Open Letter to the United Nations

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I address myself to the organization, founded for the purpose to further co-operation between nations on all problems of common concern, with some considerations regarding the adjustment of international relations required by modern development of science and technology. At the same time as this development holds out such great promises for the improvement of human welfare it has, in placing formidable means of destruction in the hands of man, presented our whole civilization with a most serious challenge.

My association with the American-British atomic energy project during the war gave me the opportunity of submitting to the governments concerned views regarding the hopes and the dangers which the accomplishment of the project might imply as to the mutual relations between nations. While possibilities still existed of immediate results of the negotiations within the United Nations on an arrangement of the use of atomic energy guaranteeing common security, I have been reluctant in taking part in the public debate on this question. In the present critical situation, however, I have felt that an account of my views and experiences may perhaps contribute to renewed discussion about these matters so deeply influencing international relationship.

In presenting here views which on an early stage impressed themselves on a scientist who had the opportunity to follow developments on close hand I am acting entirely on my own responsibility and without consultation with the government of any country. The aim of the present account and considerations is to point to the unique opportunities for furthering understanding and co-operation between nations which have been created by the revolution of human resources brought about by the advance of science, and to stress that despite previous disappointments these opportunities still remain and that all hopes and all efforts must be centered on their realization.

For the modern rapid development of science and in particular for the adventurous exploration of the properties and structure of the atom, international co-operation of an unprecedented extension and intensity has been of decisive importance. The fruitfulness of the exchange of experiences and ideas between scientists from all parts of the world was a great source of encouragement to every participant and strengthened the hope that an ever closer contact between nations would enable them to work together on the progress of civilization in all its aspects.

Yet, no one confronted with the divergent cultural traditions and social organization of the various countries could fail to be deeply impressed by the difficulties in finding a common approach to many human problems. The growing tension preceding the second world war accentuated these difficulties and created many barriers to free intercourse between nations. Nevertheless, international scientific co-operation continued as a decisive factor in the development which, shortly before the outbreak of the war, raised the prospect of releasing atomic energy on a vast scale.

The fear of being left behind was a strong incentive in various countries to explore, in secrecy, the possibilities of using such energy sources for military purposes. The joint American-British project remained unknown to me until, after my escape from occupied Denmark in the autumn of 1943, I came to England at the invitation of the British government. At that time I was taken into confidence about the great enterprise which had already then reached an advanced stage.

Everyone associated with the atomic energy project was, of course, conscious of the serious problems which would confront humanity once the enterprise was accomplished. Quite apart from the role atomic weapons might come to play in the war, it was clear that permanent grave dangers to world security would ensue unless measures to prevent abuse of the new formidable means of destruction could be universally agreed upon and carried out.

As regards this crucial problem, it appeared to me that the very necessity of a concerted effort to forestall such ominous threats to civilization would offer quite unique opportunities to bridge international divergences. Above all, early consultations between the nations allied in the war about the best ways jointly to obtain future security might contribute decisively to that atmosphere of mutual confidence which would be essential for co-operation on the many other matters of common concern.

In the beginning of 1944, I was given the opportunity to bring such views to the attention of the American and British governments. It may be in the interest of international understanding to record some of the ideas which at that time were the object of serious deliberation. For this purpose, I may quote from a memorandum which I submitted to President Roosevelt as a basis for a long conversation which he granted me in August 1944. Besides a survey of the scientific background for the atomic energy project, which is now public knowledge, this memorandum, dated July 3rd, 1944, contained the following passages regarding the political consequences which the accomplishment of the project might imply:

It certainly surpasses the imagination of anyone to survey the consequences of the project in years to come, where in the long run the enormous energy sources which will be available may be expected to revolutionize industry and transport. The fact of immediate preponderance is, however, that a weapon of an unparalleled power is being created which will completely change all future conditions of warfare.

Quite apart from the question of how soon the weapon will be ready for use and what role it may play in the present war, this situation raises a number of problems which call for most urgent attention. Unless, indeed, some agreement about the control of the use of the new active materials can be obtained in due time, any temporary advantage, however great, may be outweighed by a perpetual menace to human security.

Ever since the possibilities of releasing atomic energy on a vast scale came in sight, much thought has naturally been given to the question of control, but the further the exploration of the scientific problems concerned is proceeding, the clearer it becomes that no kind of customary measures will suffice for this purpose and that especially the terrifying prospect of a future competition between nations about a weapon of such formidable character can only be avoided through a universal agreement in true confidence.

In this connection it is above all significant that the enterprise, immense as it is, has still proved far smaller than might have been anticipated and that the progress of the work has continually revealed new possibilities for facilitating the production of the active materials and of intensifying their effects.

The prevention of a competition prepared in secrecy will therefore demand such concessions regarding exchange of information and openness about industrial efforts including military preparations as would hardly be conceivable unless at the same time all partners were assured of a compensating guarantee of common security against dangers of unprecedented acuteness.

The establishment of effective control measures will of course involve intricate technical and administrative problems, but the main point of the argument is that the accomplishment of the project would not only seem to necessitate but should also, due to the urgency of mutual confidence, facilitate a new approach to the problems of international relationship.

The present moment where almost all nations are entangled in a deadly struggle for freedom and humanity might at first sight seem most unsuited for any committing arrangement concerning the project. Not only have the aggressive powers still great military strength, although their original plans of world domination have been frustrated and it seems certain that they must ultimately surrender, but even when this happens, the nations united against aggression may face grave causes of disagreement due to conflicting attitudes towards social and economic problems.

By a closer consideration, however, it would appear that the potentialities of the project as a means of inspiring confidence just under these circumstances acquire most actual importance. Moreover the momentary situation would in various respects seem to afford quite unique possibilities which might be forfeited by a postponement awaiting the further development of the war situation and the final completion of the new weapon.

In view of these eventualities the present situation would seem to offer a most favourable opportunity for an early initiative from the side which by good fortune has achieved a lead in the efforts of mastering mighty forces of nature hitherto beyond human reach.

Without impeding the importance of the project for immediate military objectives, an initiative, aiming at forestalling a fateful competition about the formidable weapon, should serve to uproot any cause of distrust between the powers on whose harmonious collaboration the fate of coming generations will depend.

Indeed, it would appear that only when the question is taken up among the united nations of what concessions the various powers are prepared to make as their contribution to an adequate control arrangement, it will be possible for anyone of the partners to assure themselves of the sincerity of the intentions of the others.

Of course, the responsible statesmen alone can have the insight in the actual political possibilities. It would, however, seem most fortunate that the expectations for a future harmonious international co-operation which have found unanimous expression from all sides within the united nations, so remarkably correspond to the unique opportunities which, unknown to the public, have been created by the advancement of science.

Many reasons, indeed, would seem to justify the conviction that an approach with the object of establishing common security from ominous menaces without excluding any nation from participating in the promising industrial development which the accomplishment of the project entails will be welcomed, and be responded with a loyal co-operation on the enforcement of the necessary far reaching control measures.

Just in such respects helpful support may perhaps be afforded by the world-wide scientific collaboration which for years has embodied such bright promises for common human striving. On this background personal connections between scientists of different nations might even offer means of establishing preliminary and non-committal contact.

It need hardly be added that any such remark or suggestion implies no underrating of the difficulty and delicacy of the steps to be taken by the statesmen in order to obtain an arrangement satisfactory to all concerned, but aim only at pointing to some aspects of the situation which might facilitate endeavours to turn the project to lasting benefit for the common cause.

The secrecy regarding the project which prevented public knowledge and open discussion of a matter so profoundly affecting international affairs added, of course, to the complexity of the task of the statesmen. With full appreciation of the extraordinary character of the decisions which the proposed initiative involved, it still appeared to me that great opportunities would be lost unless the problems raised by the atomic development were incorporated into the plans of the allied nations for the post-war world.

This viewpoint was elaborated in a supplementary memorandum in which also the technical problem of control measures was further discussed. In particular, I attempted to stress that just the mutual openness, which now was obviously necessary for common security, would in itself promote international understanding and pave the way for enduring co-operation. This memorandum, dated March 24th 1945, contains, besides remarks which have no interest to-day, the following passages:

Above all, it should be appreciated that we are faced only with the beginning of a development and that, probably within the very near future, means will be found to simplify the methods of production of the active substances and intensify their effects to an extent which may permit any nation possessing great industrial resources to command powers of destruction surpassing all previous imagination.

Humanity will, therefore, be confronted with dangers of unprecedented character unless, in due time, measures can be taken to forestall a disastrous competition in such formidable armaments and to establish an international control of the manufacture and use of the powerful materials.

Any arrangement which can offer safety against secret preparations for the mastery of the new means of destruction would, as stressed in the memorandum, demand extraordinary measures. In fact, not only would universal access to full information about scientific discoveries be necessary, but every major technical enterprise, industrial as well as military, would have to be open to international control.

In this connection it is significant that the special character of the efforts which, irrespective of technical refinements, are required for the production of the active materials, and the peculiar conditions which govern their use as dangerous explosives, will greatly facilitate such control and should ensure its efficiency, provided only that the right of supervision is guaranteed.

Detailed proposals for the establishment of an effective control would have to be worked out with the assistance of scientists and technologists appointed by the governments concerned, and a standing expert committee, related to an international security organization, might be charged with keeping account of new scientific and technical developments and with recommending appropriate adjustments of the control measures.

On recommendations from the technical committee the organization would be able to judge the conditions under which industrial exploitation of atomic energy sources could be permitted with adequate safeguards to prevent any assembly of active material in an explosive state.

As argued in the memorandum, it would seem most fortunate that the measures demanded for coping with the new situation, brought about by the advance of science and confronting mankind at a crucial moment of world affairs, fit in so well with the expectations for a future intimate international co-operation which have found unanimous expression from all sides within the nations united against aggression.

Moreover, the very novelty of the situation should offer a unique opportunity of appealing to an unprejudiced attitude, and it would even appear that an understanding about this vital matter might contribute most favourably towards the settlement of other problems where history and traditions have fostered divergent viewpoints.

With regard to such wider prospects, it would in particular seem that the free access to information, necessary for common security, should have far-reaching effects in removing obstacles barring mutual knowledge about spiritual and material aspects of life in the various countries, without which respect and goodwill between nations can hardly endure.

Participation in a development, largely initiated by international scientific collaboration and involving immense potentialities as regards human welfare, would also reinforce the intimate bonds which were created in the years before the war between scientists of different nations. In the present situation these bonds may prove especially helpful in connection with the deliberations of the respective governments and the establishment of the control.

In preliminary consultations between the governments with the primary purpose of inspiring confidence and relieving disquietude, it should be necessary only to bring up the problem of what the attitude of each partner would be if the prospects opened up by the progress of physical science, which in outline are common knowledge, should be realized to an extent which would necessitate exceptional action.

In all the circumstances it would seem that an understanding could hardly fail to result, when the partners have had a respite for considering the consequences of a refusal to accept the invitation to co-operate, and convincing themselves of the advantages of an arrangement guaranteeing common security without excluding anyone from participation in the promising utilization of the new sources of material prosperity.

All such opportunities may, however, be forfeited if an initiative is not taken while the matter can be raised in a spirit of friendly advice. In fact, a postponement to await further developments might, especially if preparations for competitive efforts in the meantime have reached an advanced stage, give the approach the appearance of an attempt at coercion in which no great nation can be expected to

acquiesce.

Indeed, it need hardly be stressed how fortunate in every respect it would be if, at the same time as the world will know of the formidable destructive power which has come into human hands, it could be told that the great scientific and technical advance has been helpful in creating a solid foundation for a future peaceful co-operation between nations.

Looking back on those days, I find it difficult to convey with sufficient vividness the fervent hopes that the progress of science might initiate a new era of harmonious co-operation between nations, and the anxieties lest any opportunity to promote such a development be forfeited.

Until the end of the war I endeavoured by every way open to a scientist to stress the importance of appreciating the full political implications of the project and to advocate that, before there could be any question of use of atomic weapons, international co-operation be initiated on the elimination of the new menaces to world security.

I left America in June 1945, before the final test of the atomic bomb, and remained in England, until the official announcement in August 1945 that the weapon had been used. Soon thereafter I returned to Denmark and have since had no connection with any secret, military or industrial, project in the field of atomic energy.

When the war ended and the great menaces of oppression to so many peoples had disappeared, an immense relief was felt all over the world. Nevertheless, the political situation was fraught with ominous forebodings. Divergences in outlook between the victorious nations inevitably aggravated controversial matters arising in connection with peace settlements. Contrary to the hopes for future fruitful co-operation, expressed from all sides and embodied in the Charter of the United Nations, the lack of mutual confidence soon became evident.

The creation of new barriers, restricting the free flow of information between countries, further increased distrust and anxiety. In the field of science, especially in the domain of atomic physics, the continued secrecy and restrictions deemed necessary for security reasons hampered international co-operation to an extent which split the world community of scientists into separate camps.

Despite all attempts, the negotiations within the United Nations have so far failed in securing agreement regarding measures to eliminate the dangers of atomic armament. The sterility of these negotiations, perhaps more than anything else, made it evident that a constructive approach to such vital matters of common concern would require an atmosphere of greater confidence.

Without free access to all information of importance for the interrelations between nations, a real improvement of world affairs seemed hardly imaginable. It is true that some degree of mutual openness was envisaged as an integral part of any international arrangement regarding atomic energy, but it grew ever more apparent that, in order to pave the way for agreement about such arrangements, a decisive initial step towards openness had to be made.

The ideal of an open world, with common knowledge about social conditions and technical enterprises, including military preparations, in every country, might seem a far remote possibility in the prevailing world situation. Still, not only will such relationship between nations obviously be required for genuine co-operation on progress of civilization, but even a common declaration of adherence to such a course would create a most favourable background for concerted efforts to promote universal security. Moreover, it appeared to me that the countries which had pioneered in the new technical development might, due to their possibilities of offering valuable information, be in a special position to take the initiative by a direct proposal of full mutual openness.

I thought it appropriate to bring these views to the attention of the American government without raising the delicate matter publicly. On visits to the United States in 1946 and in 1948 to take part in scientific conferences, I therefore availed myself of the opportunity to suggest such an initiative to American statesmen. Even if it involves repetition of arguments already presented, it may serve to give a clearer impression of the ideas under discussion on these occasions to quote a memorandum, dated May 17th, 1948, submitted to the Secretary of State as a basis for conversations in Washington in June 1948:

The deep-rooted divergences in attitudes to many aspects of human relationship which have grown out of social and political developments in the last decades, were bound to present a serious strain on international relations at the conclusion of the second world war. While, during the war, the efforts in common defense largely distracted attention from such divergences, it was clear that the realization of the hopes acclaimed from all the nations united against aggression of a whole-hearted co-operation in true confidence would demand a radically new approach to international relations.

The necessity of a readjustment of such relations was even further accentuated by the great scientific and technical developments which hold out bright prospects for the promotion of human welfare, but at the same time have placed formidable means of destruction in the hands of man. Indeed, just as previous technical progress has led to the recognition of need for adjustments within civilized societies, many barriers between nations which hitherto were thought necessary for the defense of national interests would now obviously stand in the way of common security.

The fact that this challenge to civilization presents the nations with a matter of the deepest common concern should offer a unique opportunity for seeking continued co-operation on vital problems. Already during the war, it was, therefore, felt that a favourable foundation for later developments might be created by an early initiative aimed at inviting confidence by making all partners aware of

the actual situation which would have to be faced, and by assuring them of willingness to share in the far-reaching concessions as to accustomed national prerogatives which would be demanded from every side.

In the years which have passed since the war, the divergences in outlook have manifested themselves ever more clearly and a most desperate feature of the present situation is the extent to which the barring of intercourse has led to distortion of facts and motives, resulting in increasing distrust and suspicion between nations and even between groups within many nations. Under these circumstances the hopes embodied in the establishment of the United Nations Organization have met with repeated great disappointments and, in particular, it has not been possible to obtain consent as regards control of atomic energy armaments.

In this situation with deepening cleavage between nations and with spreading anxiety for the future, it would seem that the turning of the trend of events requires that a great issue be raised, suited to invoke the highest aspirations of mankind. Here it appears that the stand for an open world, with unhampered opportunities for common enlightenment and mutual understanding, must form the background for such an issue. Surely, respect and goodwill between nations cannot endure without free access to information about all aspects of life in every country.

Moreover, the promises and dangers involved in the technical advances have now most forcibly stressed the need for decisive steps toward openness as a primary condition for the progress and protection of civilization. The appreciation of this point, it is true, underlies the proposals to regulate co-operation on the development of the new resources, brought before the United Nations Atomic Energy Commission, but just the difficulty experienced in obtaining agreement under present world conditions would suggest the necessity of centering the issue more directly on the problem of openness.

Under the circumstances it would appear that most careful consideration should be given to the consequences which might ensue from an offer, extended at a well-timed occasion, of immediate measures towards openness on a mutual basis. Such measures should in some suitable manner grant access to information, of any kind desired, about conditions and developments in the various countries and would thereby allow the partners to form proper judgment of the actual situation confronting them.

An initiative along such lines might seem beyond the scope of conventional diplomatic caution; yet it must be viewed against the background that, if the proposals should meet with consent, a radical improvement of world affairs would have been brought about, with entirely new opportunities for co-operation in confidence and for reaching agreement on effective measures to eliminate common dangers.

Nor should the difficulties in obtaining consent be an argument against taking the initiative since, irrespective of the immediate response, the very existence of an offer of the kind in question should deeply affect the situation in a most promising direction. In fact, a demonstration would have been given to the world of preparedness to live together with all others under conditions where mutual relationships and common destiny would be shaped only by honest conviction and good example.

Such a stand would, more than anything else, appeal to people all over the world, fighting for fundamental human rights, and would greatly strengthen the moral position of all supporters of genuine international co-operation. At the same time, those reluctant to enter on the course proposed would have been brought into a position difficult to maintain since such opposition would amount to a confession of lack of confidence in the strength of their own cause when laid open to the world. Altogether, it would appear that, by making the demand for openness a paramount issue, quite new possibilities would be created, which, if purposefully followed up, might bring humanity a long way forward towards the realization of that co-operation on the progress of civilization which is more urgent and, notwithstanding present obstacles, may still be within nearer reach than ever before.

The consideration in this memorandum may appear utopian, and the difficulties of surveying complications of non-conventional procedures may explain the hesitations of governments in demonstrating adherence to the course of full mutual openness. Nevertheless, such a course should be in the deepest interest of all nations, irrespective of differences in social and economic organization, and the hopes and aspirations for which it was attempted to give expression in the memorandum are no doubt shared by people all over the world.

While the present account may perhaps add to the general recognition of the difficulties with which every nation was confronted by the coincidence of a great upheaval in world affairs with a veritable revolution as regards technical resources, it is in no way meant to imply that the situation does not still offer unique opportunities. On the contrary, the aim is to point to the necessity of reconsidering, from every side, the ways and means of co-operation for avoiding mortal menaces to civilization and for turning the progress of science to lasting benefit of all humanity.

Within the last years, world-wide political developments have increased the tension between nations and at the same time the perspectives that great countries may compete about the possession of means of annihilating populations of large areas and even making parts of the earth temporarily uninhabitable have caused widespread confusion and alarm.

As there can hardly be question for humanity of renouncing the prospects of improving the material conditions for civilization by atomic energy sources, a radical adjustment of international relationship is evidently indispensable if civilization shall survive. Here, the crucial point is that any guarantee that the progress of science is used only to the benefit of mankind presupposes the same attitude as is required for co-operation between nations in all domains of culture.

Also in other fields of science recent progress has confronted us with a situation similar to that created by the development of atomic physics. Even medical science, which holds out such bright promises for the health of people all over the world, has created means of extinguishing life on a terrifying scale which imply grave menaces to civilization, unless universal confidence and responsibility can be firmly established.

The situation calls for the most unprejudiced attitude towards all questions of international relations. Indeed, proper appreciation of the duties and responsibilities implied in world citizenship is in our time more necessary than ever before. On the one hand, the progress of science and technology has tied the fate of all nations inseparably together, on the other hand, it is on a most different cultural background that vigorous endeavours for national self-assertion and social development are being made in the various parts of our globe.

An open world where each nation can assert itself solely by the extent to which it can contribute to the common culture and is able to help others with experience and resources must be the goal to be put above everything else. Still, example in such respects can be effective only if isolation is abandoned and free discussion of cultural and social developments permitted across all boundaries.

Within any community it is only possible for the citizens to strive together for common welfare on a basis of public knowledge of the general conditions in the country. Likewise, real co-operation between nations on problems of common concern presupposes free access to all information of importance for their relations. Any argument for upholding barriers for information and intercourse, based on concern for national ideals or interests, must be weighed against the beneficial effects of common enlightenment and the relieved tension resulting from openness.

In the search for a harmonious relationship between the life of the individual and the organization of the community, there have always been and will ever remain many problems to ponder and principles for which to strive. However, to make it possible for nations to benefit from the experience of others and to avoid mutual misunderstanding of intentions, free access to information and unhampered opportunity for exchange of ideas must be granted everywhere.

In this connection it has to be recognized that abolition of barriers would imply greater modifications in administrative practices in countries where new social structures are being built up in temporary seclusion than in countries with long traditions in governmental organization and international contacts. Common readiness to assist all peoples in overcoming difficulties of such kind is, therefore, most urgently required.

The development of technology has now reached a stage where the facilities for communication have provided the means for making all mankind a co-operating unit, and where at the same time fatal consequences to civilization may ensue unless international divergences are considered as issues to be settled by consultation based on free access to all relevant information.

The very fact that knowledge is in itself the basis for civilization points directly to openness as the way to overcome the present crisis. Whatever judicial and administrative international authorities may eventually have to be created in order to stabilize world affairs, it must be realized that full mutual openness, only, can effectively promote confidence and guarantee common security.

Any widening of the borders of our knowledge imposes an increased responsibility on individuals and nations through the possibilities it gives for shaping the conditions of human life. The forceful admonition in this respect which we have received in our time cannot be left unheeded and should hardly fail in resulting in common understanding of the seriousness of the challenge with which our whole civilization is faced. It is just on this background that quite unique opportunities exist to-day for furthering co-operation between nations on the progress of human culture in all its aspects.

I turn to the United Nations with these considerations in the hope that they may contribute to the search for a realistic approach to the grave and urgent problems confronting humanity. The arguments presented suggest that every initiative from any side towards the removal of obstacles for free mutual information and intercourse would be of the greatest importance in breaking the present deadlock and encouraging others to take steps in the same direction. The efforts of all supporters of international co-operation, individuals as well as nations, will be needed to create in all countries an opinion to voice, with ever increasing clarity and strength, the demand for an open world.

Copenhagen, June 9th, 1950.

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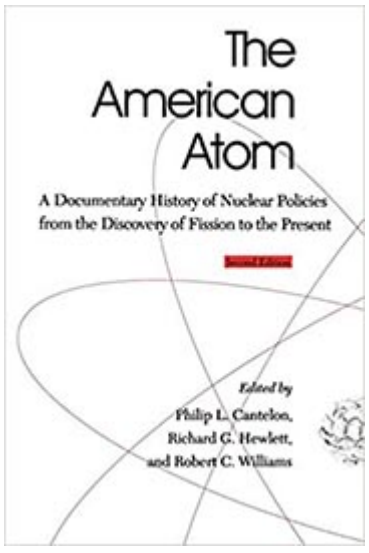

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