Errata in Joel Shurkin biography *"True Genius, The Life and Work of Richard Garwin, The most influential scientist you've never heard of,"* published 02/23/2017.

This is a list of errata known to me, Richard L. Garwin, as of 06/05/2017. Most of these were identified by me in the manuscript but remained uncorrected in the book as published. A few were communicated to me by friends who have read the book in print.

I hope that if there is a second edition, most of these errors will be corrected. Some pose a more difficult problem, such as, for instance, a paragraph out of place, or one that refers to the wrong time frame or episode.

I have previously published errata for my book with Georges Charpak, *"Megawatts and Megatons,"* but because the present table of errata are for the biography by Joel Shurkin, I feel I should provide a bit of explanation.

The book is an authorized biography, in the sense that I cooperated fully with Shurkin, sending him vast amounts of material—far too much to be included in any volume. Both the structure of the book and the text are Shurkin's. I am grateful to him for having sent me a digital copy of the book in page proof, at a time when corrections could still have been made.

I went through the book and provided corrections in several emails and in a markup of the PDF. Unfortunately, although some corrections were made, at least one email seems to have been missed, and a good many corrections that could have been made gracefully at the time were not.

The most difficult problem seems to be the conflation of quite different era or programs, and there is no easy way to remedy that except with a brief comment, which I make here, where appropriate.

Where it is important to correct the text, I provide the text as published in the printed version of the book, and what I would propose as replacement text, correcting the error.

Where I feel some explanation is due, I add that in italics, so everything in italics is just a comment for this errata file as of June 5, 2017.

Now for the list of errata:

p. i.6
Credit for whom did what in the development of the hydrogen bomb
→ Credit for who did what in the development of the hydrogen bomb

P. 10.2
of Garwin in the 1990s and then had to abandon the project. Mean
--> of Garwin in the 2000s and then had to abandon the project. Mean

P. 11.6
just spent the winter in Korea and Japan at the behest of the US Air
--> just spent a month in Korea and Japan at the behest of the US Air

P. 12.7
Asylum, where she put two of the boys, including Robert, because she
--> Asylum, where she put two of the boys, Louis and Robert, because she

P. 12.8
In 1920, the entire family changed their names to Garwin.
--> In 1920, the four brothers changed their names to Garwin.

P. 12.9
Cleveland. He never became an engineer either, Garwin said, probably
--> Cleveland. He never worked as an engineer either, Garwin said, probably

P.44.9
They can be channeled by the lenses. A powerful enough blast surrounding
--> They can be channeled by materials. A powerful enough blast surrounding

P.45.3
In the Soviet Union, Andre Sakharov and his team of bomb designers had about simultaneously come to the same conclusions, as had scientists in France, Britain, and later China.
--> In the Soviet Union, Andre Sakharov and his team of bomb designers were coming to the same conclusions, as would scientists in France, Britain, and later China.

P.47.6
Why did he then turn to Garwin, a twenty-three-year-old graduate student?
--> Why did he then turn to Garwin, a twenty-three-year-old assistant professor?
(Garwin's graduate student days ended in December 1949).

P. 48.7
The scientists picked one of the others but then return to
--> The scientists picked one of the others but then returned to

P. 49.4
have the tritium. . . . I decided that I couldn't devise a little experiment
--> have the tritium. . . . I decided that I couldn't devise a little experiment;
(*add semi-colon)*

P. 50.5
hundreds of a microsecond or so . . . leaks out of the metal in the
--> hundredths of a microsecond or so . . . leaks out of the metal in the

P.51.4
"You're wrong, Hans," said the twenty-three-year-old postdoc,
--> "You're wrong, Hans," said the twenty-three-year-old physicist,
(Not a graduate student; not a post-doc. A faculty member at the University of Chicago.)

P. 52.6
Garwin's more simple description: "I don't think you can say anything except it was a cylindrical design and a very, very big high explosive [that] used an awful lot of highly enriched uranium. But it's still classified, and [it] has never been revealed exactly how the deuterium-tritium was heated and compressed by the fission explosion. So I can't talk about that."19

(An accurate quote. But I am talking about Greenhouse George shot in 1951, and not about Ivy Mike, shot November 1, 1952.)

P. 53.7 (Greenhouse item)

That process was called "boosting," one of Teller's ideas. It had twice the yield of George. The test was a prototype of the Classical Super. It incidentally validated the notion of compression.

--> That process was called "boosting," one of Teller's ideas. It had a tenth the yield of George. George was related to the Classical Super. It incidentally validated the notion of compression.

P. 80.9
PSAC, created by Dwight Eisenhower in 1951, wasn't then very influential. Garwin was appointed. James Killian, then president of MIT, was in charge. About seventy people met in several groups to test the capability of the Soviet Union to harm the US.

--> *(Not a direct replacement, but here are the facts.)*
The Science Advisory Committee was created by President Truman in 1951. Eisenhower on taking office in 1953 requested the SAC to assess the Soviet nuclear threat to the United States. The SAC's Killian was selected to head the Technological Capabilities Panel to do this work.

P. 108.3

$50 a day later. They served four-year terms, and members elected

--> $50 a day later. PSAC members served four-year terms, and elected

P. 108.9

For many years, the sessions included lunch at the White House cafeteria, but Garwin said many administration staffers were unhappy with outsiders intruding on their territory. President Nixon, to show his unhappiness with some of what PSAC was doing, eventually barred them from the cafeteria, and they had to eat elsewhere.

--> For many years, the sessions included lunch at the White House <u>mess</u> (basement dining room), but Garwin said many administration staffers were unhappy with outsiders intruding on their territory. President Nixon, to show his unhappiness with some of what PSAC was doing, eventually barred them from the <u>mess</u>, and they had to eat elsewhere.
(Not "cafeteria" but "mess" twice.)

P. 112.5

PSAC created a panel on insecticides and pesticides, Carson's topic, especially on the use of DDT after Garwin reproduced copies of the *New Yorker* articles and brought them to a meeting.

--> After Garwin reproduced copies of the *New Yorker* articles and brought them to a meeting, PSAC created a panel on insecticides and pesticides, Carson's topic, especially on the use of DDT.

P. 141.9
sitting by chance next to a young woman. She and her husband recognized
--> sitting by chance next to a young woman with a babe in arms. She recognized
(I don't think her husband was with her.)

P. 141.9
Both were in the antiwar movement. When the plane landed and the passengers began filing out, the woman stood up and began screaming, “He is a baby killer!”
--> She and her husband were in the antiwar movement. When the plane landed and the passengers began filing out, the woman stood up and began screaming, “This man is a baby killer!”

P. 150.5
“We said the . . . government should admit that it’s not going to
--> “We said [in our 1969 report] the . . . government should admit that it’s not going to

P. 171.1
Garwin was a member of PSAC’s military panel. Henry Kissinger, Nixon’s national security advisor, also hated PSAC. Partly it-->
(Why "also"?)

P. 176.4 In the end, Safeguard congressional support of the plan was
--> In the end, congressional support of the Safeguard plan was

The first paragraph of p. 175 describes the 1967 Sentinel proposal of the Johnson/McNamara era.
See https://www.mda.mil/global/documents/pdf/1969%20Sentinel-Safeguard.pdf

The 1969 Safeguard system was proposed by the Nixon White House.

P. 177.5
participants. “I just had to correct their algebra and they would go away.”
--> (These Canavan quotes refer to the Strategic Defense Initiative of Reagan's 03/23/1983 speech, not the 1969-72 nuclear-armed interceptor era. SDI never had nuclear-armed interceptors. These paragraphs have portions that were cut-and-pasted into the wrong eras).

P. 183.7
Garwin said the US had had a peculiar problem deciding on targets. All the valuable ones have been targeted by one missile or another, but more weapons keep entering the arsenal. There is nothing left to shoot at.
--> Garwin said the US had had a peculiar problem deciding on targets. All the valuable ones had been targeted by one missile or another, but more weapons kept entering the arsenal. There was nothing left worth shooting at.
(Not our problem now, because we have a lot fewer strategic warheads)

P. 204.9
No results came of Garwin's freelancing. "Ran afoul of the desire on both sides to protect their freedom of action, and the great secrecy surrounding the 'overhead reconnaissance' satellites," he wrote.15

(This paragraph probably refers to my initiative to ban space weapons and antisatellite tests)

P. 221.9
Clearly watching the Soviet Union from the sky was the answer. But how?

(These paragraphs on p. 222 seem to be about Edwin Land's Intelligence sub-panel of the 1953-1955 TCP. That was the origin of the U-2 and the SR-71, and the CORONA film-return satellite programs.)

P.222.7
The plane was turned over to pilots from allies, perhaps Taiwanese, to overlay China, Garwin said. *("overlay" should be "overfly".*

P. 232.3
or fresher courses in his specialty."
--> or refresher courses in his specialty."

P. 245.3
The plane would drop toward the tanker, snag a thin cable, and set up its pylon turn, along with spewing out a hose line. At first the line follows the airplane around, but after the plane uncoils enough, gravity would take over and the line would go straight down the center of the turn, where it would be captured by the tanker. It would depend on the correct speed, altitude, and the angle of the plane's bank as it flew its circle. The line would remain vertical and stationary.

(For DSTAR, the plane doesn't carry the hose-- much too heavy and bulky. This describes mostly the long-line maneuver of the following paragraph.)