

Book Reviews



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Nazi Science: Myth, Truth, and the German Atomic Bomb Mark Walker, New York: Plenum Press, 1995

Much has been written about the German development of the atomic bomb. In some books, the Germans were very near development of a device similar to the ones dropped by the United States on Hiroshima and Nagasaki. Others say the Germans were some distance from development of a functioning bomb.

In the past few years, several books have been written by scholars seeking to explain the role of Dr. Werner Heisenberg in stopping or side-tracking the German bomb. Indeed, Dr. Heisenberg himself took much of the credit for ensuring that Hitler did not have this weapon at his disposal.

In a book written in 1995, author Mark Walker goes one better. He focuses on not only the German atomic bomb, but Nazi science in general. It is an interesting story.

As the communists did in Russia, the National Socialists took over the scientific community. However, they did it more by infiltration than by the direct methods used by the Russian communists. In the opening pages of the book, the author explains in some detail how German science—that is physics and associated disciplines—ran prior to the war. The early part of the book deals with the Prussian Academy of Sciences. Prior to World War II, this was one of the most respected scientific organizations in Europe.

Mr. Walker shows how the Nazis took control of this scientific organization and molded it to their own views. Like art and culture, Hitler and his supporters had a unique point of view. This was later translated into a “view” of science.

Many National Socialists were not members of the lower and less educated classes; a number of them were well educated. A principle supporter of the National Socialist German Workers Party’s takeover of science was Dr. Johannes Stark, who epitomized the idea of “Aryan” science versus “Jewish” science. It was just this type of bigotry that forced Einstein to leave Germany and come to the United States. He was not the last “Jewish” scientist to find work in America. Many of the principal “brains” behind the *Manhattan Project* were Jews.

People like Stark and his *Deutsches Physik* (German Physics) crippled the enormous capability of German scientific accomplishment during World War II. During that conflict, even with some of their best and most articulate “brains” working for the other side, German science managed to develop rockets, special torpedoes, jet aircraft, robot tanks, anti-aircraft rockets, submarines with greater depth and speed than any on the Allies side, and other and smaller weapons that are now standard in most of the armies of the world.

Half of the book deals with the fight within the scientific community to avoid absorption into the Nazi scientific mold. Although the author shows there was resistance, eventually the Nazis won, and German science fell into step.

The author then focuses on Werner Heisenberg and his work with the German atomic project. His view is somewhat different from some of the latest literature—he doesn't believe Heisenberg actually stopped the atomic bomb because of his principles but, perhaps, because he didn't quite know "how" to do it. In any event, the author takes the view that this "sabotage" of the program is probably overdone. He takes Heisenberg to task, and probably properly so, for acting as a spokesman for Nazi ideas and culture.

Remember, Albert Speer built a great reputation after World War II on the idea that he knew nothing of the Holocaust and was not a willing supporter of it. Yet, in recent work by historians, documents have come to light that show Speer had knowledge of the "Final Solution" well before the end of the war, and that as the chief city planner of Berlin, Speer's office delivered hundreds of Jews into the hands of the Gestapo. It would be very difficult now for someone like Heisenberg and Speer to claim that their hands were "clean" of such atrocities.

The last chapter is very interesting. After the war, the major German nuclear scientists were debriefed at a location in England called Farm Hall. Their debriefings were transcribed and the author read them. From these, he makes some interesting deductions about whether or not the Germans could have built the bomb had they been given the material and personnel that the United States used (120,000 workers and up to \$5 billion).

Of even more interest is the attitude of the scientists—that is, did **they want** to build a bomb? Even the Farm Hall transcripts do not give us a solid answer. Clearly, though, they understood just as well as those American scientists at Los Alamos that what they were ushering into this century was a weapon of terrible destructive potential. The Germans were just as scared of the future as the Americans.

This book is written in a good style that generally keeps your interest. In the recitation of the mundane that is much of the book, one can conceptualize how science was used for evil in the Third Reich. If the purpose of the book was to ensure we understand how this can be done, it has succeeded admirably. Reading *Nazi Science* is worth the time. We should take heed of the lessons it teaches us.

BLOOD AND WATER: SABOTAGING HITLER'S BOMB

Dan Kurzman, New York: Henry Holt and Company, 1997

One of the most important operations of the war was the British and American efforts to stop the development of the German atomic bomb. No one can say how history would have been changed if the Germans had managed to give Hitler the ultimate weapon of its time. Although he apparently did not want to use the chemical and biological weapons that had already been developed, Hitler might have used this weapon had any been available.

Blood and Water: Sabotaging Hitler's Bomb is a well-written and researched book by the prolific author Dan Kurzman. Other books have been written on this subject, some by participants themselves, but this book does a good job of covering the initiation of the effort before World War II to its end.

The title is appropriate. Much blood was spilled to stop the development and manufacture of deuterium oxide or "heavy water." This chemical was a possible moderator for the development of a chain reaction, the first step in the development of the atomic bomb.

The author takes the reader from the first stirrings of the idea of an atomic bomb through the attempt by the Germans to acquire large amounts of heavy water through the Norwegian company at Vemork that made the heavy water. At first, the Allies (the British and the French) attempted simply to buy the water right out from under the Germans. This worked until the Germans conquered Norway in 1940. This brought the plant at Rjukan under their control to make heavy water for the atomic experiments being conducted by the famous German physicist, Dr. Werner Heisenberg.

Recently, there have been a number of new books written on the part this man played in the development or nondevelopment of the atomic bomb. Some believe he was silently holding the project back to ensure Hitler would never have the bomb. Others think he was a nationalist and was working to give Hitler that weapon. Heisenberg made the decision that heavy water was to be the only moderator for the Germans experiments, and that made it a high priority for the Allies to stop its production. A survey team of four Norwegian patriots was dropped into Norway to prepare the way for a team of engineers that would make the actual assault on the Norsk factory. Their operation was given the curious title of "*Grouse*."

First, Special Operations Executive (SOE) was tasked to set up a commando raid on the factory at Rjukan called *Operation Freshman*. This ended in disaster when the two gliders carrying the commando

team crashed and killed many; more than 20 who survived the crash fell into the hands of the Germans and were later executed.

Next, an incredible attack, carried out by less than a dozen Norwegian saboteurs, crippled the plant by blowing up an important part of the heavy-water process. Called *Operation Gunnerside*, these enormously brave men bought the British and Americans more time because the Germans had the heavy water plant up and running within a few weeks after the attack.

Because of the attack, the Germans decided to move the stock of heavy water to Germany, and it was moved under heavy guard from the Norsk Plant down to a ferry. In a lapse of security, the ferry was relatively unguarded. Two saboteurs boarded the ferry *Hydro* and placed time charges in the ship's vitals that would sink the ferry when it was at the deepest part of the lake—1,300 feet. Those planning the assault knew that when it was carried out, the Germans and their Norwegian allies would take reprisals against the population, but the decision was made, and the *Hydro* sank, on cue, in the middle of Lake Tinn. The heavy water canisters, so vital to the German nuclear research, rest on the bottom of the lake to this day.

The sacrifices made by the Norwegians halted the German's development of the atomic bomb. As the author relates in *Blood and Water*, this was one of the epic struggles of the war and was essential to its successful outcome.

I recommend *Blood and Water* as a "must read" for all who are interested in knowing the complete history of one of the pivotal intelligence operations of the war. The author introduces the reader to a number of the main characters of the story. They spring to life in the pages of the book. If you look in the back of the book, you will find the author thoroughly researched this episode of the war against the German nuclear bomb. He interviewed numerous people with direct knowledge of this operation more than five decades ago. This book shows what courage and love of country can do when the chips are down and sacrifices need to be made.

Any effort to hamper the development of weapons of mass destruction by nations that would use them for destruction is not wasted. The heroes of Telemark may be the first among many to come forward in the future to stop experiments on weapons even more powerful than the atomic bomb. History sometimes has a nasty habit of repeating itself.

If this book interests you, the author has written other books that are also interesting to include the tragedy of the sinking of the cruiser *Juneau* and the loss of the five Sullivan brothers in the Pacific. Its title is fitting—*Left to Die*—because the task force that the *Juneau* was part of did not stop to pick up survivors and did not inform higher commanders of the sinking until the ships reached port. By that time, only a few of the ship's crew were still alive.