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Bravo at Sixty

# Human Radiation Experiments in the Pacific

by GLENN ALCALAY

” . . . protect the inhabitants against the loss of their lands and resources; protect the health of the inhabitants . . . ” (1)

According to Marshallese folklore a half-bad and half-good god named *Etao* was associated with slyness and trickery. When bad things happened people knew that *Etao* was behind it. “He’s dangerous, that *Etao*,” some people said. “He does bad things to people and then laughs at them.”(2) Many in the Marshall Islands now view their United States patron as a latter day *Etao*.

## Castle-Bravo

Sixty years ago this month the American *Etao* unleashed its unprecedented fury at Bikini Atoll in the Marshall Islands. It was nine years after the searing and indelible images of Hiroshima and Nagasaki that the world first learned about the dangers of radioactive fallout from hydrogen bombs that use atomic Hiroshima-sized bombs as triggers.

Castle-*Bravo*, the first in a series of megaton-range hydrogen bomb tests at Bikini Atoll on March first of 1954, was nicknamed “the shrimp” by its designer – Edward Teller – because it was the first *deliverable* thermonuclear weapon in the megaton range in the U.S. nuclear holster. We had beaten the Soviets in this key area of nuclear weapons miniaturization when the Cold War was hot and the United States did not need to seek approval from anybody, especially the Marshallese entrusted to them through the U.N.

At fifteen megatons – 1,000 times the Hiroshima A-bomb – the Bravo behemoth was a fission-fusion-fission [3-F] thermonuclear bomb that spread deadly radioactive fallout over an enormous swath of the central Pacific Ocean, including the inhabited atolls of Rongelap, Rongerik and Utrik in the Marshalls archipelago. The downwind people of Rongelap [120 miles downwind of Bikini] and Utrik [300 miles east of Bikini] were evacuated as they suffered from the acute effects of radiation exposure.

As an international fallout controversy reached a crescendo, a hastily called press conference was held in Washington in mid-March 1954 with Eisenhower and AEC chair Admiral Lewis [“nuclear energy too cheap to meter”] Strauss, his Administration’s top lieutenant in nuclear matters.

Adm. Lewis Strauss: “I’ve just returned from the Pacific Proving Grounds of the AEC where I witnessed the second part of a test series of thermonuclear weapons . . . For shot one [Bravo] the wind failed to follow the predictions, but *shifted* south of that line and the little islands of Rongelap, Rongerik and Utrik were in the edge of the path of the fallout . . . The 236 Marshallese natives appeared to me to be well and happy . . . The results,

which the scientists at Los Alamos and Livermore had hoped to obtain from these two tests [Bravo and Union] were fully realized. An enormous potential has been added to our military posture.” Strauss added the caveat that “the medical staff on Kwajalein have advised us that they anticipate no illness, barring of course, *diseases which may be hereafter contracted.*” (3)

Even former Sec. of State Henry Kissinger took note of the significance of Bravo and the new perils associated with widespread radioactive fallout contamination from megaton sized H-bombs, as might happen if the Soviets dropped The Big One on our nation’s capital and the fallout headed up the Eastern Seaboard. Writing about nuclear weapons and foreign policy in 1957, Kissinger wrote: “The damage caused by radiation is twofold: direct damage leading to illness, death or reduced life expectancy, and genetic effects.”(4)

Almira Matayoshi was one of the Rongelap “natives” referred to by Adm. Strauss. When I interviewed her in 1981 in Majuro she recounted her experience with Bravo:

The flash of light was very strong, then came the big sound of the explosion; it was quite a while before the fallout came. The powder was yellowish and when you walked it was all over your body. Then people began to get very weak and began to vomit. Most of us were weak and my son was out of breath.

I have pains and much fear of the bomb. At that time I wanted to die, and we were really suffering; our bodies ached and our feet were covered with burns and our hair fell out. Now I see babies growing up abnormally and some are mentally disturbed, but none of these things happened before the bomb. It is sad to see the babies now.(5)

A persistent puzzle surrounds the question of intentionality. In a 1982 New York Times interview, Gene Curbow (the former weather technician during Bravo) confessed that the winds did not “*shift*” according to the official U.S. explanation for the massive contamination during Bravo. “The wind had been blowing straight at us for days before the test,” said Curbow. “It was blowing straight at us during the test, and straight at us after the test. The wind never shifted.” When asked why it had taken so long to come forth with this important information, Curbow replied “It was a mixture of patriotism and ignorance, I guess.”(6)

The late Dr. Robert Conard, head of the Brookhaven/AEC medical surveillance team for the islanders, wrote in his 1958 annual report on the exposed Marshallese: “The habitation of these people on Rongelap Island affords the opportunity for a most valuable ecological radiation study on human beings . . . The various radionuclides present on the island can be traced from the soil through the food chain and into the human being.”(7)

In reference to the exposed Marshallese after Bravo, AEC official Merrill Eisenbud bluntly stated during a NYC AEC meeting in 1956, “Now, data of this type has never been available. While it is true that these people do not live the way westerners do, civilized people, it is nonetheless also true that they are more like us than the mice.”(8)

At present, the atoll communities of Bikini, Enewetak, and Rongelap remain sociologically disrupted and uncertain about their future as their contaminated islands and lagoons have yet to be fully repatriated and restored for permanent human habitation.

## **Kwajalein**

Following 67 A- and H-bombs at Bikini and Enewetak between 1946-58, the U.S. was not about to let go of its island capture, terminate the AEC-Brookhaven long-term human

radiation studies at Rongelap and Utirik, nor forfeit the valuable “catcher’s mitt” at Kwajalein for monthly incoming ICBMs from Vandenberg air base in California and Kauai. In 1961 – following a polio outbreak on Ebeye, Kwajalein – Pres. Kennedy ordered a comprehensive review of the Trust Territory of the Pacific Islands by his Harvard economist friend Anthony M. Solomon, head of the New York Reserve Bank.

Correspondingly, JFK’s National Security Action Memorandum 145 of April 18, 1962 called for the movement of Micronesia into a permanent relationship with the U.S.(9)

Through legerdemain and the inherent asymmetry of the relationship, the U.S. took every conceivable advantage of its island wards, thus setting the stage for the ongoing human and ecological radiation studies and other Pentagon activities in *perpetuity*.

To this end the Solomon Report recommended a *massive spending program* just prior to a future status plebiscite being planned for Micronesia. “It is the Solomon Mission’s conclusion that those programs and the spending involved will not set off a self-sustaining development process of any significance in the area. It is important, therefore, that advantage be taken of the psychological impact of the capital investment program before some measure of disappointment is felt.”(10)

As the Pentagon and AEC used the isolated isles of the Marshalls to perfect its Cold War nuclear deterrent – replete with human subjects for longitudinal radiation studies – let us not forget the Pentagon’s *ongoing* project of missile defense, aka “Star Wars” at Kwajalein Atoll encompassing the world’s largest lagoon bull’s eye.

Characterized as “hitting a bullet with a bullet,” ballistic missile defense has always had a reputation for fantasy and wish fulfillment, sold to Pres. Reagan with an exciting and glitzy video designed to parallel the then-sensation called “Star Wars.” Kwajalein and the fiction of Ballistic Missile Defense has tragically dumped good money after bad, notwithstanding the huge profits by Boeing, Raytheon, Northrup Grumman, MIT’s Lincoln Lab, Aerojet, Booz Allen et al. Between 1962 and 1996 the U.S. spent \$100 billion. And between 1996 and 2012 the total comes to \$274 billion and still counting.(11)

And what do we have to show for our nearly \$300 billion missile defense boondoggle? Last July 4th was also the planned launch date for a test of the BMD program. The Ground Based Missile Defense system at Kwajalein Atoll failed again, despite the fact that the test was manipulated: “The intercept team knew ahead of time when to expect the incoming missile and all its relevant flight parameters. Such luxury is obviously not available in real-life combat. But even if the \$214 million ‘test’ had worked it would not prove much.”(12)

The collateral damage known as Ebeye Island at Kwajalein is infamously tagged throughout the region as the “slum of the Pacific.” The appalling conditions on Ebeye for its 15,000 cramped residents and pool of cheap labor for the adjacent missile base are in stark contrast to the southern California-like setting on ten times as large Kwajalein Island for the 3,000 Americans manning the missile base.

Likening it to South African apartheid, I recall my first encounter with Kwajalein and Ebeye as a young Peace Corps volunteer in 1976:

Having spent the afternoon on Kwajalein yesterday left me feeling ashamed to be an American citizen. The overt segregation of the American civilian and military employees

on Kwajalein Island, and the cheap labor pool of Marshallese living on nearby Ebeye Island, makes me realize that racism is not confined to the American south.(13)

And just to insure the longevity of the asymmetry, the American Etao embedded a little-noticed caveat into the 1963 Limited [Atmospheric] Test Ban Treaty that allows the U.S. to unilaterally resume nuclear testing in the Marshall Islands, despite assurances to the contrary during the 1986 Compact status negotiations. *Safeguard "C,"* as the provision is known, also calls for the readiness of Johnston Atoll and Kauai in the Hawaiian archipelago, and Enewetak Atoll in the Marshalls under the auspices of the DOE's Pacific Area Support Office in Honolulu.(14)

Several formerly inhabited atolls remain off limits due to lingering radioactivity decades after the last H-bomb shattered the peace on Bikini and Enewetak. Imagine if the U.S. finally saw fit to do the right thing and pay their past-due \$2 billion nuclear legacy bill, a small morsel of the annual Star Wars budget.(15)

The recently discovered Mexican refugee fisherman on Ebon Atoll in the Marshall Islands drew world attention to these obscure coral formations atop extinct and submerged volcanoes where a continuous culture has survived and nearly thrived for the past two thousand years. And even though *Jose Salvador Alvarenga* said he had no idea where he was, Uncle Sam has *always* known where these tiny islands are, strategically located stepping stones in the bowels of the northwestern Pacific leading to Asia's doorstep, now in the era of the pending Trans Pacific Partnership.

Undoubtedly the legendary Etao is somewhere lurking in these once-pacific isles savoring the work of its American protégé . . .

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[Addendum: PBS is sitting on an important 90-minute film about the radiation experiments in the Marshall Islands titled "**Nuclear Savage: The Islands of Secret Project 4.1**" by Adam Horowitz. Please contact PBS and urge them to air "Nuclear Savage," a documentary film *they funded* and are keeping from the public's view. Also, please see these additional articles about the Marshall Islands: <http://www.counterpunch.org/2012/06/01/nuclear-savages> and PBS' attempt to suppress this film: [http://www.opednews.com/articles/2/Nuclear-Savage-by-William-Boardman-Broadcasting\\_Navy\\_Nuclear-Arms-Race\\_Nuclear-Attack-140110-941.html](http://www.opednews.com/articles/2/Nuclear-Savage-by-William-Boardman-Broadcasting_Navy_Nuclear-Arms-Race_Nuclear-Attack-140110-941.html)]

## Endnotes

- (1) United Nations. Trust Territory of the Pacific Islands. Trusteeship Agreement. URL: <http://www.fsmlaw.org/miscdocs/trustshipagree.htm>. New York. 1947. Article VI.
- (2) Grey, Eve. *Legends of Micronesia*. Book Two. *The sly Etao and the sea demon*. 1951. Honolulu: Office of the High Commissioner. TTPI, Dept. of Educations. Micronesian Reader Series. Pages 35-36.
- (3) Adm. Lewis Strauss, chair-AEC. Press conference about Bravo with Pres. Eisenhower, March 12, 1954, Washington, D.C. The archival footage may be viewed in this clip @ 1:00-4:30 in Part 3 of O'Rourke's [Half Life](#).

- (4) Henry Kissinger, *Nuclear Weapons and Foreign Policy*. Council on Foreign Relations. Harper Bros.: New York. 1957. Page.75.
- (5) Interview with Almira Matayoshi conducted by Glenn Alcalay in February 1981 in Majuro, Marshall Islands. This interview is online: <http://archive.is/M5aH>
- (6) Judith Miller. "Four veterans suing U.S. over exposure in '54 atom test." *New York Times*. Sept. 20, 1982.
- (7) Robert Conard, M.D., et al. March 1957 medical survey of Rongelap and Utrik people three years after exposure to radioactive fallout. Brookhaven National Laboratory, Upton, N.Y. June 1958. Page. 22.
- (8) Merrill Eisenbud. Minutes of A.E.C. meeting. U.S.A.E.C. Health and Safety Laboratory. Advisory Committee on Biology & Medicine. January 13-14, 1956. Page 232.
- (9) Report by the U.S. Government Survey Mission to the TTPI by Anthony M. Solomon, October 9, 1963. Page 41. The Solomon Report is online: [https://archive.org/stream/TheSolomonReportAmericasRuthlessBlueprintForTheAssimilationOf/micronesia3\\_djvu.txt](https://archive.org/stream/TheSolomonReportAmericasRuthlessBlueprintForTheAssimilationOf/micronesia3_djvu.txt)
- (10) Report by the U.S. Government Survey Mission to the TTPI by Anthony M. Solomon, October 9, 1963. Pages 41-42. The Solomon Report is online: [https://archive.org/stream/TheSolomonReportAmericasRuthlessBlueprintForTheAssimilationOf/micronesia3\\_djvu.txt](https://archive.org/stream/TheSolomonReportAmericasRuthlessBlueprintForTheAssimilationOf/micronesia3_djvu.txt)
- (11) Stephen Schwartz. "The real price of ballistic missile defenses." *The Nonproliferation Review*. April 13, 2012.
- (12) Yousaf Butt. "Let's end bogus missile defense testing." Reuters. July 16, 2013.
- (13) Glenn Alcalay. Journal entry of January 21, 1976. Aboard the MV Militobi. Peace Corps Journal, Marshall Islands 1975-77.
- (14) David Evans. "Safeguard 'C': U.S. spending millions on plan to re-start Pacific nuclear tests." *Chicago Tribune*. August 26, 1990.
- (15) Giff Johnson. "At 60, legacy of Bravo still reverberates in Marshall Islands." Editorial. *Marshall Islands Journal*. February 28, 2014.