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The Joint Establishment of the World Federation of Scientific Workers and of Unesco after World War II

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Introduction

The DSIRS (Division for the Social and International Relations of Science) of the BAAS (British Association for the Advancement of Science) is generally seen as the core of the Social Relations of Science (SRS) Movement in the British 1930s.² The "social function" part has been widely studied. This is not the case for the "international function", neither for the participation of progressive scientists to international science. But activists from the SRS movement played the major part in the establishment of the World Federation of Scientific Workers (WFScW) and of the Unesco (United Nations Educational Scientific and Cultural Organization) Natural Science Department, which both took form in 1946.

They shared a common origin in the SRS movements and were seen at first as complementary by their founders. With the development of the cold war, they underwent opposite paths. The WFScW had a very limited scope in its first years. With Unesco, Needham put into practice new forms of international scientific co-operation along three main lines: the "periphery principle", no science without history of science, no scientific research without caring of the social aspects of science. He therefore managed to depart from an abstract idea of scientific internationalism.

Bernal's "The Social Function of Science"

Even though the "I" for "international" was included in the BAAS Division name, it did not seem to have many consequences until World War II.

Bernal's book, "the social function of science",³ is usually considered as the main expression of this movement. A chapter is untitled "international science". It has 4 pages of general considerations, and nearly 50 for a quick overview of science beyond United Kingdom: other European countries, fascist countries, socialist countries, India, China, and Japan...

Bernal's doctrine is clearly exposed in the first sentences: "The internationalism of science is one of its most specific characteristics. Science has been from the start international in the sense that men of scientific temper even in most primitive times were willing to learn from others in different tribes or races. (...) In later times, when natural barriers separated civilizations, or when religions or national animosities divided the civilized world into hostile camps, the scientist vied with the trader in breaking down those barriers". And further:

¹ This paper is based on the following archival sources: Needham Papers (Cambridge Library), Crowther Papers (University of Sussex), AScW and WFScW Archives (Warwick University), Joliot-Curie Archives (Institut Curie, Paris), FMTS-WFScW Papers (Archives départementales, Bobigny), Unesco Archives (Paris), National Academy of Sciences archives (Washington)

² Gary Werskey : The Visible College. A Collective Biography of British Scientists and Socialists in the 1930s. London, Free Association Books, 1988

³ John Desmond Bernal, The Social Function of Science (London: Routledge, 1939)

"Internationalism in science was maintained and even increased throughout the 19th century, but the present century has marked a definite retrogression. Science, while still remaining international, has begun to suffer from the general tendency towards national exclusiveness, and the unity of the scientific world is being seriously threatened".

The economical crisis, capitalism, socialism, and the struggle against fascism... this entire context was directly, and only, international in the late 1930s. Furthermore, being universal, science was evidently international. Nobody had to bother more about what it meant exactly, and what the practical consequences were. To the point that, concluding his half page about India, Bernal wrote: "probably the best workers for Indian science to-day are not the scientists but the political agitators who are struggling towards a self-reliant and free community".

International Science and World War II

The international function of science came definitely into focus during World War II, including the participation of progressive scientists to the war efforts of the Allied Governments.

As soon as September 1941, the BAAS Division organized a conference in London on "Science and World Order". 22 countries were represented. Needham, Huxley, Haldane, Hogben were present. Three more conferences took place in 1942 and 1943. The Association of Scientific Workers (AScW) organized its own international conferences: "the Planning of Science in War and Peace" (January 1943); "Science for Peace" (February 1945), which called the Allied Countries to organize the international scientific co-operation.

Between 1943 and 1945 various inter-governmental allied conferences discussed the place of science within the foreseen UN system. The Conference of the Allied Ministries of Education, prepared Unesco. After Hiroshima bombing in August 1945, science became a major issue for international relations.

It is not surprising then that organizing international science for a better world after the victory against Nazis attracted many progressive scientists. In continuity with their wartime commitments, it allowed them to give coherence between their social and political leanings and their conception of universal science. For a short period, everything looked possible.

Needham

Needham shared an idealistic conception of science with most of his colleagues, and even explained that scientists were spontaneously pre-disposed for international co-operation. For the immediate post-war years, the most complete exposition of Needham's ideas may be found in his Boyle lecture of 1948.⁴

Even if Needham's conceptions of scientific universalism were not free of Eurocentric bias, they differed from Bernal's idealistic or political views, particularly in two fields:

Universalism: his "ecumenical" science only existed with roots in the various civilizations and was constructed by exchanges and borrowings between these civilizations.⁵

The Periphery Principle: with the Sino-British Co-operation Committee, he took conscience of the necessity of a voluntarily international action for the advancement of science in developing countries, beyond what he called "the bright zone". He denounced the "laissez

⁴ Joseph Needham, Science and International Relations (50th Robert Boyle Lecture, Oxford, June 1, 1948) (Oxford: Blackwell Scientific Publications, 1949). See also his memos of 1944 and 1945, his proposals for Unesco programme in May 1946, his arguments in favour of the establishment of international scientific laboratories (UNESCO/Nat.Sci./24/1947)

⁵ Needham shared many views with Lucien Febvre. See hereafter the "Scientific and Cultural History of Mankind".

faire" and the "parochial minds" of the majority of his fellow scientists, who are able to exchange, and to travel easily in Europe and North America. "Science looks different, when seen from India or from Europe", he used to say.⁶ He named that the "periphery principle". International efforts should be, in priority, directed towards the countries, and the scientists, who need to be supported. To apply this "periphery principle," the commitment of the main Governments was absolutely necessary, as shown by the war efforts. ICSU (International Council of Scientific Unions) has proved to be ineffective for that, and the foreseen WFScW did not look more promising.

Projects

While Needham was circulating his memos, Bernal and the AScW were attempting to build the WFScW. The 1943 AScW annual Council decided the principle of establishing the WFScW. The "Science for Peace" conference (February 1945) comforted the project. In March 1945, Bernal was charged to write an official document proposing a Federation, to circulate among world scientists to be discussed during the foreseen Moscow meeting.

The USSR organized the first important gathering of scientists after the war, to commemorate the 220th anniversary of the Russian Academy of Sciences in June 1945. Bernal and Blackett were prohibited by the British Government to travel to Moscow, but Needham, Joliot, Auger,⁷ Wooster (for the British AScW), Huxley,⁸ Shapley (an Astronomer from the American AScW) were there with dozens of scientists. Wooster said that he only discovered Needham's projects in Moscow, which were de facto on the same grounds than the foreseen WFScW, and he felt surprise by their state of advancement. Needham, Joliot, Shapley, Auger had informal meetings with Russian scientists to try to convince them to participate to the international scientific agencies in construction. But they refused both projects:

- The WFScW looked premature, the British AScW being "singular", with no equivalent in other countries. Consequently, such associations were to be built before establishing a Federation.
- The USSR refused to join Unesco until 1954, arguing that the UN (United Nations) Social and Economic Council could deal with all scientific matters as well as Unesco.

In the West, the Royal Society and the American National Academy of Sciences were equally hostile to Needham memos, and didn't see the necessity to include science in Unesco. On behalf of the American Academy, Field and Cannon consulted the scientific community through an inquiry about what should be international scientific co-operation after the war. The enquiry took place in spring 1945, and the report published in September 1945.⁹ The main proposal was to reinforce and to develop the existing Scientific Unions and the ICSU. Unfortunately, then was Hiroshima, and despite the majority of scientists, the "S" was introduced in Unesco when established in November 1945.

The WFScW

⁶ See Needham's Boyle Lecture

⁷ Auger is to succeed Needham in April 1948 to head the Unesco Science Department

⁸ Huxley will be the first Director General of Unesco

⁹ Walter B. Cannon & Richard M. Field, 'International relations in science. A review of their aims and methods in the past and in the future', *Chronica Botanica*, IX (4) (1945), 253-298.

The WFSaW not only had roots in the SRS movement, but it more specifically emerged from the links between French and British scientists, built in the common struggle against Nazism.¹⁰

In the 1930s, British and French progressive scientists had strong relations, professional as well as political. Biochemists like Needham and Rapkine, physicists like Bernal, Joliot, Blackett, Auger and Perrin, also Crowther or Zuckerman, were active in these bilateral relations. An Anglo-French Society of Sciences existed in 1940 and in 1944-1945, with Dirac and Joliot as co-presidents, and Crowther and Auger as general secretaries. In his souvenirs, the Australian physicist Eric Burhop¹¹ wrote that the idea of an international organization of scientists came from various informal meetings held in Paris between British and French scientists, in 1936, during a peace conference, and in 1937 during the International Scientific Congress at the Palais de la Découverte.

A few weeks after Hiroshima, Blackett, Joliot and other physicists gave in London a conference on "the social consequences of the atomic bomb", for the Society of Visiting Scientists: The atomic question was to over determine the international scientific co-operation for years.

The establishment of the WFSaW

The AScW organized a new international conference in London, February 1946, "Science and the Welfare of Mankind" to discuss how science could be used in peace times to solve the major social problems of humankind. Following the Moscow meeting, the WFSaW was not among the items of the official programme, but informal meetings took place with foreign delegates, and the AScW was mandated to convene a formal conference to establish the desired Federation.

Former Resistance movements have constituted a French AScW after the war, which was to be the second pillar of the WFSaW. It was not a Trade Union, but it defined itself as a "Science and Society" movement, besides existing Trade Unions. The Russians being also very reluctant for an international trade union, the coming Federation was defined as a "Science and Society" movement and not as an international Trade Union to be affiliated to the World Federation of Trade Unions.

The founding conference of the WFSaW took place in London, July 1946. The same month, London welcomed many international gatherings of scientists: The Newton tercentenary celebrations, organized by the Royal Society; The meeting of the Unesco preparatory Commission, dedicated to the elaboration of its first programme; the British Commonwealth Scientific Conference; and finally, the first post-war General Assembly of ICSU.

A dozen associations and 6 observers participated to the founding conference. Blackett, president of the AScW, delivered the inaugural speech, reminding the history of the project. Needham.¹² Burgers represented ICSU through its "Committee for Science and its Social Relations". The most important associations were the British AScW, and an American Engineers Union. The Federation of American Scientists was present, as an observer, but

¹⁰ Patrick Petitjean, 'Needham, Anglo-French Civilities and Ecumenical Science', in S. Irfan Habib & Dhruv Raina (eds), Situating the History of Science. Dialogues with Joseph Needham (New Delhi: Oxford University Press, 1999), 152-197

¹¹ Burhop will preside the WFSaW after Joliot

¹² Needham came back from China only in April 1945, to head the Unesco Science Department.

finally refused to join the Federation. Among the participants were Leon Rosenfeld for the Netherlands, Homi Bhabha for India, Eric Burhop for Australia, etc. Joliot was elected President, Bernal vice-president, and Crowther secretary-general. An American and a Russian were also both elected for the Executive Committee, in their absence. Harlow Shapley, the American astronomer, conditioned his acceptance to the symmetric acceptance by his Russian fellow. But the latter declined, and the Federation went on only under a British and French leadership.

A constitution defined the agenda of the Federation, which aim was "to promote understanding and co-operative action between the member organizations", and included 8 functions. First point was "to work for the fullest utilization of science in promoting peace and the welfare of mankind, and especially to ensure that science is applied to solve the urgent problems of the time". In second, entered the co-operation with Unesco: "to promote international co-operation in science and technology, in particular through close co-operation with Unesco". One had to wait for the seventh function to meet professional problems: "to improve the professional and social status of scientific workers". And the last one: "to encourage scientific workers to take an active part in public affairs". Clearly, the Federation was principally turned towards the "social responsibility of scientists", and a classical Trade Union.

Unesco and the WFScW

The issue of Unesco's relations with the Federation was discussed throughout the founding conference. Among the delegates, many were close to Needham. Various participants underlined the similarities between the object of both bodies, and some were puzzled about the small space left by Unesco to the Federation. In his address to the conference, Needham presented the first Unesco science programme, and proposed that Unesco should support the Federation through a formal agreement, similar to the one being negotiated with ICSU. Later, he insisted on the complementary functions of Unesco and WFScW, between an inter-governmental agency and a rank-and-file scientists movement, more radical and freer. It seems that Joliot and Crowther were more politically reluctant about close relations between the Federation and Unesco, even from the beginning. They feared about the independence of the Federation. They expected mainly material and financial support from Unesco, and the question of an office for the Federation inside Unesco House in Paris was discussed as early as the founding conference in July 1946.

One year after its foundation, the Federation had only 16 members from 13 countries. Due to the lack of money and to the growing Cold War, the Federation hardly existed for the first two years. The first General Assembly was scheduled in Prague, September 1948. It had difficulties to gather the 9 associations that the constitution required for the General Assembly to be valid. American associations had left. British and French scientists represented around 80% of the roughly 24 000 claimed members of the Federation. It has organized commemorations for Langevin and for Rutherford, in London and Paris, published and circulated the manifesto adopted in July 1946, worked for Unesco, drafted a "Charter for Scientific Workers", and rose the problem of secrecy in science. After the General Assembly, the activity continued not to be very important.

The Federation underwent a severe crisis in 1949 and 1950, related to the split within the World Federation of Trade Unions (WFTU). Some Western associations left the Federation. The ASW had to choose between its affiliation to the Trade Union Congress and an agreement between the WFScW and the WFTU. It tried to push forward a new, non-communist leadership, but failed. Joliot, Bernal, Crowther and Biquard kept their positions.

The Federation had to renounce to sign the agreement with the WFTU, which was publicly regretted by Joliot and some members.

The second General Assembly had to be postponed from 1950 to 1951. It was unable to meet in Paris. The visas were denied to Eastern delegates, and two meetings were held simultaneously in Paris and Prague.

The situation change completely when the Russians finally decided to join the Federation in 1952, together with the Polish and the Hungarians, but it is another history.

Unesco

Meanwhile, Needham was organizing and developing the Natural Sciences Department of Unesco. He tried to operate a multi-faced programme during the two years he headed this Department, with three main lines coming from the SRS movement: the periphery principle; the inclusion of the social aspects of science within the Department; and the inclusion of history of science. Another aspect had the same origin: the necessity for the Unesco Science Department to include the applications of science.¹³ It provoked some conflicts with the UN Social and Economic Council, which wanted Unesco to limit itself to basic sciences.

A further dimension of Needham's agenda could also be related with the social function of science: the importance given to the environmental problems, which will become the core of Unesco scientific programmes in the 1950s. The first attempt of an international laboratory was for the Amazonian Hylea in 1946, followed by the proposal of an Arid Zones Institute in 1947. A scientific conference was held in October 1948 to establish the International Union for the Protection of Nature.

The "Periphery Principle"

It deeply marked the first initiatives taken by Needham.

- The constitution of Field Scientific Co-operation Offices in Latin America, Egypt and China in 1947, in India in 1948. These offices were to support local scientists and to promote scientific research in these regions.
- The proposal of international laboratories, such as a Computing Centre in Asia, and the Amazon Institute in Brazil. Due to political context in Brazil, the later one hardly started in 48, and after stopped. Needham proposed Asia to locate the Computing Centre, as compensation to the destruction of the Japanese synchrotron by the United States Air Forces at the end of the war. But after Needham's departure, Unesco decided to locate this centre in Europe.
- The organization of regional scientific conferences, the first one being in Montevideo, September 48.¹⁴

No science without its social aspects

The social aspects of science benefited a special section in the Science Department, headed by Borg Michelsen. It was concerned by many activities:

- Panels about the social aspects of science, October 1947. They were followed by two organized discussions about "Food and Mankind", and about "Energy in the Service of Man". Books were published for the general public, and scientific papers on the same subjects. Another was published on "Science and Freedom".

¹³ Following the lines of the "Science and the Welfare of Mankind" Conference of February 1946 and the WFScW Constitution.

¹⁴ After Needham, some initiatives continued in the 1950s, as the committees to develop scientific research on Arid Zones or Humid Tropics, the Advisory Committee with the directors of the National Bodies for Scientific Research, dedicated to support the organization of science in non-European countries, etc.

- *Impact* (1950), a journal dedicated to science and society, supposed to publish papers on the impact of science upon society, but also on the impact of society upon science. It started by analytic bibliographies and reprints of papers from known scientists. In the 60s, it reduced to the one-way impact of science on society.
- Attention was paid to science teaching, with initiation books for children and others directed to science teachers.
- Popularization of science was another important field of action for Unesco, with the worldwide circulation of scientific exhibitions, books, guides, exchanges of know-how and practices, etc.
- Finally Unesco attempted to co-ordinate worldwide the Associations for the Advancement of Science. A first meeting took place in Paris, September 1950, with 14 associations. It met a strong support from the recently-founded Brazilian Association, whose aims were similar to Unesco with Needham's periphery principle. The main associations, the British and American ones, were more reluctant, having their own international links, and needing no support from Unesco.

No science without history of science

The part played by Needham and Unesco in History of Science was fundamental. The first proposal, May 1946, was an International Institute for the History of Science, which was transformed, November 1946, into the establishment of an International Union for the History of Science, besides the existing International Academy. Such an International Union, affiliated to ICSU, opened the possibility of to get financial support from Unesco.

Armando Cortesao was contracted by Unesco to build the Union in early 1947, and a History of Science section created in the Science department. Armando Cortesao was an exiled Portuguese, historian of science, member of this Academy. The official birth of the Union took place during the 5th ICHS (International Congress of History of Science), the first after the War, in Lausanne, October 1947.¹⁵ Unesco paid nearly the whole Union budget for the first two years, 1947 and 1948.

Later, Armando Cortesao moved to head another project, the Scientific and Cultural History of Mankind. He was replaced by Jean Pelseener, also member of the International Academy, in charge of the publication of a new journal "Archives Internationales d'Histoire des Sciences", to succeed to *Archeion*. The journal had a financial support from Unesco.

For Needham and Cortesao, History of Science has an important social function. It could bring into light that "there are few peoples and nations without any contribution, whether reduced or important, to the scientific patrimony of humankind". In opposition to narrow nationalisms, the History of Science has the possibility to contribute to the Unesco function, international understanding.

More, the History of Science is the irreplaceable tool to understand the social aspects of science, both ways. Therefore, the International Union established, right at the start, a special commission "history of the social relations of science", headed by Leon Rosenfeld and Samuel Lilley, both Marxists and friends of Needham. Unesco entrusted the commission with the redaction of a report on "social aspects of history of science", for which Samuel Lilley was the main redactor.¹⁶ The central thesis was that the contexts, whether economic, social,

¹⁵ Armando Cortesao, 'L'Unesco, sa tâche et son but concernant les sciences et leur développement historique', *Actes du Ve Congrès International d'Histoire des Sciences* (Lausanne, 1947) 25-35

¹⁶ The report was published: Samuel Lilley 'Social Aspects of the History of Science', *Archives Internationales d'Histoire des Sciences*, 2 (1949), 376-443

political, cultural) may stop or facilitate the scientific progress, but without changing its direction. This was not a very strong "externalism". The commission ceased to exist after 2 or 3 years, due to the situation of history of science in the 1950s.¹⁷

Attached to Needham's interest in History of Science, is the project to write a "Scientific and Cultural History of Mankind". This project had 3 initiators, Joseph Needham, Julian Huxley and Lucien Febvre. It was initially included in the Science Department programme (1947-48), then moved to the "Philosophy and Civilizations" Division.

The aim was to put into light the part played by science and technology in the history of civilizations, to put in the foreground the mutual dependency of all civilizations, the permanent exchanges and borrowings between cultures, etc. During the elaboration period, 1948 and 1949, a fascinating convergence existed between Needham and Febvre¹⁸ on the project aims, and therefore on the structure and the contents of this series of volumes. It was based upon the refusal of a positivist and chronological history, upon the refusal of a Eurocentric history: all civilizations were treated the same way, and it was refused to set up the Western civilization as the model and the final stage for a world civilization.

Unesco and the WFScW

The relations between Unesco and the WFScW were part of the partnership between Unesco and Non Governmental Organizations, but it remained marginal among all other activities of the Science Department.

The agreement between Unesco and ICSU had been elaborated in July 1946, accepted by ICSU, voted by Unesco in its General Assembly of Paris, November 1946, and finally signed in December 1946. It served as a model to prepare the agreement between Unesco and the WFScW.

The text was ready to be signed by January 1947, but it was vetoed by the American State Department. Nevertheless, Needham had started to apply it, by giving the WFScW an address and an office in Unesco House. For six months, Joliot, Bernal and Needham had to campaign to convince the majority of the Unesco Executive Council to accept the agreement. Needham had to retire his first proposal. Official meetings took place between WFScW the Science Department and the American Delegation. Pierre Auger, the French representative, and Paulo Carneiro, the Brazilian representative, were the main supports to the agreement proposal. But the State Department did not depart from its hostility to the WFScW. Against the American representative, a second-hand agreement was adopted by the Executive Council in July 1947, giving the WFScW an "observer status", and not full partnership. WFScW had much less financial support. It was not associated to the elaboration of Unesco official documents, but only invited to participate to some meetings.

With this agreement, the WFScW participated to the panels on the social aspects of science in Paris and New York, October 1947, to expert meetings, and to the General Conferences. Crowther represented the WFScW for the Second Conference in Mexico, November 1947. Inversely, Frank Malina, from the Science Department, represented Unesco for the first General Assembly of the Federation in Prague, September 1948. Needham, excluded from the official British delegation, represented the WFScW for the Third Conference (Beirut,

¹⁷ Anna-K Mayer, 'Setting up a Discipline II: British History of Science and the 'end of ideology', 1931-1948', *Studies in History and Philosophy of Science*, 35 (2004) 41-72

¹⁸ See the verbatim of the drafting committee, with Needham and Febvre (UNESCO/PHS/DC1/SR1-10, December 1949) and the final report (UNESCO/PHS/Conf.6/1, 24 January 1950) in Unesco Archives (SCHM23, 2.633(1))

December 1948). Bonet-Maury was the delegate for the Fourth Conference (Paris, September 1949).

Finally, the WFScW was unable to be represented in Florence, June 1950, for the Fifth Conference.¹⁹ The American delegation obtained this time the suppression of the agreement between Unesco and the WFScW. Even if the USSR joined Unesco in 1954, a new agreement was only re-signed in 1965.

The Unesco main support gained by the WFScW was a 6-month mission given to Crowther in November 1947 by Needham to travel to North America. The official aim was to study the state of preparation of the UN Scientific Conference on the Conservation and the Utilization of resources, to be held in 1949. This conference was an American proposal, and organized by the UN Social and Economic Council. Unesco felt this conference as a bit of an intrusion into its own field of competency. Unofficially this mission was also to help the construction of the WFScW in North America. With this mission, Crowther represented the WFScW at the Mexico Conference, discussed with the Social and Economic Council to try to obtain an observer status, and met the American ASW and other scientists associations in the United States. To this exception, the WFScW never got the expected support from Unesco.

As it is known, the USSR attempted to establish an intellectual organization alternative to Unesco. But the Wroclaw Conference, August 1948, failed to maintain links between communist and progressive Western intellectuals. This conference was a double failure: neither Unesco nor the pro-soviet organization managed to maintain political diversity. Unesco was perceived more and more as dominated by the Americans, which effectively became the case in the early 1950s.

Conclusion

The WFScW never had the opportunity to develop, and never actually influenced Unesco. It changed in the 1970s with the new political context. The WFScW covered then three fields: nuclear disarmament, science and developing countries, and the scientists rights, the two latest being in full coherence with Unesco actions.

Progressive scientists were able to have some space within Unesco, before the hardening of the Cold War. But Unesco itself has been rather marginalized for science in the 1950s. Since the establishment of Unesco, nuclear physics has been drawn out: The UN established a special commission under the authority of the Security Council. Further, the cold war provoked in the 1950s a kind of "re-nationalization" of mainstream science, with the formation of "scientific-industrial and military complex", in the West as in the East. Physics, biology, chemistry, and scientists, were part of national welfare, with secrecy and State control over exchanges. Remaining sciences, being more neutral, could be left to such an international organization as Unesco, and to left-leaning scientists.

Furthermore, after Needham's departure, the "periphery principle" have been easily incorporated in the "Technical Assistance"²⁰ programmes. Science was reduced to an un-

¹⁹ This conference has been a turning point for the US control over Unesco. The US delegation obtained favourable votes on key points: China's seat was given to the Kuomintang, and not to the Popular Republic; Unesco supported the US intervention in Korea; Unesco refused the proposal of Jaime Torres-Bodet (Director General) to convene an international conference of intellectuals from the Western and the Socialist blocks; the budget proposed by Torres-Bodet was reduced, which led to his resignation. Even if he accepted to come back to his position, he definitely resigned in 1952. This conference was also marked by the US proposal to establish a regional European laboratory for nuclear physics, far from the "periphery principle".

²⁰ Point IV of Truman's inaugural speech in January 1949

politicized support to economical development, the social aims (the welfare of mankind) forgotten, and less priority given to basic sciences in the developing countries.

But Unesco inaugurated some directions, which proved to be important for progressive groups or scientists outside Unesco, and which contributed to the identity of Unesco: the place of environmental sciences (which are now fundamental), the leaning towards developing countries, the attachment of science and its social aspects as well as of science and history of science.

The space within Unesco to build a "better world" with science rapidly disappeared, but the influence of the progressive scientists echoed for many years, and is recently rediscovered.