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The concept of nature and environmental projects: UNESCO in its first decade **

(1) Introduction

The scientific projects that had as object the environment were significant to UNESCO since its formation, in 1946. They were oriented by a new science, the Ecology, which, at the end, made them different. Ecology was defined in terms of internationalism, and the idea of nature was inserted in its environmental projects.¹ For UNESCO's first Board of Directors which the key for the unity in a cultural diversity was found in the idea of internationalism, Julian Huxley, the General Director, foresaw that such differences within the development of "sciences, culture and education" would be harmonized like the instruments of an orchestra that come together to a great unity.²

Huxley affirmed in his "UNESCO, its Purpose and Philosophy" that the world is potentially one, and the human needs are the same in every part of it. Anything that UNESCO can do to satisfy these needs through promoting education, science and culture, will be a step towards a unified way of life and of looking at life, a contribution to a foundation for the unified philosophy we require.³

At the same time, Joseph Needham, the first Director of the Natural Sciences Division, put into practice the principles proclaimed by the General Director, promoting the programs based on the international scientific cooperation. In UNESCO's first general meeting he called the attention to the fact that in several parts of the world scientists were in complete isolation. He, then, proposed the creation of scientific cooperation offices in different parts of the world. The first one was created in Manaus, Amazon because UNESCO support was for the programs about life conditions and the natural resources of regions still considered unknown, as the tropical ones.⁴

As much for Huxley as for Needham, the internationalization of the sciences, in the sense of exchange of knowledge among culturally different societies, would be fundamental to achieve the objectives of UNESCO. The scientific work would be made in cooperation, overlooking political, cultural and racial borders, but in accordance with local governments. The objective was to contribute for the maintenance of peace through the common progress of humanity. To make different countries create channels of scientific cooperation with the purpose of settling conflicts was considered, at that moment, the main social role of the sciences. As Needham emphasized in his Boyler lecture, in 1948:

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¹ DELEAGE, Paul (1992): *Histoire de l'Ecologie* (Paris: La Découverte), 330 p. As he said Ecology should be interpreted by the relations between men and their environment in the evolutionist optics (p. 246).

² UNESCO, First Annual Report (1947).

³ HUXLEY, Julian, ([1946] 1947): "UNESCO its purpose and Philosophy" (Washington D.C.: Public Affairs Press); <http://www.unesco.org/>, p.61.

⁴ UNESCO, "Minutes of the First General Conference", p. 178. To give aid and assistance to scientists and technologists in places isolated from the main centres of science and technology (besides the Amazon Office), the UNESCO's offices in Egypt and China were set up, in 1947. The fourth one was established in India in 1948. See PETITJEAN, Patrick (2006): "The Periphery Principles: UNESCO and the international commitment of scientists after World War II", in: M. Kokowski (ed.), *The Global and the Local: The History of Science and the Cultural Integration of Europe* (The Proceedings of the 2nd International Conference of the European Society for the History of Science. Cracow, September 6–9, 2006), p. 734-741.

Actually, since science is a unity, we ought to take such an interest; and once we start looking across the international boundaries of the sovereign states which exist in the world today, and considering the question of how scientists can co-operate more effectively across these boundaries, we have to do so.⁵

From this point of view the projects on the environment were important because they were based on ecological studies that applied different concepts of nature, thus, defining the political ways of exploring natural resources and their association, or not, with the societies where they would be developed.

(2) The environment and the unity Man and Nature

Among these, the first one was the project for the *International Institute of Hylean Amazon*. It was significant in the history of UNESCO not only for being the first based on the international scientific cooperation, or for being on the Amazon region - a polemic region still today - but because it foresaw the study the man and the nature as a unity. In its justification of the project, Paulo Carneiro said that “an immense plain crossed by copious rivers and covered by forests, it is a live system where soils, waters, plants, animals and the man integrate themselves in a vast symbiosis.”⁶ Just as the driving principles of UNESCO, the IIHA project understood the life on Earth as an evolutionary system where each one of their parts depended on the others. This interdependence of the different elements of nature defined Ecology for Huxley and included the study of the relationships among men, understanding that Anthropology was the science that promoted these studies.⁷

The project for the International Institute of Hylean Amazon was proposed by the Brazilian delegation, in 1946, during the preparatory meetings of UNESCO. It was a project of the Brazilian biochemist Paulo Berredo Carneiro, who stayed in UNESCO for more than 30 years.⁸

The IIHA project should gather the countries of the region: Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela and the three Guyana: French, English and Dutch. It was the first proposal for an international research institute that was based on the ideas of evolutionism and cultural diversity, both synthesizing in the idea of scientific humanism by Huxley.⁹ It had the ecology as background as well as the human ecology, and anthropology among its scientific objectives. But it did not succeed due to very strong political problems, involving geopolitics and nationalism (the region was considered as a national security region), and economical interests in the region then.¹⁰

The vision of ecology of the scientists involved in the project conflicted with the other national projects that envisaged the colonization of the region, whose theoretical bases were different. The sum of natural and social sciences was not yet understood, what took the American anthropologist Charles Wagley (that headed the only 'survey' of IIHA) to call attention to the fact that human culture is limited by the environment and reacts to it, so it should be manipulated carefully.¹¹ He underlined the pertinence of the IIHA's proposal that, with the purpose of knowing the peculiar Amazonian tropical environment, intended to carry out studies of natural sciences along with the social sciences. IIHA's project did not succeed and, in 1948, the first International Field Scientific Cooperation Office of UNESCO created in Manaus, Amazon, one year before, was transferred to Uruguay where it is today. UNESCO did not spoke on it, only Paulo Carneiro did it, until 1950.

⁵ NEEDHAM J. (1948): *Science and International Relations* (Oxford: Blackwell, 1948), p. 5.

⁶ CARNEIRO, Paulo (1950): *O Instituto Internacional da Hiléia Amazônica. Razões e Objetivos da sua Criação* (Rio de Janeiro).

⁷ In UNESCO, Anthropology was part of the Natural Sciences Division. See ELZINGA, A. (1996): “UNESCO and the Politics of International Cooperation in the Realm of Sciences”, in: PETITJEAN, P., *Les Sciences Coloniales: figures et institutions* (Paris: Orstom Editions).

⁸ Paulo Carneiro was a Brazilian representative and also was member of the Executive Council of UNESCO.

⁹ HUXLEY, Julian, *UNESCO its Purpose and Philosophy*, <http://www.unesco.org>.

¹⁰ DOMINGUES, H.M.B. & PETITJEAN, P. (2005): “Ecologia e Evolução: a UNESCO na Amazônia (1946–1950)”, in: ALVES, J. de A. (ed.), *Múltiplas faces da História da Ciência na Amazônia* (Belém: Editora Universitaria EDUFPA), pp. 271-285.

¹¹ WAGLEY, Charles (1949): “The International Institute of Hylean Amazon”, *Courrier de l'UNESCO*, June 1949.

Another project of UNESCO, the *Scientific and Cultural History of Mankind*, as a result from the plans of Needham and Huxley, also had as guiding principles the idea of unity between men and nature. From the point of view of the theoretical orientation of the project, the facts of the History of Mankind would be the societies, or men's actions on the nature. Their questions would be on how the knowledge exchanges had been processed regarding the nature and the uses of its resources. For them, the History of Mankind would be a history of the sum of the cultures and not of its divisions.¹² Huxley's and Needham's ideas converged with Lucien Febvre's ones, which considering that the world is divided in cultures that exist under different physical conditions, and the relationships that those different cultures are keeping among themselves along the time would be the conductive thread of the work.¹³ Therefore, the first human exchanges would be considered: the plants and the animals; the technologies and the knowledge, in the same way, were developed by cultural contact.¹⁴

The History of Mankind would be a History of Science because, as the Executive Committee concluded in 1947, the contemporary social facts invites UNESCO to urgently encourage a program which conducts to a better comprehension of the social role of sciences, of the discoveries, and of the spirit of scientific methods. The history of scientific progress shows that there are no countries or people whose citizens do not have given some fundamental contribution to science's progress.

One of the first outline of this project was those of the Archeologist Gordon Childe, that circulated in a General Conference of UNESCO that took place in Beirut, in 1948. Childe, according to Huxley, the History of Mankind should be based in the doctrine of organic evolution began in a logical scheme but has been converted into a temporal one by paleontology. Since 1920 Archeologists have made reliable and successful attempts to see the recurrent assemblages of types that they term "cultures" as integrated wholes functioning to satisfy the needs of specific societies and therefore as the concrete expressions of the individuality of societies. By now, he said, archeology disposes of well documented sequences of cultures from several geographic environments and covering in favorable cases hundreds of thousands of years that should serve to document any evolution of culture that has historically occurred and permit of the formulation of a chronological scheme which one hopes will also prove a logical one. "There are no only one chronological scheme to all cultures, but cultures with its own chronology." Then, "no two societies have had identical histories, enjoyed identical experiences and therefore built up identical worlds".¹⁵

In UNESCO, the discussion on the History project crossed chronological issues with issues on geographical and cultural levels. However, the project changed after the departure of Huxley and Needham from the direction of UNESCO and the resulting edition (published in the 60s) was quite different of the previous project. The idea of men and nature was crossed by the national feeling.

(3) The successful programs on environment: Men and Nature separated

Immediately after the World War II, the environmental subject mobilized scientists of different places. In UNESCO, as well as in the UN, the exploration of nature, besides the research programs and the proposed institutes, promoted the organization of several conferences; among them, in 1947, the first meeting of IHA, which took place in Belém (Brazil); the Economical and Social Conference, accomplished in Paris, that treated the forests, the forestry, the soils and the problems of erosion and conservation. In 1948, the Interamerican Conference of Denver and the important conference of Fontainebleau, in France, took place. In the following year, the UN promoted the Scientific Conference on the Conservation and Use of the Natural Resources (UNSCCUR) and UNESCO called for the International Technical Conference

¹² FEBVRE, Lucien (1954): "Rapport of Prof. Lucien Febvre, to the International Council for Philosophy and Social Sciences, May 1949", *Journal of World History* (Paris: Librairie des Méridiens), p. 954-961.

¹³ PETITJEAN, Patrick (2005): presented in Workshop "Sciences in Asia: Representations and Historiography, 17th to 20th Centuries" (Cambridge, 13-15 January 2005); DOMINGUES, Heloisa M. Bertol (2005): "Scientists in History: the preparation of the UNESCO's Scientific and Cultural History of Mankind", presented in the Congress "Scientists and Social Commitment" (London, BHSS, Sept. 2006); DOMINGUES, Heloisa M. Bertol (2005): "Projects on Men and Nature presented in the congress '50 years of UNESCO'" (Paris, Nov. 2005).

¹⁴ FEBVRE, L. op. cit.

¹⁵ CHILDE, G., "Cultural and Scientific History of Mankind." (Draft Proposals by Prof. Gordon Childe, Huxley Archive, Box 118 s/d), p. 7. We can see in the J. Huxley's correspondence that this document age's 1947.

for the Protection of Nature, both taken place in Lake Success, in August of 1949. The IUPCN was created in those conferences as an international organism to protect nature. Legislations and measures to make the governments protect nature were proposed, as well as was discussed the rule on the protection and conservation flora and fauna related to the economic production and the definition of national parks and natural reserves. A discussion about measures to protect hunting in Africa also took place in the conference.¹⁶ They proclaimed the importance of sciences to the protection and conservation of nature and its resources.¹⁷

In UNESCO, at least three new research projects about the environment were successful: the Humid Tropic Program, the International Institute of Arid Zones and the International Union of the Protection of Nature. Differently from the first one, they excluded men, in the sense that the anthropology had been discarded from the interdisciplinary scientific set of these programs.

The *Humid Tropic Program* appeared in the beginning of the 1950's to replace the International Institute of Hylean Amazon. However, from the scientific point of view, this program was different, even having the same objective that was to face the problems of the tropical regions. The Humid Tropic Program, presented in Denver, in 1947, was limited to the studies involving the forest problems, the nature of the soils and of its sedimentation cycles and erosion, the atmospheric problems considering pluviosity, hydrochemistry and the reactions of the soils with the rains. In short, the ecological questions, being limited to botany and zoology. The deepest concern was with the problems of the production for the markets and for the agriculture.

It has been developed in the form of international congresses that took place along the 1950's and the one of 1957 took place in Manaus, in the Amazon. In this congress it was created an international consult research committee on the humid tropic that should draw the problems and submit them to the General Director of UNESCO. Its objective was to develop researches on natural sciences and to divulge scientific information that could contribute to improve the life conditions of mankind.¹⁸ The leader of the Pacific Vegetation project speaking on the human ecology, affirmed that men of sciences need to apply their intelligences to the issue of human ecology and not only to exploit and modify the tropical milieu that will be a palliative of a short term.¹⁹ However, the Committee in the Amazon Congress decided that their researches would be on pedology, on soil conservation and classification, on agronomy, and on minerals and its decomposition: nothing on human ecology.²⁰ This program remained active up to the 1960's. In the Congress organized in 1956, in Ceylon, ecology was among the themes treated with priority, and some works considered the man as a part of the biotic community of the forest. However, he was seen as a "factor of intervention" into the equilibrium of the forest formation, not being considered culturally.²¹

The *International Institute for the Arid Zones* (IIAZ) was presented in UNESCO in 1948 by the Indian Delegation. It was similar to the project for the Amazon. The IIAZ would study problems concerning the adaptation of vegetable species in the arid zones, the eolic erosion and the conservation, purification and economy of water, preoccupying in avoiding the desertification. As arid zones are characterized by the abundance of solar energy, there should be promoted studies for its use. In the general meeting of UNESCO, organized in Beirut, in 1948, it was decided that the institute would be created. In the same occasion it was presented a project for the creation of different international laboratories of sciences.²² Finally, in Lake Success, in 1949, during the Scientific joint Conference of Conservation and Use of the Natural Resources (UNSCCUR), promoted by the UN and UNESCO, the International Committee for the Arid Zones was created, which counted with the international cooperation of FAO, of the World Health Organization (WHO) and of the UN. And one of its main objectives was the incentive to the studies about the use and the conservation of the waters. The

¹⁶ UNESCO, NS/UIPN/1, Paris, July 20th 1948.

¹⁷ UNESCO, NS/UIPN/10, Paris, October 20th 1948.

¹⁸ UNESCO/NS/HT/61, Janury 3th, 1957

¹⁹ UNESCO/NS/HT/44, Febury, 15th, 1956

²⁰ UNESCO/NS/HT/37, Febury, 21th, 1956.

²¹ UNESCO NS/HT/66, Anexo 3, p. 43.

²² UNESCO, 3C/20, 23, Nov. 1948.

project was finished in 1964.²³ It was considered a pioneer effort in the international scientific cooperation due to the failure of the Amazon Institute. It allowed the development of many new fields of research and opened the way for fruitful technical exchanges between developed and developing countries.²⁴

The project of the International Union for the Protection of Nature was presented by UNESCO, in Fontainebleau, also in 1948. It was an initiative of the Swiss League of Protection of Nature that gathered, in 1946, several European countries mobilized for the creation of an international organism for the protection of nature.²⁵ In that conference the International Union for the Protection of Nature (IUPN) was constituted as a non-governmental organization, just counting on eventual UNESCO's support.

The IUPCN regarded "protection to the nature" as a safeguard of the whole living world, which was the man's natural environment, comprehending the renewable natural resources of the earth, seen as the first factor of the civilization. The sense given to Nature, in the new Institute, should exclude the man and all his enterprises. The protection of the nature for economical reasons, that is, the exploitable the exploitable natural wealth, the forest, the fishing and hunting resources, should not be responsibility of the International Union, nor the establishment of anthropological reserves.²⁶

The idea of preserving the nature considered the natural species threatened of extinction and stimulated the creation of natural reserves or national parks where they would be conserved in their respective 'habitats' and in agreement with the needs of each country's fauna, native flora, landscapes, scientific wealth and the main archeological sites. Tourist's reserves would also be included, but they would not be considered as international problems. The IUPN sought to institute a group of restrictive measures, mainly relative to human action, and so, it could not consider the national or geographical differences.²⁷ It proclaimed itself eminently international.

However, its proposal for creating national parks or natural reserves represented the creation of sacred places of nature, it was good to some particular species, but, by this mean, it left the rest of the environment to destruction.

In 1952, in the occasion of the third General Conference of IUPCN, one of its 23 resolutions recognized that man and nature are inseparable. However, this unit for accomplishing conservation is a natural area such as a small watershed or other ecological unit where people living within its limits can feel a relationship to it. "Thus natural areas and related human groups combine to form units for conservation and treatment of the land by the people themselves, as in soil conservation districts in the United States." Land treatment to protect the land while using it for productive purposes includes soil conservation, water control and manipulation, forest, range, and wildlife management, and provision for recreation, wilderness and park areas. Then, they concluded that:

The IUPN need to encourage attention to natural areas as the basic unit for conservation, improvement, and utilization of natural resources, with the conviction that such an approach is ecologically sound; and that it offers a democratic means of accomplishing practical programs of nature protection and conservation.

In 1970's UNESCO unified these projects on environment into one program Man and Biosphere, except the one of IUPCN, which took its own way. Launched in the early 1970s, this program now uses its World Network of Biosphere Reserves as vehicles for knowledge-sharing, research and monitoring, education and training, and participatory decision-making.²⁸

²³ See HADLEY, M. (2005): "UNESCO and Environment: Early days. Notes for the UNESCO History", pp. 1-23; BATISSE, s/d, *L'UNESCO et l'Environnement*, Notes Groupe Miollis de l'AAFU.

²⁴ BATISSE, Michel (1985): "Progress and Perspectives: a look back at UNESCO Arid Zone Activities", in: WHITEHEAD, Emily *et alli*, *Arid Lands today and tomorrow. Proceedings of an International Research and Development Conference* (Tucson, Arizona, US), p. 21-35.

²⁵ UNESCO, 2C/79, 21 Oct. 1947.

²⁶ UNESCO, NS/UIPN/8, 22 Sept. 1948.

²⁷ UNESCO NS/UIPN/5C, 29/07/1948.

²⁸ <http://www.unesco.org>.

(4) Conclusion

It is perceivable the change of UNESCO relatively to these environmental programs when the first direction was substituted. The lack of success of the Hylean Amazon Institute meant a cut in the original vision of man and nature after that departure due to political and nationalistic pressures.²⁹ The Brazilian governmental plans included the “intervention” of scientists in the exploitation of natural resources, or the implantation of agriculture in large areas. In order to accomplish this, it was created an special office to develop the economy in Amazon (SPVEA) through its colonization, in 1946.³⁰

The question of the sciences’ responsibility, just as it was considered in the beginning of UNESCO, touches in problems that are still on-going, and extrapolate the scientific field, just as the internationalism versus the nationalism, and the political, inter-institutional or intellectual international cooperation. As mentioned by Terry Shinn, sciences remained national and only now they have been “denationalized”, considering that their activities include simultaneously, people, equipment and funds from different countries at the same time.³¹

The new programs that appeared, as IIAZ or Humid Tropic Program, were linked to respective governmental programs. The relationships that the environmental projects of UNESCO established with the economic and political spheres show that the notion of nature was different among them. The natural sciences program at the International Institute of Hylean Amazon included anthropology and ethno-science. In UNESCO, anthropology belonged to the organizational structure of Natural Sciences Division as well as to the International Institute of Hylean Amazon and the Scientific and Cultural History of Mankind projects. As in ecology, these projects considered a unifying concept for men and nature. Anthropology was also Ecological Anthropology and Human Ecology, as Paulo Carneiro classified the project of the International Institute of Hylean Amazon. In the other UNESCO projects, as IIAZ, the Humid Tropic Program and the International Union of Protection of Nature, the concepts of men and nature were quite different. They were understood as extrinsic to one another in that nature related exclusively to animals and plants. This division means that there is a deep wedge between natural sciences and social sciences that people are currently trying to reconcile.

²⁹ Nationalism was against Imperialism associated with all foreign actions in the country.

³⁰ PETITJEAN, P., DOMINGUES, H.M. B. (2000): “A redescoberta da Amazônia num projeto da UNESCO: o Instituto Internacional da Hiléia Amazônica”, *Revista Estudos Históricos – Descobrimientos*, Vol. 14, 26 (2000), p. 265-292.

³¹ CRAWFORD, E. & SHINN, T. (1993): *Denationalizing Sciences. The Context of International Scientific Practice* (Dordrecht: Kluwer Academic Publishers).