

SEVEN THOUSAND SCIENTISTS APPEAL BAN OF NUCLEAR ARSENALS

YOSIAKI ITÔ

1-8, Mongi Iwasaki, Nisshincho, Aichi Pref. 470-01, Japan

MORE than seventy thousand letters which appeal ban of nuclear arsenals to avoid 'nuclear winter' are now circulating within scientific community of the world. This is the event of recent three years. When the threat of nuclear war escalated to the highest level since 1960's. These letters includes those from at least four Nobel Prize Winners, Severo Ochoa (Physiology and Medicine, 1959), H. G. Khorana (Physiology and Medicine, 1968), C. B. Anfinsen (Chemistry, 1972) and Peter Mitchell (Chemistry, 1978), Presidents of Indian National Science Academy and Academia Sinica, Vice-Presidents of Academia Sinica and Academy of Science, USSR, Presidents and Academic Vice Presidents of seven American and Canadian universities, and many directors of national scientific institutions of the west and east.

These letters are parts of a chain-letter initiated by myself in the spring of 1982. Each scientist who accepted the appeal sent 10 letters which expressed sender's wishes, by his (her) own words, to stop the nuclear arms race and to start the discussion between two large nuclear-armed countries on ban of nuclear weapons, and appealed to continue the chain to their friends. During the process of the chain, someones suggested to send a copy of letter to me, for reference, and now many scientists sent me copies of letters which indicate their participation to the chain. At the end of last November, the number of letters amounted 6,383 from 86 countries (table 1). More than 99% of the letters came from professional scientists. As there is no duty to report their participation to me, the number of chain letters actually sent should be far more than seventy thousand.

I, Yosiaki Ito, a population and behavioural ecologist, spent my high-school life under severe conditions of the World War II. I had chances to hear on terrible consequences of atomic explosions at Hiroshima and Nagasaki, directly from my friends. When a Japanese fishing craft 'Fukuryumaru' suffered radioactive fallout from an H-bomb explosion in Bikini Atoll in 1954 (at a point of ocean more than 100 km from Bikini), which caused death of a victim Mr. Kuboyama several month later, I was an editor of a journal 'Seibutsu Kagaku' (Biological Science, Tokyo), and I could hear how serious are the after-

effects of the irradiation on the crews from physicians who participated the editorial board.

In the beginning of 1982, just before the Second Special Session for Disarmament (SSDII) of the United Nations, I sent some ten letters to my foreign friends (ecologists and entomologists) asking them to send ten similar letters to their friends, to do some efforts for success of the SSDII. They strongly supported this. However, the word 'for the success of SSDII' disappeared during the chain, and now the chain continues without time limit.

Of course this is my mistake; I did not clearly set the time limit, field of scientists to be covered in the movement, and the way to publish our common concern. This mistake came from my underestimation of the depth of world scientists' concern on the risk of nuclear war and their enthusiasm to work for reversing the present situation. I must apologize my friends, scientists, for that the movement becomes rather endlessly, and makes nuisance to them (many scientists wrote me that they received the similar letters several times), and that I cannot find a way to appeal to the leaders of powerful countries.

Although this is a large problem, which I must solve to repay the enthusiasm of quite many scientists, it is my great pleasure that I could know, through this movement, how strong are many distinguished leaders of science wishing the reversal of the present situation, and that the *Scientific Community* is still functioning, despite the worst relation between the two superpowers.

As a population and behavioural ecologist, I have been especially inspired when I received letters from most famous theorists of ecology and evolution, to whom I had no contact before, such as Ernst Mayr (Harvard), C. B. Michener (Kansas), Robert Hinde (Cambridge), R. C. Lewontine (Harvard), V. J. A. Novak (Praha), E. Tobach (Johannesburg), Ashley Montagu (Princeton), etc. Many entomologists, I know them but I did not contact directly, such as Franz Huber (Seewiesen) and David Pimentel (Ithaca) participated the chain. As a man working in the Agricultural Faculty, letters from two distinguished plant biochemist, Prof. James Bonner and Prof. R. L. Hill were most stimulative. In addition, I received

Table 1 Number of scientists who informed me their 'participation' to the chain letter by the end of November, 1984.

<i>West Europe</i>		<i>Middle America and</i>		Malaysia	8
Austria	85	<i>Carribbean</i>		Papua Newguinea	6
Belgium	86	Barbados	1	Philippines	11
Denmark	229	Costa Rica	12	Sri Lanka	40
FRG (West Germany)	500	Cuba	6	Thailand	1
Berlin	44	Dominica	1	Turkey	2
Finland	137	Guatemala	3	Vietnam	1
France	171	Jamaica	4	Pakistan	1
Greece	11	Mexico	56		
Iceland	7	Nicaragua	3	<i>Africa</i>	
Ireland	23	Panama	1	Botswana	2
Italy	245	Trinidad-Tobago	1	Egypt	7
Malta	1			Ethiopia	2
Netherland	195	<i>South America</i>		Ghana	1
Norway	211	Argentina	45	Kenya	9
Portugal	24	Bolivia	25	Lesotho	1
Spain	125	Brasil	228	Liberia	1
Sweden	265	Chile	32	Madagascar	1
Switzerland	115	Columbia	5	Mauritius	1
United Kingdom	403	Ecuador	2	Morocco	1
		Peru	8	Mozambique	1
<i>East Europe</i>		Paraguai	1	Nigeria	2
Bulgaria	12	Uruguay	3	South Africa	35
Czechoslovakia	28	Venezuela	29	Tanzania	11
East Germany (GDR)	18			Uganda	2
Hungary	72	<i>Asia</i>		Zambia	1
Poland	43	China (continent)	12	Zimbabwe	2
Rumania	5	China (Taiwan)	4		
USSR	106	China (Hongkong)	10	<i>Oceanea</i>	
Yugoslavia	31	India	97	Australia	234
		Indonesia	6	Fiji	2
<i>North America</i>		Israel	36	New Zealand	68
Canada	408	Iraq	1		
USA	1589	Japan	107		
		Korea	1	United Nations	2
				Number of countries = 86	
				Number of persons = 6,383	

letters from quite many deans of the faculty of medicine of UK, USA, Latin Americas, South Africa and Oceanea.

President Jiayi Lu and Vice-President Dongsheng Yan of Academia Sinica Beijing, received letters from leading Indian scientists (including Prof. A. K. Sharma, President of Indian National Science Academy) and expressed their support to me by English letters. Dr. J. R. Jordan, President of Scientific Council of the Ministry of Public Health, Cuba, sent me a copy of his letters as a response to a letter from an English scientist. I could not formerly consider that such influential scientists in the socialist countries respond letters from western scientists and send their personal, English, letters to the friends of western countries. I have known, from the lists of persons to whom they sent their letters, that the letters often

passed west-east-west. A Canadian Professor of Mathematics wrote me that he shall continue the chain as a response to a letter came from a Vietnamese mathematician.

All but several of letters from the socialist countries were not, say, stereotyped-political ones, but they expressed senders' personal concern. These facts indicate that the scientists of the west and east can cooperate for man's future. It was also shown by the fact that two distinguished Soviet scientists cooperated the symposium on the nuclear winter held at Washington, D.C. in October, 1983 (*Science*, 222: 823), and that Soviet scientists published results of their independent studies on the terrible consequences of the nuclear exchange in USSR.

Although the number of letters came from South Asia and Africa are not so many, they include those

sent by influential scientists, such as directors of national institutions. The largest number of letters per scientist possibly came from Sri Lanka, where the President of the largest university and the Deputy Inspector-General of Police participated the chain. Many letters came from countries which are being governed by military powers.

Thus I can believe that the scientists of the west and east, developed and developing countries, can use their unity and their influence to create new circumference for international discussions for the complete ban of nuclear arsenals.

The situation in Japan, an only country which suffered atomic explosions, for ban of nuclear arsenals is, in my view, worse than before. Our Prime Minister supported even the SDI (Space Defence Project of the US government) and did not respond positively to the decision of New Zealand government to reject the docking of nuclear armed warships. In my view, we must now reconstruct the peoples movement (1985 is the 40th year from atomic explosions at Hiroshima and Nagasaki!) on much broader basis. Although I could not find so far good media to introduce the results of our movement to peoples of Europe and America, the Asahi, the Mainichi, two largest newspapers in Japan, and the Nagoya Branch of the National Broadcast (NHK) reported the results of our chain letter movement. Prof. K. Fushimi, former president of the Science Council of Japan, in response to a letter from Prof. E. P. Velikhov, Vice-President of Academy of Science, USSR, contributed a paper, on a peace journal being published by a conservative M. P. Mr. Tokuma Utsunomiya, to inform leaders of the results of our movement.

Here I would like to express my sincere thanks to all the scientists who joined the chain. Despite my insufficiency in programming the movement, their participation have certainly heighten the concern over

the risk of nuclear war within the scientific community. I hope them to continue their deep concern on this problem in future and introduce the results of our movement to citizens of their countries to promote their movement.

I would like to appeal to the government leaders and their advisory staffs of many countries to take the voice of world scientists into serious consideration and strength their efforts to begin the international talk for ban of nuclear arsenals immediately. I would like to appeal to peoples of the world to join anti-nuclear weapons movement of any kind to save the earth from the nuclear winter.

In the last, I express my opinion that the chain letter (in the present style) should now be finished. The letters are overflowing the university office and I can not make direct contact to all the participants. It may be better to set a resting period, for more efficient, better programmed, movement near future, possibly before the SSDIII.

Yosiaki Itô, Associate Professor of Applied Entomology and Nematology, Nagoya University, Nagoya, Japan, born in Tokyo in 1930. He got Doctorate of Science from Kyoto University in 1960. He wrote 112 original papers (80% in English), and seven Japanese books on ecology, such as Comparative Ecology (1st ed. 1959, 2nd ed. 1978, English translation of 2nd edition from Cambridge Univ. Press in 1980). An Introduction to Animal Ecology (1963), Animal Ecology (1977), Social Behaviour of Animals (1982). He got Japanese Society of Applied Entomology and Zoology Reward in 1969 and Japanese Society of Agriculture Reward in 1972, both for studies on population dynamics and their application to the integrated control of insect pests. He is now President of the Society of Population Ecology and Vice-President of the Japan Ethological Society.