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Codifying the human right to science

William A. Schabas[a,b,c]

[a]Department of Law, Middlesex University, London, UK; [b]Faculty of Law, Leiden University, Leiden, the Netherlands; [c]Department of Law, University of Galway, Galway, Ireland

ABSTRACT

The human right to science is set out in the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights. The two texts, which were adopted consecutively, are similar but not identical. Conflicts in formulating the right to science in international human rights law were rooted in the ideological quarrels of the Cold War. The *travaux préparatoires* indicate debate about whether the right was essentially about the freedoms of scientists or about the purposes of science, including concern about abuse. Article 15(3) of the Covenant confirms recognition of 'the freedom indispensable for scientific research … ' The Soviet Union promoted the view that scientific research must pursue progressive aims but was unsuccessful in its attempts to entrench this in the texts. UNESCO's contribution to the Declaration was insignificant but it had considerable influence on the Covenant text. In 1950 and 1951, UNESCO issued important and influential expert statements challenging 'scientific' arguments of racial supremacists, confirming in practice its own understanding of the direction that science should take.

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In his closing address at the San Francisco Conference, Jan Christian Smuts, the head of the South African delegation and the principal author of the preamble of the Charter of the United Nations, spoke of the 'mounting horror of war' for men and women, adding that 'science warns them to expect far worse in future war'.[1] Six weeks later, 'advances' in scientific research destroyed two Japanese cities and their inhabitants. The following year, several prominent German scientists were tried for war crimes and crimes against humanity with respect to medical experiments on human subjects. 'Obviously all of these experiments involving brutalities, tortures, disabling injury, and death were performed in complete disregard of international conventions, the laws and customs of war, the general principles of criminal law as derived from the criminal laws of all civilised nations, and Control Council Law No. 10', said the judgment of the American military tribunal sitting in courtroom 600 of the Nuremberg Palace of Justice. 'Manifestly human experiments under such conditions are contrary to "the principles of the law

CONTACT William A. Schabas w.schabas@mdx.ac.uk

of nations as they result from the usages established among civilised peoples, from the laws of humanity, and from the dictates of public conscience".'[2]

It was not always easy at the time to distinguish between abusive science and progressive science. The worst of modern weaponry, the atomic bomb, had been developed and used by those who took credit for the triumph over Nazi evil. The defendants in the trial of the Nazi doctors pointed to experiments on human subjects in American prisoners who were infected with serious diseases. As for Nazi race science, purporting to justify white supremacy, it had its enthusiasts within scientific communities in Britain, France, and the United States. Very recently, Mikel Mancisidor has noted 'the state of distrust ("what the scientists will do to us next") which pervaded the debate on the development of science when fully disconnected from values and aims. The role of science and technology in Nazi war crimes, and in the atomic bombs' was 'very present' in the minds of those who developed the UN institutions and who crafted the early instruments of international human rights law.[3]

Drafting the Universal Declaration of Human Rights

The 'Draft *Declaration of the International Rights and Duties of Man*' prepared by the Inter-American Juridical Committee is the ancestor of the right to science provisions in the Universal Declaration of Human Rights and the International Covenant on Economics, Social and Cultural Rights:

> Article 15
>
> Right to Share in Benefits of Science
>
> Every person has the right to share in the benefits accruing from the discoveries and inventions of science, under conditions which permit a fair return to the industry and skill of those responsible for the discovery or invention.
>
> The state has the duty to encourage the development of the arts and sciences, but it must see to it that the laws for the protection of trademarks, patents and copyrights are not used for the establishment of monopolies which might prevent all persons from sharing in the benefits of science. It is the duty of the state to protect the citizen against the use of scientific discoveries in a manner to create fear and unrest among the people.[4]

The text, dated 31 December 1945, was signed by four members of the Committee, Francisco Campos, Félix Nieto del Rio, Charles G. Fenwick and Antonio Gómez Robledo.[5]

The initial materials to be considered in drafting of the international bill of rights prepared by the Secretariat of the United Nations Commission on Human Rights contemplated a text on the 'right to share in the benefits of science'.[6] The preliminary Secretariat draft, attributed to John Humphrey, contained the following: 'Everyone has the right … to share in the benefits of science.'[7] The Documented Outline of the Secretariat, consisting of several hundred pages, drew on a range of sources, some of them prepared by individuals and non-governmental organisations, as well as national constitutions. For certain rights, such as freedom of expression and the right to a fair trial, a broad range of sources was produced. The text of the Inter-American Juridical Committee was the only source for a 'right to science'.[8]

The right to science provision was discussed only briefly by the Drafting Committee of the Commission on Human Rights during its June 1947 sessions. When Peng-chun

Chang of China asked for an explanation of the phrase 'share in the benefits of science', the Chilean member, Hernán Santa Cruz, invoked the draft of the Inter-American Juridical Committee stating that 'scientific inventions should belong to society and be enjoyed by all'. The Commission's chairman, Eleanor Roosevelt, announced that the provision was amended to read: 'Everyone has the right … to share in the benefits that result from scientific inventions and discoveries'. She said a footnote could be included stating that it might be proper to include the substance of this Article in the Preamble.[9] The Drafting Committee's Report dropped the reference to inventions. A parenthetical note said: 'It was the opinion of some of the members that the thought back of this Article should be included in the Preamble.'[10] Later that year, Ecuador proposed a more elaborate version: 'Right to enjoy the fruits of his discoveries, inventions, and other scientific, literary and artistic activities under conditions prescribed by law, and to share in the benefits accruing from scientific discoveries and inventions.'[11]

By December 1947, the draft International Bill of Rights had been split into two separate instruments, a manifesto or declaration and a treaty or covenant. Economic, social, and cultural rights, including the right to share in the benefits of science, were only addressed in the first of the two. In the Working Group of the Commission on Human Rights on the draft declaration, the suggestion that the provision be relegated to the preamble was revived. The text as a substantive rather than a preambular provision barely survived, with three votes to retain it, one opposed and two abstentions.[12] The Soviet delegate asked 'what was meant by sharing in the benefits that resulted from scientific discoveries'. He thought the phrase appeared to imply an obligation to reveal patents of scientific discoveries. Eleanor Roosevelt, who chaired the Working Group, said 'the idea of the Drafting Committee had been to stress the universality of such sharing'. She proposed inserting a comment specifying that the text did not imply an obligation to reveal secrets of scientific discoveries that had been patented.[13] The Report of the Working Group contained such a comment on intellectual property[14] but it was not reproduced in the final Report of the Commission's December 1947 session.[15] The idea is rather odd because it is inherent in the patenting process that the discovery be revealed and hence there is no secret.

The Commission on Human Rights adopted its final draft of the Universal Declaration of Human Rights during its June 1948 session. René Cassin of France proposed inserting the words 'in scientific research and' between the words 'share' and 'in the benefits'.[16] Cassin explained that 'cultural life included science but that he wished to lay particular stress on the participation of even uneducated persons in scientific progress'.[17] Peng-chun Chang proposed replacing 'share in the benefits that result from scientific discoveries' with 'share in scientific advancement'. The Commission's reigning intellectual, Chang recalled that 'the phrase was derived from Bacon',[18] presumably a reference to Francis Bacon's *Of the Advancement and Proficiencies of Learning: Or the Partitions of Sciences*, published in 1674. Cassin withdrew his own amendment and supported that of Chang.[19] The Soviet representative, Alexei P. Pavlov, stressed that 'the task of science was to work for the advancement of peaceful aims and to make human life better'. He said that in the Soviet Union 'science and culture belonged to all and tremendous progress had been achieved in making the benefits of culture accessible to broadest masses'.[20] Pavlov proposed an amendment: 'In the advancement of science which should serve the interests of the progress of mankind, the cause of peace, and co-operation

amongst peoples.'[21] After the Soviet amendment was put to a vote and rejected, the Chinese amendment was adopted.[22]

The final negotiations of the Universal Declaration of Human Rights took place in the third General Assembly session in late 1948. The Soviets renewed the proposal about the purposes of science although they were no more successful the second time around.[23] Pavlov emphasised the importance of science serving the interests of progress, democracy, and peace, invoking 'the atmosphere of terror which prevailed throughout the world owing to the application of scientific discoveries for destructive purposes. According to the Press of certain countries, scientists were at present engaged in perfecting a bacteriological weapon which would destroy 180 million human beings at one blow.'[24] Roosevelt spoke against the Soviet amendment. 'The United States delegation would under no circumstances agree that science should be placed at the service of politics', she said. 'Yet that might be the practical effect of the USSR amendment.'[25] Her comments were echoed by delegates from Australia,[26] Belgium,[27] Cuba,[28] the Dominican Republic,[29] Lebanon, [30] Norway,[31] and Uruguay.[32] The British delegate referred to the Nazi ideologue Alfred Rosenberg, who had been 'the propagandist of a doctrine which bestowed racial superiority upon Germany. That was why it was necessary to take care in the declaration of human rights not to state a principle which might be misinterpreted and might be used for purposes prejudicial to the rights of the individual.'[33] But there was also significant sympathy with the Soviet position. Argentina said it could accept the proposal if the reference to democracy was dropped.[34] Chile,[35] Ecuador,[36] and Venezuela[37] expressed similar sentiments. France's Cassin said he agreed 'that science must be put at the service of progress and of peace, but believed that the problem raised by the USSR delegation fell outside the framework of the declaration of human rights'.[38]

The Third Committee of the General Assembly considered a number of changes to the text adopted by the Commission. Peru wished to add the word 'freely' in the opening words of the provision so as 'to recognise the freedom of creative thought, in order to protect it from harmful pressures which were only too frequent in recent history'.[39] Cuba proposed modifying the final phrase by replacing 'share' with 'participate'.[40] Guy Pérez-Cisneros explained that the 'the Cuban delegation did not consider that everyone was sufficiently gifted to play a part in scientific advancement'.[41] Cassin agreed with the proposal, recalling that 'the question had been debated at length by the Commission on Human Rights, where several delegations had maintained that even if all persons could not play an equal part in scientific progress, they should indisputably be able to participate in the benefits derived from it'.[42] China prepared a revised version that incorporated the amendments of Peru and Cuba along with one of its own. Chang argued that there were two aspects to the right, that of everyone to share in the benefits of scientific advancement and that of the right to participate in the work of scientific creation. He proposed adding the words 'and its benefits',[43] which brought the text back to the original idea expressed by the Inter-American Juridical Committee. The first paragraph of the article, which became article 27(1) in the final text of the Declaration, was adopted unanimously by the Third Committee.[44]

UNESCO's contribution

UNESCO's mandate resonates through the Universal Declaration of Human Rights, especially in articles 26, on education, and 27, on science and culture. The ancestor of UNESCO was the International Committee of Intellectual Cooperation, set up by the League of Nations in September 1921. Its membership included prominent scientists such as Albert Einstein and Marie Curie.[45] Three years later, the League Assembly welcomed the establishment of the International Institute of Intellectual Cooperation, based in Paris. A new body conceived as part of the new post-Second World War institutional framework was to be named the United Nations Educational and Cultural Organisation. 'Science' was only added to its name in the course of the London Conference of November 1945 when the Constitution was adopted.[46]

Representatives of UNESCO regularly attended the sessions of the Commission on Human Rights and the Economic and Social Council when the drafts of the Universal Declaration were being discussed. On its own initiative, UNESCO's Committee on the Philosophic Principles of the Rights of Man prepared a document compiled 'on the basis of a survey of the opinion of scholars in the various parts of the world' that was intended to address 'the intellectual bases of a modern bill of rights'.[47] It referred enthusiastically to the importance of economic and social rights, noting that 'the increased accessibility of economic and social rights was achieved as a consequence of the advances of science'. The document said: 'Finally, there are few to deny, in the retrospect of technological advances today, the right of all to share in the advancing gains of civilisation and to have full access to the enjoyment of cultural opportunities and material improvements'.[48] Fifteen categories of fundamental rights were identified of which the fifteenth was 'The right to share in progress': 'Every man has the right to full access to the enjoyment of the technical and cultural achievements of civilisation.'[49]

The UNESCO report was very poorly received by the Commission on Human Rights. The Belgian representative, Fernand Dehousse, said he was 'very sorry' to see the document. Dehousse was angered that a Belgian publication, *Synthèse,* had published an account of the UNESCO document without even mentioning the Commission on Human Rights. He said it would be 'regrettable' if the initiative had been taken by UNESCO alone and not at the request of the UN human rights bodies. John Humphrey, the Secretary of the Commission, confirmed that UNESCO had done this on its own.[50] Humphrey said he had initially planned to circulate the UNESCO report but the Commission decided against this and no reference was ever made to its contents.[51] This was an overreaction. Ten days after the brouhaha in the Commission, UNESCO wrote to Eleanor Roosevelt, the Chairman of the Commission, clarifying that the report was indeed issued in response to an invitation to comment on the report of the Drafting Committee made in July 1947.[52]

On a few occasions the UNESCO representatives intervened in the debates.[53] When article 27 was discussed by the Working Group of the Commission, Jacques Havet took the floor to 'stress the importance' of the provision but he spoke about culture rather than science.[54] In July 1948, UNESCO published a very substantial study as a contribution to the negotiations. Two rather brief chapters addressed issues related to the right to science. J.M. Burgers took the perspective of the 'scientific worker', exploring the scope of rights and obligations. His article was more about the 'rights of scientists'

than the 'right to science'.[55] W.A. Noyes, an American chemistry professor, pointed to the relationship between science and warfare. The scientist, 'whether he likes it or not', is 'tied to the military destinies of the various countries', he wrote. 'The Rights of Man and the rights of the scientist have become, therefore, inextricably entangled.' Noyes concluded that 'the immediate objective of the scientists should be to ensure that all levels of society in all nations are freed from economic anxiety'.[56] The 1948 UNESCO study was never referred to in the General Assembly debates.

As the Universal Declaration was being completed, UNESCO was requested by the Sub-Commission on the Prevention of Discrimination and the Protection of Minorities, a subsidiary organ of the Commission on Human Rights, to consider 'as a first step, the desirability of initiating and recommending the general adoption of a programme of disseminating scientific facts with regard to race'.[57] This was later reformulated more purposely in a resolution of the Economic and Social Council, the phrase 'with regard to race' replaced with 'designed to remove what is commonly known as racial prejudice'.[58] In May 1949, UNESCO reported on implementation of the resolution, noting that 'recognised scientific authorities' in various parts of the world had made statements during the Second World War concerning Nazi racial theories, including Britain's Royal Anthropological Society, the American Anthropological Association, the Society for the Study of Social Issues, and the Brazilian Society of Anthropologists. UNESCO said a compilation and publication of such statements, with a suitable introduction, could be done almost immediately. It also referred to individual anthropologists whose work was not readily accessible to a broad public. Their materials could be organised around several themes, such as race from the standpoint of biology, anthropology, and psychology, the cultural contributions of 'the races of mankind', the 'irrational nature of race prejudice', its cost, 'successful experiments in race relations', and methods of combating race prejudice. The report said an expert group would be convened in July 1949 to issue a statement on 'racial problems and racial prejudice'.[59]

Before the proposed UNESCO meeting of experts, the General Conference of UNESCO instructed the Director-General to 'study and collect scientific materials concerning questions of race', to 'give wide diffusion to the scientific information collected' and to 'prepare an educational campaign based on this information'.[60] The reference to 'questions of race' was clearly more reserved than the language used in the ECOSOC resolution, which had spoken of 'racial prejudice'. Organisation of the expert gathering was the responsibility of UNESCO's head of social sciences, Arthur Ramos, who died suddenly only weeks before the meeting. Ramos had set the tone with an article in UNESCO's journal, *Social Sciences*. '[T]he "racial" technique has led to one of the greatest states of disequilibrium that exist, namely war. The present century has just paid tribute in the shape of the European nations' Second Great War, of which there were many causes; but one cause was undoubtedly the philosophy of racial domination espoused by the racialists of our time, that is to say the Germans', he wrote. 'We see then, in the last analysis, that racialism is a direct result of Europeanisation and imperialism.'[61]

The Committee of Experts on Race Problems convened at UNESCO headquarters in Paris in December 1949. In preparation for the meeting, UNESCO issued a detailed memorandum that appears to be the outline of a book, developing the themes that were identified in the report on implementation of the resolution earlier that year.[62] The Committee had eight members: E. Franklin Frazier, Ashley Montagu, Ernest

Beaglehold, Juan Comas, L.A. Costa Pinto, Morris Ginsberg, Humayun Kabir, and Claude Levi-Strauss. Frazier, head of the sociology department at Howard University and the first Black president of the American Sociological Association, was elected chairman.[63] Montagu was designated as rapporteur.[64] It was 'an international dream team of scholars' assembled to draft 'the final rebuttal to Nazism and eugenicists worldwide'.[65]

Edward Lawson represented the United Nations Secretariat as an observer. He explained that the Division of Human Rights had reached the conclusion that it was 'scientifically illegitimate' to attempt to define the concept of race. Lawson told the expert group that the Secretariat felt what was needed was 'a clear, concise statement of fact about race which could be disseminated all over the world and which would serve as a basis for eliminating false ideas about race'.[66] His words were echoed by Montagu who explained that genetical and social evidence from recent research showed 'race questions were not of a biological character'. Montagu said differences in genes among humans were insignificant, and that all belonged to the human race 'with superficial physical differences'. The real 'species character' common to humans was 'educability or plasticity'.[67] Montagu was himself somewhat of an *enfant terrible* on the subject. Trained in the United States by Ruth Benedict and Franz Boas, he had advanced his controversial positions in scholarly debates,[68] apparently 'with little humility and, probably as a result, little effect'.[69] Montagu was the author of a best-selling monograph, *Man's Most Dangerous Myth: The Fallacy of Race*.[70]

Entitled 'The Race Question', the statement noted the relatively narrow use of the term by anthropologists, referring to the current usage of three major divisions, Mongoloid, Negroid and Caucasoid. But it said '[t]o most people, a race is any group of people whom they choose to describe as a race'. It explained that Englishmen and Frenchmen were not a race, nor were Catholics, Protestants, Moslems or Jews, or people who were 'culturally' Turkish or Chinese. The statement recommended that 'when the term "race" is used in popular parlance, it would be better when speaking of human races to drop the term "race" altogether and speak of ethnic groups'. The statement continued:

For all practical social purposes 'race' is not so much a biological phenomenon as a social myth. The myth of 'race' has created an enormous amount of human and social damage. In recent years it has taken a heavy toll in human lives and caused untold suffering. It still prevents the normal development of millions of human beings and deprives civilisation of the effective co-operation of productive minds. The biological differences between ethnic groups should be disregarded from the standpoint of social acceptance and social action. The unity of mankind from both the biological and social viewpoints is the main thing. To recognise this and to act accordingly is the first requirement of modern man.[71]

The very specific issue of 'race mixture' was also confronted. Montagu's original draft contained a strong plea favouring the benefits of 'hybridisation'. He wrote that 'the evidence points unequivocally to the fact that race mixture is always biologically good in its effects … Race mixture is biologically one of the greatest of all powers for the creation of novel and desirable traits in man.'[72] But this was a step too far for some of the experts, and in the final version reference to any beneficial consequences of 'race mixture' were removed. Montagu's sentence about 'convincing evidence' was changed to state that there was nothing to indicate 'that race mixture of itself produces biologically bad effects. Statements that human hybrids frequently show undesirable traits, both

physically and mentally, physical disharmonies and mental degeneracies are not supported by the facts.' Consequently, said the UNESCO statement, there was 'no biological justification for prohibiting intermarriage between persons of different ethnic groups'.

The UNESCO statement is given great credit for its positive impact on scientific discussion as well as on public opinion.[73] A headline on page 1 of the *New York Times* proclaimed 'No Scientific Basis for Race Bias Found by World Panel of Experts'.[74] After decades of debate among recognised scientists that ultimately did much to fuel the genocidal plans of the Nazis and their supporters, an authoritative international body backed by established scholars had dramatically framed the discussion, both within the academic community but also in public opinion generally. According to Elazar Barkan, the Statement 'highlighted the dramatic transformation in the scientific and public understanding of the race concept'.[75] UNESCO's press release described it as 'the most far-reaching and competent pronouncement of its kind ever made and provides a scientific foundation for some of the basic principles expressed in the Universal Declaration of Human Rights'.[76] Later in the year, Montagu published a detailed commentary on the 1950 statement.[77]

Ashley Montagu had been right in expecting the 1950 Statement would not please everyone, and he may have been too optimistic in thinking it was 'bombproof'. Within a week of its publication, a critical letter by William B. Fagg, writing on behalf of the Royal Anthropological Institute, was published in *The Times*. It claimed that several propositions in the Statement were 'distinctly controversial in the present state of our knowledge'. Fagg said the statement that 'race is less a biological fact than a social myth' was 'too simplified'. As for the conclusion that humans are driven towards universal brotherhood and cooperation, Fagg said 'surely very few anthropologists anywhere would yet venture to commit themselves' to this.[78] In the months that followed, the Institute's journal, *Man*, published several letters from English academics challenging the Statement on a variety of grounds.[79] At least one was known for holding quite racist views about 'interbreeding' and the positive consequences of competition between races.[80] The editor of *Man* dismissed the UNESCO document as the 'Ashley Montagu Statement'.[81] A lengthy, mocking critique appeared in the *Eugenics Review*.[82] Physical anthropologists and biologists grumbled that the expert panel had been dominated by social scientists, with the exception of Montagu, whom many regarded as a maverick. The journal of the Royal Anthropological Institute noted the views of prominent physical anthropologists who, while in 'cordial agreement with the purpose and essential thesis of the document' seemed to view it as simplistic.[83] Although England provided the core of the opposition to the UNESCO Statement, there were also a few critical comments from elsewhere including the United States.[84]

The Director-General of UNESCO himself, Jaime Torres Bodet, explained to one of those consulted on the 1950 statement that it had been widely distributed and well received. 'It has given hope and courage to many people', he said, and did not think that 'in the present state of science, the text of this document could be altered'. But he added that a new meeting of physical anthropologists and geneticists would be convened in early June 1951 'in order to show our scientific impartiality'.[85] There was a recognition that the findings of the 1950 meeting, which had been composed of sociologists and cultural anthropologists, needed to be reinforced by the views of physical anthropologists and geneticists.

Perrin Selcer has pointed to the 'more matter-of-fact tone' of the second statement. It based itself on 'the rather esoteric argument that biological diversity must be understood through a population rather than a typological approach and more clearly hedged on the actual equality of races. Nevertheless, the second statement surprised even many of its own signatories with the strength of its antiracism, and UNESCO successfully presented it as another weapon in the fight against racial prejudice.'[86] For Michelle Brattain, 'the second statement project revealed how much the categories, premises, empirical records, and authority of an older, supposedly discredited body of work once dedicated to measuring difference continued to influence the science of race'.[87] Alfred Métraux, who directed UNESCO's work against racism in the 1950s, was enthusiastic about the June 1951 meeting. He had anticipated a 'great battle'[88] but ultimately felt the results were constructive. Far from 'invalidating' the 1950 Statement, he felt that the earlier document had been 'reinforced'.[89] Writing to his wife, he described 'une très bonne réunion … Ashley Montagu s'est comporté mieux que prévu et, je dois le reconnaître, il a apporté beaucoup à la réunion en se présentant comme une cible.'[90]

To make its message accessible to young people. UNESCO published a picture book entitled *What Is Race? Evidence from Scientists*.'[91] It also undertook an investigation into the factors that 'produced in Brazil a spirit of tolerance and a degree of harmony in inter-racial relations in strong contrast with the morbid intransigence of other types of culture'. Short monographs, averaging about 50 pages each, were produced as part of a collection entitled 'The Race Question in Modern Science'.[92]

UNESCO returned to the issue in the 1960s, issuing two more declarations.[93] This work was consolidated in 1978 with the adoption of a political statement crafted by international lawyers, entitled UNESCO Declaration on Race and Racial Prejudice.[94]

Drafting the International Covenant

With the adoption of the Universal Declaration of Human Rights, on 10 December 1948, the attention of the Commission on Human Rights and other United Nations organs turned to the draft Covenant, whose adoption was expected to take another year or two. The drafts adopted by the Commission in 1947 and 1948 did not include economic, social, and cultural rights.[95] In 1949, the debate began about the place of such rights, including the right to science, within the treaty. The Commission's 1949 text was accompanied by draft provisions on economic and social rights for what was then being called Part II of the Covenant. These were derived from articles 22 to 26 of the Universal Declaration but there was nothing reflecting article 27(1).[96] In 1950, the Soviet Union submitted a resolution in the General Assembly setting out a catalogue of economic, social, and cultural rights for incorporation in the Covenant. It included an obligation on the State to 'ensure the development of science and education in the interests of progress and democracy and in the interests of ensuring international peace and co-operation'.[97]

If UNESCO's contribution to the Universal Declaration was inconsequential, the same cannot be said of the text on the right to science in the International Covenant on Economic, Social, and Cultural Rights where its engagement was quite seminal. Within a few months of the adoption of the Universal Declaration of Human Rights by the United Nations General Assembly, on 10 December 1948, Bart J. Bok published an article in

the *Bulletin of the Atomic Scientists* entitled 'Freedom of science and the Universal Declaration of Human Rights'. A Dutch-American astronomer, Bok was responding to an invitation from Julian Huxley, the English evolutionary biologist and the first Director-General of UNESCO, to address the challenges posed to 'men of science' by increased political pressure from the State. At the time, Huxley's concerns were focussed on the triumph of the Lysenko school in Soviet genetics, a development attributable to political pressure. Huxley said that Nazi Germany had paid for its attacks on scientific autonomy and unity 'by a deterioration in the quality of its scientific work' and he predicted the same fate awaited the Soviet Union.[98]

Bok questioned whether 'scientific advance' was dependent upon full freedom for the scientist. He pointed to totalitarian states that 'restrict and pervert science'.[99] Bok welcomed the adoption of the Universal Declaration of Human Rights as a guide to scientists in the development of their own 'Charter for Scientists' as proposed by Huxley and others. He pointed to the special importance of three provisions of the Universal Declaration of Human Rights: article 12, on the right to privacy, article 13, on freedom of movement, and article 19, on freedom of expression. Then he turned to article 27, the provision of the Declaration that actually refers to science and that, said Bok, 'is especially important to the scientist'. Bok wrote that '[i]f this Article had been written twenty years ago, it would, to the majority of the world's scientists, have seemed like an admirable statement, but it would not have been considered by them as especially significant for the scientist.' He noted 'a wide questioning of the scientist's right to free participation in community activities. In the days of the atomic bomb, scientists are supposed to be much more careful than non-scientists in choice of organisations that they join or in the popular causes that they wish to espouse.'[100] Bok set out his own amended version of the 'Charter for Scientists'. Bok's discussion of 'freedom of science' was subsequently published by UNESCO as a booklet in a French translation.[101]

Bok's study was largely adopted in a UNESCO submission to the Commission on Human Rights for consideration during the drafting of the treaty provisions on economic, social, and cultural rights. The lengthy document focussed largely on the freedoms of scientists rather than on the right to science. With reference to the Bok study, UNESCO proposed including special rights that were, in reality, little more than specific formulations of freedom of expression and freedom of information. It called for recognition of a right to obtain information on the aims of research projects, to publish results of research, 'and the fullest possible freedom to discuss the development of their work with other scientists, except where there might be social or moral grounds for restricting these privileges'. In harmony with Bok's approach, UNESCO also envisaged certain duties: '[t]o examine carefully the meaning and aim of the work carried out by the scientist and, when it is in the service of other men, to determine their purposes and to assess the moral problems at stake', '[t]o contribute towards the progress of science in those fields that will most benefit mankind as a whole and to bring the fullest influence to bear to prevent any abuse of science', and '[t]o assist in the education of the people and of governmental authorities by explaining to them the aims, methods and spirit of scientific research and enabling them to follow scientific progress'.[102]

UNESCO considered that the Covenant should include 'two quite general clauses in line with the first paragraph of Article 27 of the Universal Declaration'. The first would formulate the obligation 'to allow all, irrespective of race, sex or religion, the

widest possible access to the various forms of cultural life'. The second would provide 'the guarantee that artists and scientists would enjoy the fullest freedom and security'. The right to benefit from science had been totally forgotten. In its place was protection of the rights of scientists. UNESCO said that '[t]hese articles should be framed as to draw the attention of governments to the essentially international and universal character of cultural life and to the danger of restricting access to culture of certain national groups only'.[103]

The following year, UNESCO's Director-General proposed a text on the subject that recognised 'the enjoyment of the benefits resulting from scientific progress and its application':

> Article (d). The Signatory States undertake to encourage the preservation, development and propagation of science and culture by every appropriate means;
>
> (a) By facilitating for all access to manifestations of national and international cultural life, such as books, publications and works of art, and also the enjoyment of the benefits resulting from scientific progress and its application;
> (b) by preserving and protecting the inheritance of books, works of art and other monuments and objects of historic, scientific and cultural interest;
> (c) by assuring liberty and security to scholars and artists in their work and seeing that they enjoy material conditions necessary for research and creation;
> (d) by guaranteeing the free cultural development of racial and linguistic minorities.[104]

A draft article submitted by Chile a few weeks later explicitly acknowledged that it was inspired by the UNESCO text:

> The States parties to the Covenant undertake to encourage by all appropriate means the conservation, the development and the diffusion of science and culture, in accordance with the principle of non-discrimination enunciated in paragraph 1 of Article 1 of this Covenant.

They recognise that it is one of their principal aims to ensure conditions which will permit every one:

1. to take part in cultural life;
2. to enjoy the benefits of scientific progress and its applications;

> Each State party to the Covenant pledges itself to undertake progressively, with due regard to its organization and resources, the measures necessary to attain these objectives in all the territories within its jurisdiction.[105]

There was little debate on the provision in the Commission on Human Rights at its session ending in May 1951. Jacques Havet, speaking on behalf of UNESCO, said that '[t]he right of everyone to enjoy his share of the benefits of science was to a great extent the determining factor for the exercise by mankind as a whole of many other rights'.[106] He explained that '[e]njoyment of the benefits of scientific progress implied the dissemination of basic scientific knowledge, especially knowledge best calculated to enlighten men's minds and combat prejudices, coordinated efforts on the part of States, in conjunction with the competent specialised agencies, to raise standards of

living, and a wider dissemination of culture through the processes and apparatus created by science'.[107] The Commission adopted the Chilean draft with the exception of the final paragraph, which belonged in the general provisions of the treaty applicable to all economic, social and cultural rights.[108]

The previous December, the General Assembly had taken a decision to include economic, social, and cultural rights in the Covenant.[109] There was no unanimity about this, and a number of Western States were opposed.[110] In 1951 the Western States succeeded by a small majority with their demand for two Covenants, each with a different set of implementation instruments.[111] At its 1952 session, the Commission on Human Rights prepared the first draft of the International Covenant on Economic, Social and Cultural Rights. The United States proposed a text to replace the one adopted by the Commission the previous year:

1. The States Parties to the Covenant recognise the right of everyone:
   (a) To take part in cultural life;
   (b) To enjoy freedom necessary for scientific research and creation.
2. The full attainment of this right requires the conservation, the development and the diffusion of science and culture.[112]

Eleanor Roosevelt, who was then in her final year as a member of the Commission, explained that the United States had put the emphasis on 'the freedom necessary for scientific research and creation because the original text called merely for the right to enjoy the benefits of scientific progress, or, in other words, simply the right to enjoy the results of scientific research, whereas what was really required was to ensure conditions in which such research could be freely conducted'.[113] The American proposal was consistent with the position taken by UNESCO. Its Human Rights Committee, which had been shown an early draft of the American proposal, felt that in referring to 'the need for guaranteeing the freedom of the creative mind in scientific and intellectual research' the American proposal was a useful addition.[114]

Nevertheless, the elimination of the right to the benefits of science provoked criticism from some Member States. Venezuela's delegate insisted upon the point: 'In many countries, people were prevented from enjoying the benefits of scientific. discoveries and inventions because the latter were suppressed by powerful economic or political interests which were unwilling to make the capital investment required; it was necessary to ensure that such benefits were made available to all, without obstruction.'[115] Poland and Uruguay proposed amendments to the American amendment in order to revive the idea: '(c) To enjoy the benefits of scientific progress and its applications.'[116] Roosevelt agreed but 'on condition that it should not be interpreted as infringing recognised rights such as literary, artistic, scientific and commercial rights'.[117] The American resolution was reformulated so as to reinstate the phrase about the benefits of science.

1. The States Parties to the Covenant recognise the right of everyone:
   (a) To take part in cultural life;
   (b) To enjoy the benefits of scientific progress and its applications.

2. The steps to be taken by the States Parties to this Covenant to achieve the full realisation of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.
3. The States Parties to the Covenant undertake to respect the freedom indispensable for scientific research and creative activity.[118]

It was adopted by 14 votes to none, with 3 abstentions.[119]

The Soviets had attempted to revive the clause on the objectives of science that they had proposed, without success, for the Universal Declaration of Human Rights by adding the words 'and to ensure the development of science and education in the interests of progress and democracy and of the maintenance of peace and cooperation between peoples'.[120] The Soviet delegate, Platon Morozov, argued that it was 'essential for States to take the steps necessary to prohibit scientific activity designed to destroy mankind'. He referred to nuclear science which had gone in two directions, one for peaceful purposes and the other for mass destruction of human beings.[121]

According to the Commission's Report, while 'some members' favoured the clause, '[m]ost members, however, were opposed to including à statement of the ends which scientific research should serve, on the grounds that scientific research by its nature was independent of any external criterion and that a statement of aims such as that envisaged might provide a pretext for State control of scientific research and creative activity'.[122]

The Commission draft of article 15 was debated in in the Third Committee of the General Assembly in 1957. UNESCO's representative, Rene Maheu, pointed to the difference between the provision on cultural rights then being debated and the two that preceded it, which concerned education. He noted that whereas the rights in articles 13 and 14 were already well-defined, article 15 'dealt with ideas which were still in the process of evolution, from both the legal and the philosophical points of view … Moreover, it dealt with matters in which the State, although playing a considerable part, could act only with great caution, since the very freedom of the human mind was involved.' Maheu said care should be taken to protect scientific freedom in order to prevent destroying the right that intended to be protected.[123]

Czechoslovakia revived the debate about the purposes of scientific research. It submitted a draft amendment proposing insertion of the words 'in the interest of the maintenance of peace and co-operation among nations' at the end of paragraph 2.[124] In the course of the debate, Czechoslovakia took up a suggestion from UNESCO's representative and added the words 'in particular' before 'in the interest of'.[125] The UNESCO representative was favourable to the Czechoslovak proposal on the purposes of scientific research. Maheu pointed to article 1 of UNESCO's Constitution which declared that education, science and culture were instruments of peace.[126] Czechoslovakia's representative said it was 'common knowledge, however, that, applied to the wrong ends, technical and scientific progress could be harmful to humanity'.[127] She noted that the paragraph on cooperation would be consistent with a General Assembly resolution adopted unanimously at the previous session and to a draft resolution on the same subject proposed by her delegation and adopted by the Third Committee earlier in the month.[128]

Greece objected to the words 'in the interest of the maintenance of peace and co-operation among nations', saying they were not only unnecessary 'but even dangerous'. Its delegate asked '[w]ho would be the judge?', explaining that '[i]In all likelihood, it would be the State, in which case the amendment would have the effect of restricting individual freedom'.[129] The United Kingdom was of the same view. '[S]cience and culture were autonomous in their very nature and could not be made subject, as regards their aims, to other principles, however admirable', said Samuel Hoare.[130] The Rapporteur observed that Czechoslovakia's addition of the words 'in particular' failed to satisfy those who objected to the proposal.[131] Czechoslovakia's amendment on peace and co-operation among nations was rejected by 35 to 21, with 16 abstentions.[132]

Czechoslovakia also proposed the addition of a fourth paragraph: 'The States Parties to the covenant will encourage all-round development of international scientific and cultural co-operation and of mutual contacts between scientific and cultural experts.'[133] After the United Kingdom questioned whether the new paragraph 4 should impose an obligation, Saudi Arabia thought the problem could be addressed by replacing the words 'States Parties will encourage' with 'States Parties recognise the benefits derived from the encouragement of…' Saudi Arabia also proposed replacing 'contacts between experts' with 'international contacts'.[134] Czechoslovakia accepted the amendments.[135] The new paragraph met with general approval and was adopted by 47 to 9, with 16 abstentions. The final text was adopted by 71 votes to none, with one abstention.[136]

Two years after adoption of the Covenant, the Proclamation of the International Conference on Human Rights reflected concerns about the abuse of science: 'While recent scientific discoveries and technological advances have opened vast prospects for economic, social and cultural progress, such developments may nevertheless endanger the rights and freedoms of individuals and will require continuing attention.'[137] Similar concerns appear in the Vienna Declaration which, after acknowledging the right to enjoy the benefits of scientific progress and its applications notes that 'certain advances, notably in the biomedical and life sciences as well as in information technology, may have potentially adverse consequences for the integrity, dignity and human rights of the individual'.[138]

Conclusions

General Comment 25, adopted by the Committee on Economic, Social and Cultural Rights in 2020, places a great deal of emphasis on participation in science. The issue of the direction that science should take, which was a preoccupation of the drafters of the two provisions, receives relatively little attention. The General Comment points to minor differences in terminology, noting that the Universal Declaration of Human Rights speaks of 'scientific advancement' while the Covenant refers to 'scientific progress'. The Committee makes no issue of the distinction and treats the two phrases as if they are synonymous: '[T]hese expressions emphasise the capacity of science to contribute to the well-being of persons and humankind. Thus, the development of science in the service of peace and human rights should be prioritised by States over other uses.'[139]

The consideration given in this essay to UNESCO's work on race during its early years may strike some readers as a digression from the subject of the right to science. But the

discussion seems justified because this was probably the first manifestation of UNESCO's engagement in the implementation of its human rights responsibilities which were framed by the terms of article 27(1) of the Universal Declaration of Human Rights. Unlike the Charter of the United Nations, which is silent on the specific subject of racial discrimination other than in the formulaic references to equality in general, the preamble of UNESCO's Constitution addresses the issue directly: 'That the great and terrible war which has now ended was a war made possible by the denial of the democratic principles of the dignity, equality and mutual respect of men, and by the propagation, in their place, through ignorance and prejudice, of *the doctrine of the inequality of men and races*'.[140]

UNESCO took up the issue of race in 1949 at the request of the human rights organs of the United Nations. Two statements were issued in the space of a few years, the work of teams of scientists from several disciplines belonging to both the social sciences and the natural sciences. In so doing, UNESCO was not proclaiming the right of scientists to conduct research without government involvement. Rather, it was imposing a framework for the direction of science, laying down, if only implicitly, guidelines for the direction that research should take. The UNESCO statements delivered a serious blow to so-called eugenics, which had been a favourite subject of Nazi 'scientists' but also one of interest to many researchers in other countries, including the first director general of UNESCO, Julian Huxley.

But even within the organisation, UNESCO's early statements on race seem afflicted with a degree of ambivalence. A recent study on science within the work of the organisation, comprised of detailed discussions of activities in mathematics, oceanography, geology, and engineering, to name a few contains a single perfunctory reference to the work on race.[141] The *UNESCO Courier* devoted a special issue to racism in 2001, in conjunction with the Durban Conference on racism and racial discrimination. A short chapter by Prof. George Frederickson entitled 'The rise and fall of the laboratory racist' refers to 'the scientific racism that had been respectable and influential in the United States and Europe before World War II' but inexplicably makes no mention of the UNESCO statements.[142]

René Cassin was an iconic personality in the development of international human rights law. As a founding member of the Commission on Human Rights, he was one of the authors of article 27(1) of the Universal Declaration of Human Rights. In 1972, Cassin published an article with the title 'Science and Human Rights'. Cassin's overriding concern was with the abuses of science. He acknowledged the tension between the freedom of the scientist in the conduct of research and her or his responsibility to serve humanity.[143] The challenge of 'dual use' confronts part of this issue.[144] But resisting applications of science that may cause harm is not entirely the same as insisting that science direct its attention to 'progress'. The spirit that inspired UNESCO in 1950 should be revived. It was a concrete manifestation of the application of science in the service of human rights.

The drafting histories of article 27(1) of the Universal Declaration of Human Rights and article 15(1)(b) reveal important tensions in understanding the scope of 'the right to science', as it is now called. The debate was generally focussed not on the beneficiaries of the right but rather on the scientists themselves. The view that the right was essentially about the freedoms of scientists to engage in research unencumbered by any political or

ideological orientation was promoted. However, article 15(3) of the Covenant clarifies the autonomy of this issue: 'The States Parties to the present Covenant undertake to respect the freedom indispensable for scientific research … '

The Soviets were the main promoters of the view that scientific research must pursue progressive aims. They were unsuccessful in their efforts to insert language along these lines in the two provisions. As they pointed out in the debates, there was an inconsistency with the recognition of such a perspective with respect to freedom of education. For example, in article 13(1) of the Covenant the States Parties affirm that 'education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms. They further agree that education shall enable all persons to participate effectively in a free society, promote understanding, tolerance and friendship among all nations and all racial, ethnic or religious groups, and further the activities of the United Nations for the maintenance of peace.' Why should it be any different for science? Moreover, the failure to incorporate language making clear that not all science is beneficial to humanity is inconsistent with the activities of UNESCO at the time the right was being formulated, as its work on the fallacy of race makes clear.

Notes

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2. *United States v. Brandt et al.*, Judgment, 19 August 1947, (1948) 2 TWC 183, at p. 183.
3. Mikel Mancisidor, 'The Dawning of a Right Science and the Universal Declaration of Human Rights (1941–1948)', in *The Right to Science, Then and Now*, ed. Helle Porsdam and Sebastian Porsdam Mann (Cambridge: Cambridge University Press, 2022), 17–32, at p. 20.
4. Inter-American Juridical Committee, Draft Declaration of the International Rights and Duties of Man and Accompanying Report, (1946) 40 *American Journal of International law Supp.* 93. The Draft Declaration was also produced as an official United Nations document: Draft Declaration of the International Rights and Duties of Man formulated by the Inter-American Juridical Committee, E/CN.4/2. It had been submitted to the first session of the General Assembly by Chile: Letter from the Representative of Chile to the Secretary-General, 3 November 1946, A/C.1/38.
5. For a detailed discussion of the drafting of the provision, see Cesare P.R. Romano, 'The Origins of the Right to Science, The American Declaration on the Rights and Duties of Man', in *The Right to Science, Then and Now*, ed. Helle Porsdam and Sebastian Porsdam Mann (Cambridge: Cambridge University Press, 2022), 33–53, at pp. 35–45.
6. Analysis of Various Draft International Bills of Rights, 23 January 1947, E/CN.4/W.16, p. 5; List of Types of Rights Contained in Drafts of Proposed International Bills of Rights, 31 January 1947, A/CN.4/W.18.
7. Draft Outline of International Bill of Rights (prepared by the Division of Human Rights), 4 June 1947, E/CN.4/AC.1/3, art. 44.
8. Drafting Committee on an International Bill of Human Rights, International Bill of Rights Documented Outline, 11 June 1947, E/CN.4/AC.1/3/Add.1, 356.
9. Summary Record of the 15th Meeting of the Drafting Committee of the Commission on Human Rights, 23 June 1947, E/CN.4/AC.1/SR.15, 3–4.
10. Report of the Drafting Committee on an International Bill of Human Rights: Suggestions for the Preamble of an International Declaration on Human Rights, 1 July 1947, E/CN.4/21, Annex E, 80–1.

11. Draft Charter of International Human Rights and Duties, Proposed by the Delegation of Ecuador, 12 November 1947, E/CN.4/32, art. 15 (emphasis in the original).
12. Summary Record of the 9th Meeting of the Working Group on the Declaration of Human Rights, 10 December 1947, E/CN.4/AC.2/SR.9, 2.
13. Ibid., 3–4.
14. Report of the Working Group on the Declaration on Human Rights, 10 December 1947, E/CN.4/57, 15.
15. Draft International Declaration on Human Rights, 16 December 1947, E/CN.4/77/Annex A, 8; Draft International Declaration on Human Rights, 17 December 1947, E/600, Annex A, 18.
16. France: Amendment to Article 30 of the Draft International Declaration of Human Rights, 11 June 1948, E/CN.4/126.
17. Summary Record of the 70th Meeting of the Commission on Human Rights, 11 June 1948, E/CN.4/SR.70, 4.
18. Ibid.
19. Ibid., 5.
20. Ibid., 4–5.
21. Ibid., 6.
22. Ibid.; Draft International Declaration of Human Rights, 18 June 1948, E/CN.4/148/Add.1, 4; Draft International Declaration of Human Rights, 28 June 1948, E/800, 13.
23. Statement Made by the Delegation of the Union of Soviet Socialist Republics, on 18 June 1948, in the Commission on Human Rights on the Results of the Commission's Work, 28 June 1948, E/800, Appendix, 44; Compilation of Amendments to the Draft Declaration of Human Rights Submitted to the Third Committee before 4pm 6 October in Chronological Order, 6 October 1948, A/C.3/230, 16; Recapitulation of Amendments to Article 25 of the Draft Declaration (E/800), 20 October 1948, A/C.3/302.
24. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 623–4.
25. Ibid., 620.
26. Ibid., 630.
27. Ibid., 622.
28. Summary Record of the 151st meeting of the Third Committee, 22 November 1948, A/C.3/SR.151, 628.
29. Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 636.
30. Ibid., 637.
31. Ibid., 635.
32. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 621; Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 637.
33. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 625. Also Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 637.
34. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 625. Also Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 636.
35. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 631–2.
36. Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 635.
37. Ibid.
38. Summary Record of the 151st meeting of the Third Committee, 22 November 1948, A/C.3/SR.151, 630–1.
39. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 619.

40. Cuba: Amendments to Articles 23 to 27 of the Draft Declaration (E/800), 12 October 1948, A/C.3/261; Recapitulation of Amendments to Article 25 of the Draft Declaration (E/800), 20 October 1948, A/C.3/302
41. Summary Record of the 150th meeting of the Third Committee, 20 November 1948, A/C.3/SR.150, 618.
42. Ibid., 619.
43. Summary Record of the 151st meeting of the Third Committee, 22 November 1948, A/C.3/SR.151, 630–27; China: Compromise text for Article 25 of the Draft Declaration (E/800), 22 November 1948, A/C.3/621.
44. Summary Record of the 152nd meeting of the Third Committee, 22 November 1948, A/C.3/SR.152, 635.
45. Jean-Jacques Renoliet, *L'UNESCO oubliée, la Société des Nations et la coopération intellectuelle (1919–1946),* Paris: Publications de la Sorbonne, 1999.
46. Gail Archibald, 'How the 'S' came to be in UNESCO', in Patrick Petitjean, Vladimir Zharov, Gisbert Glaser, Jacques Richardson, Bruno de Padirac and Gail Archibald, eds., *Sixty Years of Science at UNESCO 1945–200*5, Paris: UNESCO, 2006, 36–40.
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48. Ibid., 6.
49. Ibid., 11.
50. Summary Record of the 26th Meeting of the Commission on Human Rights, 3 December 1947, 11–13.
51. Ibid., 16.
52. Communication Addressed by the United Nations Educational, Scientific and Cultural Organization to the Chairman of the Commission on Human Rights, 16 December 1947, E/CN.4/78.
53. For example, Verbatim record of the 69th Meeting of the Economic and Social Council, 14 March 1947, E/422. 1–2; Summary Record of the 8th Meeting of the Working Group on the Declaration of Human Rights, 10 December 1947, E/CN.4/AC.2/SR.8, 5; Summary Record of the 40th Meeting of the Commission on Human Rights, 16 December 1947, E/CN.4/SR.40, p. 13; Summary Record of the 67th Meeting of the Commission on Human Rights, E/CN.4/SR.67, 10 June 1948, 11; Summary Record of the 68th Meeting of the Commission on Human Rights, E/CN.4/SR.68, 10 June 1948, 3, 6.
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58. Report of the Second Session of the Economic and Social Council, 1–2 March 1948, E/RES/116 (VI) B, para. B(iii).
59. Note on implementation of Resolution E/RES/116 (VI) B, 9 May 1949, E/CN.4/173, 4–6.
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62. Committee of Experts on Race Problems, Implementation of the Resolution of the Economic and Social Council, 7 December 1949, UNESCO/SS/Conf.1/2.

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67. Ibid., 8.
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Notes on contributor

William A. Schabas is professor of international law at Middlesex University in London, emeritus professor at Leiden University and the University of Galway, distinguished visiting faculty at the Paris School of International Affairs, Sciences Po and a door tenant at 9 Bedford Row. His new book, *The International Legal Order's Colour Line*, appeared in 2023. Other recent publications include *The Customary International Law of Human Rights* and the published version of the course he delivered at the Hague Academy of International Law in January 2021 entitled *Relationships between International Criminal Law and Other Branches of Public International Law*. Professor Schabas is an Officer of the Order of Canada and a member of the Royal Irish Academy.