Boltzmann Shot
Operation Plumbbob
Sergio Frutos
2017

Acrylic on canvas
110 x 195 x 2 cm

Unique
Signed

SF-P 17-10



About this artwork:

Boltzmann Shot was the first nuclear test conducted on May 28, 1957, as part of Operation Plumbbob at the Nevada Test Site. The event included VIP observers, NATO representatives, and Exercise Desert Rock VII and VIII personnel[1].

Operation Plumbbob consisted of 24 nuclear tests and included other notable shots like Whitney and Fizeau. It was the biggest and the most controversial nuclear test series to ever take place in the continental United States. Between May 28 and October 7, 1957, a series of 29 atomic bombs were detonated as part of a study of the effects that nuclear explosions had on structures, people and animals. About 16,000 American troops were exposed, as well as some 1,200 pigs. Pigs were burned in the blast and showered with glass blast debris[2]. Although some studies are not concluding[3], many others show health consequences for the participant troops[4].

During the Pascal-B nuclear test of August 1957, one of the tests of Operation Plumbbob, a 900-kg steel lid was welded over the borehole to contain the nuclear blast, despite scientists predicting that it would not work. When Pascal-B was detonated, the blast went straight up the test shaft, launching the cap into the atmosphere, making it the fastest human-made object ever[5].

1. Jaton West and Jeannie Massie, SHOTS BOLTZMANN TO WILSON The First Four Tests of the PLUMBBOB Series, Final Report DNA 6008F (McLean, Virginia: Defense Nuclear Agency, 1981). →
2. *Dark Circle*, directed by Judy Irving, Ruth Landy, and Christopher Beaver (Arlington, Virginia: PBS, 1989), DVD. →
3. Caldwell, Glyn G, Matthew M Zack, Michael T Mumma, et al. "Mortality among Military Participants at the 1957 PLUMBBOB Nuclear Weapons Test Series and from Leukemia among Participants at the SMOKY Test." *Journal of Radiological Protection* 36, no. 3 (2016): 474–89. →
4. *Mortality of Veteran Participants in the CROSSROADS Nuclear Test* . National Academies of Sciences, Engineering, and Medicine, 1996. →
5. Rebecca Harrington, "The Fastest Object Ever Launched Was a Manhole Cover — Here's the Story from the Guy Who Shot It into Space," *Tech Insider* (New York), May 2, 2016. →

About the project: Atom

[…]
"And so?" you ask your guide, *the nice one*.

“So, we learned to make stars,” he answers.
“I thought you told me that this was already like a sun.”
“Oh, yes, but it's not a real sun. Real suns don't work like that. They're much more powerful. So we made real stars.”
“I can't believe it.”
“And what do you think that white powder you've got there and this thermos I've got here are for?”
“The stuff that stars are made of?”
“Yes. And nightmares.”

> Antonio Cantó, “Así funciona un arma termonuclear. (How a thermonuclear weapon works)” *La pizarra de Yuri: historias de ciencia al calor del fuego (Yuri's blackboard: science stories by the fire)*. Guadalajara ; Madrid: Silente, 2011. ➞

The project Atom is based on archival photographs from nuclear tests and revolves around how the ‘atomic age’ is a turning point[1] and to which extent human stupidity can destroy the world we live in. Is possible the survival of humanity and living beings with whom we share the planet as we know it under the current system?.

The phrase “atomic age” has been around since 1945 in reference to the world’s reframing by the newfound human control over nuclear forces. Nuclear weapons prompted both apocalyptic visions of humanity’s annihilation through mutually assured destruction and promises of abundance, progress, and modernity through the utilization of atomic energy.

On the one side, the atrocities of mass destruction in Japanese cities, on Pacific Atolls, and other “testing sites” across the globe forever stamped the self-image of the human as an engineer of death. On the other side, harnessing nuclear power and the emerging nuclear sector were hailed as instruments of national security, a hotbed of technological innovation, a wellspring for electric household energy, and a radically modern means of investigating the natural world and improving human bodies and diets. But soon the smiling side of this Janus face faded, and threat of radioactivity became the scare phenomenon of the second half of the twentieth-century. Radioactive contamination has changed the natural and the social environment to an extent that brings a whole new register into focus: the possibility that life on this planet could end as we know it.[2]

Our current development, predating the planet, following the dictates of capitalism will certainly drive us to mass extinction.[3]

Since the nuclear test race in 40s and 50s, the world has advanced in nuclear technology. Today, a nuclear bomb could target a large-scale attack, at a longer range, and with much greater destructive force. People are increasingly concerned about the potential destructive humanitarian outcomes.[4] So long as nuclear weapons exist, it is inevitable that someday they will be used, whether by design, accident, or miscalculation. The danger of use of nuclear weapons is greater than ever before due to proliferation of nuclear weapons, terrorism, and political instabilities.[5]

1. Paul Crutzen and Christian Schwägerl, “Living in the Anthropocene: Toward a New Global Ethos.” *Yale E360*, January 24, 2011. ➞
2. A. Cundy, et al., “Radioactive Fallout as a Marker for the Anthropocene.” In: C. Rosol and G. Rispoli (eds) *Anthropogenic Markers: Stratigraphy and Context, Anthropocene Curriculum*. Berlin: Max Planck Institute for the History of Science, 2022. ➞
3. Troy Vettese, “A Marxist Theory of Extinction.” *Salvage*, January 1, 2019. ➞
4. Shan Xu and Alicia Dodt, “Nuclear Bomb and Public Health.” *Journal of Public Health Policy* 44, no. 3 (2023): 348–59. ➞
5. Kathleen Kingsbury et al. “At the brink: Confronting the risk of nuclear war.” Opinion. *The New York Times*, October 10, 2024. ➞

Asnos estúpidos

Isaac Asimov

Naron, de la longeva raza rigeliana, era el cuarto de su estirpe que llevaba los anales galácticos. Tenía en su poder el gran libro que contenía la lista de las numerosas razas de todas las galaxias que habían adquirido el don de la inteligencia, y el libro, mucho menor, en el que figuraban las que habían llegado a la madurez y poseían méritos para formar parte de la Federación Galáctica. En el primer libro habían tachado algunos nombres anotados con anterioridad: los de las razas que, por el motivo que fuere, habían fracasado. La mala fortuna, las deficiencias bioquímicas o biofísicas, la falta de adaptación social se cobraban su tributo. Sin embargo, en el libro pequeño nunca se había tenido que tachar ninguno de los nombres anotados.
En aquel momento, Naron, enormemente corpulento e increíblemente anciano, levantó la vista al notar que se acercaba un mensajero.

—Naron —saludó el mensajero—. ¡Gran Señor!
—Bueno, bueno, ¿qué hay? Menos ceremonias.
—Otro grupo de organismos ha llegado a la madurez.
—Estupendo, estupendo. Hoy en día ascienden muy aprisa.
Apenas pasa año sin que llegue un grupo nuevo. ¿Quiénes son?
El mensajero dio el número clave de la galaxia y las
coordenadas del mundo en cuestión.
—Ah, sí —dijo Naron— lo conozco.

Y con buena letra cursiva anotó el dato en el primer libro, trasladando luego el nombre del planeta al segundo.
Utilizaba, como de costumbre, el nombre bajo el cual era conocido el planeta por la fracción más numerosa de sus propios habitantes.
Escribió, pues: La Tierra.
—Estas criaturas nuevas —dijo luego— han establecido un récord. Ningún otro grupo ha pasado tan rápidamente de la inteligencia a la madurez. No será una equivocación, espero.
—De ningún modo, señor —respondió el mensajero.
—Han desarrollado la energía termonuclear, ¿no es cierto?
—Sí, señor.
—Bien, ese es el requisito —Naron soltó una risita—. Sus naves sondearán pronto el espacio y se pondrán en contacto con la Federación.
—En realidad, señor —dijo el mensajero con renuencia—, los observadores nos comunican que todavía no han penetrado en el espacio.

Naron se quedó atónito.
—¿Ni poco ni mucho? ¿No tienen siquiera una estación espacial?
—Todavía no, señor.
—Pero si poseen la energía termonuclear, ¿dónde realizan las pruebas y las explosiones?
—En su propio planeta, señor.

Naron se irguió en sus seis metros de estatura y tronó:
—¿En su propio planeta?
—Si, señor.
Con gesto pausado, Naron sacó la pluma y tachó con una raya la última anotación en el libro pequeño.
Era un hecho sin precedentes; pero Naron era muy sabio y capaz de ver lo inevitable, como nadie, en la galaxia.

—¡Asnos estúpidos! —murmuró.

Publicado en: *Future Science Fiction*, Febrero 1958, p. 114
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