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UDK: 349.7:327
621.039:355.02(100)

BLOCKING THE “NUCLEAR ALLERGY” SYMPTOMS: A BRIEF HISTORICAL OVERVIEW OF THE BEHAVIORAL PSYCHOLOGY OF MULTILATERAL NUCLEAR AFFAIRS CONCERNING NUCLEAR-WEAPON-FREE-ZONE ESTABLISHMENTS

ABSTRACT: Since the horrific 1945 atomic bombings of Hiroshima and Nagasaki, the abnormal phenomenon known as “nuclear allergy” began to initially manifest in Japan, simultaneously reflecting ambivalent strategies and international relations with both nuclear-weapon states (NWS) and non-nuclear-weapon states (NNWS). Moreover, the global spread of “nuclear allergy” has had the consequence of significant groups of countries to become interested in “nuclear-weapon-free-zones” (NWFZ), which is hypothesized as an attempt from the majority of the international community to block the “nuclear allergy” symptoms. Hence, this review paper provides a brief historical overview of the behavioral psychology of multilateral nuclear and security affairs after World War II in relation to the potential interconnectedness between the global spread of the “nuclear allergy” phenomenon and the increased interest in NWFZ.

KEY WORDS: Nuclear Affairs; International Law; Atomic Bombings; Multilateral Security;

INTRODUCTION

Ever since World War II left 63 of her 66 large cities in ashes, there has been a strong current of pacifism in Japan, and since the destruction of Hiroshima and Nagasaki, the Japanese people have been particularly sensitive to the might and danger of nuclear power. The Japanese and United States governments, meanwhile, have disparagingly dismissed Japanese fears as a manifestation of “nuclear allergy”, a term implying a pathology and abnormality. Officials of both countries seemed determined to treat the perceived disease as a true allergy and to desensitize the patient by the continued injection of even larger doses of the afflicting substance. Thus, the official “cure” had been to take advantage of every opportunity to make nuclear items increasingly commonplace in Japan. (Pempel, 1975, p.169) Japanese strategists have long been ambivalent about nuclear weapons. On the one hand, memories of horrific attacks on Hiroshima and Nagasaki have sustained antinuclear sentiment and helped justify national policies championing nonproliferation and foregoing an indigenous nuclear arsenal. This “nuclear allergy” has been diagnosed as a genetic condition, and associated institutional and diplomatic constraints on nuclear breakout have been involved to predict that Japan will find it virtually impossible to reverse course on nuclear weapons. (Samuels & Schoff, 2015, p.475) On the other hand, there had been a simultaneous concerted campaign in Japan to downplay the radioactive hazards of nuclear power, partly to attract support for the development of nuclear energy, in view of the fact of Japan’s dependency on imports for approximately 90 percent of her oil. At a more subtle level, however, in April 1959, the government had succeeded in stopping the Hiroshima Atomic Disease Hospital from publishing the statistics of deaths caused by atomic radiation. There had also been support for articles in popular journals to demonstrate the alleged safety of nuclear power, and support for ventures of high public relations potential. (Pempel, 1975, p.169) And while Japan continued to internationally manifest such ambivalence toward nuclear weapons in various legal forms, as well as strategies and international relations with both nuclear-weapon states (NWS) and non-nuclear-weapon states (NNWS), various groups of countries around

the world have reportedly became interested in establishing nuclear-weapon-free-zones (NWFZ) which according to the behavioral psychology of nuclear and security-related affairs, might represent a particularly interesting socio-psychological mechanism to block the "nuclear allergy" symptoms of which Japan is currently known to be the only victim up to date. Hence, it could be said that the international community, from a bystander's perspective, is more terrified of the "nuclear allergy" than the original victim itself.

Material and methods

The aims and objectives of this brief review paper are to critically analyze the global spread of the international phenomenon known as "nuclear allergy" from a historical perspective after World War II, specifically concerning the time period after the 1945 atomic bombings in Hiroshima and Nagasaki. We postulate the theoretical hypothesis that the significant interest in NWFZ by various groups of countries represents an attempt to block the "nuclear allergy" symptoms initially experiences by Japan. Hence, the fields of study in regards to this review paper include multilateral nuclear and security affairs, as well as the behavioral psychology of international law, where a strictly qualitative research is performed, by taking into consideration the following factual elements:

- International Relations between NNWS and NWS;
- United Nations Principles;
- The four dimensions of the global spread of "nuclear allergy" after the 1945 atomic bombings of Hiroshima and Nagasaki;

The utilization of the above-mentioned materials and methods leads us to the detailed treatment of such hypothesis in order to attempt to reach a suitable rationale.

Results and discussion

Pending complete nuclear disarmament, which must be realized through negotiations, we must seek how to assure security from nuclear weapons. In the nuclearized world up to now, three types of multilateral nuclear security assurances have been proposed:

(1) Positive Security Assurances: commitments by the NWS to come to the aid of a NNWS threatened by nuclear weapons, or against which nuclear weapons have been used;
(2) Negative Security Assurances: commitments by the existing NWS not to use, or threaten to use, their nuclear weapons against NNWS;
(3) No-First-Use Commitment: a commitment where a NWS pledges itself never to be the first to use nuclear weapons; (Rotblat & Konuma, 1997, pp.334-336.)

Compared with other strategies employed in international politics, assurances have not been the subject of much empirical research. Coercive strategies such as deterrence and compellence have received by far the greatest attention when it comes to assessing the ways states attempt to influence the behavior of other states. In addition to the manipulation of military threats, the use of economic statecraft has been a focus of much research, including efforts to determine the effectiveness of economic sanctions and to a lesser extent the usefulness of positive incentives. In contrast, there has been little effort to develop a general theory of security assurances or to conduct systematic empirical research on the effectiveness of assurances. (Knopf, 2012, p.3) While there are multiple NWS, our focus is specifically aimed at the United States due to its role and contribution for developing the "nuclear allergy" phenomenon. In relation to NNWS, however, determining the legal regulation of use

of force in relation to the use of nuclear weapons, the United States, being one of the NWS, stipulated "U.S. Assurance to Non-Nuclear-Weapons States" – which reads:

> *"The United States reaffirms that it will not use nuclear weapons against non-nuclear weapon States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a State towards which it has a security commitment, carried out or sustained by such a non-nuclear weapon State in association or alliance with a nuclear-weapon State."* (Black-Branch & Fleck, 2015, Asser Press)

Regarding negative security assurances, the treaties on NWFZ, like that of Tlatelolco of 1967 in Latin America and that of Rarotonga of 1985 in the South Pacific, set up the obligations of the contracting parties to denuclearize their territories. In response to these obligations, additional protocols of these treaties provide that the NWS would not only respect the status of the denuclearized zone but would also undertake not to use or threaten to use nuclear weapons against the contracting parties to such treaties. This is the crucial stipulation on the negative security assurances for the denuclearized state in question. (Rotblat & Konuma, 1997, p.335). This negative assurance is intended to underscore the security benefits of adhering to and fully complying with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and persuade NNWS party to the Treaty to work with the United States and other interested parties to adopt effective measures to strengthen the non-proliferation regime. (United States Department of Defense, 2010, p.viii) Furthermore, on November 17, 1978, Ambassador Adrian S. Fisher, a former Director of the United States Arms Control and Disarmament Agency and the United States Representative to the Committee on Disarmament, submitted the following ***"Proposal of the United States of America for Strengthening the Confidence of Non-Nuclear-Weapon State in their Security against the Use of Nuclear Weapons"****:*

> The approach of the United States to strengthening the confidence of NNWS in their security against the threat or use of nuclear weapons takes into account paragraph 59 of the Final Document of the Special Session on Disarmament (SSOD) which provides:
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> > *"In the same context, the nuclear-weapon states are called upon to take steps to assure the non-nuclear-weapon states against the use or threat of use of nuclear weapons. The General Assembly notes the declarations made by the nuclear-weapons states and urges them to pursue efforts to conclude, as appropriate, effective arrangements to assure non-nuclear-weapon states against the use or threat of use of nuclear weapons."* (Nash, 1978, p.1610)

Such efforts toward NNWS were additionally manifested by creating so-called "nuclear-weapon free zones." The concept of Nuclear-Weapon-Free Zone (NWFZ) is a distinct one, which means denuclearization, non-nuclearization and nuclear free. Thus, the concept of the NWFZ is a flexible one. Therefore, the criterion to establish NWFZ depends on the group of countries interested for establishing such a zone in their respective regions. Accordingly, the objectives of the zone can also be different from that of any one established already. However, a general objective for establishing a zone in any part of the world should consider the following criterion:

- The security of states included in the zone;
- World security;
- Non-proliferation of nuclear weapons;
- Regional arms control consideration; and
- Security treaties;

The interested group of countries can select any one of the above objectives and formulate treaty for establishing NWFZ in their respective zone or region. In addition to the UN principles, the countries in the respective zone can also develop new criteria for the purpose. (Moorthy, 2006, p.2) One valuable example for consideration is the *Tlatelolco Treaty* regarding Latin America. On May 24, 1978, President Carter transmitted to the Senate, with a view to receive its advice and consent to ratification, Additional Protocol I to the 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), which the President had signed on May 26, 1977. The Treaty, done at Mexico City, February 14, 1967, and open only to States located in the zone (Latin America), was complemented by two Additional Protocols, the second of which intended for signature by nuclear-weapon states, had been ratified by the United States on May 12, 1971. In addition, proposals for nuclear-free zones have emerged in virtually every region of the world. For instance, Greece has pledged to remove U.S. nuclear weapons and bases from its soil by 1989. New Zealand declared itself a nuclear-free zone and banned U.S. nuclear weapons and nuclear-powered ships from its waters. Spain and Canada succeeded in having U.S. nuclear warheads removed from their soil in 1979 and 1984, respectively. Norway and Denmark halted their national funding for U.S. nuclear missile bases in Europe, while Third World countries such as Egypt, Sri Lanka, and India prohibit nuclear ships in their territorial waters. (Arkin & Fieldhouse, 1985, p.11) Moreover, it was considered that the zone concerning the Balkan countries (as Figure 1 geographically and historically depicts) should also become free of nuclear weapons of any kind. Such an achievement would not have only rendered the Balkan Peninsula secure; it would have also contributed to the establishment of good relations among the nations of that region and thus enhance the likelihood of continuous and stable peace and cooperation. (Andrikos, 1985, p.29) Such consideration originates from the factuality that the Warsaw Treaty member states were convinced that the establishment and effectiveness of NWFZ depended largely on the attitude of the other States, especially of the nuclear States, towards them. The Warsaw Treaty member states also noted the readiness of the Soviet Union to take other practical steps towards the materialization of the idea of setting up a NWFZ in Northern Europe. They declared themselves in support of the establishment of a zone free of nuclear weapons in the Balkans and of the efforts for strengthening security and expanding confidence, good-neighborliness and co-operation among the Balkan states. (United States Arms Control and Disarmament Agency, 1986, p.175) The idea of turning the Balkan Peninsula into a NWFZ, however, is not new. The establishment of an area of peace in the Balkan, free of foreign military bases, was first proposed by Romania on September 10, 1957. Over the following years, Bulgaria, Romania, and Yugoslavia continued from time to time to underline the need for a Balkan nuclear-free zone in various forums. (Andrikos, 1985, p.29) In fact, many Balkan nations were already dissatisfied with the present international regime for nuclear non-proliferation. The NTP had been sharply criticized by Romania and Yugoslavia for being discriminatory. And although Turkey had ratified the NPT (leaving only Albania outside the regime), several leaders in both Greece and Turkey have spoken of the possibility of indigenous development of nuclear weapons. The 1980/81-level capability of Balkan countries to accomplish this task, as Table 1 depicts, was negligible. One index is the number of power and research reactors in the region which could conceivably produce bomb-grade fissile material. (Rydell & Platias, 1982, p.58) One of the major questions regarding a Balkan nuclear-weapons-free zone considered the following: *Will the nuclear weapons states formally recognize the zone?*

According to Rydell and Platias, all five states recognized the Latin American NWFZ and there was no compelling reason why recognition would not eventually be obtained for a similar region in the Balkans. Soviet leader Leonid Brezhnev had already offered a nuclear security guarantee to members of a Balkan zone. If NATO could successfully obtain Soviet concessions on the deployment of nuclear forces near the Balkans, then there would be little to gain for other NWS to withhold similar guarantees. (Rydell & Platias, 1982, p.59) In other words, such consideration would be primarily based upon the notion of regional-based non-discrimination. A contrasting military-related

perspective, however, has simultaneously emerged, which stated that the main flaw in existing nuclear-free policies or nuclear-free zones is that they set up a system whereby non-nuclear means nothing but the absence of nuclear warheads, while the infrastructure is ignored. In the 1950s and 1960s when nuclear weapons were large and difficult to transport or assemble, the mere restriction of warheads might have made sense as an arms control initiative. But today warheads are small and lightweight and require minimal preparation and upkeep. Virtually every ship and airplane available to the nuclear powers can carry them anywhere on earth, as long as the intelligence, targeting, basing, training, and communication infrastructure is in place to support them. (Arkin & Fieldhouse, 1985, p.13) Nevertheless as previously mentioned, proposals for the establishment of nuclear-free zones dominated within every global region, which further questions the socio-psychological factors and aspects of such international occurrence, and more importantly, the recognition of the term *"Nuclear Allergy"*, as well as its practical manifestation. Being described as an international occurrence, moreover, the global spread of "nuclear allergy" after the 1945 atomic bombings of Hiroshima and Nagasaki (geographically depicted in Figure 2) regarded four main notions:

(1) Nations that have ousted U.S. nuclear weapons;
(2) Nations that do not allow ships carrying nuclear weapons in their territorial waters;
(3) Nations party to the Tlatelolco Treaty to ban nuclear weapons; and
(4) NATO nations that do not permit basing of U.S. nuclear weapons; (Arkin & Fieldhouse, 1985, p.13)

This postulates that the global spread of "nuclear allergy" practically manifested four separate dimensions which, in one way or another, have been utilized by separate groups of countries as a response to the 1945 atomic bombings of Hiroshima and Nagasaki. Nevertheless, the Japanese devotion to their peace constitution is reinforced by a "nuclear allergy", a psychological result of the national experiences of Hiroshima and Nagasaki. (Emmerson, 1969, p.354) Kurt Campbell and Tsuyoshi Sunohara convincingly demonstrate the power of domestic political pressure in creating and reinforcing Japan's non-nuclear choice. *"Having experienced the horrors of Hiroshima and Nagasaki,"* they write, *"Japan's political structures and national psyche have engendered a deeply enshrined cultural taboo… against even public discussion of the nuclear option."* In the past few years, public and political opposition to nuclear weapons has gradually softened, as Japan adopted a more assertive military policy. Still, public opposition to a nuclear-armed Japan coupled with U.S. security assurances make it unlikely that Tokyo will amend its non-nuclear policy. Campbell and Sunohara conclude, *"The depth of antinuclear sentiment is such that only major changes in the international or domestic environment, and probably only a combination of such changes could engender a domestic political environment more permissive toward Japan's acquiring nuclear weapons."* (Cirincione, 2007, p.70) Some experts believe that Japan's aversion to nuclear weapons is enduring and yet susceptible to reconsideration under extraordinary conditions. Japan's leaders consistently affirm the goal of a global nuclear disarmament. And while these affirmations might count as a clear posture of nuclear avoidance, however, some Japanese statements suggest that elements of both nuclear aversion and aspiration co-exist. Hence, in order to understand Japan's complex attitude towards nuclear weapons, we should first recognize that officials emphasize their status as history's sole victim of atomic warfare:

> *"As the only country that suffered the devastation of atomic bombs, Japan seeks a peaceful world free from nuclear weapons to create a better international security environment. To this end, it is vital for the whole world to share a vision of "a world free of nuclear weapons", by overcoming the differences in position of the nuclear-weapon States and the nuclear-weapon States*." (Doyle, 2015, pp.35-36)

Japan's nuclear weapons allergy is understandable and Prime Minister Eisaku Sato (1964-72) first enunciated Japan's Three Non-Nuclear Principles in 1967 that prohibit the production, possession, or introduction of nuclear weapons on Japanese territory. In 1974 he won the Nobel Peace Prize for doing so, but subsequently it is clear that he was aware of, and tolerated, repeated US violations of these principles, generating a storm of controversy. This agreement was concluded when the US-Japan Mutual Security Treaty was revised in 1960 and allowed US ships carrying nuclear weapons to transit Japanese waters and call at Japanese ports. (Kingston, 2012, p.118) Continuously, the level of domestic debate surrounding Japan's nuclear option is historically unprecedented. Japan's "nuclear allergy," the taboo that once forestalled mere discussion of nuclear weapons, has largely evaporated in the face of growing external threats. As a result, government elites who advocate nuclear weapons need no longer fear public disgrace and forced resignation. (Kliman, 2006, p.47) Much would also depend on the reaction of the rest of the world. If world opinion condemned the nuclear escalation that took place and if the use of such weapons seemed basically ineffective, the influence of those favoring Japanese nuclear weapons would not be strengthened. If the opposite held true, Japan might indeed surge toward the front of the list of new proliferators. (Quester, 2006, p.73)

Concluding remarks

Because of its experience as the only state on which nuclear weapons were used in war, Japan is often portrayed as having a "nuclear allergy" and being a staunch proponent of nuclear disarmament and nuclear nonproliferation. However, accumulating historical evidence and new scholarship suggest that Japan has had a much more complicated relationship with the possibility of nuclear weapons development. Despite being diagnosed with an "allergy", Japan has fed on a steady diet of all things nuclear since the 1950's, developing a robust civilian nuclear energy sector, as well as eventually indigenous uranium enrichment and plutonium reprocessing facilities (first at Tokaimura, and subsequently Rokkasho) that impart Japan full indigenous control of the fuel cycle. Today, the nuclear proliferation literature is replete with references to the "Japan Model", which refers not to its erstwhile status as an economic powerhouse, but rather to having all the requisite pieces in place to develop nuclear weapons but refraining from doing so – hedging, in other words. In fact, Ariel Levite refers to Japan as "the most salient example of nuclear hedging to date". Japan "hardly tries to conceal its strategy". (Narang, 2022, p.75) Such ambivalent strategies from Japanese strategists, when reflected on a global level, might influence the behavioral psychology of multilateral nuclear and security affairs, particularly concerning the interest of NWFZ. Namely, like domestic law, international law has experimented in recent decades with new approaches to changing legal subjects' behavior. Realist and institutional scholarship in international law and international relations generally assumes that states will cheat on their obligations if doing so is in their interest. (Cohen & Meyer, 2021, p.45) Consequently, groups of countries being identified as such legal subjects, might change their behavior towards their interest in NWFZ, including legal obligations established by treaties, agreements, as well as non-binding commitments in relation to nuclear weapons, often in an attempt to gain national and military power in the ever-changing geopolitical circumstances. And shifts in political beliefs between nations have significant predispositions toward unstable and even dangerous international relations, given the direct or indirect involvement of nuclear weapons in the equation. On this view, the basic challenge for international law would be to establish a set of "credible commitments" that states will abide by even in the face of incentives to cheat. To make a commitment credible, an international agreement must alter state incentives so that states will find it in their interest to comply with their commitments, a task usually accomplished through the imposition of some form of sanction for violation. To promote compliance, international lawyers became obsessed with mechanisms for detecting and sanctioning cheating, while

international law scholars debated the level and significance of compliance with international law. (Cohen & Meyer, 2021, p.45)

REFERENCES

Andrikos, N. (1985). A Balkan Nuclear-Weapon-Free-Zone. Bulletin of Atomic Scientists, 2(10), 29-31.

Arkin, W. M. & Fieldhouse, R. W. (1985). Focus on the Nuclear Infrastructure. *Bulletin of Atomic Scientists*, 2(10), 11-15.

Black-Branch, J.L. & Fleck, D. (2015). *Nuclear Non-Proliferation in International Law: Volume II – Verification and Compliance*. Asser Press.

Cirincione, J. (2007). *Bomb Scare: The History and Future of Nuclear Weapons*. Colombia University Press.

Cohen, H.G. & Meyer, T. (2021). *International Law as Behavior*. Cambridge University Press.

Doyle, T.E. (2015). *The Ethics of Nuclear Weapons Dissemination: Moral Dilemmas of Aspiration, Avoidance and Prevention*. Routledge.

Emmerson, J.K. (1969). Japan … Eye on 1970. *Military Review*, 49(1), 348-362.

Kingston, J. (2012). *Contemporary Japan: History, Politics, and Social Change since the 1980's*. John Wiley and Sons.

Kliman, D.M. (2006). *Japan's Secure Strategy in the Post-9/11 World: Embracing a New Realpolitik*. Greenwood Publishing Group.

Knopf, J.W. (2012). *Security Assurances and Nuclear Nonproliferation*. Stanford University Press.

Moorthy, P. (2006). *Nuclear-Weapon-Free-Zone*. Concept Publishing Company.

Narang, V. (2022). *Seeking the Bomb: Strategies of Nuclear Proliferation*. Princeton University Press.

Nash, M. L. (1978). *Digest of United States Practice in International Law*. Office of the Legal Adviser, Department of State.

Pempel, T.J. (1975). Japan's Nuclear Allergy. *Current History*, 68(404), 169-173.

Quester, G.H. (2006). *Nuclear First Strike: Consequences of a Broken Taboo*. The Johns Hopkins University Press.

Rotblat, J. & Konuma, M. (1997). *Towards a Nuclear-Weapon-Free-World: Proceedings of the Forty-Fifth Pugwash Conference on Science and World Affairs*. World Scientific Publishing.

Rydell, R.J. & Platias, A. (1982). The Balkans: A Weapon-Free-Zone? *The Bulletin of the Atomic Scientists*, 38(5), 57-59.

Samuels, R.J. & Schoff, J.L. (2015). Japan's Nuclear Hedge: Beyond "Allergy" and Breakout. *Political Science Quarterly*, 130(3), 475-503.

United States Arms Control and Disarmament Agency. (1986). *Documents on Disarmament*. United States Arms Control and Disarmament Agency.

United States Department of Defense. (2010). *Nuclear Posture Review Report*. United States Department of Defense.

TABLES, FIGURES AND PICTURES

Figure 1: Map of the Balkan Peninsula (1941-1991). *Note.* Adapted from "A Balkan nuclear-weapons-free zone," by N. Andrikos, 1985, June/July, *Bulletin of Atomic Scientists, 2(10)*, p.29.

Table 1: Nuclear Reactors in the Balkans (1980/81)

Nuclear Reactors in the Balkans

	Current and past	*Planned*
Romania	1 research reactor (3 megawatts)	9 (600 megawatts each)
Bulgaria	2 power reactors (408 megawatts each) 1 research reactor (1 megawatt)	2 (408 megawatts each)
Yugoslavia	3 research reactors (all < 7 megawatts)	3 (1,000 megawatts each) 2 (1,200 megawatts each) 1 (632 megawatts)
Greece	1 research reactor (5 megawatts)	1 (600 megawatts) 2 (900 megawatts each)
Turkey	3 research reactors (< 6 megawatts)	2 (1,000 megawatts each) 1 (600 megawatts)
Albania	0	0

Note. Adopted from "The Balkans: a weapon-free zone?" by R.J. Rydell & A. Platias, 1982, May, The Bulletin of the Atomic Scientists, 38(5), p.58.

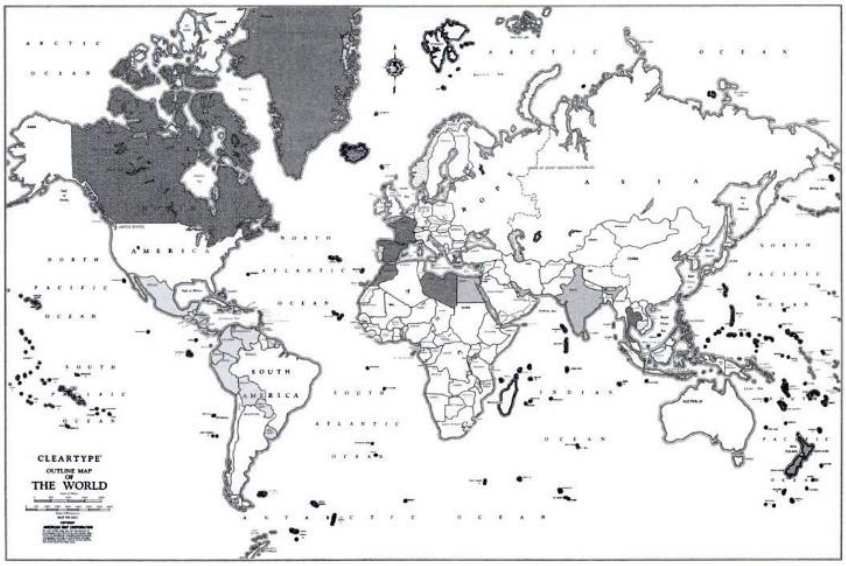

Figure 2: The Spread of “Nuclear Allergy”. *Note.* Adapted from “Focus on the Nuclear Infrastructure,” by W.M. Arkin & R. W. Fieldhouse, 1985, June/July, *Bulletin of Atomic Scientists, 2(10)*, p.13.