

Niels Bohr and Petr Leonidovich Kapitza†

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Kapitza became acquainted with Niels Bohr in the summer of 1923 when Bohr came to Cambridge to be conferred with an honorary doctoral degree. “... After a conversation with Bohr you feel like such a fool”, — wrote Kapitza to Nikolai Nikolaevich Semenov in Petrograd on August 6, 1923 ([1], p. 86). His second year of activities at Cambridge were drawing to a close. This is how Bohr reminisced about their first conversation. “Your enthusiasm and imaginative power — he wrote to Kapitza on January 27, 1937 — made the greatest impression on me from the very first day we met in Cavendish Laboratory 15 years ago when you told me of your new ideas and plans for creating magnetic fields of super strength” [2].

Kapitza wrote his first letter to Bohr 10 years after their first meeting. But this was an entirely different Kapitza. By that time he had become a ‘European’ scientist, as people were saying at the time: a Fellow of Trinity College, a Fellow of the Royal Society, a correspondent member of the Academy of Sciences of the USSR and director of the Mond Laboratory in Cambridge... Indeed, Kapitza’s purpose in writing to Bohr was to request him to arbitrate a dispute which had arisen in conjunction with the official opening of this new laboratory in Cambridge.

As a sign of recognition to his Teacher, who had been supportive of his research on strong magnetic fields, Kapitza had unveiled a bas-relief of Rutherford in the entrance hall of the Mond Laboratory, commissioned from Eric Gill, one of the leading sculptors of the modern school of England. The conservatively minded professors felt that this portrait bore no special resemblance to Rutherford and therefore constituted an ‘offense’ to him. They demanded that the portrait be removed ([3], p. 265).

This is how Kapitza concluded his letter to Bohr:

“...Lord Rutherford, on being approached by the ‘conservative’ people, speaking to me, said that he does not understand anything about Art, and is even unable to judge the likeness, although he finds the nose in the portrait too pronounced and more of an Assyrian type. He fails in any case to see any offense in the portrait, and said to me, “You had better write and ask Bohr’s view — he knows me well, and also takes a great interest in modern art. I should like to know what he thinks” ([3], pp. 265–266).

On March 10, 1933 Kapitza wrote to Bohr and enclosed a snap shot of the bas-relief. By March 15 Bohr had already given his reply: “... the carving of Rutherford look to me most excellent, being at the same time thoughtful and powerful. I can therefore in no way support the critics of the portrait, and if Rutherford does not object to it and you are satisfied with it, I think that it fulfills its object. I hope that it will remain in its place for many years to come to witness the good work which we all know will be done in your new laboratory” ([3], p. 266).

As a token of gratitude for saving Rutherford’s portrait, Kapitza commissioned the sculptor to make another exact copy — for Bohr. It was sent to Bohr after when Kapitza no longer worked in Cambridge, when he was starting from scratch at the Institute for Physical Problems in Moscow.

On July 2, 1936 Bohr wrote to him in Moscow:

“Dear Kapitza,

I am sure you know that my long silence does not mean that I do not often think of you, and I hope that you have by now found good working conditions and that we shall soon again hear from you about some great new achievement. Many times every day I am reminded about your friendship and our common love for Rutherford through the relief which you so kindly gave me” ([3], p. 270).

Kapitza replied to Bohr in a long and very warm letter, in which he related the situation of scientists in the USSR and the challenges he had faced in setting up his institute in Moscow.

“I feel the responsibility of my position, especially having the experience which I gained in Cambridge. Besides just resuming my work here, I think I must try to organize my institute in such a way as to show people here all the healthy and powerful methods of the work in the Cavendish Laboratory. I will try to follow Rutherford’s methods as far as I am capable.

I am not quite sure that all I am telling you interest you but as we are both pupils of Rutherford and love him, I feel that you will be interested in these thoughts” ([4], p. 104).

“Common love for Rutherford” — this was the main thing which united Bohr and Kapitza.

When Rutherford died at the end of October 1937, Kapitza wrote a most grief-stricken and highly emotional letter to Bohr. “I loved Rutherford, and I am writing to you, because I know that you had a great feeling for him. From his words I always gathered that he liked you the most amongst all his pupils and to be sincere I was always a little jealous of you” ([3], p. 273; [5], p. 310).

Thus, love for their Teacher was the first thing that Kapitza and Bohr had in common.

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Portrait of Rutherford, the Teacher of N Bohr and P L Kapitza. The portrait was made by English sculptor E. Gill in 1933.

* * *

“There was one other thing that Bohr and I had in common, — stated Kapitza upon receiving his diploma as foreign member of the Danish Academy in July 1946 — the issue of the need to support internationalism in science.”

He went on to say:

“The modern achievements of science are the result of collaboration among scientists in many countries. (...) At present, due to the tremendous new opportunities which atomic energy has made available to mankind, the idea of this international collaboration of science is exposed to great dangers. If the solution of the fundamental problems of nuclear physics is not to be a field of international study, and individual countries attempt to tackle there problems in isolation, research of these important natural phenomena will undoubtedly be held back. Indeed, it will be all the more regrettable, since the value of these new discoveries lies not in their military applications, but in the unusual power of these new energy sources, which hold the promise of supplying mankind with atomic energy, and which, as may be expected, will, over the passage of time, totally reshape the face of modern culture. The dangers which the development of science faces in this respect can most certainly have an adverse effect on the evolution of science and progress.”

“Recently, — remarked Kapitza, — I had the chance to exchange opinions with Bohr on this matter. Our opinions match as to the fact that scientists should speak out against secrecy in this area and against all attempts to turn one of the most amazing achievements of science into a petty game of imperialist aspirations or the aggressive ploys of individual countries” [2].

Before discussing the exchange of opinions, which Kapitza mentioned having had with Bohr, I should not pass over one episode which, to the best of my knowledge, is recounted in every single biography dedicated to the life of Niels Bohr. I am referring to the letter which Kapitza wrote Bohr in October 1943, when he learned that Bohr had managed to escape, together with his family, from Denmark, then occupied by the Germans.

No sooner was Kapitza informed that Bohr had fled, than he wrote, on the same day, October 14, 1943, to the first deputy chairman of the government, the People’s Commissar of Foreign Affairs of the USSR, V M Molotov:

“Today I learned that the Danish physicist Niels Bohr has escaped to Sweden. He is a very great scientist, the father of modern atomic theory, a Nobel laureate and an honorary member of many academies including our own. Bohr is a good friend of the Soviet Union and has visited three times to deliver lectures, etc. I know him very well and regard him as a great scientist and a good person.

I think it would be appropriate and correct if we could offer him and his family hospitality in the Soviet Union while the war continues. Even if he is unable to make use of such an invitation, it should still be offered. If you approve of this idea then the invitation could come either from the Academy of Sciences (...) or less formally, from me personally...” ([4], p. 206).

I recall the amazement of Professor David Shoenberg, a pupil of Kapitza, back in Cambridge, with whom we worked on an English version of the letters of Kapitza [5] when, in the spring of 1989, I showed him this letter. He, like many in the West, — including Churchill — was convinced that in 1943 Kapitza was trying to lure Bohr into the USSR in order to worm secrets of the atomic bomb out of him. Kapitza’s letter to Molotov eliminates this suspicion. As we shall see, Kapitza was moved purely by his humanitarian concern for a beloved friend who had lost his homeland.

Two weeks later, after learning that he would be allowed to send an invitation to Bohr, Kapitza wrote to Molotov: “I am very pleased that you are so favorably disposed towards the opportunity of allowing me to render assistance to such a great scientist as Bohr, who holds the Soviet Union in high esteem. Thank you very much.”

At the same time Kapitza sent Molotov the text of his letter to Bohr. “If you find this letter appropriate, — he writes, — I would be grateful if you could forward it through your channels and give instructions so that Bohr might have the same opportunity to send me a reply” ([4], p. 207).

Everything was done as Kapitza requested. This is why Bohr received a letter from his Soviet friend at the Embassy of the USSR in London. This happened in 1944, after Bohr returned from a trip to the USA, where he became acquainted with research into the atomic bomb.

It will be sufficient to cite merely the final sentence of this letter, which has been published on a number of occasions:

“... I always couple your name with that of Rutherford, — wrote Kapitza, — and the great affection we both feel for him is a strong bond between us. It will be the greatest pleasure for me to help you in any respect” ([4], p. 209; [5], p. 355).

Bohr received Kapitza’s letter at a time when he was waiting for a very important meeting with Churchill. He wished to convince him that the development of the atomic bomb in secrecy from Russia, the ally in the war against Hitler’s Germany, now suffering great hardship, would be a grave danger for the future of the world. “No real safety can

be achieved without a universal agreement based on mutual confidence", he wrote in April from America to one of the closest associates of Churchill ([6], p. 347).

It is interesting to point out that even Bohr didn't regard Kapitza's letter as completely disinterested. In an 'aide-memoir' of July 3, 1944, which he addressed to Roosevelt, he wrote: "... An interest within the Soviet Union for the project may perhaps be indicated by a letter which I received from a prominent Russian physicist with whom I had formed a friendship during his many years stay in England... This letter contained an official invitation to come to Moscow to join in scientific work with Russian colleagues ... No reference was made to any special subject, but from pre-war work of Russian physicists it is natural to assume that nuclear problems will be the center of interest" [7].

Bohr had to co-ordinate his reply letter to Kapitza, which was dispatched through the Soviet Embassy in London, with British intelligence authorities.

His meeting with Churchill is known to have been a failure. Bohr's proposal was rejected and during a meeting between Churchill and Roosevelt held in Hyde Park on September 19, 1944, the following minutes were recorded:

(1) The suggestion that the world should be informed regarding T.A. (Tube Alloys, the British codename for the atomic project) with a view to an international agreement over its control and usage, is not accepted ... The entire issue should from now on be regarded as top secret. (...)

(3) Enquiries should be made regarding the activities of Professor Bohr and steps taken to ensure that he is responsible for no leaks of information, particularly to the Russians ([6], p. 447).

When Churchill was made aware of Bohr's correspondence with Kapitza, he became furious. "... The Russian professor has urged him to go to Russia in order to discuss matters — wrote Churchill to his personal assistant Lord Cherwell on September 20, 1944. — What is all this about? It seems to me Bohr ought to be confined or at any rate made to see that he is very near the edge of mortal crimes" ([6], p. 358).

Kapitza learned many year later of Bohr's conflict with Churchill and the dramatic history of his diplomatic 'negotiations' in London and Washington, in which Kapitza's humanitarian letter played such a strange role, after reading Margaret Gowing's "Britain and Atomic Energy" (6) and a manuscript of an article on the war years which Bohr's son — Aage — wrote for a collection of articles on Niels Bohr, by his friends and associates (this book was published in 1967 [8]). Aage Bohr delivered the manuscript of his article to Kapitza in May 1965, when the latter arrived in Copenhagen, where the King of Denmark awarded him the Niels Bohr gold medal.

On August 26, 1965 Kapitza wrote to Aage: "The foresight of your father that secrecy in atomic science is not only useless but harmful proved to be quite correct. The collision between his view and the narrow-minded and selfish attitude which was taken by Churchill is a wonderful illustration in history — how political mistakes are made. The persistence and energy with which your father tried to push his views deserve the greatest praise. This story must be known, not only as the most interesting episode of your father's public life but also as a lesson for future generations to know how necessary it is to maintain internationalism in science" [2].

* * *

A few words should now be said about the 'exchange of opinions' with Bohr, which Kapitza mentioned in July 1946, when he was awarded a foreign fellowship of the Danish Academy.

Let us begin on that terrible day when the Americans dropped their first atomic bomb on the city of Hiroshima. A person who saw Kapitza on August 1945 related to me that he was utterly appalled by this news. Nobody had ever seen him so shaken and depressed.

When I asked Anna Alekseevna, Kapitza's wife, to tell me if this was how it had been, she told me that Kapitza that day was tormented by the question: why and to what purpose had this been done?

The trouble was that he, as many others in our country, guessed why the western allies had dropped an atomic bomb on the nearly devastated Japan. "They are trying to intimidate us, their allies" — this is the thought which tormented Kapitza, one of the most 'western' people in our country. They are intimidating us with the bomb which they made and kept secret from us.

Kapitza's state of mind at that time shows that he saw nothing reprehensible about using his name to conceal the intelligence mission to Copenhagen of Ya P Terletskii and his so-called 'interrogation of Bohr', of which so much has been written in recent years. It should also be recalled that Kapitza was then one of the leaders of the Soviet atomic project: on August 20, 1945 Stalin signed an edict on the formation of a Special Committee, under the State Defense Committee, which was assigned to "supervise all activities involving the utilization of atomic uranium energy" ([9], p. XV). There were only two scientists (of the 9 members) who sat on the Committee: I V Kurchatov and P L Kapitza. L P Beria was appointed chairman of the Committee.

On October 20 Niels Bohr received a rather odd telegram from Kapitza: two months following the return of Bohr to his native Copenhagen, Kapitza sent his congratulations: "on your happy and safe reunion with your family in free Denmark ..." [2].

It was as though Bohr had been waiting for this telegram. On the following day, October 21, he sent an anxious reply to Kapitza (apparently through the Soviet embassy in Denmark) in which he shares his thoughts and anxieties.

"I need not say that in connection with the immense implications of the development of nuclear physics the memories of Rutherford have constantly been in my thoughts and that I, like his other friends and pupils, have deplored that he should not himself be able to see the fruits of his great discoveries. His wisdom and authority will also be greatly missed in the endeavors to avert new dangers for civilization and to turn the great advance to the lasting benefit of all humanity" ([4], p. 237).

Along with his letter Bohr sent Kapitza his article "Science and Civilization", which was published in the "Times" newspaper on August 11, 1945, and a copy of the article "A Challenge to Civilization", which he submitted to the American journal "Science". He requested that these articles be shown to their common friends. Then he went on to observe: "I need not add that I shall be most interested to learn what you think yourself about this all-important matter which places so great a responsibility on our whole generation" ([4], p. 237).

It should not be ruled out that by October 21 Beria had been informed in Moscow by encrypted telegram that Bohr's letter to Kapitza had been received at the Soviet embassy in



Meeting of Niels Bohr with physicists in the Institute for Physical Problems (May, 1961). From left to right: I E Tamm, E S Itskevich, I M Lifshits, ?, V A Fok, L A Vainshtein, N Bohr, L D Landau, P L Kapitza. (Photo by S V Petrov)

Copenhagen. At any rate, on October 22, Kapitza, as though communicating telepathically with Bohr, writes him a letter which expresses the same sense of alarm and the same thoughts.

“At the moment I am much worried about the question of the international collaboration of science which is absolutely necessary for the healthy progress of culture in the world. The recent discoveries in nuclear physics and the famous atomic bomb I think prove once more that science is no more the hobby of university professors but is one of the factors which may influence world politics. Nowadays it is dangerous that scientific discoveries, if kept secret, will not just broadly serve humanity, but be used for the selfish interests of particular political or national groups.”

Kapitza writes in the final part of the letter: “I should be glad to hear from you what is the general attitude of leading scientists abroad on these questions. Any suggestions from you about means to discuss these questions I shall welcome warmly. I can indeed inform you what can be done in this line in Russia ...” ([4], p. 236; [5], p. 371).

There follows a paragraph which was omitted in the first publication of this letter in P L Kapitza’s book “Letters on Science”. Incidentally, this was clearly not a matter of ‘evil intentions’, since in 1989, when this book was published, its compiler, the present author, was unaware of the activities of the physicist Ya P Terletskii in the intelligence department of the NKVD.

“This letter, — writes Kapitza — will be handed to you by a young Russian physicist Terletskii. He is a young and able professor of the Moscow University and will explain to you the aims of his visit abroad. With him you may send me the answer” [2].

Let us now try to imagine the time when this letter was written. Kapitza’s participation in the Special Committee was unquestionably linked to a special degree of secrecy (this would account for his strange ‘silence’ on Bohr’s 60th birthday — October 7, 1945). Any communication with foreigners was forbidden. No personal relations were permitted in any way, shape or form. After receiving an assignment from Beria to help Terletskii gain access to Bohr, Kapitza uses this possibility to send Bohr a very important letter. As mentioned previously, he sent him a very strange telegram. But Bohr also had a great need for contact with Kapitza. That is why he was so pleased to receive that strange telegram and immediately sent Kapitza a long and very important letter.

Two prominent men sadly watch as an ‘iron curtain’ slowly and inexorably falls. They are attempting to stop this curtain from falling.

On October 22, 1945 Terletskii went to the Institute for Physical Problems to pick up his ‘letter of recommendation’.

“Kapitza first met with me alone, — he recalls. He advised me not to ask Bohr too many questions, but simply to introduce myself, pass on the letter and gifts from Kapitza, talk about Soviet physicists and that Bohr himself would talk about many issues of interest to us. While the letter was being prepared in English, Kapitza asked Landau in. Kapitza was brought the typewritten letter and two Palekh boxes. Kapitza handed them to me while Landau was present and explained that I was going to see Bohr in Copenhagen ...” ([10], p. 28).

Terletskii goes on to express perplexity and indignation as to why Kapitza needed to inform Landau of his trip. “The point is that Kapitza had clearly been instructed about the delicate nature of my mission, — Tereletskii writes. — It was

most undesirable to broaden the circle of persons who were aware of this and therefore the whole thing looked intentional.”

Indeed, it was intentional — Landau’s invitation to a ‘conspiratorial meeting’ with Terletskii. I believe that Kapitza did this because he was trying to remove what he felt to be the disgusting atmosphere of conspiracy and espionage which surrounded it. He really wished to make Bohr happy. He knew that Bohr would be pleased to hear from Terletskii that he had seen Landau safe and sound prior to his departure from Moscow.

As a matter of fact, Landau was another link between Kapitza and Bohr. One of Bohr’s most brilliant pupils, in March 1937 he was head of the Theory Department of the Institute for Physical Problems. In April 1938 he was arrested. At that time those who came to Landau’s defense included not only Kapitza, who eventually managed to secure his release, but also Bohr, who wrote Stalin a long letter ([11], p. 344).

In concluding the discussion of ‘Bohr’s interrogation’ I would like to offer my version of the facts and answer the question which Prof. David Holloway raises in his interesting article: why did Bohr agree to answer Terletskii’s questions at all? “He could have told Terletskii politely that he could not speak about such things”, — Holloway correctly points out ([12], p. 254).

It is my feeling that the involvement of Kapitza (and perhaps, Landau’s involuntary involvement) played a decisive role in this case. Let us recall how Terletskii describes the first minutes of his meeting with Bohr: “... We handed Bohr Kapitza’s letter and gifts. After reading the letter, Bohr began to ask questions about Kapitza’s family and Landau’s situation. When I said that Landau was working successfully in Kapitza’s laboratory, thereby dissipating the suspicion of Landau’s being persecuted in the USSR, which had obviously lingered since the time of Landau’s 1-year imprisonment in 1938, Bohr perked up and began to praise Landau as the most talented young theoretician with whom he had worked. Later, during the conversation, whenever it was appropriate, Bohr reiterated his praise of Landau. He even conveyed the impression that the main thing for him was to make the Soviet authorities aware of his great esteem for Landau” ([10], p. 37).

It should also be mentioned here that as early as July 1944, Bohr wrote to Roosevelt of Kapitza’s letter of October 28, 1943 as ‘an official invitation to join his Russian colleagues in their research efforts’. “Nuclear problems, — he wrote, — will be the center of their interests” [7]. Thus, even at that time he was convinced that Kapitza was one of the leading members of the Soviet atomic project and therefore, who but he could send him, Bohr, an official invitation via diplomatic channels? I am convinced that in October — November 1945 Bohr, along with many western physicists, had no doubts that it was Kapitza who was in charge of Soviet activities regarding the development of the atomic bomb (or was one of the leaders of this activity). It was therefore no matter of chance that such a prestigious american newspaper as “The New York Times” wrote as about something which was perfectly obvious: “Dr. Kapitza is the Soviet scientist most frequently mentioned in connection with the development of the atomic bomb in Russia ...” [13].

On November 2, 1945 Bohr received a visit from Professor Mogens Fog, a Communist member of the Danish parlia-

ment, and one of the leaders of the Danish resistance to the Germans during the occupation. He reported that a Soviet scientist arrived in Copenhagen “with a letter from Kapitza and wished to deliver it to Bohr and have a confidential talk with him, which would have to be arranged so secretly that the secret service would not in any way receive information about it” (aide-memoir which was dictated during those days by Bohr to his son Ernest; cited in the article by D Holloway [12] on page 245 and the footnote on p. 37). The cynicism of this head-on approach employed by Soviet intelligence is amazing enough, without mentioning the amateur and ostentatious nature of the whole operation, as described by a professional intelligence official V B Barkovskii ([14], p. 122).

Even though he was fully aware of the intelligence overtones of this visit, Bohr nonetheless agreed to meet with Terletskii and even answer his questions. But why?

This is my version. The content of Kapitza’s letter, which closely reflected the thoughts and mood of Bohr’s letter that was written on almost the same day, was in blatant contradiction with Terletskii’s mission, the recommendation paragraph not containing any code words which described Kapitza’s personal relation to the person who brought the letter (‘my friend’, for example, or ‘my pupil’ or ‘Landau’s pupil’). A A Kapitza drew my attention to this fact, as she had read this letter carefully after all the commotion arose in connection with Sudoplatov’s scandalous book [15].

In this letter Kapitza assumes a certain distance from Terletskii: “He will explain to you the aims of his visit abroad ...” These words, in my opinion, also contain a hint that Kapitza was forced to write a recommendation for Terletskii. Who could have compelled him to do this? Only the upper echelons of power in the country. And it was not difficult for Bohr to understand what totalitarian authority in the USSR does with those who fail to perform their tasks or do so unsatisfactorily. He had only to recall Landau’s tragic experience.

And now Kapitza (and Landau!) asked for his help. This is one way of interpreting Terletskii’s story about how he saw Landau when he was in Kapitza’s study ... How could Bohr then, in such a situation, worried as he was about the fate of Kapitza and Landau, show Terletskii the door?

Bohr acted the way a clever and decent person is obliged to do in such cases with insane authorities: he tried to outwit them. Nearly everything he told Terletskii was contained in ‘The Smyth Report’ [16] † which had recently been published in the USA. He delivered a rotaprint copy of this report to Terletskii during their second meeting, which made Terletskii genuinely happy. “... We were perhaps the first Soviet people who saw him”, exclaimed Terletskii, recalling those bygone days ([10], p. 39).

It should also be mentioned that Kapitza’s involvement in covering Terletskii’s blatant intelligence mission in no way affected his friendship with Bohr. At the beginning of April 1946 the Danish Academy of Sciences and Arts elected Kapitza as a foreign member and Bohr wrote him a warm letter on April 12, in which he invites him and his wife to come to Copenhagen. In the postscript to this letter he returns to Kapitza’s suggestion to assemble an international conference of scientists to discuss the issues which had arisen in connection with the appearance of nuclear weapons. This

† This was pointed out by Yu N Smirnov in his commentary to the publication of a report on ‘the interrogation of Niels Bohr,’ which Beria sent to Stalin in 1945 ([17], p.114).

proposal, as we know, was advanced in that same letter which Terletskii delivered to Bohr. The point is that Kapitza was adroit enough to use Terletskii as a courier so that Bohr could receive an important message.

“As regards the arrangement of an international conference of scientists which you wrote to me about, I am confident that, if you and some of your colleagues could attend, many of our English and American colleagues would most heartily welcome a meeting with us here in Copenhagen, and I am ready, as soon as I hear your reactions, to proceed with the preparations for such a meeting which could, I think, be arranged almost any time you would find suitable” [2].

Bohr writes: ‘meeting with us ...’ ‘With us’ will be meaningful to the attentive reader.

They were above the feuding which caused clashes between politicians and economic systems. They were true citizens of the world, citizens of that world-wide state whose name is Culture, Civilization and Science. The destiny of this state was what concerned them most of all.

Four months after Kapitza was elected foreign member of the Danish Academy of Sciences and Arts, Stalin signed a decree of the Council of Ministers of August 17, 1946 which released Kapitza from all his positions and expelled him from the Institute for Physical Problems which he himself had founded. This was his punishment for refusing to collaborate with Beria in manufacturing the Soviet atomic bomb.

For many years after this Kapitza remained an academician in disgrace who constantly ran the risk of being arrested or being involved in an ‘unfortunate accident’ ...

* * *

On four occasions Bohr proposed Kapitza as a candidate for the Nobel Prize (1947, 1948, 1956 and 1960). In 1956 he proposed both Kapitza and Landau. He nominated Landau three times — in 1956, 1960 and 1962 ([18], p. 326). Bohr was gladdened to hear the news that his pupil had been awarded the Nobel prize, — he died in November 1962. Kapitza received the Nobel Prize only in 1978.

In 1964 the Danish Engineering Society awarded P L Kapitza the Niels Bohr International Gold Medal. In his acceptance speech delivered at the time when he received the diploma for this medal, Kapitza stated:

“We scientists are very pleased when our achievements and discoveries are held in high esteem outside the borders of our country. This is all the more pleasant because science is the legacy of all nations across the world. Our achievements are those of all peoples. There are no achievements in science which have not belonged to humanity as a whole. (...) If we say that the investigation of the atom is linked with the names of Bohr, Rutherford and the participation of Planck, this means that in the immense edifice of science single bricks are engraved with the names of individual scientists. It is indeed a great honor for a scientist to have some of these bricks linked with his name. But if someone were to think that it is possible to acquire private apartments in this immense edifice, it would be an egregious error. Bohr unquestionably belonged to those scientists who, by way of their example, raised the international standing of science” [2].

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