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VISIONS AND REVISIONS

Defining UNESCO's scientific culture: 1945-1965

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Born of the cataclysm of the Second World War, battered by the storms of the Cold War, transformed by the end of colonialism, UNESCO, during the first two decades of its history, reflected much of the tumultuous change that defined the mid-twentieth century. The Organization's Natural Sciences sector found itself engaged in some of the most significant issues of the era. The story of how this most idealistic of endeavours---trying to better the world and further the cause of peace through international scientific cooperation---developed between 1945 and 1965 makes for an intriguing intellectual and political history. Part I of this book examines the priorities and principles that defined UNESCO's scientific programme from its inception to its early maturity.

It was in 1942 that the Allies began discussing post-war cooperation and laying the groundwork for new international, intergovernmental organizations. During the late War years, 1943-1945, a continuing collaboration between the key players in the anti-fascist alliance seemed assured. When the War ended with mushroom clouds over Hiroshima and Nagasaki, it was blindingly obvious that scientific development would play a critical role in the future of nations. Scientists had been elemental to the war effort. Now many of them hoped to be essential in keeping the peace. Science was understood to be neutral while at the same time promoting progress. For these thinkers, international cooperation represented a means not only of continuing their anti-fascist commitment but of preventing the destructive use of science in the post-war era.

Nevertheless, the subject of science had been neglected by the former international cultural and educational organizations. Before the War, the International Institute for Intellectual Co-operation (IIIC) took steps in that direction, but with little time to achieve much. Moreover, this scientific cooperation was between persons, not governments. While there was minimal participation by some governments in the International Council of Scientific Unions, the activities of the ICSU were also curtailed by the War.

Even after the 'S' was introduced into the title at the last moment of the conference that established UNESCO in November 1945, the place of science in the Organization, and in the broader United Nations system, remained ill-defined. Thanks to the determination of UNESCO's first scientific staff, within a few years, significant programmes were launched and successfully developed, often in the face of setbacks and formidable opposition from some Member States. In the process leaders such as Julian Huxley, UNESCO's first Director General and Joseph Needham, the Organization's first head of the Science Section¹ promoted their compelling vision of the world as well as ideas on the social and international role of science.

Setting up the 'S': 1946-1950

¹ 1946-1948: Natural Sciences Section, July 1948-1964: Natural Sciences Department and from September 1964 onwards: Natural Sciences Sector

UNESCO's first science programmes were focused on the reconstruction of countries ravaged by the War. The funding for these programmes (less than 10% of UNESCO's total budget) was divided into three main fields:

Support to ICSU and the creation of new scientific unions

Establishment of regional scientific offices and conferences.

Creation of new forms of scientific cooperation, such as the Amazonian Institute project, initiated at the first session of UNESCO's General Conference in Paris in 1946, the Arid Zone Institute project and the International Computation Centre, both initiated at the General Conference in Beirut in 1948.

Other initiatives concerned the social aspects of science and nurtured the creation of films, publications, exhibitions and educational projects addressing a range of issues. There was also the establishment of the 'world center for scientific liaisons' which was engaged in exchange programs, travel facilitation, the standardizing of analytical reports and other publications and the creation of an international directory of scientists.

But the freezing winds of the Cold War had a profound effect on UNESCO. The Soviet Union refused to join the Organization, wary of the West's prominent role in its creation. Meanwhile, Anglo-Saxon Member States accused UNESCO of being sympathetic to communists. They applied pressure to reduce the Organization's scientific activities. Their reasons varied: programmes were too disparate, bureaucracy was being expanded without results, the financial crisis in Europe required limits on funding.

In the spring of 1948, finding a successor to Joseph Needham, as Head of Natural Sciences at UNESCO, proved difficult. The United States vetoed candidates suggested by Needham, and Director-General Julian Huxley refused candidates suggested by the United States. Pierre Auger---liberal but less left-wing than Needham, and a man with close ties to the French government---was a compromise choice. Succeeding Needham, Auger held the post of Head of the Natural Sciences Department until December 1958.

UNESCO also had difficulties fitting into the United Nations system as a whole. The scientific mandate was shared by several UN Agencies and by the Economic and Social Council. The responsibility for nuclear power was reserved for the UN Security Council. While scientific development had become an essential political issue during the War, a divergence soon became apparent between scientists and diplomats. Unlike the UN's Economic and Social Council, UNESCO was a hybrid organization, intergovernmental while also acknowledging the importance of intellectual personalities. The negotiation, timing and execution of a number of projects reflected the way scientists did things, which was largely incompatible with the rhythm and ways of diplomats and the necessities imposed by intergovernmental consultations.

The scientific-diplomatic culture clash was a main factor in the failure of the Amazonian Institute. Because of the United States' persistent hostility to costly projects, the Arid Zone Institute was reduced to a simple 'consultative committee.' Nevertheless, it would go on to become a resounding success.

Looking for a balanced programme: 1950-1954

Jaime Torres Bodet succeeded Julian Huxley after the Beirut General Conference (December 1948) with only the last minute endorsement of the USA. Writer and poet, diplomat and ex-Minister of Education, less opinionated than Huxley and more government

orientated, Torres Bodet hoped that UNESCO would receive the funding necessary to fulfill its pacifist mission. He wanted UNESCO to bridge the gap between East and West by promoting contacts between intellectuals. At Florence (May-June 1950, 5th session of the General Conference), the United States prevented both: the Director-General was denied the budget he hoped for and UNESCO maintained a bias toward the West. Membership was denied to the People's Republic of China and the Organization voiced its support for American intervention in Korea. A major Conference between Eastern and Western intellectuals was refused. Torres Bodet resigned, then changed his mind and stayed two more years as Director-General. He again resigned, for good, in November 1952 (7th session of the General Conference, Paris).

Within the scientific field, dire changes took place at Florence. The place reserved for science was reduced to only one out of the ten programme priorities. Needham's "periphery principle"---which favoured the inclusion of developing nations in the scientific progress pioneered by advanced countries---was undermined by the launching of the European nuclear center project. Finally, the World Federation of Scientific Workers was judged pro-communist and scratched from the list of NGOs benefiting from an official relationship with UNESCO.

Despite resistance from Anglo-Saxon countries, Torres Bodet, during his tenure, succeeded in imposing the idea that scientific cooperation undertaken by UNESCO should help countries rather than just individual scientists, notably in the formation of national policy. He reaffirmed that UNESCO should 'favour progress and the applications of science for the benefit of all'. This idea would be taken up again during the 7th session of the General Conference (Paris, 1952). There it was decided that international scientific cooperation should be based on a new type of social contract in which Western nations share with others the benefits of modern science. This represented, in effect, a renewed commitment to the periphery principle. Furthermore, the Paris Conference launched an assistance programme to underdeveloped countries for the creation of national research centers.

There were some prominent American voices calling for more aid to developing countries, if only as part of a strategy of waging the Cold War. U.S. President Harry S. Truman, in his inaugural address on 20 January 1949, proposed his Point Four foreign-aid programme, which was approved by Congress in June 1950. The programme called for Technical Assistance in the effort to improve living standards in underdeveloped countries. Funds administered by several U.S. agencies and the U.N. were used to provide industrial and agricultural equipment as well as to teach useful skills to people in need. Despite its altruistic dimension, Technical Assistance was also intended as a bulwark against communism.

UNESCO struggled to find its place within the context of the dramatic changes that scientific research was undergoing during the early 1950s. This research was now completely different from that preceding UNESCO's creation. With the advent of the Cold War, powerful countries invested massively in research and nationally organized development. 'Big Science', especially in physics, became the maxim. The armed forces dominated in sensitive areas. Many scientists worked closely with their governments and were considered a purely national source of 'wealth'. A large part of research was therefore excluded from international exchange and suffered from limited circulation of individuals and results. The Cold War inevitably complicated the relationships between scientists and governments and diminished the role of international organizations.

Consolidation 1954-1965

The 8th session of the General Conference (Montevideo, 1954) marked the beginning of UNESCO's consolidation phase, the gradual thawing of Cold War hostilities. The most important indicator of change was the conference on the peaceful uses of atomic energy (Geneva, August 1955). The USSR finally became a Member State in 1954 and the Russian, Victor A. Korda replaced Pierre Auger as head of the Natural Sciences Department in January 1959. International scientific cooperation was revived by this détente. There was also a sense of peaceful competition, exemplified by Polar expeditions and by the first International Geophysical Year.

In 1954, the scientific programme's objective to improve living conditions for humankind was reconfirmed and was divided into four equal budget chapters funding international scientific cooperation, contributions to research, the teaching and diffusion of science, and the spread of regional offices for science and technology. UNESCO's determination to encourage intergovernmental cooperation was reiterated at its 10th session of the General Conference (Paris, 1958) which contributed to the participation of newly independent countries in international scientific cooperation during the 1960s.

The success of the Arid Zones project led to a proliferation of new ventures during UNESCO's second decade of existence. A similar project for Humid Tropics was launched in 1955 as was a consultative committee on marine sciences. In 1960, the Intergovernmental Oceanographic Commission (IOC) was created. In 1961, the International Computation Centre (ICC), Rome became, at last, operational. That same year the FAO/UNESCO project for a world soil map was devised. And in 1965, the magazine *Nature and Resources* was launched and the International Hydrological Decade began.

The end of colonialism represented a major turning point for science at UNESCO. The sector benefitted from a notable budget increase and greater involvement in policy issues. A United Nations Conference (Geneva, February 1963) was organized around the 'Application of Science and Technology for the Benefit of the Less Developed Areas.' The 13th session of the General Conference (Paris, 1964) then decided to raise science to the same high-priority level as education. During the second half of the 1960s, posts in the science sector doubled and the portion of UNESCO's budget allocated for science rose from an average of less than 10% to 15%. UNESCO organized a first regional conference for the applications of science and technology (CAST) in Chile in 1965. More conferences followed in other parts of the world with the help of the Regional Offices for Science and Technology (ROSTs). The first volume in the series *Science Policy Studies and Documents* was published in June 1965.

Conclusion

By the mid-1960s, UNESCO had mastered its own original approach to international scientific cooperation. The importance accorded to the environment, the emphasis placed on the social aspects of science, the priority given to developing countries gave science in UNESCO its particular culture and identity. As the twentieth century entered its final third, UNESCO's scientists were well prepared for the challenges ahead.

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