[1]	Pot. Minerals[2]	Resources	Recuperable Fe	World Percentage
World	**278.053**	**556.779**	**834.832**	**99.305**	**100,0**
Developing Regions	**78.391**	**144.079**	**222.470**	**40.490**	**40,8**
Latin America	56.691	67.179	123.870	27.600	27,8
Asia, Middle East	17.300	54.200	71.500	10.124	10,2
Africa	4.400	22.700	27.100	2.766	2,8
Industrial Regions	**89.162**	**218.899**	**308.061**	**30.693**	**30,9**
Australia, New Zealand, New Caledonia	18.500	17.000	35.500	10.200	10,3
Canada	36.300	89.400	125.700	10.641	10,7
Europe	21.300	12.800	34.100	7.738	7,8
USA	10.662	97.899	108.561	1.814	1,8
South Africa	2.400	1.800	4.200	300	0,3
USSR	110.500	193.801	304.301	28.122	28,3

Source: Valorization of natural resources and the growth of the iron and steel industry in d.c. A. Gamboa (III International Iron and Steel Congress, Chicago, 16-20 April, 1978.)

[1] Mineral reserves which may be developed under economic and local conditions existing at present.

[2] Potential Minerals: Minerals requiring technological, economic and local conditions that are more favourable for exploitation than the existing ones at present.

trend of higher iron content charges in the blast furnaces of the industrialized countries.

In 1985 and later years Argentina and Colombia will not be self sufficient in what refers to iron ores but will be supplied from the region, thus not restricting their steel production.

Even if Latin America makes wide use of direct reduction and charcoal, the coke based blast furnace will continue being the fundamental pig iron producing facility. From the technical point of view, the dependence from hard coking coals is critical for the regional iron and steel industry because, as can be seen from Table 5, Latin America has only 0,2% of the total world reserves of this energy carrier.

Aware of this situation, the utilization of direct reduction and charcoal will steadily increase; however, there are limitations in natural gas reserves (with the exception of Mexico and Venezuela) and in reforestation areas; therefore it is most urgent to increase the use of low or noncoking coals. It should be

pointed out that with this in mind, the recently installed coking plants and those in construction include quenching and preheating facilities. But the most favourable prospects for using these coals are likely to be found in their gasification and their use in direct reduction processes. Studies on this matter are quite advanced in Brazil.

Fortunately there are prospects of increasing coal reserves in this area where exploration has been insufficient. Regions such as Amazonas, Acre, Rondonia and Parana in Brazil; Amazonas and Caquete in Colombia; Beni and Santa Cruz in Bolivia; Madre de Dios in Peru and Perija in Venezuela, are promissory. But the most inmediate areas for obtaining regional supplies of this reducing agent are the excellent deposits of Colombia and Venezuela.

One favourable condition for our steel industry development and which too often is not sufficiently appreciated, is the amplitude of the regional market and its attractive future prospects. Figures in Table 1 show that the average regional deficit of the last two years amounted to slightly less than 6.5 million tons and that this situation will continue in the best of cases until at least the middle of the next decade. This solid regional demand is one basic element for the creation of new plants and the expansion of existent ones in the area.

Another aspect that must be qualified positive is the fact that the Latin American iron and steel industry is mostly state owned, as mentioned in the introduction. When the State has a share in the steel business, it does so not only considering profitability but also for reasons that are related to social production costs. On the other hand, the fact that state and privately owned companies coexist in these countries, is a guarantee for consumers as it implies the possibility of a certain regulation of commercialization conditions.

Among the obstacles to the development of the iron and steel industry, mention must be made of financing, the difficulties in finding technical personnel and certain international steel trade restrictions. Among the latter ones is the application of the trigger price mechanism adopted in USA and the European countries and its combination in Europe with an informal import quota system. These measures are centainly not directed mainly against developing countries but they have affected them in rendering difficult the sale of their export surplus. It is a well known fact that whilst steel demand grows gradually, production capacity grows abruptly which results in years during which supply sometimes exceeds production. In this case, our companies must have the possibility of selling their production in foreign markets, within the Organization for Economic Co-operation and Development (OECD) a Steel Committee was established a few months ago and even if its targets are perfectly compatible with GATT rules, precedents that led to its establishment and previous deliberations induce us to fear the eventual adoption of other restrictive measures which might harm even more seriously the aspi-

Table 5

World Coal Resources - All Ranks and Hard Coal

(million tons)

	Reserves Total	Hard coals[1]	Percentage of total	Fut. Minerals	Resources	Percentage of world total
World	1.321.698	476.270	100	10.379.820	10.856.090	100
Developing regions	243.210	116.370	24,4	1.071.951	1.188.321	10,9
Latin America	9.078	742	0,2	25.355	26.097	0,2
Asia, Middle East	230.958	113.877	23,9	996.318	1.119.195	10.2
(Of which China)	(200.500)	(101.300)	21,3	(910.400)	(1.011.700)	(9,3)
Africa	26.607	1.751	0,4	50.278	52.029	0,5
Industrial Regions	687.399	189.671	39,8	3.618.337	3.808.008	35.1
Australia, N. Zealand	74.694	13.805	2,9	185.836	199.641	1,8
Canada	9.034	4.195	0,9	104.582	108.777	1,0
Japan	8.628	791	0,2	7.837	8.628	0,1
West Europe	207.257	36.853	7,7	455.267	492.120	4,5
USA	363.662	123.443	25,9	2.831.060	2.954.503	27,2
South Africa	24.224	10.584	2,2	33.755	44.339	0,4
USSR and East Europe	366.865	170.229	35,8	5.689.532	5.859.761	54,0

Source: Valorization of natural resources and the growth of the iron and steel industry in d.c. A. Gamboa (III International Iron and Steel Congress, Chicago, 16-20 April, 1978)

[1] Hard coal including anthracite and bituminous coal.

rations of the iron and steel industry in the developing countries a fact which I wish to strongly emphasize.

The lack of technical personnel also contributes to hinder the development of the iron and steel industry in our countries, where it has the exceptional privilege of developing not only its own technical staff but also of contributing to the growth of other production sectors via the continuous emmigration of this human element. This situation derives from the geographic plant location, wage possibilities and other iron and steel industry consubstantial characteristics. I do not intend to diminish the priority degree of this problem, but I am convinced that our government and business leaders will be able to overcome it.

The above figures on investment in Latin America evidence the magnitude of the financial problem. But it is not only its dimensions that make it the most important obstacle but also certain special characteristics of the steel sector. For the sake of simplification, I shall refer myself to only two of the most important conditions. Firstly, the long time required for maturing of these investments is longer in developing countries due to their special characteristics and secondly, profitability is always low in this sector, a fact that hinders the generation of own resources as well as the payment of debts incurred.

Some ideas on strategy.

The fact that steel has been selected as one of the two priority sectors that have been destined for trying to give a concrete content to an authentic Era of Industrialization of the developing world, makes it imperative that these countries attain in successive steps and until the end of this century, the established goal of steel production. An excessively broad gap between aspiration and reality would endanger not only the Lima Objective but also the New International Economic Order so ardently pursued by the United Nations.

Undoubtedly all delegates gathered here have meditated on the best way of advancing during these Conferences and we shall hear most certainly very interesting proposals during these days. We have tried to simplify a matter of such complexity in order to emphasize certain aspects which we consider fundamental for advancing safely towards the goal assigned to us.

In the first place, I wish to express that I am firmly convinced that the method adopted by the United Nations Industrial Development Organization (UNIDO) for these Consultation Meetings is the most adequate means for the search of solutions and mechanisms for attaining the Lima Goal, because this is a true series of negotiations which enables the developing countries to seek the co-operation of the industrialized countries. This type of mechanism is truly consubstantial with the spirit and the organization of the United Nations system. I also am aware of the earnestness and efficiency which several

preparatory meetings on specialized subjects have been held and that will help us to treat these matters with highly valuable information. But I am also convinced that there lacks one instance in this system which I consider fundamental for achieving our aspirations. In fact, there has been no opportunity for an exchange of opinions between the representatives of the developing countries and they are the most interested ones in the progress of these negotiations. This means that we arrive at this Meeting sharing difficulties and interests, but without a general basic proposal that would assist us in participating in a coordinate way in the discussions during this week. We think that it is necessary that we confront our views about how to make the best use of the conditions that favour the growth of the iron and steel industry in the countries of the Southern Hemisphere and the way for approaching the obstacles that stand in the way towards this development. Undoubtedly we desire to become important steel producers on the international scene; but the stage of our development is most unequal. The distribution of resources —mineral, energetic, human, financial resources— is not balanced at all and it is precisely due to these differences that we risk presenting views which not always will coincide and even might be contradictory. This situation does not help at all in bringing about the Lima Target proposed for the year 2000. Therefore, we believe that it is indispensable that prior to the next Consultation Meeting at least one preparatory meeting of the developing countries be programmed which I think could be held within the so-called Group of the Seventy-Seven. For preparing these meeting it would be necessary that the efficient UNIDO staff lend their collaboration, so that within a few days a long range strategy could be outlined with possibilities of future improvements, as well as for working out positions —let's hope coincident— on the items of the agenda of the Consultation Meetings.

Apart from the possibility that this mechanism may be improved in the future, it seems convenient to establish from this very moment on informal contacts among the representatives of the Southern Hemisphere; these will assist us in getting to know different views and in creating a basis for future understandings likely to be developed into a common strategy.

Secondly, I believe it should be pointed out that without detriment to the goals established for the end of this century, it seems convenient to set up shorter range goals. Since 1975, year of the Lima Declaration, I have been attending a series of specialized international meetings of the iron and steel industry and the fact of having spoken in several ones to expose the views of our countries has convinced me that a 25 year Target appears to be not very realistic not only to the representatives of the developed nations but also to the eyes of some skeptics in our own countries. For that reason, it seems suitable to establish a Target in our countries and the rest of the world to an interme-

diate range, let's say 1990. All of us gathered at this meeting understand the fundamental premise that the Lima Target is a transcendental element within the New International Economic Order and thus represents a political aspiration of the Third World. We believe however that at a medium range it would be easier to make these political interests compatible with the industrial reality. Most steel economics analysts are aware that the old tradition of cyclical steel demand has been destroyed by the recent energy crisis. Steel demand has fallen definitively to lower levels apparently due to the lower specific consumption of those products which require steel for their manufacture. This new situation must be incorporated when the world scenario of 1990 is imagined and thus provide a tool of unsuspected service for our public or private enterprise planners.

From the analysis we have developed in Latin America arises the fundamental need of creating financial schemes tailored for carrying out at the right moment the investments that are required for increasing our production capacities. You are all aware that our industry is one that needs the greatest density of capital, factor that has become more serious during the last years due to the proved fact that equipment and installation prices have jumped up out of proportion as compared to steel products and iron ore materials. On the other hand, the situation of permanent inflationary crisis in the world is leading by itself to a restriction of credits or to an increase in interest rates making the financial problems of this sector increasingly distressing. I am growing more and more convinced that this is the true Gordian knot in the development of whatever strategy in this sector in most developing countries and I believe that this same responsability of mobilizing such enormous financial resources should lead us to the creation of schemes fit especially to the iron and steel industry.

The lack of interest of the international credit organizations in iron and steel industry transactions has been notorious lately. In spite of no official explanations to this respect, undoubtedly this attitude is strongly influenced by the restricted market situation in the major steel producing countries, disregarding the existence of projects for domestic markets with evident perspectives of a deficit of supply.

We think that the need of investing about US$ 6.000 million per annum in the Latin American iron and steel industry requires a feasibility study for organizing a specialized credit agency which would be able to multiply the financial resources of our countries attracting capitals from the international financial markets.

Such an ageney could be conceived in a regional ambit or within wider geographic limits and also go beyond the steel sector. But if a project of this type is to thrive, it is essential that the governments eventually interested in its promotion, decide effectively that the iron and steel industry must be an in-

come-yielding and protected activity. The assistance of UNIDO in performing this study and eventually later on its support of such an organization, would be of upmost value for achieving our aspirations.

The series of above mentioned restrictive measures adopted by the major steel producing countries force us to think that we must intensify our efforts for increasing the co-operation between countries, enterprises and organizations in our own regions, as well as among different developing areas as a means for diminishing our critical dependence from the Northern Hemisphere. Regarding this matter, I wish to mention with pride that the efforts made in Latin America during years are bearing fruit and it is possible to point out with optimism iron ore transactions, multinational efforts for the development of coal fields, the trade in iron and steel products, engineering purchases and others that evidence the aperture of our industries towards the region. We believe that the moment has arrived to start or to increase technical and commercial contacts between enterprises of different developing areas. We are aware of the difficulties regarding cultures, languages and communications. But I believe the hour has come to also help each other. In this sense also UNIDO may be of great help in establishing the channels of contact among the leaders of our regions.

In another order of thinking but within the scheme of regional co-operation, the existence of technical iron and steel organizations should be mentioned; they assemble companies of different countries within one region and in emulation of other similar institutions in industrialized countries, area leading a very active life in the technical and economic plans of our sector. I refer myself specifically to the Latin American Iron and Steel Institute (ILAFA) with headquarters in Chile; to the Arab Iron and Steel Union with its headquarters in Algeria; and to the South East Asian Iron and Steel Institute (SEASI) centered in Singapore. It should be mentioned that these institutions are multinational which shows their integrationist vocation right from their establishment. Even if their action extends itself to geographic areas of very diverse steel production levels, with unequal natural resource endowments, they share one factor in representing almost all steel producers, fact which makes them be an optimum tool for implementing programs that tend to the technological improvement of our production structures, such as personnel development and training, technical information services, coordination or unification of industrial and mining research and other activities that have sprung up in the context of Consultation Meetings. I wish to make a special appeal to the delegates and UNIDO authorities pleading that these organizations are used in instrumenting the schemes of technical support that might derive from this Conference.

Gentlemen, I shall finish my exposition renewing my conviction that we shall achieve the Lima Objective within the steel producing sector.

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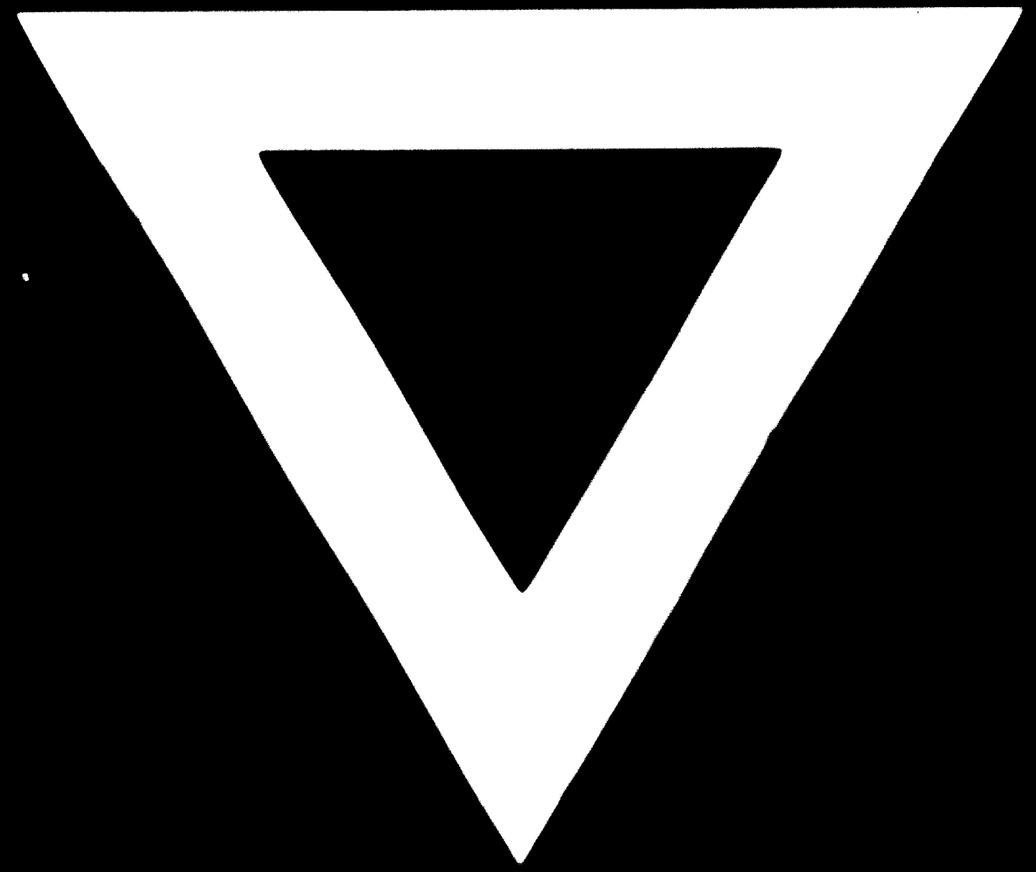

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