The Russell-Einstein Manifesto

Fifty Years On

On 9 July 1955, Bertrand Russell read what became known as the Russell-Einstein Manifesto to the world's press assembled in London. He explained that signing the appeal was the last thing Einstein had done before he died (see the excerpt from Russell's Autobiography *reproduced on page 27). We conclude this section with the two men's correspondence about their public appeal.*

In the tragic situation which confronts humanity, we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction, and to discuss a resolution in the spirit of the appended draft.

We are speaking on this occasion, not as members of this or that nation, continent, or creed, but as human beings, members of the species Man, whose continued existence is in doubt. The world is full of conflicts; and, overshadowing all minor conflicts, the titanic struggle between Communism and anti-Communism.

Almost everybody who is politically conscious has strong feelings about one or more of these issues; but we want you, if you can, to set aside such feelings and consider yourselves only as members of a biological species which has had a remarkable history, and whose disappearance none of us can desire.

We shall try to say no single word which should appeal to one group rather than to another. All, equally, are in peril, and, if the peril is understood, there is hope that they may collectively avert it.

We have to learn to think in a new way. We have to learn to ask ourselves, not what steps can be taken to give military victory to whatever group we prefer, for there no longer are such steps; the question we have to ask ourselves is: what steps can be taken to prevent a military contest of which the issue must be disastrous to all parties?

The general public, and even many men in positions of authority, have not realised what would be involved in a war with nuclear bombs. The general public still thinks in terms of the obliteration of cities. It is understood that the new bombs are more powerful than the old, and that, while one A-bomb could obliterate Hiroshima, one H-bomb could obliterate the largest cities, such as London, New York, and Moscow.

No doubt in an H-bomb war great cities would be obliterated. But this is one of the minor disasters that would have to be faced. If everybody in London, New York, and Moscow were exterminated, the world might, in the course of a few centuries, recover from the blow. But we now know, especially since the Bikini test, that nuclear bombs can gradually spread destruction over a very much wider area than had been supposed.

It is stated on very good authority that a bomb can now be manufactured which will be 2,500 times as powerful as that which destroyed Hiroshima. Such a bomb, if exploded near the ground or under water, sends radioactive particles into the upper air. They sink gradually and reach the surface of the earth in the form of a deadly dust or rain. It was this dust which infected the Japanese fishermen and their catch of fish. No one knows how widely such lethal radioactive particles might be diffused, but the best authorities are unanimous in saying that a war with H-bombs might possibly put an end to the human race. It is feared that if many H-bombs are used there will be universal death, sudden only for a minority, but for the majority a slow torture of disease and disintegration.

Many warnings have been uttered by eminent men of science and by authorities in military strategy. None of them will say that the worst results are certain. What they do say is that these results are possible, and no one can be sure that they will not be realised. We have not yet found that the views of experts on this question depend in any degree upon their politics or prejudices. They depend only, so far as our researches have revealed, upon the extent of the particular expert's knowledge. We have found that the men who know most are the most gloomy.

Here, then, is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race; or shall mankind renounce war?[1] People will not face this alternative because it is so difficult to abolish war.

The abolition of war will demand distasteful limitations of national sovereignty.[2] But what perhaps impedes understanding of the situation more than anything else is that the term 'mankind' feels vague and abstract. People scarcely realise in imagination that the danger is to themselves and their children and their grandchildren, and not only to a dimly apprehended humanity. They can scarcely bring themselves to grasp that they, individually, and those whom they love are in imminent danger of perishing agonisingly. And so they hope that perhaps war may be allowed to continue provided modern weapons are prohibited.

This hope is illusory. Whatever agreements not to use H-bombs had been reached in time of peace, they would no longer be considered binding in time of war, and both sides would set to work to manufacture H-bombs as soon as war broke out, for, if one side manufactured the bombs and the other did not, the side that manufactured them would inevitably be victorious.

Although an agreement to renounce nuclear weapons as part of a general reduction of armaments[3] would not afford an ultimate solution, it would serve certain important purposes. First: any agreement between East and West is to the

good in so far as it tends to diminish tension. Second: the abolition of thermonuclear weapons, if each side believed that the other had carried it out sincerely, would lessen the fear of a sudden attack in the style of Pearl Harbor, which at present keeps both sides in a state of nervous apprehension. We should, therefore, welcome such an agreement though only as a first step.

Most of us are not neutral in feeling, but, as human beings, we have to remember that, if the issues between East and West are to be decided in any manner that can give any possible satisfaction to anybody, whether Communist or anti-Communist, whether Asian or European or American, whether White or Black, then these issues must not be decided by war. We should wish this to be understood, both in the East and in the West.

There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal as human beings to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.

Resolution

We invite this Congress, and through it the scientists of the world and the general public, to subscribe to the following resolution:

'In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the governments of the world to realise, and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them.'

Professor Max Born (Professor of Theoretical Physics in Berlin, Frankfurt, and Göttingen, and of Natural Philosophy, Edinburgh; Nobel Prize in Physics)

Professor Percy W. Bridgman (Professor of Physics, Harvard University; Nobel Prize in Physics)

Professor Albert Einstein

Professor Leopold Infeld (Professor of Theoretical Physics, University of Warsaw)

Professor J.F. Joliot-Curie (Professor of Physics at the Collège de France; Nobel Prize in Chemistry)

Professor Herman J. Muller (Professor of Zoology, University of Indiana; Nobel Prize in Physiology and Medicine)

Professor Linus Pauling (Professor of Chemistry, California Institute of Technology; Nobel Prize in Chemistry)

Professor Cecil F. Powell (Professor of Physics, University of Bristol; Nobel Prize in Physics)

Professor Joseph Rotblat (Professor of Physics, University of London; Medical College of St. Bartholomew's Hospital)

Bertrand Russell
Professor Hideki Yukawa (Professor of Theoretical Physics, Kyoto University; Nobel Prize in Physics)

Notes

1. Professor Joliot-Curie wishes to add the words: 'as a means of settling differences between States'.
2. Professor Joliot-Curie wishes to add that these limitations are to be agreed by all and in the interests of all.
3. Professor Muller makes the reservation that this be taken to mean 'a concomitant balanced reduction of all armaments'.

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Man's Peril

Russell tells the story of how the Manifesto came into being in this excerpt from his Autobiography. He begins by reflecting on the response to his BBC broadcast entitled 'Man's Peril', which went out during Christmas 1954. It elicited an enormous public response.

'…as I assessed the response that my broadcast had achieved and considered what should be done next, I had realised that the point that I must concentrate upon was the need of co-operation among nations. It had occurred to me that it might be possible to formulate a statement that a number of very well-known and respected scientists of both capitalist and communist ideologies would be willing to sign calling for further joint action. Before taking any measures, however, I had written to Einstein to learn what he thought of such a plan. He had replied with enthusiasm, but had said that, because he was not well and could hardly keep up with present commitments, he himself could do nothing to help beyond sending me the names of various scientists who, he thought, would be sympathetic. He had begged me, nevertheless, to carry out my idea and to formulate the statement myself. This I had done, basing the statement upon my Christmas broadcast, 'Man's Peril'. I had drawn up a list of scientists of both East and West and had written to them, enclosing the statement, shortly before I went to Rome with the Parliamentarians. I had, of course, sent the statement to Einstein for his approval, but had not yet heard what he thought of it and whether he would be willing to sign it. As we flew from Rome to Paris, where the World Government Association were to hold further meetings, the pilot announced the news of Einstein's death. I felt shattered, not only for the obvious reasons, but because I saw my plan falling through without his support. But, on my arrival at my Paris hotel, I found a letter from him agreeing to sign. This was one of the last acts of his public life…

…June came and still all the replies to my letters to the scientists had not been

received. I felt that in any case some concrete plan must be made as to how the manifesto should be publicised. It seemed to me that it should be given a dramatic launching in order to call attention to it, to what it said and to the eminence of those who upheld it. After discarding many plans, I decided to get expert advice. I knew the editor of *The Observer* slightly and believed him to be liberal and sympathetic. He proved at that time to be both. He called in colleagues to discuss the matter. They agreed that something more was needed than merely publishing the fact that the manifesto had been written and signed by a number of eminent scientists of varying ideologies. They suggested that a press conference should be held at which I should read the document and answer questions about it. They did far more than this. They offered to arrange and finance the conference with the proviso that it not become, until later, public knowledge that they had done so. It was decided finally that the conference should take place on July 9th (1955). A room was engaged in Caxton Hall a week before. Invitations were sent to the editors of all the journals and to the representatives of foreign journals as well as to the BBC and representatives of foreign radio and TV in London. This invitation was merely to a conference at which something important of worldwide interest was to be published. The response was heartening and the room had to be changed to the largest in the Hall…

…Another difficulty that had beset me was the finding of a chairman for the meeting who would not only add lustre to the occasion but would be equipped to help me in the technical questions that would surely be asked. For one reason or another everyone I approached refused the job. I confess that I suspected their refusal to have been a result of pusillanimity. Whoever took part in this manifesto or its launching ran the risk of disapproval that might, for a time at any rate, injure them or expose them to ridicule, which they would probably mind even more. Or perhaps their refusal was the result of their dislike of the intentional dramatic quality of the occasion. Finally, I learned that Professor Josef Rotblat was sympathetic. He was, and still is, an eminent physicist at the Medical College of St Bartholomew's Hospital and Executive Vice-President of the Atomic Scientists' Association. He bravely and without hesitation agreed to act as Chairman and did so when the time came with much skill. From the time of that fortunate meeting I have often worked closely with Professor Rotblat and I have come to admire him greatly. He can have few rivals in the courage and integrity and complete self-abnegation with which he has given up his own career (in which, however, he still remains eminent) to devote himself to combating the nuclear peril as well as other, allied evils. If ever these evils are eradicated and international affairs are straightened out, his name should stand very high indeed among the heroes.

Amongst others who encouraged me at this meeting were Alan Wood and Mary Wood who, with Kenneth Harris of *The Observer*, executed a variety of burdensome and vexatious drudgeries to make the occasion go off well. In the event it did go well. The hall was packed, not only with men, but with recording and television machines. I read the manifesto and the list of signatories and explained how and why it had come into being. I then, with Rotblat's help,

replied to questions from the floor. The journalistic mind, naturally, was impressed by the dramatic way in which Einstein's signature had arrived. Henceforth, the manifesto was called the Einstein-Russell (*or vice versa*) manifesto. At the beginning of the meeting a good deal of scepticism and indifference and some out and out hostility was shown by the press. As the meeting continued, the journalists appeared to become more sympathetic and even approving, with the exception of one American journalist who felt affronted for his country by something I said in reply to a question. The meeting ended after two and a half hours with enthusiasm and high hope of the outcome of the call to scientists to hold a conference…

* * *

Correspondence

Einstein received Russell's first proposal about the appeal in a letter dated 11 February 1955.

Dear Dr. Einstein,
In common with every other thinking person, I am profoundly disquieted by the armaments race in nuclear weapons. You have on various occasions given expression to feelings and opinions with which I am in close agreement. I think that eminent men of science ought to do something dramatic to bring home to the public and Governments the disasters that may occur. Do you think it would be possible to get, say, six men of the very highest scientific repute headed by yourself, to make a very solemn statement about the imperative necessity of avoiding war? These men should be so diverse in their politics that any statement signed by all of them would be obviously free from pro-Communist or anti-Communist bias. I have had a letter from Joliot-Curie which I found encouraging since the fact that he is a Communist and I am not did not prevent agreement on this matter. I expressed my own feelings in a broadcast of which I enclose a reprint. This has evoked a surprisingly favourable response in this country, but in other countries other voices are needed. I do not know personally any of the American atomic scientists, but I read their *Bulletin* monthly with interest and usually with agreement. I am sure that there are many of them who are anxious to find some way of preventing atomic disaster. Do you know of any way of securing effective action from any of these men?

There are certain points that seem to me important. First: it would be wholly futile to get an agreement prohibiting the H-bomb. Such an agreement would not be considered binding after war has broken out, and each side on the outbreak of war would set to work to manufacture as many bombs as possible. Second: it is important not to be sidetracked by the peaceful uses of atomic energy. These will become important when war ceases to be probable, but until then their importance is comparatively negligible. Three: in any attempt to avoid atomic war the strictest

neutrality is to be observed. There must be no suggestion of seeking advantage for either side or of preferring either side. Everything must be said from the point of view of mankind, not of this or that group. For this reason, among others, it would be a good thing if some were known Communists and others known anti-Communists. Four: the thing to emphasise is that war may well mean the extinction of life on this planet. The Russian and American Governments do not think so. They should have no excuse for continued ignorance on the point. Five: although the H-bomb at the moment occupies the centre of attention, it does not exhaust the destructive possibilities of science, and it is probable that the dangers of bacteriological warfare may before long become just as great. This reinforces the general proposition that war and science can no longer coexist.

Joliot-Curie apparently pins his faith to a large international conference of men of science. I do not think this is the best way to tackle the question. Such a conference would take a long time to organise. There would be difficulties about visas. When it met there would be discussions and disagreements which would prevent any clear and dramatic impression upon the public. I am convinced that a very small number of very eminent men can do much more, at any rate in the first instance.

My own belief is that there should be an appeal to neutral powers. I should like to see one or more of the neutral powers appointing small commissions of their own nationals to draw up a report as to the probable effects of war on neutrals as well as belligerents. I should like to see such a commission composed of, say, six members: a nuclear physicist, a bacteriologist, a geneticist, an authority on air warfare, a man with experience of international relations derived from work in the United Nations, and a chairman who should not be a specialist but a man of wide culture. I should like their report to be published and presented to all Governments of the world who should be invited to express their opinion on it. I should hope that in this way the impossibility of modern war might come to be generally acknowledged. Neutral nations are more likely to consider such a scheme favourably if they know that there is important support for it in countries which are not neutral.

I should be very glad to know your opinion on these various matters.

With warmest good wishes,
Yours very sincerely,
Bertrand Russell

Einstein replied within the week, on 16 February 1955.

Dear Bertrand Russell,
I agree with every word in your letter of February 11. Something must be done in this matter, something that will make an impression on the general public as well as on political leaders. This might best be achieved by a public declaration, signed by a small number, say, twelve persons, whose scientific attainments

(scientific in the widest sense) have gained them international stature and whose testimony will not be blunted in its effectiveness by their political affiliations. One might even include politically tagged people like Joliot, provided they were counterbalanced by men from the other camp.

The neutral countries ought to be well represented. For example, it is absolutely vital to include Niels Bohr, and surely there is little doubt that he would join. Indeed, he might even be willing to visit you and take part in outlining the text from the very outset. He might also be helpful in proposing and enlisting signatories.

I hope you will consent to my sending your letter to a few people here in America, men I think may prove useful to the undertaking. The choice is particularly difficult. As you well know, this country has been ravaged by a political plague that has by no means spared scientists.

Of course there should be Russian signatures as well, a matter that may not be so difficult after all. My colleague Leopold Infeld, now a professor at the University of Warsaw, might be helpful in such an endeavour.

Here in America, in my opinion, Whitehead and Urey should be considered. We should try to see to it, however, that half the signatories are neutrals, because that will impress the hot-heads and emphasise the neutral character of the whole enterprise.

With warmest regards,
Yours,
A. Einstein

Russell wrote again on 25 February 1955, two weeks after his first letter.

Dear Einstein,
Thank you for your letter of February 16. I am very glad to find that you and I are in such agreement. I think you are right in suggesting that we should first make sure of two signatories in addition to yourself and me, and that we should then send the draft to selected persons. I should like to leave to you, or to you and Bohr, the choice of such persons, as you know the scientific world much better than I do. I am interested that you should think Niels Bohr would be prepared to come and see me. I do not know where he is at present. I made his acquaintance in Copenhagen before the war and found him a very sympathetic personality. I am entirely willing that you should show my letter to anybody that you think may help. In your letter you mentioned Whitehead and Urey. I do not know what Whitehead you are alluding to. Before attempting to draw up a draft for submission to a small number of eminent men of science, I should like to have your opinion as to the best scope for such a document. My own feeling is that after pointing out, briefly and soberly, the universal suicidal folly of a thermonuclear war it should go on to suggest that Governments which are uncommitted should approach both sides in an attempt to get them

simultaneously to agree that war cannot serve purposes of either. I think this important, not only because it may succeed, but also because it suggests a possible line of action. I find many people paralysed by inability to think of anything that could be done; and I do not think we should rest content with pointing out the horrors of a war, but should suggest practical steps towards preventing it.

I have been in touch with Nehru and have submitted to him verbally a suggestion which is made explicit in the enclosed draft. This draft, which will be signed by a number of Members of Parliament, is about to be submitted to Mrs Pandit. Nehru has expressed himself as very favourable to its suggestions, and it seems probable that he will do something along the lines that are suggested. For the moment, the memorandum remains private and nothing must yet be said about what the Indian Government may do, but I think there is good reason to hope that the outcome may be such as we can welcome.

A declaration by a small number of eminent men such as you and I have in mind runs parallel with any action that the Indian Government may take, and may help the Indian Government to act vigorously.

I shall be glad to hear your opinion on the above points.

Yours very sincerely,
Bertrand Russell

Einstein's next letter is dated 4 March 1955.

I have written to Niels Bohr and suggested that he get in touch with you. I hope he will do so very soon. I have not written to any colleagues in the United States, because I am not quite clear about the role you intend them to play, and also for the reason that such a step is, in some respects, irreversible.

It seems to me that, to avoid any confusion, you should regard yourself as the dictator of the enterprise and give orders. I would be grateful to hear how Niels Bohr reacts and whether you reach agreement on the fundamental points.

Pardon me for having been unaware that your old friend Whitehead passed away. You reminded me of the fact in the most exquisitely tactful way.

I think it would be highly desirable to get Albert Schweitzer as one of our group. His moral influence is very great and world-wide. If you should think it advisable, I shall write him as soon as you give me a clear picture of the activities that are planned for the group.

Awaiting orders, I am, with warmest regards and in admiration,

Yours sincerely,
Albert Einstein

Einstein's letter to Niels Bohr, at the Institute for Theoretical Physics in Copenhagen, was dated 2 March 1955.

Dear Niels Bohr,
Don't frown like that! This is not about our old physics controversy, but about a matter on which we are in complete agreement. Bertrand Russell recently wrote me a letter, of which I enclose a copy. He seeks to bring together a small group of internationally renowned scholars who would join in a warning to all nations and governments of the perilous situation created by atomic weapons and the arms race. This declaration is to coincide with political action initiated by the neutral countries.

Bertrand Russell knows and desires that I write you. Of course he is well aware that you could greatly aid the undertaking with your influence, your experience and your personal relations with outstanding people; indeed, he realises that your counsel and active participation are virtually indispensable for success.

This endeavour of the scholars is *not* to be limited to representatives of neutral countries, though the choice of participants is to demonstrate clearly a total absence of political partisanship. Unless I miss Russell's purpose, he wants to go beyond a mere highlighting of the peril; he proposes to *demand* that the governments publicly acknowledge the necessity for renouncing any solution of problems by military means.

It would be most kind of you to communicate with Bertrand Russell and to advise him that you are disposed to participate – that is, if you approve of the plan in principle. The two of you could then decide on personalities whose participation would seem desirable. Among those now over here, I have been thinking of Urey, Szilard and James Frank – but there really shouldn't be too many physicists. I stand ready to write to anyone the two of you think suitable, but I am reluctant to undertake the initial (and irrevocable) step until I know how both of you feel about it.

In America things are complicated by the likelihood that the most renowned experts, who occupy official positions of influence, will be disinclined to commit themselves to such an 'adventure'. My own participation may enhance the effect abroad, but not here at home, where I am known as a black sheep (not merely in scientific matters).

Much will be gained if you can reach agreement with Bertrand Russell on the main points. For the time being there is no need to write me at all.

With warmest regards,
Yours,
Albert Einstein

Russell's last letter to Einstein about the manifesto was dated 5 April 1955.

Dear Einstein,
I have been turning over in my mind, and discussing with various people, the best steps for giving effect to the feeling against war among the great majority of men of science. I think the first step should be a statement by men of highest eminence, Communists and anti-Communists, Western and Eastern, about the disasters to be expected in a war. I enclose a draft of such a statement, and I very

much hope that you will be willing to sign it. I enclose also a list of those whom I am asking to sign. If sufficient signatures are obtained, I think the next step should be an international scientific congress which should be invited by the signatories to pass a resolution on the lines of the draft resolution which I enclose. I hope that in this way both Governments and public opinion can be made aware of the seriousness of the situation.

On the whole, I have thought that it was better at this stage to approach only men of science and not men in other fields, such as Arnold Toynbee whom you mentioned. Scientists have, and feel that they have, a special responsibility, since their work has unintentionally caused our present dangers. Moreover, widening the field would make it very much more difficult to steer clear of politics.

Yours sincerely,
Bertrand Russell

Einstein's reply dated 11 April proved to be his last public statement.

Dear Bertrand Russell,
Thank you for your letter of April 5th.
I am gladly willing to sign your excellent statement.
I also agree with your choice of the prospective signers.

With kind regards,
Albert Einstein

The first conference of scientists called for in the Russell-Einstein Manifesto took place in Canada, at Pugwash in Nova Scotia, in July 1957. Pugwash, as the organisation came to be called, has continued to convene conferences on these themes ever since (see www.pugwash.org).