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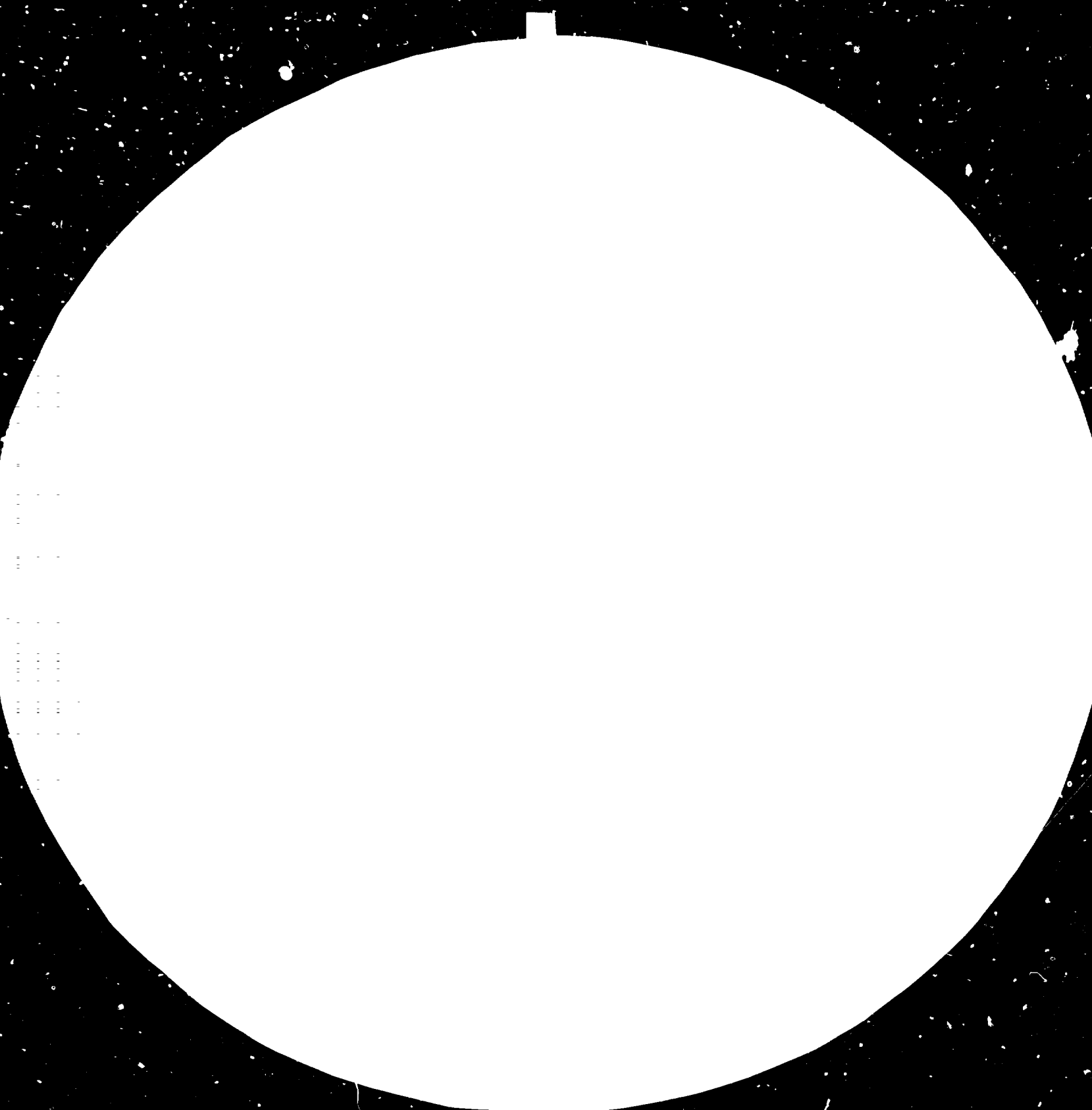
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Developing Countries from Small-Scale Industry
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Technical Co-operation among Developing *
Countries (TCDC) and New Forms of Industrial
Co-operation *

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** IDC: Institute for Developing Countries.

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Besides the basic motive of profit making, other important objectives of a development project (or development objective) are becoming established, especially among developing countries, such as more adequate inclusion in the international division of labour, the attraction of financial and technological resources, the possibility of adequate utilization of the results of investment in economic development, etc. As it evaluates different inputs, recognized different development motives, and takes place in different spheres of human activity, technical co-operation among developing countries (TCDC) is understood as multi-dimensional co-operation. This is specially emphasized by the conceptual character of this type of co-operation, the actual implementation of which may take different forms.

TCDC is an attempt to formulate an alternative system of production internationalization which would not be guided exclusively by profit making and profit concentration (i.e. by exploitation of natural resources and manpower in developing countries), but would satisfy efforts at realizing profit as a function of progress, i.e. at activating the human and natural potentials of developing countries.

At the same time, TCDC answers the need to develop and strengthen the economic relations of countries with different social and economic systems and with different levels of development.

In order to try and satisfy these basic demands, at least conceptually, TCDC must be conceived as an open and flexible system of co-operation which can include different forms and mechanisms of international co-operation and exchange, and increase to a maximum mutual administrative, legal, financial, etc. tolerance.

Being a flexible system of co-operation, TCDC does not require new institutional bodies or the creation of new organizations or major administrative intervention in national administrations of individual countries. The slow practical introduction of new dimensions in co-operation can only partly be ascribed to administrative and other formal limitations within the framework of international organizations or administrations of individual countries. It depends more on the actual possibilities of developing countries to come forward as active participants in international economic co-operation. In order to make this possible, a major part of the initiative in putting such co-operation into effect should be taken over by those directly engaged in economic activity.

When discussing the system of TCDC, the question arises of relations between such, direct participants (mostly organizations, either in private or social ownership) and state channels of international co-operation along which technical co-operation preponderantly proceeds, including

training of cadres and transfer of technology. From the instances of many developing countries, but also of developed countries, it is easy to perceive discrepancy between state and private channels of co-operation. The reason for this may well need to be sought in the fact that information, development of science, and transfer of technology and education are often treated as activities not directly linked with economic development. They are understood as social consumption rather than social production.

The new dimension of international co-operation and the system of TCDC are thus still not clearly defined and formulated, but already now they open up possibilities for seeing international relations, especially economic relations, in a new development light. Their inadequate definition produces, for the time being, certain inclarities, primarily those relating to the mechanism of co-operation. Thus one of the basic questions becomes the question of mechanisms, or of finding an answer to the question h o w to put co-operation in practice, how to realize a development project on the principles of TCDC. Although it appears to be formal, the question is in fact conceptual, for neither here nor elsewhere is it possible to separate form from content. The conceptualization of TCDC, and generally of new dimensions in international co-operation, shows that increasing consideration is being given to new possibilities and methods of internationalization of production, i.e. to different modes of the international division of labour. The answer to the question how to realize projects in practice on the principles

of TCDC must then be sought in the beginnings of new forms and a new practice of international economic co-operation and exchange, such as, for instance, trilateral arrangements, parallel inclusion of international organizations and of developed and developing countries in the realization of development projects which are of interest to a number of countries, etc.

Such an answer, however, is still not sufficiently precise, because there is no thoroughly developed mechanism which would fully express the aspirations of the new dimension in international co-operation. Therefore, here we can discuss only a few innovative forms which have already emerged in practice and which indicate the need to change the conditions and modes of their implementation, or those which are only being initiated as forms of co-operation among developing countries.

Transfer of technology proceeds in the context of different international economic and political relations. Its total productive and development effect transcends the limits of the sale of the right to the utilization and application of a certain technology, although legal regulations are exceptionally important, both on the international and on the national level. In developing countries especially, transfer of technology cannot be dissociated from wider social and development context. The transfer of technology within the framework of TNCs is beyond the reach of that society in which production takes place for some TNCs, because the communication of this mode of production with the environment in which it takes place is only partial, i.e. it involves

only limited areas, - usually manpower and natural resources. Efforts at adapting technology or introducing what is called small-scale technology (usually outdated) have not been sufficient to solve the problem of including societies in developing countries into industrial civilization.

Therefore the transfer of technology as a possible form of co-operation on the principles of the TCDC concept must be considered through the evaluation of different development aims, while taking into consideration existing systems of social values. In this sense the question of adequate technology becomes a question of the functionality of technology transfer in general. Thus what is involved are not only possibilities of adapting technology to different specific conditions, but also ensuring the utilization of technology which can only be achieved when the transfer forms part of a total development project. Thus, for instance, an ideal form of technology transfer is transfer within the framework of joint ventures (JVs) and various trilateral arrangements which have the advantage that they can ensure a wider choice of technology. In view of the fact that very often the largest part of investment comes from national state funds, the transfer of technology to developing countries can also be effectuated by linking state channels of co-operation with the contacts of individual organizations which widens the possibility of choice and ensures optimum conditions for transfer.

Another innovative form of co-operation among DCs is the mutual exchange of experts and consultants. The smallest number of experts who come to developing countries in connection with various TCDC arrangements work in industry,

although it is exactly here that they are most needed. The methods of their engagement and activities are rather outdated and inconsistent with the new concepts of co-operation. Experts rarely work in teams or on clearly defined tasks. When they do exist, teams do not easily become homogenized, while their work efficiency is problematic which is not the case when separate companies organize and dispatch their own teams.

In formulating and realizing TCDC projects it is possible to ensure a more intensive orientation on the engagement of manpower and experts in the country in which the project is being realized, and to intensify the utilization of other factors which are indispensable for ensuring the necessary basic cadres: engagement of consultants from developing countries, education and on-the-job training, organization of seminars for experts, etc.

Although the delivery of equipment is linked with the transfer of technology, equipment can also be discussed from the aspect of dividing transfer according to elements of the technological process which are familiar to a country or could quickly be mastered, and those which cannot be immediately mastered. The application of the TCDC concept would make it possible to interpret the delivery of equipment fully as industrial co-operation. In this manner a developing country which takes over a certain technology and the necessary equipment would - from the very beginning, through the transfer process it-self - actively participate in the adaptation of technology to the specific environment in which it is to function. This would at the same time make transfer

less expensive and offer greater guarantee for a correct handling of the equipment.

Although scientific co-operation should apparently retain autonomy, the meaning of scientific research on the plane of industrial development generally shows in application. Despite the fact that technologies are transferred to developing countries mostly from developed countries, and that almost all work on industrial and other projects is carried out according to adopted know-how, it is precisely through the TCDC system that scientific monitoring and a total scientific valorisation of projects, - from the macro-economic to the technological level - must be ensured. Developing countries are mostly consumers of technology in a literal sense, but the maintenance of the functioning of technology alone calls for a scientific basis, i.e. for both personnel and research work which guarantee that the production process itself will be fully mastered. As the scientific potentials of most developing countries are almost negligible, the TCDC system should ensure a more intensive co-operation on this plane, - to identify and link existing capacities and ensure maximum co-operation with developed countries. In this respect the possible positive role of international organizations must be emphasized.

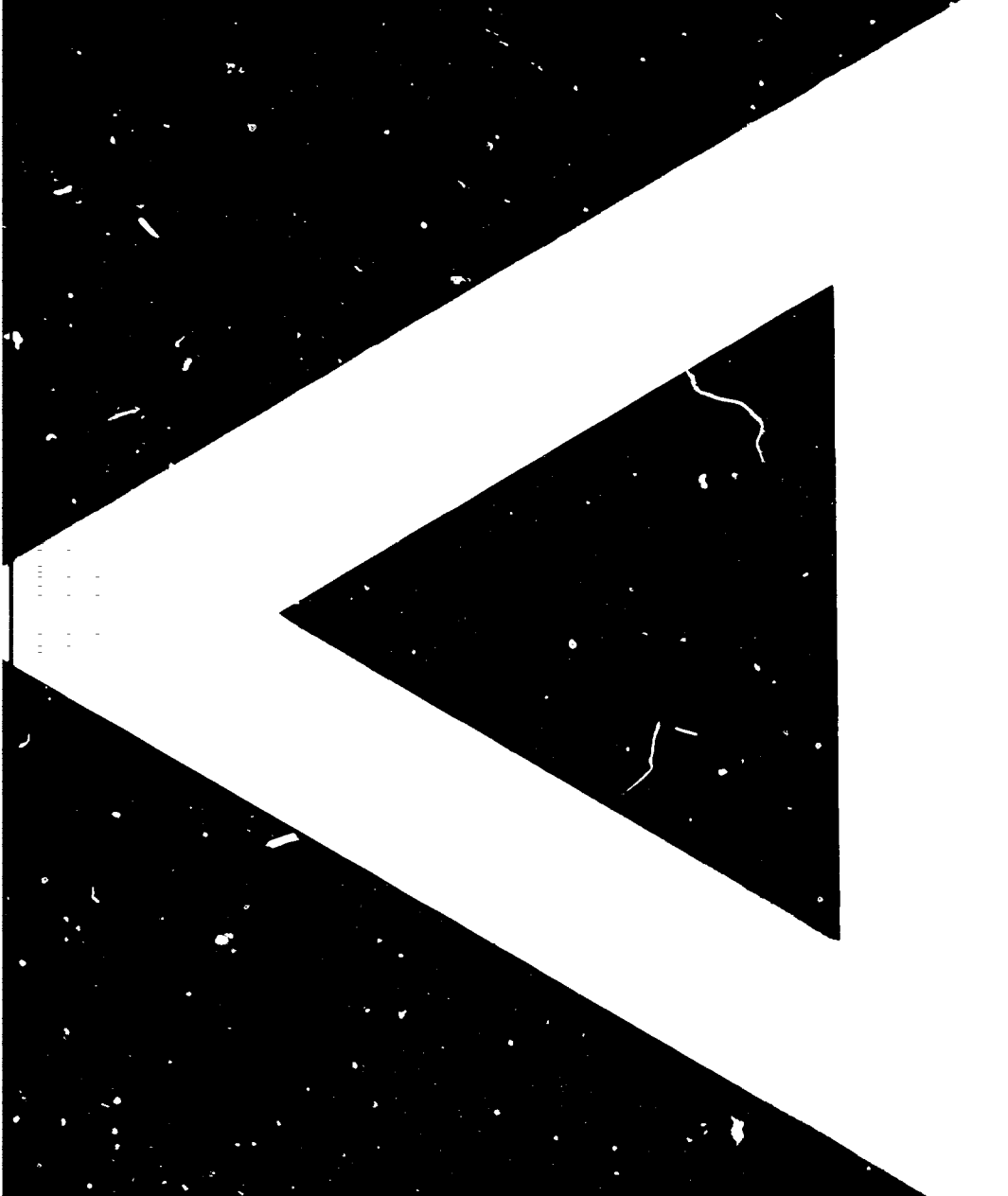
The idea of the new dimension in co-operation is to bring about new types of links. It has become clear that the project approach, although operative, is too narrow and that it should be broadened by establishing development links between different projects, i.e. between project plans and the wider development plans. In developing countries

these links are still not functioning. Complex projects ought to ensure a wider inclusion of certain activities and connect several development projects into a functional development entity (for instance, energy projects, agricultural projects, industrial projects of the regional type). In many cases such projects can also link different countries in settling development problems of certain regions (e.g. exploitation of river valleys or other common natural resources).

Joint ventures are a more recent form of co-operation among developing countries which should make possible more successful utilization of their various resources and, on the basis of either differences or similarities in development experience, make it easier for them to make progress in production and the development of infrastructure. This form of co-operation includes different spheres of co-operation and different types of arrangement (licences, contracts for production, technical co-operation, production co-operation, profit sharing, etc.). Although joint ventures of developing countries are growing in number, it is difficult to define a typical joint venture of developing countries since they link differently structurized national economies or different branches of production within these economies. Consequently there is no clear organizational and production model, but the interest of all partners in such a venture is defined both legally and as regards production and finances. This means that joint ventures are a possible real basis for a much wider co-operation especially in industry. Joint ventures

can also include partners from developed countries, or states, but usually they are comparatively autonomous organizations. Therefore states seldom make adequate use of joint ventures for the realization of elements of their own development plans, even when acting as direct partners. As a result, much international co-operation on the level of technology transfer, training of cadres etc. is still not based on production processes and relations, and remains bureaucratically isolated from economic entities which could use it profitably.

Only some forms of co-operation have been discussed here, - those which apparently can be fully used in the development of industrial co-operation. These forms do not perhaps show a sufficient homogeneity or correlation in application. They are only mentioned here because they represent partial experience and are rather an expression of the search for more favourable modes of co-operation than found in the established system. In this sense this discussion may be criticized as being insufficiently systematic. But it is an attempt to discover possibilities of developing and spreading industrial civilization as an expression of practical needs. Such needs have not yet led to any changes in the methods of following international co-operation. The questions of overall industrial development in the world and the further industrialization of developing countries impose the need for changing the system of international co-operation in order to bring about more intensive and better production communication in the world.



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