"Always" the target?: While U.S. bomb scientists were racing against Germany, military planners were looking toward the Pacific

By Arjun Makhijani [1]

On April 23, 1945, Gen. Leslie R. Groves, director of the Manhattan Project, wrote a memo to Henry L. Stimson, secretary of war. It contained a puzzling phrase, which I have italicized:

> "Our previous hopes that an implosion type of bomb might be developed in the late spring of 1945 have now been dissipated by scientific difficulties. . . .
>
> "While our plan of operations is based on the more certain, more powerful, gun type bomb, it also provides for the use of the implosion type bombs as soon as they become available. *The target is and was always expected to be Japan.* A composite group of the 20th Air Force has been organized and specially trained and equipped." [2]

By the time the memo was written, it was clear to everyone connected with the atomic bomb project that Germany would not be the target. The Third Reich would collapse long before the first bombs were ready for use. If the new weapon was to be used at all in World War II, it would be against Japan.

But had Japan "always" been the target, as Groves implied? If so, that fact suggests a terrible irony that has been little noted in the decades-long debate over the use of the bomb. From August 1939, when Albert Einstein alerted President Roosevelt to the possibility that atomic bombs could be built, to late 1944, when it became entirely apparent that Germany was not an atomic threat, the focus of U.S. bomb makers was Germany.

Émigré scientists from Europe especially—Leo Szilard (who first conceived the idea of an atomic bomb), Enrico Fermi, Hans Bethe, Victor Weisskopf, Eugene Wigner, James Franck, Niels Bohr and the like—played pivotal roles in the Manhattan Project. To a man, they—along with their American and British colleagues—got involved for one overarching reason: Germany had first-rate scientists who presumably understood the destructive possibilities of nuclear fission. The United States had to develop an atomic bomb before the Germans did. Such weapons in the hands of Hitler would be the ultimate catastrophe for the world.

Joseph Rotblat, a Polish scientist before the war and a founder of the Pugwash movement after the war, told me last February that "there was never any idea [among scientists] that [the bomb] would be used against Japan. We never worried that the Japanese would have the bomb. We always worried what [Werner] Heisenberg and other German scientists were doing. All of our concentration was on Germany."

Surviving Manhattan Project scientists continue to believe that the atomic bombs were used on Hiroshima and Nagasaki, rather than on German targets, merely because they were not ready in time. But that may not be the whole story. There is evidence—albeit fragmentary—that as early as May 1943, high-level

planners assumed that Japanese rather than German military forces would be the likely target for first-use of the new weapon. That was long before anyone could reasonably predict when the war in Europe might end or when atomic bombs might be ready for use.

The first targeting discussion—insofar as can be determined from declassified documents and Manhattan Project histories—seems to have occurred during a meeting of the high-level Military Policy Committee on May 5, 1943. [3] The discussion that day ranged over a variety of topics—personnel issues, technical problems, commissioning a study on radioactive poisons, and even a "story to be allowed to leak out on the Los Alamos project to reduce the curiosity of the local population."

According to Groves's summary of the meeting:

> "The point of use of the first bomb was discussed and the general view appeared to be that its best point of use would be on a Japanese fleet concentration in the Harbor of Truk [in the Pacific, north of New Guinea]. General Styer suggested Tokio but it was pointed out that the bomb should be used where, if it failed to go off, it would land in water of sufficient depth to prevent easy salvage. The Japanese were selected as they would not be so apt to secure knowledge from it as would the Germans." [4]

The discussion was surely a blue-sky exercise. The Manhattan Project was still at an early stage, D-Day was more than a year away, the war in the Pacific was not yet going well for the United States, and no one could have predicted how important the Japanese fleet or Truk might be by the time the bomb was ready.

Nevertheless, the discussion suggests a line of thought that would have astonished Manhattan Project scientists, if they had been privy to it. In fact, it surprises them today, although the existence of the memo has been revealed before. (See, for example, page 253 of *The New World*, an official history of the Atomic Energy Commission by Richard G. Hewlett and Oscar E. Anderson Jr., published in 1962, which mentions it.)

Hans Bethe, who headed the Theoretical Division at Los Alamos, was astonished when I discussed the memo with him in February: "I am amazed both by the conclusion not to use [the bomb] on Germany and secondly by their reasons [for targeting the Japanese fleet]. We [the scientists] had no idea of such a decision. We were under the impression that Germany was the first target until the German surrender. That was my belief. Obviously, it was wrong."

Glenn Seaborg, who headed the team that first isolated plutonium, concurs. In an interview with me in February, he said: "So far as I recall, right up until the time the Germans surrendered in the spring of 1945, we thought that the Germans would be the target for the atomic bomb. As their demise became more and more predictable, perhaps we somewhat drew away from that feeling. But certainly we thought in 1944 that Germany would be the target."

David Hawkins, who was a special assistant to J. Robert Oppenheimer (the scientific director of the Los Alamos Laboratory) and the historian for the Los Alamos effort, agreed. When I asked him in February about the memo, he said that the scientists had no idea that Germany had been discussed and apparently

rejected as a potential first-use target as early as May 1943. Indeed, Hawkins and others I interviewed—including John A. Simpson, a group leader in the Chicago Metallurgical Laboratory and a founder of the *Bulletin*—do not recall targeting discussions among the scientists taking place until well into 1945.

Rotblat seems to have been the exception to that. He left the Manhattan Project in December 1944, after it became clear to him that Germany was no longer a nuclear threat. But once he announced his decision to leave, he was not permitted to talk about it with his colleagues.

The bomber of choice

In contrast to the specific suggestion of targeting the Japanese fleet at Truk, possible use of the bomb against Germany seems to have been only vaguely addressed at high levels. A Military Policy Committee status report of August 21, 1943, suggests that if the war became "unduly" long, the Germans might be able to produce "a usable bomb" before the United States. In that event, the committee concluded that it might "be necessary for us to stand the first punishing blows [of German atom bombs] before we are in a position to destroy the enemy." [5] Meanwhile, practical preparations continued for use of the bomb in the Pacific theater.

In the latter half of 1943, Navy Capt. William S. Parsons, who headed the project's ordnance group, chose the B-29 as the bomber the United States would use, if it could be appropriately modified. [6]

According to Hewlett and Anderson, the choice of the B-29 indicated that Japan was already the target. "Had Germany been the primary target, the choice would hardly have fallen on an aircraft never intended for the European theater." [7]

That conclusion is supported, at least indirectly, by the technical facts. British Lancasters could have been modified for the atom bomb. The four-engine Lancaster had a normal payload of 14,000 pounds, but some had been modified to carry the "Grand Slam"—at 22,000 pounds, the heaviest bomb produced in the war. The chief technical advantage the B-29 had over the Lancaster was its great range—3-4,000 miles. That made it the only bomber suitable for use in the Pacific. [8]

Another advantage of the B-29 was its made-in-USA label. In a March 1944 meeting between Groves and Gen. Henry H. "Hap" Arnold, commander of the Army Air Force, Groves said the first choice was the B-29, but the Lancaster had to be considered as a back- up. That "displeased Arnold, who stated emphatically that an American-made airplane should carry the bombs." [9]

In any event, that Japan would be the target of the atom bomb, if it were used at all, was affirmed in September 1944, when President Roosevelt and British Prime Minister Churchill met at Roosevelt's Hyde Park home. A summary of the meeting makes no mention of the possible use of atomic bombs against Germany, but it says that when the bomb was ready "it might perhaps, after mature consideration, be used against the Japanese, who should be warned that this bombardment will be repeated until they surrender." [10]

Momentum builds

The Military Policy Committee targeting discussion of May 5, 1943, had nothing to do with an estimate of when the war against Germany might end. In the spring of 1943, no one knew when that might be. Moreover, the technical problems that eventually delayed bomb production into the summer of 1945 had not yet emerged. In fact, a report of the committee, dated August 21, 1943, suggested that a fission weapon might be available by the fall of 1944 or by January 1, 1945. [11]

That schedule would have been compatible with the targeting of Germany. But the available documentation suggests that there were no discussions, much less plans, for use of the bomb against Germany. Given the fact that losses of Allied troops were expected to be heavy during and after D-Day, one might expect to find evidence that contingency plans to use the bomb in the fall of 1944 had been made. But there is no evidence of that, either. Rather, what evidence there is—albeit sketchy—suggests that there was simply an automatic assumption at an early stage that Japanese forces would be the target.

That assumption contrasts sharply with rationales for the bomb project. For example, in March 1942, Vannevar Bush, President Roosevelt's chief science adviser, said in a memo to the president that the "successful use [of atomic bombs] would be very important and might be determining in the war effort. It is also true that if the enemy arrived at the results first it would be an exceedingly serious matter." [12]

The "enemy" was Germany. The presumed German bomb effort drove the Manhattan Project, giving it an urgency unmatched by any other wartime project. In 1942, a host of war-related projects were in fierce competition for industrial and intellectual resources. Nevertheless, in June of that year, Roosevelt endorsed a high priority for the still-speculative bomb effort. In September, when Groves took over the Manhattan Project, he obtained the highest priority—AAA—for use whenever a slightly lower priority, AA-3, was deemed insufficient. Eventually, Groves's project grew so large that during some periods it "was using more AAA ratings than the combined total for all other Army and non-Army programs." [13]

As early as 1939, fear of a German bomb prompted the United States to begin its own research program. By late 1942, Roosevelt and his top scientific advisers had decided to proceed at top speed; that might insure that atom bombs would be produced in time to be a "determining" factor in the outcome of the war. But in late 1944, when a U.S. intelligence-gathering mission code-named "Alsos" revealed that the German bomb program had made virtually no progress, that fact made no difference. By then, the all-out U.S. effort had created its own momentum independent of anything Germany was or was not doing.

Fear of a German bomb got the U.S. project going; but once it was under way—at a resource-straining AAA priority level—officials connected with it were compelled to demonstrate that it would have a decisive effect on the outcome of the war. During 1944, for instance, congressional demands for an investigation of the mysterious project that commanded so much in the way of resources grew. Jack Madigan, an official in the War Department, said in a status report: "If the project succeeds, there won't be any [congressional] investigation. If it doesn't, they won't investigate anything else." [14]

James F. Byrnes, Roosevelt's director of the Office of War Mobilization, was acutely aware of the potential for intense political problems if atom bombs were not produced and used in the war. On March 3, 1945, he wrote to Roosevelt, saying that "if the project proves a failure, it will then be subjected to relentless investigation and criticism." [15]

Shortly thereafter, Roosevelt died and Byrnes became President Truman's secretary of state. The new

president was surely attuned to Byrnes's concerns. As a senator in 1944, he had wanted to investigate the project, which seemed to produce nothing—but at great expense. Upon being denied permission to do so, he wrote Secretary of War Henry L. Stimson that the "responsibility . . . for any waste or improper action which might otherwise be avoided [by a senatorial inquiry] rests squarely on the War Department." [16]

Truman appointed Byrnes as his representative to the Interim Committee, which first met after Germany surrendered. The committee was established to provide recommendations on a wide range of nuclear energy issues; inevitably, that included a consideration of how the bomb would be used against Japan.

David Robertson, in a recent biography of Byrnes, says that Byrnes "had a three-part agenda for atomic power" as a member of the Interim Committee. First, he was "against sharing of any atomic research with the Soviet Union." Second, he wanted the atomic bomb used "as quickly as possible in order to 'show results.'" (It was Byrnes who urged that the Interim Committee recommend that he bombs be used "on a war plant surrounded by workers' homes.") Finally, Byrnes wanted "the bomb used without warning." [17]

Questions

Time has not stilled the controversies surrounding the decision to bomb Hiroshima and Nagasaki, even while Japanese diplomats were quietly exploring a face-saving way to surrender. In the past five decades, millions of words have been written to explain the bombings.

To most Americans—especially veterans—the use of the bombs was a cut-and-dried matter. They were dropped to end the war quickly and thus save American lives.

In contrast, some historians argue that the Manhattan Project created its own logic leading to the use of the bombs. It was simply not reasonable to believe that after spending so much money and swallowing up so much of the nation's scarce wartime resources that such a decisive new weapon would be put on the shelf.

In recent years, many historians have argued that the use of the bombs had little to do with World War II. Rather, it was part of a *Realpolitik* campaign to intimidate the Soviets and make them more tractable in the post-war world.

Meanwhile, many have noted the obvious: High-level decision makers had already crossed the moral threshold regarding the deliberate bombing of civilians in February 1945, when the United States joined the British in the "terror bombing" of Dresden (Churchill's phrase). [18] About 40,000 people were killed in Dresden. And in March the United States began its terror raids against Japan, with the fire bombing of Tokyo.

According to various post-war surveys, hundreds of thousands of civilians were killed in Germany and Japan by air raids—before the atomic bombs were dropped. The use of atom bombs merely increased the terror, in that a single bomber, rather than hundreds or thousands, could now destroy a whole city.

Finally, it seems clear that the May 5, 1943, memo suggests that a form of nuclear deterrence was at work. The Germans were thought to have an active nuclear bomb program; therefore, the Military Policy

Committee was reluctant to use the first U.S. bomb against German forces. If it had been used against a German target—and if it had been a dud—the Germans might have been more likely to recover it and "to secure knowledge from it."

All such explanations—and more—find historical support in documents relating to the Manhattan Project and World War II. But nothing in the historical record can answer these questions: How many scientists—if any—would have left the project if they had known in 1943 that Japan might have been the target of first use? How many scientists simply would have quit in 1943 and 1944, Rotblat-style, if they had known—if Groves's words of April 1945 can be taken at face value—that the target "was always expected to be Japan"?

In the early days of the Manhattan Project, U.S. and British scientists believed they were in a desperate winner-take-all race with German scientists. That was especially true of the émigré scientists who came to the Manhattan Project. They had experienced Nazism first-hand, and their fear and loathing of Hitler was intense. They were convinced that German science was fully capable of producing a terrible new weapon that Hitler would use to enslave the world.

Over the years, Groves used that fear of a German bomb to drive his team onward. By late 1944 and 1945, however, the Manhattan Project had gained such momentum that it was unstoppable, despite the collapse of Germany. There is also evidence that by then most of the scientists working on the project wanted to see it through—to learn if the "gadget" would actually work. (Rotblat, in his August 1985 *Bulletin* article, called it "simple curiosity—the strong urge to find out whether the theoretical calculations and predictions would come true.")

By the fall of 1944, a U.S. effort that began because of the fear of a German nuclear weapons program had been transformed in a way that virtually guaranteed that nuclear weapons would be used as a tool of immense military superiority against a non-nuclear power, to accomplish a variety of goals.

To be sure, a number of scientists—but still a minority of the Manhattan Project team—were concerned about the moral implications of the bomb and *how* it might be used. Nevertheless, by the end of 1944, when Rotblat quit the project, the majority of scientists "were quite content to leave it to others to decide how their work would be used." [19]

But in 1943, the dynamics of the Manhattan Project were far different. The outcome of the war was far from certain and fear of a German victory was great. In the summer of 1943, Harold Urey, a Nobel Prize winner and one of the key members of the project, even recommended that Groves warn the American people of the possibility of an atomic attack, a suggestion the general ignored. [20]

Through his policy of strict compartmentalization of information, Gen. Groves kept bomb scientists isolated from any discussion of "how their work would be used." However, if the scientists had known early in their work that Japanese forces rather than German forces might be the first target, would there have been defections? If so, could an atomic bomb have been designed and produced in time to be used in the war?

Fifty years later, such if-only-they-had-known speculation is merely an intellectual exercise dealing with a host of unknowable factors. But it does raise an essential philosophical and practical point regarding

secrecy and the responsibility of scientists—an old question that is nonetheless as relevant today as it was 50 years ago:

If scientists do not have the minimum information needed to participate openly and democratically in deciding how the weapons of mass destruction they make will be used, should they be involved in making them?

Notes:

1. Arjun Makhijani. “Always” the target?: While U.S. bomb scientists were racing against Germany, military planners were looking toward the Pacific. Arjun Makhijani is president of the Institute for Energy and Environmental Research in Takoma Park, Maryland. He is the principal editor of *Nuclear Wastelands*, was published by MIT Press in 1995. The final, definitive version of this paper has been published in *Bulletin of the Atomic Scientists*, v. 51, no. 3 (May/June 1995): pp. 23-27. Online at http://books.google.com/books?id=PgwAAAAAMBAJ&q=Arjun+makhijani#v=snippet&q=Arjun%20makhijani&f=false. Published by Educational Foundation for Nuclear Science. ? Return
2. Leslie R. Groves, “Memorandum to the Secretary of War,” April 23, 1945, Records of the Manhattan Engineer District, 1942-1948, Record Group 77, National Archives, Washington, D.C. ? Return
3. At the meeting: Vannevar Bush and James B. Conant, President Roosevelt’s two top civilian advisers on the bomb project, and Rear Adm. William R. Purnell, Maj. Gen. Wilhelm D. Styer, and Groves. ? Return
4. Leslie R. Groves, Memorandum, “Military Policy Committee,” Records of the Manhattan Engineer District, 1942–1948, Record Group 77, National Archives, Washington, D.C. “MPC Minutes, 5 May 43 mtg” ? Return
5. Military Policy Committee, “Report of August 21, 1943, On Present Status and Future Program on Atomic Fission Bombs,” Records of the Manhattan Engineer District, 1942–1948, Record Group 77, National Archives, Washington, D.C. ? Return
6. Lee Bowen, *Project Silverplate, 1943–1946*, vol. 1 of *A History of the Air Force Atomic Energy Program 1943–1953*, (Air Force Historical Division, 1959); and Richard Hewlett and Oscar Anderson, *The New World*, (Berkeley, Calif.: University of California Press, 1990), p. 253. ? Return
7. Hewlett and Anderson, *The New World*, p. 253 ? Return
8. Technical data on the Lancaster and B-29 bombers provided by Robert S. Norris, Natural Resources Defense Council, Washington, D.C. ? Return
9. Vincent Jones, *Manhattan: The Army and the Atomic Bomb* (Center of Military History, United States Army, Washington, D.C., 1985), p. 520. ? Return
10. Martin Sherwin, *A World Destroyed* (New York, N.Y.: Vintage Books, 1987), p. 284. ? Return
11. Military Policy Committee, “Report of August 21.” ? Return
12. Vannevar Bush, “Report to the President: Status of Tubealloy Development,” March 9, 1942, Records of the Office of Scientific Research and Development, Record Group 227, National Archives, Washington, D.C. ? Return
13. Jones, *Manhattan*, p. 82. ? Return
14. As quoted in Leslie R. Groves, *Now It Can Be Told* (New York, N.Y.: Harper & Brothers, 1962),

p. 360. ? Return

15. James F. Byrnes, “Memorandum for the President,” March 3, 1945, Modern Military Branch, National Archives, Washington, D.C. ? Return
16. Harry S. Truman to Henry L. Stimson, March 10, 1944, Modern Military Branch, National Archives, Washington, D.C. ? Return
17. David Robertson, *Sly and Able* (New York, N.Y.: W.W. Norton, 1994), p. 410. ? Return
18. Noble Frankland and Charles Webster, *The Strategic Air Offensive Against Germany I V*, (London, England: Her Majesty’s Stationery Office, 1961), p. 112. ? Return
19. Joseph Rotblat, “Leaving the Bomb Project,” *Bulletin of the Atomic Scientists*, August 1985, p. 18. ? Return
20. Peter Wyden, *Day One* (New York, N.Y.: Simon and Schuster, 1984), p. 106. ? Return