Compiled and edited with additional imagery by Wilson Li.

Articles, accounts and poems from Outrider Post, Federation of American Scientists, CSO, Nuclear Age Peace Foundation, Arms Control Association, The Atlantic, New York Times, TIME, Union of Concerned Scientists, Bulletin of the Atomic Scientists and Huffington Post.

This living document was created on Gweagle and Gadigal Land. Though this document details the anxieties, experiences and hopes of people in the threat of conflict, we cannot ignore the conflict and damage to the Land, people and culture of Aboriginal Australians that continues to this day, upon which we build our lives and work. Sovereignty was never ceded, and these Lands remain contested to this day.

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dered probable, is imminent, or is taking place.
During the Cuban Missile Crisis, the US
Strategic Air Command was placed on DEFCON
2 for the first time in history, while the rest of US military commands (with the exce
ption of the US Air Forces in Europe) went on DEFCON 3. On
22 October 1962 SAC responded by establishing Defense Condition Three (DEFCON III), and ordered B-52s on
airborne alert. Tension grew and the next day SAC
declared DEFCON II, a heightened state of alert, ready to strike targets within the Soviet Union.On 15 November 1965 the day Strategic Air Command (SAC) postured
down to defense condition (DEFCON) III.On 6 October 1973 Egyptian and Syrian forces launched a surprise attack on Israel. On 25 October U.S. forces went on
Defense Condition (DEFCON) II alertstatus, as possible intervention by the Soviet Union was feared. On 26 October, CINCSAC and CINCONAD reverted to normal
DEFCON status. On 31 October USEUCOM (less theSixth Fleet) went off DEFCON III status. The Sixth Fleet resumed its normal DEFCON status on 17 November 1973.

Contents

Foreword

DEFCON is a scale used internally by the United States military to categorise their proximity to nuclear conflict. Though this categorisation is not made available publicly until later documentation, community efforts are made by niche groups to upkeep its intent and adjust its count as necessary. In this living document, the community; the Peoples fears, anxieties and hopes, are made visible under each count, their accounts and experiences made manifest from beneath the singular, paraphrasing digits.

To check the current DEFCON level, scan this QR code using the Eyejack app, then move the camera to ensure the full two pages are in view.
This DEFCON count will be updated as the projected DEFCON level changes, according to defconlevel.com.

DEFCON 1, or condition level one has also been called “Cocked Pistol” or “white alert”. Defcon 1 is a white colored alert status and is a maximum readiness condition level that was initially created in 1959 by the joint chiefs of staff. Cocked Pistol means that the United States is currently in a state of war, or that a nuclear threat is either in progress or imminent.

Trees with No Branches Flowers with No Names

For Nobuo Miyake, Takeharu Terao
and the Hibakusha

Kathleen Hellen, 2007

2007 Barbara Mandigo Kelly Peace
Poetry Contest Honourable Mention

One
A finger like a bone rose out of smoke and pointed
to the sun the world went white
a thousand winds rushed in

Two
Glass that didn't shatter melted bodies
bloated buildings shrugged
collapsing in the radiance of waves

Three
Something in his eye besides his eye turned in
tattooed pattern of his wife
blackened husks the sleeve of skin

Four
Heads as big as human grew in keloid cherry
blossoms stem on top
maggots hatched in wounds that wouldn't heal

Five
Man or woman? Indistinguishable
the end beginning

Kathleen Hellen, 2007

A Fire In the Sky

When the Japanese surrendered in World War II, the historic news was all but eclipsed by the world-altering event that led up to it: the dropping of the atomic bomb on Hiroshima, which happened 70 years ago Thursday.

> "The greatest and most terrible of wars ended, this week, in the echoes of an enormous event—an event so much more enormous that, relative to it, the war itself shrank to minor significance," read TIME's first sentence of the first story that ran the first week after.

Lily Rothman, August 6, 2015

> "The knowledge of victory was as charged with sorrow and doubt as with joy and gratitude. More fearful responsibilities, more crucial liabilities rested on the victors even than on the vanquished."

Lily Rothman
August 6, 2015

Based on an excerpt from Time 2005

It was clear to all then that a great force had been unleashed, and those who had survived the awful war would be left to try to harness it. In 1985, on the 40th anniversary of the bombing of Hiroshima and Nagasaki, TIME looked back at the legacy of the Atomic Age.

As part of that special issue, Yoshitaka Kawamoto, the director of the Hiroshima Peace Memorial Museum, shared his memories of that day in 1945.

An aerial photograph of Hiroshima, Japan, shortly after the "Little Boy" atomic bomb was dropped. Dated 1945 (Rothman, L.)

When Yoshitaka Kawamoto came to, the classroom was very dark, and he was lying under the debris of the crushed school building. In those days most Japanese buildings were made of wood; when the Bomb dropped, all but one or two of the structures that stood near the hypo-center of the explosion were flattened like paper hats. Kawamoto's school, the Hiroshima Prefectural First Middle School, stood only 800 meters, a mere half-mile, from the hypo-center. Two-thirds of his classmates were killed instantly where they sat at their desks. Some who survived were weeping and calling for their mothers. Others began singing the school song to bolster their courage and to let passers-by know that the 13-year-olds were still alive.

"But then the singing and the cries grew weaker. My class mates were dying one by one. That made me very fright-ened. I struggled to free myself from the broken fragments, and looked around. I thought that gas tanks had exploded. Through a hole in the roof I could see clouds swirling in a cone; some were black, some pink. There were fires in the middle of the clouds. I checked my body. Three upper teeth were chipped off; perhaps a roof tile had hit me. My left arm was pierced by a piece of wood that stuck in my flesh like an arrow. Unable to pull it out, I tied a tourniquet around my upper arm to stanch the flow of blood. I had no other injuries, but I did not run away. We were taught that it was cowardly to desert one's classmates. So I crawled about the rubble calling, 'Is there anyone alive?'

"Then I saw an arm shifting under planks of wood. Ota, my friend, was moving. But I could see that his back was broken, and I had to pull him up into the clear. Ota was looking at me with his left eye. His right eyeball was hanging from his face. I think he said something, but I could not make it out. Pieces of nails were stuck on his lips. He took a student handbook from his pocket. I asked, 'Do you want me to give this to your mother?' Ota nodded. A moment later he died. By now the school was engulfed in flames. I started to walk away, and then looked back. Ota was staring at me with his one good eye. I can still see that eye in the dark."

So began Kawamoto's morning, Aug. 6, 1945. Yoshitaka Kawamoto is 53 today, a small, solid man who dresses formally in blue or brown suits and carries himself with a quick-moving dignity. When he tells the story of what happened 40 years ago, however, he can become a 13-year-old on the spot--suddenly springing from a chair to strike a military pose, demonstrating a march step, or hunching down like a shortstop. In his office he sang the school song that was sung by his classmates the morning of the bombing. As he did, he rose automatically and snapped to attention, chin tucked, eyes forward: The rain pours white against the Hiroshima evening.

"Colors fade on petals just past full bloom."

Colors fade on petals just past full bloom, Spring is passing. But we stand firm, our dreams of prosperity unfading. Only in the past two years, since he was appointed director of the Hiroshima Peace Memorial Museum, has Kawamoto begun to tell the story of his days of survival. Before then he did not want publicly to declare himself a hibakusha, a survivor of the bombing. He is aware of the unspoken stigma attached to being a hibakusha, that people often treat the survivors with a sort of sympathetic shunning. It is also unlike Kawamoto to do anything without a clearly defined reason. The museum directorship provided a reason. Kawamoto now recounts his experiences to museum visitors and groups of schoolchildren. He believes in his role; people must know the facts, he says.

At the same time, this retelling of the August days has caused Kawamoto deep uneasiness. He had given little thought to Ota before the past two years. Now Ota appears in his dreams. Kawamoto explains that much guilt is connected to surviving the bombing. In the days following Aug. 6, he lost Ota's student handbook. Kawamoto spoke of that time, Aug. 6-11, over a recent five-day period, telling part of his story in his office across the hall from the Peace Museum, and the rest "on location," in various places where the story occurred. His office and the museum are in a long, silvery modern building that looks like a harmonica, situated at the end of the triangular Peace Memorial Park. At the point of the triangle sits the Aioi Bridge, a T-shaped structure spanning the Honkawa, the river that served as the aiming point for the Enola Gay (The Bomb missed by only a block or two).

Between the point and the broad end of the triangular park lies a grassy area dotted with various memorials to peace or to specific victims of the bombing, the most sought-out of which is a rocket-shaped sculpture dedicated to a little girl who in 1955 died of leukemia attributed to radiation poisoning. According to one account, the girl made more than 900 paper cranes before she died, trusting that if she completed 1,000, her life would be spared. In Japan there is an old belief that a crane can live for 1,000 years, and that if you fold 1,000 paper cranes, they will protect you from illness. Thousands of green, red and yellow paper cranes made by schoolchildren billow out from under the rocket like the undergarments of a skirt.

Yet not the dome nor the Peace Park nor the monuments--and there are dozens of monuments to victims throughout the city--give any real feeling of the devastation of Aug. 6, 1945. Even the film that is shown visitors to the Peace Museum displays less sadness and horror than one would expect, in spite of the pictures of scorched children and hairless women lying listless in hospital beds. Far more affecting is a three-to-five-minute 16-mm movie in Kawamoto's possession that shows Hiroshima in 1936: men who dressed in kimono; elegant women scooting rapidly through the streets of a shopping district; cherry blossoms; a glimpse of the Atomic Bomb Dome as it looked originally: fat, Victorian and official.

It is the ordinariness of the city that creates the sense of loss; what a normally pleasant city Hiroshima was before the bombing, what a normally pleasant city it is today. On any summer morning, the Hiroshima Carp take infield practice in the baseball stadium; fashionably dressed young men and women walk purposefully to work; traffic builds on the city's bridges. If you would picture the layout of the center of Hiroshima, which covers much of the ground of Kawamoto's story, place your right hand palm down on a flat surface with your fingers spread wide. Your fingers are rivers. On the land between your third and fourth fingers lies the Peace Park. Between your fourth and fifth fingers Kawamoto's school was situated. The heel of your hand is Hiroshima Bay, and beyond your fingertips lie mountains and countryside.

Between your second and third fingers is where the Enola Gay dropped the Bomb at 8:15 a.m. on August 6. Once relieved of its nearly 9,000-lb. burden. the plane thrust upward jerking the heads of the crew. The B-29 made a 60° dive and a 158° right turn. Forty-three seconds after the Bomb was released, it detonated. The crew members watched it explode in a red core below them. Then they headed back to base, the tiny island of Tinian in the Northern Marianas, 1,600 miles to the south. That morning had begun routinely for Kawamoto.

"Scorched children lying listless in beds."

At the time, he was living with his mother and his younger brother in Ono, now a growing suburb of 30,000, then a fishing village of fewer than 10,000, about 30 kilometers outside Hiroshima, across Hiroshima Bay. Mrs. Kawamoto had taken her two boys to Ono one year before, after her husband, an engineer, had been killed in a freak accident in an electrical factory. Until then the Kawamotos had been living in the nearby village of Kuba, where Yoshitaka and his friends swam out long distances in the bay. "They called us children of the sea." Sailors from German U-boats would wave to the boys from the subs. Kuba was a wonderful town to grow up in, Kawamoto says, a place of frogs and dragonflies. Boys would test their courage in the graveyard at night. "In the daytime we wore uniforms, but at night we put on kimono. In the graveyard the hem of your kimono could get caught on a bush. It would feel like a hand tugging you down."

Hiroshima

140,000 deaths

How many people died as a result of the atomic bombings of Hiroshima and Nagasaki? There is the one thing that everyone who has tackled this question has agreed upon:

The answer is probably fundamentally unknowable.

Nagasaki

70,000 deaths

The indiscriminate damage inflicted upon the cities, coupled with the existing disruptions of the wartime Japanese home front, means that any precise reckoning is never going to be achieved.

Bulletin of the Atomic Scientists, August 4, 2020

DEFCON 2, or condition level two has also been called “Fast Pace” and is a “Red Alert” or red colored condition level. Fast Pace means we are at the next step to war or a nuclear threat. During DEFCON 2, the United States Armed Forces will be ready and prepared to ship out in 6 hours time or less, hence the name “Fast Pace”.

Gaza

In seven years, we've got a whole new body.
A European doctor on emergency duty in Gaza says
it's like being bombed in a cage,
and I think of how it must seem
to those already hospitalized
with wounds that may never heal

to hear the wham and whistle
smash and screech of missiles,
the rumble of earth giving way underneath
as they lie immobilized
waiting for medicine.

Even the body of a patient lying quietly,
incarcerated, on life support,
generates three billion cells a minute.
In seven years, he could have a whole new body,
not as it was, but brimming with life.

Where is Joseph, whose dreams saved
both Egyptians and the brothers who betrayed him?
Water brims to the top of a tube and trembles there.

Estella Lauter
2009

2009 Barbara Mandigo Kelly Peace
Poetry Contest Adult Winner

Estella Lauter, 2009

Stuxnet

Josh Fruhlinger
22 August, 2017

Thanks to Stuxnet, we now live in a world where code can destroy machinery and stop (or start) a war.

Stuxnet is an extremely sophisticated computer worm that exploits the multiple previously unknown Windows zero-day vulnerabilities to infect computers and spread. Its purpose was not just to infect PCs but to cause real-world physical effects. Specifically, it targets centrifuges used to produce the enriched uranium that powers nuclear weapons and reactors.

Stuxnet was first identified by the infosec community in 2010, but development on it probably began in 2005. Despite its unparalleled ability to spread and its widespread infection rate, Stuxnet does little or no harm to computers not involved in uranium enrichment. When it infects a computer, it checks to see if that computer is connected to specific models of programmable logic controllers (PLCs) manufactured by Siemens. PLCs are how computers interact with and control industrial machinery like uranium centrifuges. The worm then alters the PLCs' programming, resulting in the centrifuges being spun too quickly and for too long, damaging or destroying the delicate equipment in the process. While this is happening, the PLCs tell the controller computer that everything is working fine, making it difficult to detect or diagnose what's going wrong until it's too late.

Who Created Stuxnet?

It's now widely accepted that Stuxnet was created by the intelligence agencies of the United States and Israel. The classified program to develop the worm was given the code name "Operation Olympic Games"; it was begun under President George W. Bush and continued under President Obama. While neither government has ever officially acknowledged developing Stuxnet, a 2011 video created to celebrate the retirement of Israeli Defense Forces head Gabi Ashkenazi listed Stuxnet as one of the successes under his watch.

While the individual engineers behind Stuxnet haven't been identified, we know that they were very skilled, and that there were a lot of them. Kaspersky Lab's Roel Schouwenberg estimated that it took a team of ten coders two to three years to create the worm in its final form.

Several other worms with infection capabilities similar to Stuxnet, including those dubbed Duqu and Flame, have been identified in the wild, although their purposes are quite different than Stuxnet's. Their similarity to Stuxnet leads experts to believe that they are products of the same development shop, which is apparently still active.

The Purpose of Stuxnet?

The U.S. and Israeli governments intended Stuxnet as a tool to derail, or at least delay, the Iranian program to develop nuclear weapons. The Bush and Obama administrations believed that if Iran were on the verge of developing atomic weapons, Israel would launch airstrikes against Iranian nuclear facilities in a move that could have set off a regional war. Operation Olympic Games was seen as a nonviolent alternative. Although it wasn't clear that such a cyberattack on physical infrastructure was even possible, there was a dramatic meeting in the White House Situation Room late in the Bush presidency during which pieces of a destroyed test centrifuge were spread out on a conference table. It was at that point that the U.S. gave the go-head to unleash the malware.

Stuxnet was never intended to spread beyond the Iranian nuclear facility at Natanz. The facility was air-gapped and not connected to the internet. That meant that it had to be infected via USB sticks transported inside by intelligence agents or unwilling dupes, but also meant the infection should have been easy to contain. However, the malware did end up on internet-connected computers and began to spread in the wild due to its extremely sophisticated and aggressive nature, though as noted it did little damage to outside computers it infected. Many in the U.S. believed the spread was the result of code modifications made by the Israelis; then-Vice President Biden was said to be particularly upset about this.

Stuxnet Source Code

Liam O'Murchu, who is the director of the Security Technology and Responses group at Symantec and was on the team there that first unraveled Stuxnet, says that Stuxnet was "by far the most complex piece of code that we've looked at, in a completely different league from anything we'd ever seen before." And while you can find lots of websites that claim to have the Stuxnet code available to download, O'Murchu says you shouldn't believe them: he emphasized to CSO that the original source code for the worm, as written by coders working for U.S. and Israeli intelligence, hasn't been released or leaked and can't be extracted from the binaries that are loose in the wild. (The code for one driver, a very small part of the overall package, has been reconstructed via reverse engineering, but that's not the same as having the original code.)

However, he explained that a lot about the code could be understood from "examining the binary in action and reverse-engineering it. For instance, he says, it was pretty obvious from the first time we analyzed this app that it was looking for some Siemens equipment." Eventually, after three to six months of reverse engineering, "we were able to determine, I would say, 99 percent of everything that happens in the code," O'Murchu said.

And yet it was a thorough analysis of the code that eventually revealed the purpose of the malware. "We could see in the code that it was looking for eight or ten arrays of 168 frequency converters each," says O'Murchu. "You can read the International Atomic Energy Association's documentation online about how to inspect a uranium enrichment facility, and in that documentation they specify exactly what you would see in the uranium facility — how many frequency converters there will be, how many centrifuges there would be. They would be arranged in eight arrays and that there would be 168 centrifuges in each array. That's exactly what we were seeing in the code."

It was very exciting that we'd made this breakthrough," he added. "But then we realized what we had got ourselves into — probably in an international espionage operation — and that was quite scary." Symantec released this information in September of 2010; analysts in the west had known since the end of 2009 that the Iranians had been having problems with their centrifuges, but only now they understood why.

Stuxnet Documentary

Alex Gibney, the Oscar-nominated documentarian behind films like Enron: The Smartest Guys In The Room and Going Clear, directed Zero Days, which explains the history of Stuxnet's discovery and its impact on relations between Iran and the west. Zero Days includes interviews with O'Murchu and some of his colleagues, and is available in full on YouTube.

One dramatic sequence shows how the Symantec team had managed to drive home Stuxnet's ability to wreak real-world havoc: they'd programmed a Siemens PLC to inflate a balloon, then infected the PC it was controlled by with Stuxnet. The results were dramatic: despite only being programmed to inflate the balloon for five seconds, the controller kept pumping air into until it burst.

The destruction of the Iranian uranium centrifuges, which followed the same logic—they were spun too quickly and destroyed themselves—was perhaps less visually exciting, but was ultimately just as dramatic. As the documentary explains, we now live in a world where computer malware code is causing destruction at a physical level. It's inevitable that we'll see more in the future.

Fukushima Daiichi

Fukushima, Japan
March 2011

The earthquake and tsunami that struck eastern Japan on March 11, 2011, caused a serious accident at the Fukushima Dai-ichi nuclear power plant on the northeastern coast of Japan.

The earthquake cut off external power to the reactors. tsunami, which reached levels more than twice as high as the plant was designed as to withstand, disabled backup diesel generators, crippling the reactor cooling systems. Battery power was quickly exhausted, and overheating fuel in the plant's operating reactor cores led to hydrogen explosions that severely damaged three of the reactor buildings. Fuel in three of the reactor cores melted, and radiation releases from the damaged reactors contaminated a wide area, forcing the evacuation of nearly half a million residents.

Chernobyl

Chernobyl, Ukraine (former Soviet Union)
April 26, 1986

Chernobyl is considered the world's worst nuclear disaster to date. It occurred on April 26, 1986, when a sudden surge in power during a reactor systems test resulted in an explosion and fire that destroyed Unit 4. Massive amounts of radiation escaped and spread across the western Soviet Union and Europe. As a result of the disaster, approximately 220,000 people had to be relocated from their homes.

Unit 4 was to be shut down for routine maintenance. A test was conducted to determine the plant's equipment's ability to provide sufficient electrical power to operate the reactor core cooling system and emergency equipment during the transitional periods between a loss of major main station electrical power supply and the start-up of the emergency power supply. Workers did not implement adequate safety precautions or alert operators to the electrical test's risks. This lack of awareness led the operators to engage in actions that diverged from safety procedures. Consequently, a sudden power surge resulted in explosions and nearly complete destruction of the reactor. The fires that broke out in the building contributed to the extensive radioactive releases.

Three Mile Island

Middletown, Pennsylvania, USA
March 28, 1978

The partial meltdown at Three Mile Island Unit 2 is considered the most serious nuclear accident in U.S. history, although it resulted in only small radioactive releases.

The accident began with failures in the non-nuclear secondary system, followed by a human-operated relief valve in the primary system that stuck open, which allowed large amounts of nuclear reactor coolant to escape. The plant operators' initial failure to correctly identify the problem compounded it. In particular, a hidden indicator light led to an operator manually overriding the automatics emergency cooling system because he mistakenly believed that too much coolant water in the reactor had caused the steam pressure release. Eventually the reactor was brought under control, although the full extent of the accident was not understood until later.

Enrico Fermi Unit 1

Frenchtown Charter Township,
Michigan, USA
October 5, 1966

Coolant flow blockage in the two fuel channels led to the partial meltdown of two fuel assemblies at Fermi Unit 1.

Fermi Unit 1 was the nation's first and only commercially operating liquid metal fast breeder reactor. Vibrations caused a component within the reactor vessel to loosen, which had blocked coolant flow when hydrodynamic forces carried it up the fuel subassemblies' inlet nozzle. Workers did not notice what had occurred until core temperature alarms sounded. Several fuel rod subassemblies reached temperatures of up to 700 degrees Fahrenheit, thus causing them to melt. After the reactor was shut down for repairs, it was returned to partial operation periodically until 1972, but it was never again fully operational. It was officially decommissioned in 1975.

SL-1

Idaho Falls, Idaho, USA,
January 3, 1961

The withdrawal of a single control rod caused a catastrophic power surge and then steam explosion at the SL-1 boiling water reactor that killed all the workers on duty at the time.

On January 3, 1961, workers were in the process of reattaching to their drive mechanisms control rods they had disconnected earlier that day to enable test equipment to be inserted in the reactor core. They lifted the central control rod 20 inches, instead of the four inches that was required. This error caused the reactor to go critical and its power to surge 6,000 times higher than its normal level in less than a second. As a result, the nuclear fuel vaporized and a steam bubble was created. The steam bubble expanded so quickly that it pushed water above it against the reactor vessel, which caused it to jump out of its support structure. It hit an overhead crane and then returned to the reactor vessel. In the process, all of the water and some of the fuel was released from the reactor vessel. All three workers on duty received lethal doses of radiation, in addition to trauma from explosion.

Sodium Reactor Experiment

Los Angeles, California, USA
July 1959

A partial meltdown had occurred at the Sodium Reactor Experiment (SRE) due to cooling flow blockage that caused the reactor core to overheat.

The Sodium Reactor Experiment had experienced extensive fuel damage during a power run. Thirteen of forty-three fuel elements overheated when the cooling flow provided by the liquid sodium was blocked by tetralin, an oil like fluid which had leaked into the primary sodium loop during the prior power runs. This overheating caused the reactor core to fail. Fission products were released from the damaged fuel into the primary sodium loop. Some of the fission products leaked from the primary sodium loop into the high bay area, a region inside of the building housing the reactor. Other fission products flowed with the helium cover gas over the liquid sodium in the reactor pool to gaseous storage tanks. Fission products from the high bay area and from the gaseous storage tanks were processed through the filters of a ventilation system and discharged to the atmosphere.

Union of Concerned Scientists, October 1, 2013

3

DEFCON 3, or condition level three has also been called “Round House” or “Yellow Alert” and it is an increase in alertness and military readiness. Within DEFCON 3 the air force is in a higher state or level of readiness so that they can deploy and mobilize within 15 minutes.

Paper Crane

Start with a perfectly square sheet of paper for waking a sleeping giant;

Fold one edge to meet the other for the nations who shared the sides of a bitter vendetta;

Flip the square for a sinister cloud that rose above the heavens;

Crease the corners for a melted city once engulfed in light.

Open up the paper for the blistering ash that rained down upon the streets;

Form the head for the austere procession of the scorched in the wake of the aftermath;

Gently pull the wings apart for a small girl who made a vain wish on colored sheets;

Now behold a small red paper crane for a hopeful future.

Alexandra S. Timmer
2017

2017 Barbara Mandigo Kelly
Peace Poetry Contest Adult
Honourable Mention

Alexandra S. Timmer, 2017

Nuclear Anxiety Returns to America

Robinson Meyer
August 12, 2017

People are talking about thermonuclear war again—
And they're out of practice.

On opening their paper on Friday morning, readers of The Wall Street Journal encountered a financial item of unusually wide interest. "Here's a question that's probably not on the CFA exam," write Mike Bird and Riva Gold. "What happens to financial markets if two nuclear-armed nations go to war?"

What, indeed? We soon learn the consequences could be dire. Short-term interest rates would rise and long-term rates would fall. In such a small skirmish between North Korea and the United States, the S&P 500 Index might post a "20-percent losses before it became clear that the United States would prevail." But were another nuclear-armed power like Russia or China to get involved, the European Central Bank would have to take extreme action and issue "highly dovish forward guidance."

Yet even amid this market turmoil, the savvy broker might still protect their investment. Sure, it's true that the Japanese yen—a traditional safe haven—makes for a tricky bet when Tokyo is 800 miles downwind of Pyongyang. But there's at least one good option left, according to analysts at the Nordea Group:

> "German bunds, the perennial refuge of panicked investors, would be good to own during a nuclear conflict too, with aggressive buying pushing the spread between German two- and 10-year bunds to 0.5 percentage point, from above one percentage point now."

"The urban firestorms, the plumes of sun blotting black smoke"

At last, a good spread between German bonds. What a relief.

Nowhere does the story mention several other consequences of nuclear war: the urban firestorms; the plumes of sun-blotting black smoke; the crop die-offs across Asia, Africa, and North America; and the breakdown in the global communication network, whose destruction would render the German bund meaningless (no matter how favorable its yield curve). Nor did the story pause to note the millions of dead.

In the second week of August 2017, the American public began to do something that felt distinctly 20th-century: consider the consequences of a nuclear war. Two things became clear. First, nuclear anxiety had arrived again as a mass cultural force in American life—or, at least, in the accelerated internet-era version of it. Second, the public (and the American president) was obviously out of practice in thinking about it.

The episode began in earnest on Wednesday, when The Washington Post reported that at least one intelligence agency believed that North Korea could now miniaturize its nuclear weapons to fit into an intercontinental ballistic missile. If true, it represents an alarming technological breakthrough for the nation.

Then the president spoke. At an unrelated event at his private golf course in New Jersey, President Donald Trump warned of "fire and fury like the world has never seen" if North Korea continued to make threats against the United States. The next day—after aides tried to signal that his comments were improvised—he repeated them, saying maybe "fire and fury" was not "tough enough."

Finally, on Friday morning, Trump tweeted that the U.S. military was "locked and loaded should North Korea act unwisely." Nuclear war—suddenly, everyone was talking about it, because the president was talking about it, in ways he isn't supposed to.

Every late-night host riffed on the apocalypse. "Even Trump is scared by what he's saying—look at him, he's literally hugging himself," quipped Seth Meyers, host of Late Night. (Trump gripped his torso as he uttered "fire and fury.") set of Democratic-connected advocacy groups, most of them not particularly radical, held an "emergency rally against nuclear war" at the White House.

"And every professor or researcher of nuclear-weapons policy—who normally confined to the dusty corners of a university libraries and international security conferences—found themselves on a treadmill of radio and TV interviews.

"[Nuclear weapons] are this kind of layer over the world, this abstract, intangible thing. We don't talk or think about them," says Lovely Umayam, who researches nuclear weapons at the Stimson Center, a think tank in Washington, D.C. She

said she felt glad there was renewed interest in the one technology that hangs over all U.S. international relations. But she also worried about how reactive the attention seemed. For the past week, she told me, she's heard just one constant question during TV and radio interviews: "Should we be concerned?"

As an expert, I say, no, not quite," she said. "We could really walk back on these words and develop de-escalation mechanisms. It's horrible [Trump and Kim Jong Un] are talking this way, but it's not the end of the world yet."

But then, as an anthropologist, I want to say: Yes, you should be concerned! You should always be concerned. And that you just have to ask an expert that question—what does it say about your literacy of [nuclear] issues?" she said.

Kristyn Karl, a professor of political science at Stevens Institute of Technology, agreed that the public's interest in nuclear weapons was way up—even if their understanding wasn't. "The public is currently more aware of nuclear threats than they have been since the end of the Cold War," she told me in an email. That doesn't mean they know much about them.

"Americans flunk questions about a basic nuclear security, Karl said, "such as identifying nuclear states, the scale of nuclear arsenals, etc." Younger Americans also have little experience with nuclear weapons, especially compared with Baby Boomers. Alex Wellerstein, a historian of nuclear weapons, also at the Stevens Institute, agreed that people seem more interested now. But he worries that they won't stay that way once this crisis passes.

It's clear there is a sharp uptick of interest on nuclear questions," he said in an email. "The question is, what kind of interest is it? Is it the kind of interest that will lead to a more sustained public interest on these topics? Or is it an ephemeral fear of the sort that comes and goes in a crisis?"

American nuclear anxiety seems almost totally focused on the foreign policy issues from small states—specifically Iran and North Korea. So in that sense it is different than the period of the Cold War when the threat was larger," he said:

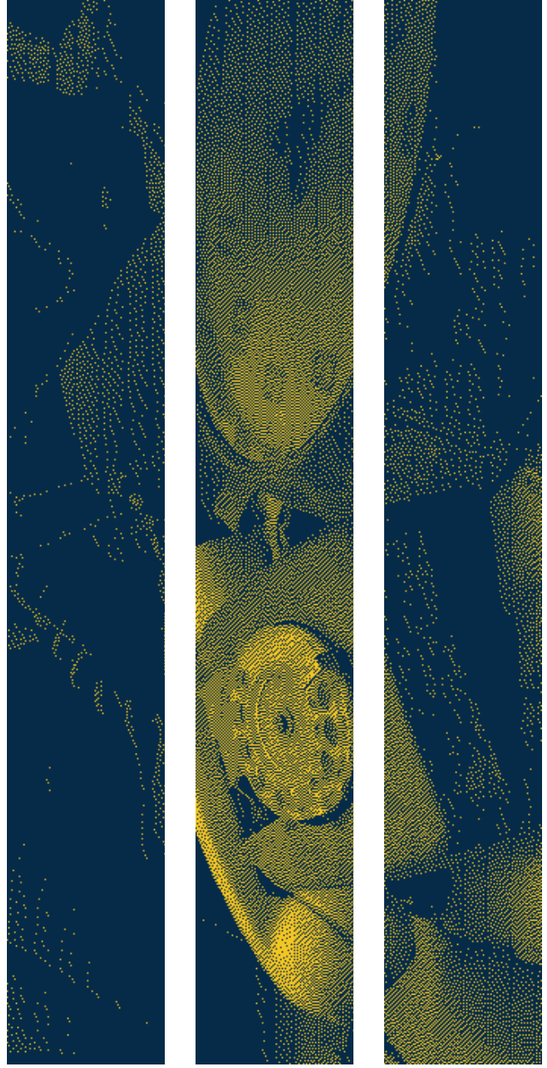
> "What I fear is that Americans will erroneously think that a war with either Iran or North Korea would be "no big deal" whereas we are (and were) much more aware that a war with Russia was totally unthinkable. A war with Iran should be considered unthinkable (one need only look at what our war with Iraq has cost us, what monsters it created), and war with North Korea would come at a dearer cost than I think most people appreciate."

But when it comes to the prospect of nuclear annihilation, what is unthinkable and what isn't? Americans are finding themselves back in the uneasy practice of imagining not the end of the world, but all the intermediate steps between now and then—the first warnings on the news, the orange streaks in the sky, the agony of waiting for ignition.

Writing three decades ago, the essayist and physician Lewis Thomas imagined a war with Russia and fell into despair. "My mind swarms with images of a world in which the thermonuclear bombs have begun to explode, in New York and San Francisco, in Moscow and Leningrad, in Paris, in Paris, in Paris. In Oxford and Cambridge, in Edinburgh," he wrote:

> This is a bad enough thing for the people in my generation. We can put up with it, I suppose, since we must. But what I cannot imagine, what I cannot put up with ... is what it would be like to be young. How do the young stand it? How can they keep their sanity? If I were very young, 16 or 17 years old, I think I would begin, perhaps very slowly and imperceptibly, to go crazy."
>
> But for today's young people, looking to an uncertain future, at least there are German bonds to buy.

Robinson Meyer is a staff writer at The Atlantic, author of the newsletter The Weekly Planet, and a co-founder of the COVID Tracking Project at The Atlantic.



A rotary telephone and clock are seen in the NATO tunnels dating back to the Cold War beneath Valletta, Malta, in 2017. (Meyer, R.)

Robinson Meyer, August 12, 2017

The World Can Still Be Destroyed In A Flash

NYTimes Editorial Board
August 6, 2020

It seems that the United States is plunging into a new arms race without learning the lessons of the last.

The nuclear weapons dropped over Hiroshima and Nagasaki 75 years ago this week wreaked a devastation never before seen in human warfare. Yet they were firecrackers compared with the nuclear weapons that were soon developed — bombs, warheads, shells, torpedoes and other devices capable of vaporizing the human race in an apocalyptic flash.

For decades, that thought cast a pall of acute anxiety over America and the world. Whether because of that fear, a strategy of effective deterrence, chance or all the above, the United States remains the only country to have used nuclear weapons in combat. With the end of the Cold War, anxiety around nuclear war has receded. Most people probably are not aware that a harrowing and expensive new arms race is now underway.

Today Americans are more than likely to identify climate change as the greatest man-made threat to the planet. Last year, in the list of what Americans fear compiled annually by Chapman University, "North Korea using nuclear weapons" and "Nuclear weapons attack" ranked 27 and 29, far below "Corrupt government officials" (No. 1) or "Pollution of oceans rivers and lakes" (No. 2).

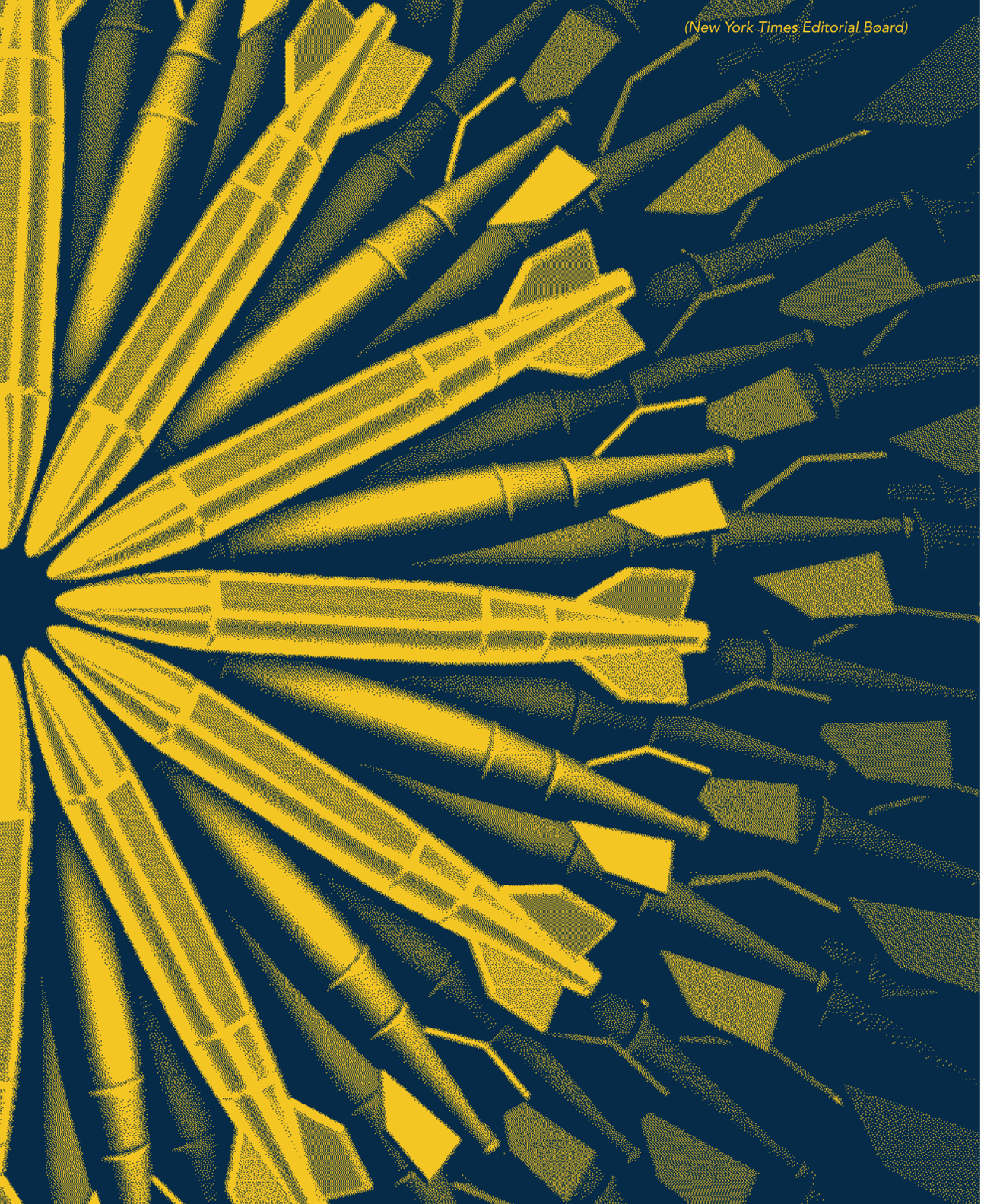
Yet even with the Cold War long over and stockpiles of nuclear weapons in the Russian and American arsenals sharply reduced through a series of nuclear arms treaties, to fewer than 6,000 warheads each, there are no grounds for complacency. The world can still be destroyed in a flash.

Nine states have nuclear weapons — being United States, Russia, Britain, France, China, India, Pakistan, Israel and then North Korea. Iran's nuclear program has been the focus of intense concern for years, and Saudi Arabia has vowed that if Iran develops a nuclear weapon, it will follow suit. Consider also that just two men have the power to unleash a nuclear barrage almost entirely on their own — President Trump and Vladimir Putin, the Russian president, who are both working assiduously on modernizing their arsenals.

> "The United States remains the only country to use nuclear weapons in combat."

Mr. Trump has said he is working on a new arms control agreement with Russia and is seeking to include China in the talks. But his administration has always found it easier to tear up treaties than to sign them, especially if the result in any way restrains the United States. As the special envoy for arms control, Marshall Billingslea, boasted in May, "We know how to win these races, and we know how to spend the adversary into oblivion."

Before the coronavirus pandemic put millions of Americans out of their work, spending so much money on new doomsday weapons was profligate. Now, it seems morally indefensible. This week, the Government Accountability Office said that, without changes, the Pentagon's nuclear weapons modernization effort is on track to surpass its $1.2 trillion price tag over the next three decades. It seems as though the United States is plunging into a new nuclear arms race with Russia and China without having learned the lessons of the last one.



(New York Times Editorial Board)

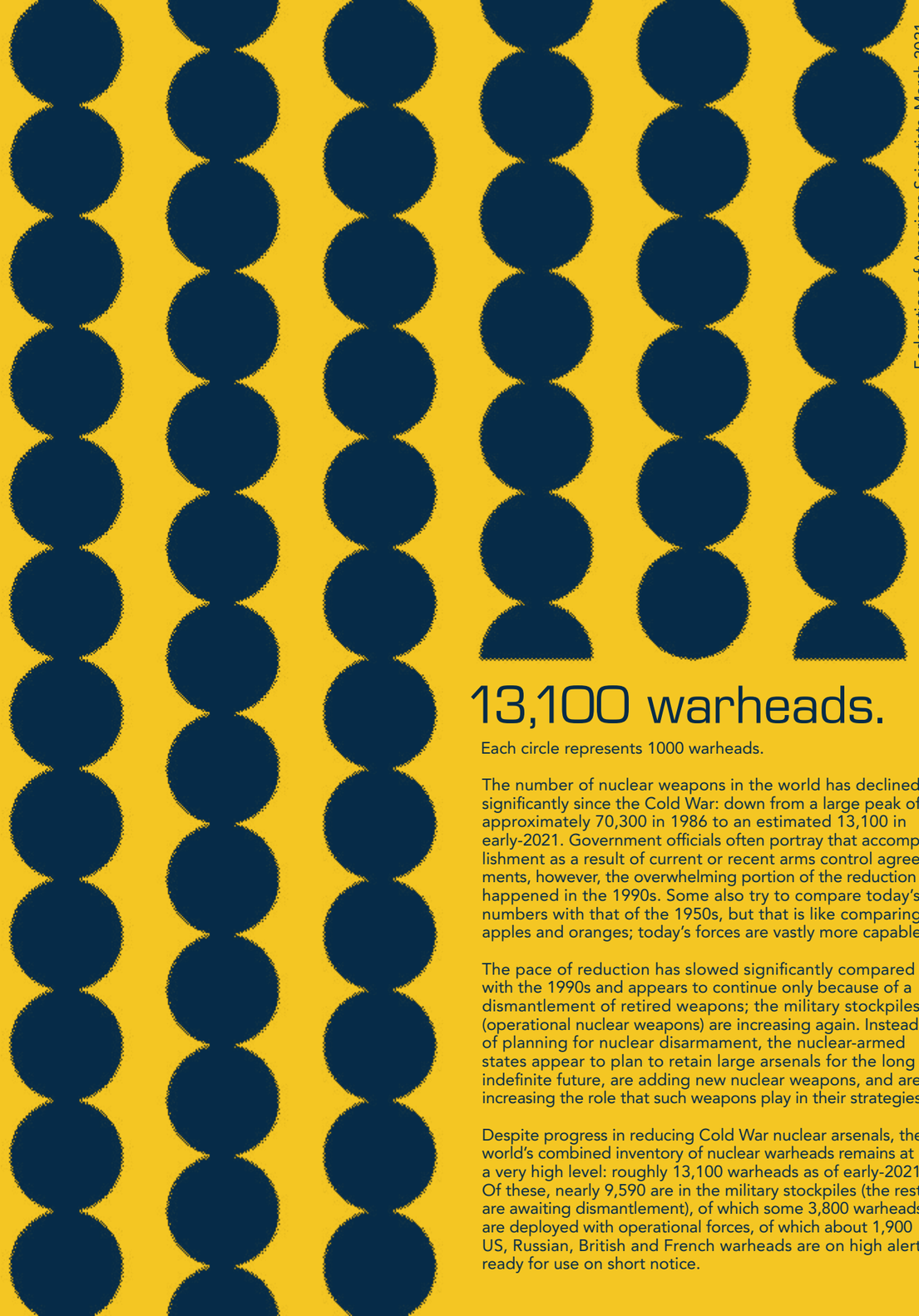
When briefed by the military in 2017 on the levels to which American as well as Russian nuclear arsenals had been reduced through arms treaties, Mr. Trump reportedly demanded that the United States increase its nuclear stockpile tenfold. According to some reports, this was what prompted the secretary of state at the time, Rex Tillerson, to call the president a "moron."

Mr. Trump withdrew the United States from the Intermediate-Range Nuclear Forces Treaty and the Iran nuclear deal, and he has not yet extended the New START accord, the only agreement still in place limiting American and Russian nuclear forces, which was signed by President Barack Obama and expires in early February. In addition, the Trump administration was recently reported to be thinking of breaking the 28-year-old moratorium on nuclear testing.

The 75th anniversary of Hiroshima is a good time to revive the serious public concern about nuclear weapons. The pandemic may leave little room for other fears, but public health and economic recovery should not have to compete for resources with a needless and enormously expensive new arms race. As Jessica Mathews, former president of the Carnegie Endowment for International Peace, writes in the current issue of The New York Review of Books, it would be good for the five original nuclear powers — the United States, Russia, Britain, France and China — to formally endorse the principle set forth by Presidents Ronald Reagan and Mikhail Gorbachev at their 1985 summit, that "a nuclear war cannot be won and must never be fought."

"Mr Trump withdrew the United States from the Intermediate-Range Nuclear Forces Treaty and the Iran nuclear deal."

Above all, the wrenching images of scorched rubble where Hiroshima had stood ought to be cause for serious reflection on what nuclear weapons do — and what they cannot do.



13,100 warheads.

Each circle represents 1000 warheads.

The number of nuclear weapons in the world has declined significantly since the Cold War: down from a large peak of approximately 70,300 in 1986 to an estimated 13,100 in early-2021. Government officials often portray that accomplishment as a result of current or recent arms control agreements, however, the overwhelming portion of the reduction happened in the 1990s. Some also try to compare today's numbers with that of the 1950s, but that is like comparing apples and oranges; today's forces are vastly more capable.

The pace of reduction has slowed significantly compared with the 1990s and appears to continue only because of a dismantlement of retired weapons; the military stockpiles (operational nuclear weapons) are increasing again. Instead of planning for nuclear disarmament, the nuclear-armed states appear to plan to retain large arsenals for the long indefinite future, are adding new nuclear weapons, and are increasing the role that such weapons play in their strategies.

Despite progress in reducing Cold War nuclear arsenals, the world's combined inventory of nuclear warheads remains at a very high level: roughly 13,100 warheads as of early-2021. Of these, nearly 9,590 are in the military stockpiles (the rest are awaiting dismantlement), of which some 3,800 warheads are deployed with operational forces, of which about 1,900 US, Russian, British and French warheads are on high alert, ready for use on short notice.

Federation of American Scientists, March 2021

DEFCON 4, or condition level four has also been called “Double Take” or “Green Alert” and is an increase in intel gathering and strengthening of security protocols. DEFCON 4, or Double Take is considered “Above Normal Readiness”.

A Child Hibakusha Hiroshima 1947

My mother

When my hair began falling out, my mother got down on
her knees and picked up one hair at a
time. My hair was everywhere--under the hospital bed,
inside my sleeves, on the white wall.
My mother would sweep the floor, press my hair into a
black ball between her hands
and put it inside her apron's pocket. Even after I became
bald, the hairs continued to well up
like spring water in the mountain. When the wind came
through the window,
my hairs moved like worms on the wet ground. This
morning, my hair was inside my mother's
noodle soup. She filled her mouth with my hair and noodles
and
swallowed them all at once.

My brother

My brother pushed my swing, and I went up high.
When I came down and passed him, he said he could see
the top
of my head, bare, full, and smooth like the belly
of a pregnant woman.

My grandmother

Thousands of pieces
of glass flew into my grandmother's head
like bees into a hive.
After she lost all of her hair, she died.
Inside the coffin, my grandmother's head shone
as if the stars were buried underneath her skin.

My River

River, I'm going to die soon. My grandmother, Cousin Toshi
and Mrs. Kamata in the next
village all died when they lost their hair.
You keep moving onto the next village, to the ocean and to
the rivers in another country.
It would take you one hundred years to come back to
Hiroshima again.

You won't find a
bald girl like me.

Yuko Taniguchi, 2013

Yuko Taniguchi
2013

2013 Barbara Mandigo Kelly
Peace Poetry Contest Adult
Honourable Mention

Reflections on Injustice, Racism and the Bomb

Vincent Intondi
July, 2020

Excerpt from the Arms
Control Association

The moment in August 2005 is seared into my memory. The train pulled up to the Hiroshima station from Kyoto. I stepped out with my mind full of images from 60 years ago, when the United States dropped the first atomic bomb on this pristine city of 340,000 people. (Hiroshima had been one of the few cities that escaped the fire-bombing campaign of Japan's major cities led by U.S. Air Force General Curtis LeMay.) Initially, I was taken aback by what I saw: a modern city, filled with restaurants, hotels, shops, and lots of people, much like any other in the industrialized world.

Suddenly, everything changed. Clearly, I was not ready; and before I could prepare myself, I was standing in front of the iconic Atomic Bomb Dome—one of the few structures still standing in its original form near the hypocenter. Throughout my life, I had seen photos of the dome standing alone amid the total destruction wrought by the 15-kiloton atomic blast. But it was different being there in person. I could feel myself starting to change.

The next two days were filled up with conversations with atomic bomb survivors (hibakusha), museum visits, and the retracing of the places about which John Hersey wrote in his historic work, Hiroshima. On the night of August 6th, I saw thousands of Japanese citizens gathered at the Motoyasu River. People reflected on those who lost their lives, making paper floating lanterns and putting them in the water.

That night, with a few of my new Japanese friends (I was a student at the time at American University, of which had partnered with Ritsumeikan University), I put our lantern into the water. I still remember what I wrote on our lantern: "I will dedicate my life to making sure this never happens again." As it floated away, I began to look around and think that 60 years ago, everyone here was dead. I thought of all the human suffering that had taken place, and all of my anger, guilt, and sorrow boiled over as tears rolled down my face. At that moment, Koko Tanimoto Kondo, a hibakusha with whom I had grown close, immediately came over to console me.

When I returned to the United States, friends, family, and colleagues began hearing me talk about abolishing nuclear weapons. Many were perplexed. I had been known as an activist who fought for civil rights. I had become conscious when the phrase "Free Mumia" was dominant. I had spent my time protesting the murder of Amadou Diallo and the police assault on Abner Louima. "Who cares about nuclear weapons?" I heard. "Nukes will always be there…no one is crazy enough to use them," and "That's an issue for old, white dudes."

But I could not forget what I learned, who I met, or how I felt in Hiroshima. Regardless if I was fighting for civil rights; against all the inequities perpetuated by the World Trade Organization and International Monetary Fund; for justice for the indigenous people of Chiapas, Mexico; or to stop the U.S. war in Iraq, I kept coming back to one thought: What does any of this matter if we were all dead from nuclear war?

To me, it was simple. These were not separate issues. Jobs, racial equality, climate change, war, class, gender, and nuclear weapons were all connected and part of the same fight: universal human rights, with the most important human right being to live free from the fear of nuclear war.

Of course, this thinking is not new. Contrary to the narrative that nuclear disarmament has been and remains a "white" issue, since 1945, the anti-nuclear movement has included diverse voices who saw the value in connecting all of these issues. Moreover, the nuclear disarmament movement has been most successful when it left room for diverse voices and combined the issue with social justice.

The movement to abolish nuclear weapons began even before the first bomb was dropped. Among the earliest critics of nuclear weapons were the atomic scientists, members of the Roman Catholic Church, the Women's International League for Peace and Freedom, and many in the Black community. Specifically, regarding African Americans, nuclear weapons were directly linked to racism.

Many African Americans agreed with Langston Hughes' assertion that racism was at the heart of President Harry Truman's decision to use the nuclear weapons in Japan. Why did the United States not drop atomic bombs on Italy or Germany, Hughes asked. The Black community's fear that race played a role in the decision to use nuclear weapons only increased when the U.S. leaders threatened to use nuclear weapons in Korea in the 1950s1 and Vietnam a decade later. For others, the nuclear issue was connected to colonialism. From the United States obtaining uranium from Belgian-controlled Congo to the French testing a nuclear weapon in the Sahara, activists saw a direct link between those who possessed nuclear weapons and those who colonized the nonwhite world. For many ordinary citizens, Black and white, however, this fighting for nuclear disarmament simply meant escaping the fear of mutually assured nuclear destruction and moving toward a more peaceful world.

> Today, many people love to quote Dr. Martin Luther King Jr., especially his "I Have a Dream" speech, while also ignoring the full title and focus of the march: "Jobs and Freedom." Throughout his life, King made the connections of what he called the "triple evils" of capitalism, racism, and militarism. King was not alone among civil rights activists in making these connections. To put it in today's context, to singer, actor, and activist Paul Robeson, "Black Lives Matter" meant not only speaking out about racism in the United States but also highlighting where the United States had obtained its material to build nuclear weapons. To W.E.B. Du Bois, Black Lives Matter meant not only forming the NAACP or writing Souls of Black Folk, but also getting millions to sign the "Ban the Bomb" pledge to stop another Hiroshima in Korea. To civil rights leader Bayard Rustin, Black Lives Matter meant not only organizing the March on Washington, but then also traveling to Ghana to stop France from testing its first nuclear weapon in Africa. To Lorraine Hansberry, Black Lives Matter meant not only A Raisin in the Sun, but Les Blancs, her last play, about nuclear abolition. To the Representative Ronald Dellums (D-Calif.), Black Lives Matter meant not only bringing jobs and education to Oakland, California, but also making sure President Ronald Reagan did not build the MX missile.
>
> The prominent Black writer James Baldwin put it best on April 1, 1961, when he addressed a large group of peace activists at Judiciary Square in Washington. Baldwin was one of the headlining speakers for the rally, as titled "Security Through World Disarmament."
>
> When asked why he chose to speak at such an event, Baldwin responded, "What am I doing here? Only those who would fail to see the relationship between the fight for civil rights and the struggle for world peace would be surprised to see me. Both fights are the same. It is just as difficult for the white American to think of peace as it is of no color.… Confrontation of both dilemmas demands inner courage." Baldwin considered the two problems in the same breath because "racial hatred and the atom bomb both threaten the destruction of man as created free by God."

The power of diversity in the nuclear disarmament movement was perhaps most evident in the 1980s. With Reagan's rhetoric of a "winnable nuclear war" and the massive budget increases for nuclear weapons while cutting social programs that hurt the most vulnerable, the anti-nuclear movement grew exponentially.

New groups such as the Women's Actions for Nuclear Disarmament, Feminists Insist on a Safe Tomorrow, Performers and Artists for Nuclear Disarmament, Dancers for Disarmament, and Athletes United for Peace formed. Established organizations such as Committee for a Sane Nuclear Policy, the Union for Concerned Scientists, and Physicians for Social Responsibility all saw their membership skyrocket.

For some, ending the nuclear arms race was and still is linked to their religious faith. Others saw a direct link between the amount of money being spent on nuclear weapons and eliminating badly needed social programs that benefited the poor. Many viewed and still view nuclear weapons as a part of the overall military industrial complex, which included U.S. intervention in Central America

and the Middle East, while for others, there was a genuine fear that the United States and Soviet Union would start a nuclear war.

This new sense of awareness, fear, and action culminated in the June 12, 1982, demonstration in New York's Central Park, in which 1 million people of different races, genders, class, and religions marched and rallied for nuclear disarmament. As Randall Forsberg, one of the principal authors of the proposal for a nuclear weapons freeze, said in her speech to the throngs that day, "Until the arms race stops, until we have a world with peace and justice, we will not go home and be quiet. We will go home and organize."

The rally, combined with other actions of the 1980s, contributed to the Reagan administration changing course on nuclear weapons, effectively showed the power of grassroots organizing, challenged the idea that the movement was not diverse, and paved the way for a new generation of activists committed to saving the world from nuclear annihilation.

The questions that we must ask ourselves today are how have we avoided nuclear war for the last 75 years and how can we sustain the popular support and awareness that is necessary to move policymakers to take the steps necessary to reduce and eliminate nuclear dangers. The answers: good luck and good organizing. There is nothing we can do about luck, except hope it is on our side. But by learning from the past, it is clear that there is much we can do as organizers, advocates, lobbyists, artists, writers, teachers, and just concerned citizens.

We need to make connections. Our power is in our own diversity. The anti-nuclear movement needs to continue to reach out to marginalized communities and show the links between that amount of money spent on nuclear weapons and how those funds could be used for food, health care, jobs, housing, and education. Whether it is connecting with the religious, immigrant, LGBTQ, or Black communities, half the battle is showing up.

We need education. Far too many students will go through their entire education, including college, without ever learning about the history of the atomic bombings of Hiroshima and Nagasaki or the greater nuclear threat that has persisted since 1945. We must demand that curriculums across the country dedicate more time to the nuclear arms race and the movement to stop nuclear war. This means being involved on school boards and curriculum committees and creating the materials that we can distribute and incorporate into the various school systems.

We need artists. Part of the reason the nuclear issue resonated in the 1980s was because of performers such as Jackson Browne, Rita Marley, James Taylor, Bruce Springsteen, Gil Scott-Heron, Harry Belafonte, and Linda Ronstadt, as well as various Hollywood and Broadway stars, performed, raised money, and lent their voices to the cause. We saw the power of this action when President Barack Obama was pushing the Iran nuclear deal.

We need filmmakers. One of the most successful strategies of the anti-nuclear movement in the 1980s was to create "The Day After." Viewed by millions, this film, along with Helen Caldicott's relentless pursuit of making sure the world knew the human effects of nuclear weapons, shook ordinary citizens to their core. We can and must replicate these actions to drive home the uncomfortable fact that nuclear weapons are a threat to everyone, everywhere.

We need to hold politicians accountable. Currently, we have a president who has threatened repeatedly to use nuclear weapons, has no problem spending billions on their nuclear arsenal, and may even want to resume nuclear testing. Moreover, we have local, state, and federal politicians who support the president's decisions and are complicit in the march to nuclear competition and the perpetuation of the oppression imposed by the threat of nuclear weapons use. Whenever we have an opportunity to back a politician who will fight for nuclear disarmament, we need to do so. We need to demand from our elected officials that they work toward the goal of nuclear abolition and indeed have some of our organizers within the movement run for office. Of course, we need to vote.

We need to support the anti-nuclear movement and help it evolve. Much like new organizations that emerged in the 1980s, over the last decade we have seen groups such as Global Zero, Beyond the Bomb, and Don't Bank on the Bomb and global disarmament networks such as the International Campaign to Abolish Nuclear Weapons emerge. From the start, these groups have promoted intersect-

About one million people attended the historic rally to "Halt the Arms Race and Fund Human Needs," in New York on June 12, 1982. (Intondi, V.)

ionality and made the connections among race, climate, feminism, and poverty in the fight to abolish nuclear weapons, not just in the United States but worldwide. In many cases, dynamic women have led this new movement. They are younger, with fresh ideas; savvy; and motivated. Whether one is in favor of working toward a no-first-use policy or a formal ban on nuclear weapons through negotiations at the United Nations, these organizers need our support, money, time, and respect.

With all this said, I cannot lie. I am saddened as I write this. Every five years on the anniversary of the first atomic bombings, the demand for my work seems to increase. Although I am thankful that I have the opportunity to write and speak about racism and nuclear weapons, this also means both are still with us.

Part of the problem is that we cannot wait until an anniversary of the atomic bombing or the release of another video of an unarmed person of color being murdered by police forces to talk about these issues.

"Every five years on the anniversary of the first atomic bombings, the demand for my work seems to increase."

Yet, I also remain hopeful. I find hope in the work of long-established groups such as the Arms Control Association, Ploughshares Fund, the Union of Concerned Scientists, and others. I find hope in younger anti-nuclear activists and the movement around the world to formally ban the bomb. I find hope in seeing so many in the streets demanding racial justice and refusing to remain silent in the face of hate, racism, and bigotry. But mostly, I remain hopeful that there will come a time, perhaps on another anniversary of Hiroshima, when I will be asked to write about the past when nuclear weapons and institutional racism once existed and were finally dismantled. Until that day, the fight continues, and we march on.

"We don't want any Japs back here — EVER!"

A U.S. Army poster during WWII. (Yam, K.)

Jap (plural Jappen)

(Derogatory, ethnic slur, usually offensive, unofficial spelling) A Jap, a Japanese person.

The bombing of Pearl Harbor not only marked a turning point in America's role in World War II, but also helped catalyze rampant anti-Japanese sentiment across the country.

Americans, Japanese-Americans, bore the brunt of this xenophobia. As bold signs with these bigoted slogans were erected on storefronts and stories like "How to Tell Japs from the Chinese" were splashed across the many pages of newspapers and magazines, Americans of Japanese descent were quickly painted as "the enemy."

These racist attitudes, perpetuated by government officials, had real consequences for Japanese-Americans. President Franklin D. Roosevelt's Executive Order 9066 paved the way for more than 110,000 of them to be forced from their homes and then imprisoned behind barbed wire during the war. What's more, their detention received Congress' blessing.

On Thursday, the 76th anniversary of the attack on Pearl Harbor, Americans look back on the tragedy that changed the lives of so many citizens. Against the backdrop of the Trump administration's travel ban targeting travelers from mostly Muslim-majority countries World War II-era propaganda and signs remind us what happens when an entire group of people is scapegoated during a time of conflict.

Kimberly Yam, December 7, 2017

Defcon 5, or condition level five has also been called "Fade Out" or "Blue Alert" and is the lowest or normal state of readiness. Defcon 5, or Fade Out means we are at a complete and total state of peace and no immediate need to be on a high state of alert.

The Light is Shining on Us

Xiao Jin Jackson, 2008

2008 Barbara Mandigo Kelly
Peace Poetry Contest Youth
(12-Under) Winner

Inside a shooting star are wolves so fast
they make the star shoot
Inside a shooting star is cold air
pushing to get out

Inside a shooting star are frogs
croaking so loud it's like an elephant yelling
into a microphone that has a speaker that runs
all the way around the world.
Inside shooting star is peace
trying to make its way to Earth.
Inside a shooting star is laughter,
everybody is happy.
Inside a shooting star is light,
light shining on us.

Xiao Jin Jackson, 2008

Thermonuclear Monarchy and a Sleeping Citizenry

Elaine Scarry
May 9, 2019

This is a transcript of the 18th Annual Frank K. Kelly Lecture on Humanity's Future, delivered by Elaine Scarry on May 9, 2019 in Santa Barbara, California.

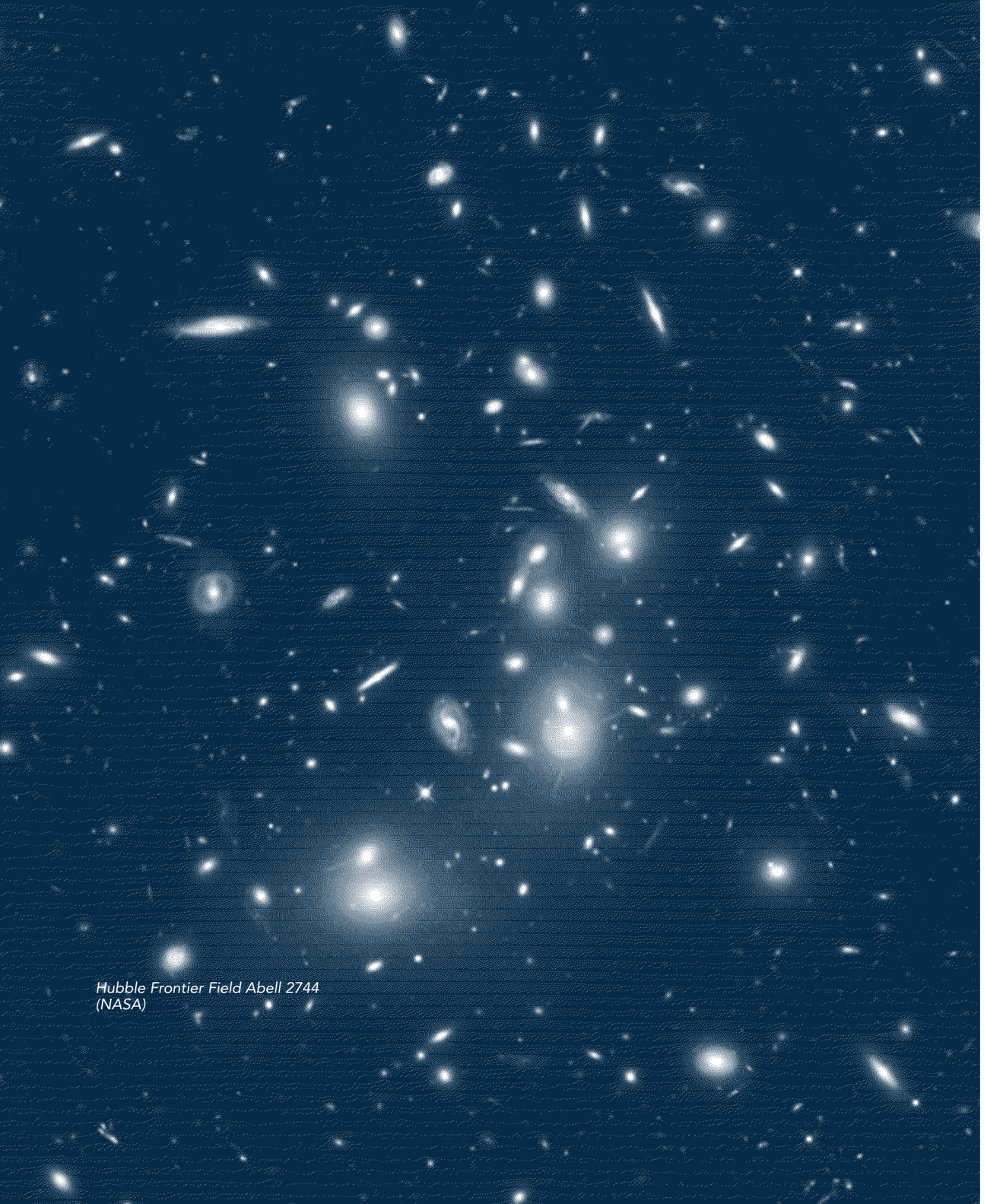
It's a tremendous pleasure to be a guest of the Nuclear Age Peace Foundation and the group of people who run it—David, Rick, Richard Falk, Rob Laney, Sandy, Sarah, and others—and I'm also very grateful to all of you for coming out tonight.

It's a special honor to be talking in terms of humanity's future, and because that's the title, I thought that I would begin by just mentioning the fact that when I work on nuclear disarmament, I've often noticed that one of the groups of people that is most worried about nuclear weapons is composed of astronomers and astrophysicists. When I first noticed this I was kind of surprised by it, because whereas the rest of us is are thinking all the time about the Earth, I take it that astronomers are often thinking about worlds way beyond the Earth, like other galaxies outside the Milky Way. This one galaxy, for example, contained several hundred billion stars, many of which have planets. So it seemed remarkable that astronomers should care about this little piece of ground in the universe.

This next particular photograph—although it's showing a very tiny piece of the sky—contains thousands of galaxies, just within one galaxy cluster, and each of those galaxies has billions of stars. When I asked somebody named Martin Reese, who's a royal astronomer of Britain, why he was so concerned about it, given that he spent so much of his mental life outside of our own terrain, he said that if you're an astronomer looking at that other world, you actually care more about the Earth because you realize that what we have here is nowhere else to be found in the universe. That there is no life, certainly no intelligent life, elsewhere in the universe, so the miracle of it being back here seems especially precious.

I also asked another astronomer at the Hubble telescope, Mario Livio, the same question. And he gave the same answer: how extraordinary it was to be always having once mental life projected out into this world of other universes, and to find again and again that there was no other life, or certainly intelligent life, out there. Mario Livio went on to explain that several decades ago a famous scientist named Fermi pointed out that it's almost incomprehensible, given the number of planets that recreate the conditions necessary for life, that we haven't yet encountered other life. This has come to be known in science as Fermi's paradox—the fact that there are so many millions of places that ought to be showing us life, and yet we haven't found it. Mario Livio said that different explanations are given for this, and one is that very early in the history of life on a planet, a bottleneck occurs, in particular a bottleneck that occurs in going from one-cell organisms to multi-cell organisms.

On our own planet, one cell organisms appeared almost the moment the Earth was created—almost the moment it cooled down enough to support life—but multi-celled creatures only occurred millions of years later. It may be that the jump from one cell to multi-cell is just too hard to get through. We luckily got through it, but Mario Livio said there's also another bottleneck that occurs not at an early moment, but in a late moment. This, by the way, is the reason that most people speculate why we're not finding life on other galaxies. The explanation is that any group of creatures intelligent enough to have interstellar communication will also be smart enough to blow themselves up. They will, and they have—it is almost certain that other civilizations have existed and have not made it through the particular eye of the needle that we're trying to get through right now. It's for that reason that everybody on Earth—all our resources on Earth—all our ingenious scientists, and humanists, and theologians should be working together to get our



Hubble Frontier Field Abell 2744 (NASA)

planet through something that other planets haven't gotten through, rather than working at odds.

Now, I don't know what the weapons system looked like on these other planets, but this is what it looks like on our planet. The screen isn't perfect here, but I have just a couple of key things to say about it. Each of the little icons has to be multiplied by five. The total arsenal on Earth is over 14,000 right now, so if this were representing each of the warheads you'd have to take this number and multiply it by five, it would go away beyond any piece of paper that could hold it—we can just multiply it in our minds.

"What we have here is nowhere else to be found in the universe."

The key thing to know is that the United States and Russia together own 93% of all the missiles. Everything from about three o'clock around to about seven o'clock is owned by the United States, and everything from there up to one o'clock is owned by Russia. That little wedge you see between one and two o'clock are the other seven nuclear states. The other thing to know about that is that countries that we're always hearing about are not on there. Iraq isn't on there, because Iraq doesn't have nuclear weapons. Iran isn't on there, because Iran doesn't have nuclear weapons. North Korea is on there, but it's the country with the smallest arsenal. Some people put North Korea's estimates as high as 60, but the most reliable estimates say that it's 20 or fewer. Comparatively, the United States right now has over 6,000.

It is a specific kind of architecture that is most to the credit (or discredit) of the United States and Russia, who have one third of their arsenals on hair trigger alert. Now, the next thing to know about is this particular physical architecture. Tonight I'm going to be talking about both the physical architecture of nuclear weapons, and the mental architecture that keeps that physical architecture in place, but for a few minutes I'm just going to be talking about the physical architecture.

We've started with the simple fact that every weapon has two ends: the end from which it's fired, and the end to which it does the injury. That's true of a gun: there's one person injured at this end, and there's one person firing at this end. Sometimes things are slightly out of ratio, for example, if it's a machine gun, there's one person firing at this end, and 50 people who are injured at this end.

Nuclear weapons are extraordinary at both ends of the weapon, because there is a catastrophically high number of people who are being injured. And not just people, but plants, animals, birds, and bio-plankton in the oceans, that are being slaughtered by the weapon. The most recent estimates on nuclear winter say that if even a tiny fraction of the world arsenal is used, and the fraction that used is 1/100th of 1% of the total blast power that you saw pictured there, 44 million people will be casualties on the first afternoon, and 1 billion people will die within the first month. The level of injury is extraordinary. Now, the firing end of the weapon is also extraordinary, because it's done by one person. We only think that in this country we came close with the Cuban missile crisis because that was the only crisis that was then made public, but we know that Eisenhower twice considered using nuclear weapons—once in the Taiwan Strait in 1954 and once in Berlin in 1959. John Kennedy, according to Robert McNamara, three times—not once in Cuba, but three times—came within a hair's breadth of all out nuclear war. Lyndon Johnson considered dropping a nuclear weapon in China in order to prevent it from getting a nuclear weapon. Nixon has said that he four times considered dropping a nuclear weapon. By "considered using a nuclear weapon", he doesn't mean just a stray thought that went through his mind. In Nixon's case, he sent 18 B-52s loaded with nuclear weapons out over Russia, and back again. In his mind it was a feint—an exercise—but it could have led to an utter disaster. I begin by stressing this because the language we use tends to underscore only the first fact—the fact that an extraordinary number of people are killed—and we

need language like "Weapons of Mass Destruction" that registers the fact that there is this outrageous level of injury posed by these weapons.

"Every weapon has two ends: the end from which it's fired, and the end to which it does the injury."

Yet we also have to look at the extraordinary, and almost equally obscene, fact that one person in our own country stands ready to launch the weapons. That's of course true of Trump, but it's also true of every president who's been in the Nuclear Age. If we were to go back two slides to the chart, and if we took this whole thing as the weapon, were that whole arsenal to be used the Earth would be completely destroyed, and all creatures on it. How many people would be responsible for the launch?

There are nine nuclear states, and so it would be close to nine individuals, but it might even go as high as 20 or 30 people in some cases. For example, in the UK, we know that the prime minister has a sealed envelope that tells their submarine captains—if they can't reach them in a nuclear exchange—whether they should go ahead and obliterate Russia or not. So now maybe we have to not just count the Prime Minister, but also the submarine captain—but maybe 30 people. If you imagine that on another planet, and you imagine there were billions of people on that planet, wouldn't you think the billions of people there could come up with something to get the 30 people to go into a room, sit them down, and say to them: "You're not coming out until you figure out how to dismantle these things." Something like that is what we probably need to do.

The other reason I wanted to start by emphasizing the fact that the nuclear weapon, or any weapon, has both the end from which it's fired, and the end to which it's injured, is because the laws that address this, and that can help us get rid of these things, fall into two categories. This a slight overstatement, but I still think it's true. By and large, international law addresses the injuring side of the weapon. International law, like the current ban on nuclear weapons that is being ratified country by country, is addressed to the humanitarian consequences of these weapons, and to the illegality, in terms of international law, of that kind of suffering. In 1995, when there was a case at the International Court of Justice where 78 countries went to the court to ask that nuclear weapons be declared illegal, the international legal rules that were used all addressed the suffering end of the weapon. For example, the Geneva protocols, The Hague, and the conventions against genocide were all things that said you're not allowed to cause disproportionate suffering, or you're not allowed to cause suffering that that passes over the boundaries of a country into a neutral country, or you're not allowed to destroy the ozone layer, or you're not allowed to destroy the environment. Those are all crucial international laws, and the Nuclear Age Peace Foundation has done an amazing thing by working to get states to support this international ban. California is the first, and so far the only state that has signed on in support of the ban and it's got a crucial chance of doing some real good.

The national laws, and the ones I'm going to speak about, address the other side of the weapon. They they address the agency side—the firing end of the weapon. They essentially prohibit the kind of arrangement that we currently have, which is a thermonuclear monarchy. It's one person who was empowered to not just carry out a war, but to carry out acts of genocide without getting anyone else's okay about it. It's wholly illegal, and it's wholly incompatible with our own Constitution—the two are mutually exclusive. Because they're mutually exclusive, the Atomic Age, or the Nuclear Age, has just put the Constitution aside. As I talk about it, the one thing to be aware of is that my basic point is that we need both international and national law converging on this problem, and that the together they may help us. You can't walk up one side of a building, but if you've got two sides of a building, you can use them both to get up. There's a real difference between the two in that the injuring end of the weapon has overt ethical content. We get it. You can't have that kind of disgraceful injury caused to a foreign population. What could these people have done that would ever mean they had deserved such a thing?

If we go to the last reason, Circularity, as I said before Constitutions and nuclear weapons are mutually exclusive. Right now we've taken away the Constitutional provisions. Congress and nuclear weapons are incompatible, so we've taken away Congress's single most important job of overseeing our entry into war. Citizenry and nuclear weapons are incompatible, so we've infantilized our whole citizenry by telling them that they should just turn on the TV if they want to find out if we're at war. But it also means that if we bring back Constitutions, you can only do it by getting rid of nuclear weapons. If you bring back Congress, you can only do it by getting rid of nuclear weapons because they're mutually exclusive. And if you bring back the citizenry, you'll get rid of nuclear weapons.

And yet in the time when these things were gotten rid of, they've been diminished in our eyes. They've been sullied in our eyes. We think of the citizenry as not much use. We think of Congress as a bunch of overtalking fools—there are many books on how Congress is dead, or dying or something like that. And we think of Constitutions as just a piece of paper, because that's the result of the Nuclear Age. That's what it means to destroy a Constitution, and a citizenry, and Congress. And we have to take it on trust that when those things come back, the scale of their power will be visible to us once more. But I just refer this as the Circularity Problem.

The fact that the very things that would save us, by being eliminated, now look kind of pathetic, and therefore we don't see that they have tremendous power to do the work. If we see our actions, not just in terms of our own planet, but in terms of the universe—a universe it appears that has never gotten through the problem that we're now facing—and if we see that we can use Constitutional tools in their international covenants, we can see that these legal documents actually have some of the technicolor beauty of the galaxies themselves.

Thank you.

A No First Use (NFU) policy is a commitment by a country to never be the first to use nuclear weapons in a conflict.

China

After its first nuclear test in 1964, China declared the first NFU policy. Today, it is the only nuclear weapon state to have declared an NFU policy with no conditions. China has called on other nuclear weapon states to follow suit and proposed an NFU treaty.

India

India too has declared an NFU policy, but there are conditions. India has asserted it will not use nuclear weapons first during a conflict unless attacked with biological or chemical weapons.

The United States

Through the Nonproliferation Treaty (NPT), the U.S. has pledged not to use nuclear weapons against countries that don't have them. For countries that do have nuclear weapons, the U.S. would consider using nuclear weapons first to defend the U.S. or its allies. The circumstances for nuclear first use are not defined, and the U.S. President has the sole authority to order a nuclear first strike. The North Atlantic Treaty Organization (NATO) has consistently opposed a U.S. NFU policy, as have U.S. allies in Asia. European and East Asian allies of the U.S. rely on the threat of a nuclear first strike as a way to deter regional, non-nuclear threats.

The United Kingdom

The U.K. has a relatively vague policy, stating it does not rule out anything. The U.K. has in the past committed not to use nuclear weapons against non-nuclear countries abiding by the Nonproliferation Treaty.

North Korea

North Korea has not adopted an NFU policy. North Korea would consider launching a preemptive nuclear first strike on the U.S. and its allies if it thought an attack was imminent.

France

France maintains its right to use nuclear weapons first under any circumstances.

Pakistan

Pakistan has not adopted an NFU policy. Pakistan has also not established what circumstances would call for a nuclear strike and purposefully maintains this ambiguity.

Israel

Though Israel has nuclear weapons, it does not confirm nor deny that it has them. Because Israel refuses to talk about its nuclear weapons, it cannot be confirmed if Israel has an NFU policy or not.

Russia

In 1982, Soviet leader Leonid Brezhnev pledged not to launch a nuclear first strike in a conflict. During the Cold War, NATO leaders did not believe this commitment, and in 1993 Russia did away with it. In a military doctrine released that year, Russia stated it would not use nuclear weapons against a non-nuclear country unless it was allied with a nuclear country. Today, Russia's nuclear policy states it will use nuclear weapons against attacks that threaten the country's existence even if they are conventional attacks. The policy also allows for nuclear use to retaliate against a nuclear attack or use of other types of weapons of mass destruction.

To check the current DEFCON level, scan this QR code using the Eyejack app, then move the camera to ensure the full two pages are in view.
This DEFCON count will be updated as the projected DEFCON level changes, according to defconlevel.com.

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