

# PUGWASH

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The series of "Pugwash Conferences" on the impact of science on world affairs began with an international meeting of scientists in July 1957 at the home of industrialist Cyrus Eaton in Pugwash, Nova Scotia. Subsequent conferences have been held in various parts of the world, most recently in England.

# 1962

*By Freeman J. Dyson*

**T**WO Pugwash Conferences on Science and World Affairs (COSWA for short) were held in England in 1962. The ninth conference was held in Cambridge in August, the tenth conference in London in September. The two meetings were very different in purpose and in character. The ninth conference followed the tradition set by earlier meetings. It was small, informal, and concentrated on a particular subject, in this case "Problems of Disarmament and World Security". The tenth conference broke with tradition in every respect. It was large, formal, and scattered over a variety of topics. Those people who attended both meetings were unanimous in declaring that the ninth was not only pleasanter but much more useful. However, there was a legitimate reason for making the tenth conference big and formal. It was intended that the tenth conference should guide the policies to be followed by the international continuing committee which organizes the Pugwash meetings. So the continuing committee reported to the tenth conference on the work the committee has done over the last five years, and the conference formally elected a new continuing committee representing a wider group of countries than the old one. A policy statement was adopted, requiring the continuing committee to organize only small specialized meetings for the next four or five years, at the end of which time another big formal meeting may be called to review policy and re-elect the committee. So the tenth conference performed a necessary function in enabling a large group of people to take formal responsibility for the future of the Pugwash movement. Apart from this, the high point of the

tenth conference was the personal appearance of Bertrand Russell, who opened the proceedings with a wise and witty speech and received a standing ovation.

The real business of the Pugwash meetings is, of course, the getting together in small groups of Western and Soviet scientists. The purpose is not to reach formal agreements, but to get to know each other individually and to understand the divergent mental processes which underlie our political disagreement. Judged by this criterion, the big tenth conference was inevitably a total failure. No personal intimacy or understanding can be expected to grow in meetings of three or four hundred people sitting in rows in a lecture hall. On the other hand, the ninth conference did provide excellent opportunities for getting to know the Russians as people. So far as I was concerned, the ninth conference was highly successful. I acquired a vivid and immediate impression of the ways of thinking of several Russian scientists upon political questions. This was what I had come to the meetings to find. I shall therefore concentrate the rest of this account upon the ninth conference, leaving the tenth to the official historians to whom it rightly belongs.

**T**HE ninth conference was held in physical surroundings which were ideal for the purpose. All delegates were housed in the new block of Caius College, a brand new building which combines the eternal beauty of Cambridge with such new-fangled luxuries as central heating and running hot-and-cold water. Caius College fed the entire conference three times a day, and every evening we were invited to the home of one or other of the Cambridge participants. Each home that we visited had behind it a large and idyllic

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garden, where the influence of sherry and of the soft evening light made conversation flow freely in broken English and ungrammatical Russian.

For the working sessions the meeting was divided into five groups, each containing ten or fifteen people. The working sessions were held in undergraduate sitting rooms in the old part of Caius College, so that each little group was crammed in cozy informality into aged leather sofas and armchairs around an aged fireplace. For the most important part of the conference, the nonworking sessions of two or three delegates taking an afternoon stroll together between meetings, the quiet college gardens and the punts on the river were always available.

The following topics were assigned to the five working groups. (1) Problems of reduction and elimination under international control of weapons of mass destruction and of their means of delivery. (2) Problems of balanced reduction and elimination of conventional armaments. (3) Political and technical measures contributing to the lessening of international tensions. (4) Problems of security in a disarmed world. (5) Economic aspects of disarmament. I chose to work in group (4) for two reasons. First, the subject is comparatively remote from the area of current negotiations at Geneva, and therefore allows discussion unhampered by rigid official positions of the two sides. Second, it is my opinion that the subject of group (4) must be thought through and understood in detail before any decisive action on the more immediate issues of disarmament will be possible. My choice of group (4) was justified by the outcome. I afterwards learned that few of the participants in the other groups were as happy as I was in group (4). Group (1) especially suffered from the baneful effects of the Geneva negotiations, and degenerated into a dogged defense of official positions.

The situation in group (4) was particularly favorable, because at sticky moments Szilard would always be able to put forward some idea sufficiently outrageous to unite Russians and Westerners in opposition to it. Our most bellicose Westerner was an Englishman, and he too had the effect of pushing Russians and Americans closer together. Finally, our group was fortunate in containing on the Russian side a distinguished international lawyer who had served for seven years as a judge of the International Court. He spoke always with great precision and good humor, and understood better than anybody the problems of establishing any kind of uniform legal procedure in a world of divergent legal traditions.

Broadly speaking, the debate in group (4) centered around the question, how the UN Security Council could be enabled to do the job for which it was originally intended. The Russians more or less took the view that, in a disarmed world with a veto-free inspection system, the existing Security Council would be sufficient for enforcing disarmament and resisting aggression. The Westerners were prepared to accept the Security Council as the basic instrument of interna-

tional security, but wished to establish in addition a subsidiary organization having the power to move police forces rapidly into disputed areas when required. Both sides accepted the existence of the veto, in the hands of the two major powers at least, as a legal recognition of the fact that a police action of the international organization against a major power is impracticable. The Westerners wished the international organization to be empowered to take certain clearly defined and limited actions, for which promptness and reliability are essential, without waiting for the Security Council's approval.

We had four full days for the meetings of our working group. This time was divided sharply into two phases. In the first phase, which lasted for three of the four days, discussion was free and ranged over all kinds of hypothetical situations which we could imagine as creating threats to peace in a disarmed world. We discussed specifically the various stubborn animosities, such as the Israeli-Arab, the Pakistani-Indian, and the German-Polish, which will undoubtedly persist and create trouble in a disarmed world. These animosities provided us with working examples against which to test the adequacy of various proposed forms of international peace-keeping machinery. On the fourth day the discussion changed abruptly in tone; instead of arguing about matters of substance we argued about pieces of paper. The reason was that the Russians desired to take home with them some agreed written statement from each of the working groups. The purpose of these agreed statements was never made entirely clear; the Russians assured us that they would circulate them at a high level within their government. Inevitably the negotiation of an agreed statement generated the same mental atmosphere which has made the Geneva negotiations sterile. We wasted the fourth day haggling over words and phrases, and the statement which emerged from our labors was only a summary of those uncontroversial issues to which nobody had any serious objection. At the beginning of this day of haggling, Szilard wisely remarked, "Now I am going to help you to write your statement," walked out of the door and did not return. To me personally the fourth day was of absorbing interest in two respects. First, it showed dramatically how a Russian will transform himself from an amiable intellectual companion into a hard bargainer as soon as he feels himself to be speaking officially for his country. Second, the ironing out of the agreed draft sentence by sentence in two languages provided me with a splendid lesson in the fine points of Russian semantics.

All in all, looking back on the friendly first three days of working group (4) and on the slightly acrimonious fourth day, one overwhelming impression remains. I lived for four days mentally in a disarmed world, with all its difficulties, and the longer I was there the better I liked it. At the end of the four days I did not at all feel happy to return to the present-day world of deterrence and counterforce, missiles and megatons. I would very seriously recommend that all

military experts and political leaders who have learned to take our present world for granted should from time to time be exposed to an experience like mine. It would refresh their imaginations and enlarge their hopes.

SO much for working group (4). I turn now to describe the general conclusions which I reached from talking with the Russians, both inside and outside the working sessions. The dominant note was a tremendous sincerity and urgency in the desire of each Russian for drastic disarmament. The feeling of personal sincerity cannot be communicated at second-hand, but everybody who was talking to the Russians at Cambridge was impressed by it. For these Russians, quick and savage disarmament is a passionate concern. They see no other escape from the ever-increasing arms race and the final catastrophic war. They do not accept any half-measures such as stabilized deterrence or disarmament by gradual stages. Their feelings against half-measures arise partly from a rational belief that the world requires a sudden major perturbation to shake it off its present disastrous course, and partly from the irrational and traditional Russian impatience with gradual methods.

It is important that the public should understand the basic cause of the disagreement between Russian and Western positions on disarmament. Our newspapers mostly write as if inspection were the main problem. In fact inspection is a problem, but a comparatively minor one. The wiser heads in the East and the West are now fairly close together in their views of how much inspection is feasible and necessary. The major issue separating the two sides is the issue of speed. All our discussions tended to become stuck on the question of speed, and on this issue even an informal meeting of minds was very difficult to reach.

The divergence of views on the proper speed of disarmament seems to have arisen in the following way. A Russian looks at disarmament as a problem for heads of state. The heads of state must decide upon a logical method of disarmament. The process of decision may take much time and long negotiations. But once the decision is made and the treaty signed, it is a simple matter to carry out the terms of the agreement. It is clearly safer and more convenient to make the physical process of disarmament as rapid as possible, in order to minimize the special difficulties which might arise during the intermediate stages. The Russians chose 18 months as a reasonable length of time in which to complete the major act of disarmament, the elimination of the means of delivery of weapons of mass destruction. Any desire to prolong the carrying out of disarmament after the agreement is signed appears to a Russian as a desire to cheat or to frustrate the agreement.

A Westerner looks at disarmament as a political process in which the public and the recalcitrant sections of the government must be coaxed and persuaded to acquiesce as the process continues. The start must be gradual so that it can begin at all. Drastic political

decisions, such as the final elimination of long-range missiles, cannot possibly be made until the process of disarmament has been in operation for several years and the public has begun to feel at home with it. For a Westerner, many of the political difficulties of disarmament only emerge after the agreement is signed, and a time-scale shorter than ten years for the complete carrying out of an agreement seems quite unrealistic.

At Cambridge I learned that it is almost impossible for a Russian, even a Russian with wide knowledge of the Western world, to grasp the idea of a government being unable to do whatever it decides to do. In vain I argued that we cannot disarm rapidly for the same reason that we cannot desegregate our schools rapidly. A Russian thinks of both these problems in terms of his own experience. He assumes that if a government has decided upon a policy, opposition to that policy can only come from a conspiracy of evil individuals whose influence must be fought and overcome. In the case of the schools, the evil individuals are the Ku Klux Klan; in the case of disarmament, they are the Pentagon generals. A Russian cannot imagine a state of affairs in which the opposition to government policy comes from a group of responsible political leaders without whose cooperation the government cannot function. Still less can a Russian understand that this internal opposition is not regarded by us as evil but is deliberately built into our system in order to make it impossible for the government to take hasty and drastic actions against the will of a minority.

At the meetings in Cambridge and London, the Russians were happy to find that their government's policy of rapid disarmament was supported by a large majority. The official American plan, with its slow beginning, indefinite duration, and numerous escape clauses, was generally regarded as so unsatisfactory that it was hardly even discussed. The personal sincerity of the Russians, together with the logical directness and sharpness of their ideas, had a strong effect in winning support for the Soviet plan. In the end the public statement of the tenth Pugwash conference went very far toward endorsing the official Soviet proposals on disarmament. This was primarily a victory of a policy of speed over a policy of caution.

I personally agree with the majority in preferring speed to caution. I consider that, if we should sign the Soviet draft treaty on general and complete disarmament tomorrow, we should significantly improve our chances of preserving our world and our constitutional system intact. However, the hard fact is that no treaty as abrupt and revolutionary as the Soviet draft could ever be digested by our slow-moving political machinery. It should be our task at future Pugwash meetings to convince the Russians that they must learn to live with our slowness, just as we have to learn to live with their secretiveness. Our slowness and their secretiveness are facts of history which must be understood and tolerated, but which cannot be arbitrarily overridden.