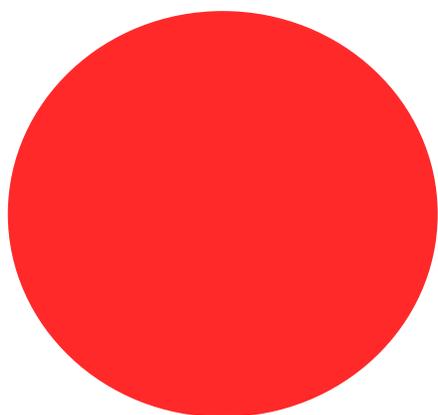


Tsetusuo Wakabayashi, Revealed



By Dwight R. Rider
Edited by Eric DeLaBarre



Preface

Most great works of art begin with an objective in mind; this is not one of them. What follows in the pages below had its genesis in a research effort to determine what, if anything the Japanese General Staff knew of the Manhattan Project and the threat of atomic weapons, in the years before the detonation of an atomic bomb over Hiroshima in August 1945. That project drew out of an intense research effort into Japan's weapons of mass destruction programs stretching back more than two decades; a project that remains on-going.

Unlike a work of art, this paper is actually the result of an epiphany; a sudden realization that allows a problem, in this case the Japanese atomic energy and weapons program of World War II, to be understood from a different perspective.

There is nothing in this paper that is not readily accessible to the general public; no access to secret documents, unreported interviews or hidden diaries only recently discovered. The information used in this paper has been, for the most part, available to researchers for nearly 30 years but only rarely reviewed. The paper that follows is simply a narrative of a realization drawn from intense research into the subject. The discoveries revealed herein are the consequence of a closer reading of that information. Other papers will follow.

In October of 1946, a young journalist only recently discharged from the US Army in the drawdown following World War II, wrote an article for the Atlanta Constitution, the premier newspaper of the American south. The article, *Japan Developed Atom Bomb; Russia Grabbed Scientists*, ran as a front page headline.

Central to the story were revelations of a Japanese atomic weapons program as described by one, Tsetusuo Wakabayashi, the reported chief of counterintelligence for the program. The veracity of the story has spawned debate amongst historians and other interested parties ever since. That Japan had a wartime atomic energy and weapons research program is indisputable; how large the program was and how successful it became remains controversial.

Fundamental to the legitimacy of the story was Snell's source, a man known only as Tsetusuo Wakabayashi. The name was actually a pseudonym, an alias assigned to the informant to protect his true identity by US Army intelligence in early 1946, and likely never to be revealed. As might be imagined, Snell's story was sensational, and drew its share of critics and naysayers.

Lost among its critics was the fact that despite all, Snell obviously had sufficient evidence of the veracity of his source in 1946, to convince the editors and owners of the Atlanta Constitution to 1) run the story, and 2) give it front page headlines. At any point in the ensuing controversy Snell could have ended the debate by simply revealing the identity of his source. Nearly 40 years after Snell released his article in October 1946, Robert Wilcox investigated the original story in his work, "*Japan's Secret War, Japan's Race against Time to build its Own Atomic Bomb*," subjecting himself to a similar degree of controversy and personal attacks.

It is entirely possible that David Snell never knew the actual identity of his source. In the world of national security and intelligence operations, the true identity of an informant is a closely guarded secret and never revealed. Unlike other sources of intelligence information, such as monitoring of communications and imagery collection, with human sources, real people with real lives are at risk. It may be that David Snell only possessed supporting documents and his interview of the man known to him as Tsetusuo Wakabayashi. Whatever David Snell had in his possession in 1946, it was enough for his

editors to support the story and run it on the front page of the Atlanta Constitution. No small feat in the era of gray fedoras, smoke filled rooms and scooping journalistic competitors.

Had Snell ever revealed the true identity of his source, much of the ensuing debate and opposition to his work would have probably crumbled. Any lesser journalists might have succumbed to the storm of controversy, but David Snell never revealed his source. So who was Tsetusuo Wakabayashi? This paper attempts to answer that question.

The paper relies as much as possible on primary sources; US government documents written during and after the war, interviews conducted by others, video, newspaper articles, and wherever possible, memoirs of those who lived the events described below, understanding that the description of primary used may be disputable. Unlike many of the documents written during and after the war, Japanese names will appear as they are written in Japan, surname first, given name second

A word of warning, this paper is not written to convince the reader of the correctness of its conclusions, nor is it written to entertain. The paper does not attempt to attribute blame or guilt. The story described herein is not an attempt to embarrass or shame anyone living or departed. I alone am solely responsible for its contents and conclusions. It is simply a narrative of events that took place near 70 years ago. There was no conscious effort to bend these sources to the will of the narrative, nor are these sources taken out of context. While the International Dateline leads to some confusion over the dates of some events, every effort has been made to maintain an accurate chronology of events as they occurred in August of 1945.

It should be understood that the events described herein occurred in the background of some of the most critical moments of any nation's history, the complete destruction of Japan by atomic weapons at the end of World War Two. It should also be understood that despite the volume of sources used, this story remains largely incomplete. There is likely more to the story than known, or ever to be revealed.

In closing I would like to thank: Barb Hartwig and Terry Rainey, longtime supporters of my research without whose unflinching support this and other papers to follow, would have likely remained unwritten; Dr. Chris Frankle of Los Alamos National Labs who tolerates my endless questions and discussions about the end of WWII; Daryl Peterson of Idaho National Labs who constantly challenges my thinking surrounding the events of the past, with a heavy dose of reality; Robert Wilcox and William Pellas, who sharpen my thinking; Dr. Daryl Herd of the Defense Intelligence Agency who taught me long ago that a source used, is a source acknowledged; Dr. Walter Grunden, Bowling Green State University who, like me, seeks the truth, whatever that might be; my daughter Mackenzie, her husband Daniel Sautter (US Army) who have graced my life with a new grandchild Phoebe Jean; my youngest son, Michael Nguyen who bought me a white board where I can visualize the connections between people and events of decades past; my oldest son Peter Nguyen (US Air Force), his wife Mimi and grandson Sean who continuously prodded me to keep on keeping on; the Japanese I have become friends with over the writing of this paper, and whose names are best left private; my cohorts in researching prisoners-of-war in Asia – Rod Beattie, Edna Binkowski, Rhonie Cauquiran Dela Cruz, Robert Hudson, Wes Injerd, Robert Lucke and David Metherell; my friends and associates at Intelligent Decision Partners – Michael Marks, Dr. Ben Benjamin, Eric Levy-Myers, Rich Rattan and Maria Velez de Berliner who tolerate my wandering about into events concerning World War Two and Japan; my parents, Billy and Jean Rider who taught me to seek the truth in all things regardless of the consequences, and finally my editors-in-chief Eric and Deana DeLeBarre who continue to believe that I do write in some language resembling English.

Dwight

Tsetusuo Wakabayashi Revealed

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By Dwight R. Rider

Edited by Eric DeLaBarre

Even in wartime journalists protect their sources, none more so than David Snell. In 1946 Snell published an article in the Atlanta Constitution titled “*Japan Developed Atom Bomb; Russia Grabbed Scientists.*”¹ According to Snell the article was based on a 1946 interview he conducted in Seoul, Korea with a “Japanese officer who said he was in charge of counter intelligence at the Konan [Hamhung, Korea] project before the fall of Japan.”² Snell conducted the interview at a Shinto Shrine overlooking Seoul, the Chosen Jingu located on Nam Mountain known in Korean as Namsan, which was then serving as a refugee center for Japanese fleeing China and Korea in the aftermath of the war.

To protect the identity of his source, “and at the request of the Army,” Snell referred to the man with a pseudonym, Tsetusuo Wakabayashi,” a cover story. In later articles, Snell no longer referred to the Japanese officer as being in charge of counter intelligence, but as “in charge of a Japanese atomic development in Korea.”³ It is likely that his reported position as “in charge of counter intelligence” was also part of the cover story designed to protect the man’s true identity. In another newspaper, Snell referred to his source as “in charge of Japanese scientists in Hamhung, Korea,” which was probably closer to the truth.⁴ The Soviet Union (USSR), then in control of Hamhung took great offense to the piece with the state run news service Izvestia, condemning the article as “the delirium of a provincial paper.”⁵ But the USSR had provinces, not the United States. This single 1946 article spawned debate about Japan’s wartime atomic bomb project that



Chosen Jingu, Seoul, Korea

in another newspaper, Snell referred to his source as “in charge of Japanese scientists in Hamhung, Korea,” which was probably closer to the truth.⁴ The Soviet Union (USSR), then in control of Hamhung took great offense to the piece with the state run news service Izvestia, condemning the article as “the delirium of a provincial paper.”⁵ But the USSR had provinces, not the United States. This single 1946 article spawned debate about Japan’s wartime atomic bomb project that

¹ Snell, David. *Japan Developed Atom Bomb; Russia Grabbed Scientists*. Constitution. Atlanta, Georgia. 3 Oct 1946.

² *JAPS TESTED A-BOMB FOUR DAYS TOO LATE*. San Mateo Times. San Mateo, California, Vol. 50, No 256. 25 October 1950.

³ *Reds Criticize U. S. Story on Jap A-Bomb*. The Troy Record. Series 1946, Number 246. Troy, New York. 14 October 1946.

⁴ *United States Was Target of Stalin Charge*. Jefferson City Post-Tribune. Vol. 80. No.38. Jefferson City, Missouri. 14 October 1946

⁵ *Reds Criticize U. S. Story on Jap A-Bomb*. The Troy Record. Series 1946, Number 246. Troy, New York. 14 October 1946.

continues to this day. Some historians refer to the issue as one of the last great mysteries of the war while others continue to insist that the story was a hoax.

Many historians agree that during the war Japan did attempt to develop an atomic bomb, but disagree about the size, scope and success of the project. Most historians argue that Japan's program lacked sufficient uranium, did not receive adequate support from the military, and was grossly underfunded; precisely as Japanese physicist described the program to US investigators after the war, but was that all there was to it? Snell's source, Tsetusuo Wakabayashi would disagree.



David Snell

According to Tsetusuo Wakabayashi (Wakamatsu Tetsuo as published in Japan), Snell's supposed source, the exact opposite was true.⁶ As Tsetusuo Wakabayashi related to Snell in the summer of 1946, the Japanese program was far more extensive, far more capable, and far more successful than many would believe. As Wakabayashi told Snell, Japan had actually tested an atomic bomb off the coast of northern Korea, at Hamhung, just days after Enola Gay dropped a uranium-based atomic weapon known as "Little Boy" over Hiroshima. Additional reports suggest that a similar such test took place along the eastern edge of the Gobi Desert just days after the test at Konan. But was it true? Was there a test of some kind of weapon at either location? In the rush to end the war against Japan, in the aftermath of two surprising attacks with atomic weapons, did the American intelligence community miss something? Who was Tsetusuo Wakabayashi? Was he a credible source? David Snell never said.

David Snell

David Snell was born in Minden, Louisiana on 28 March 1921. He graduated from Minden High School in 1939. For much of World War II he worked for the Atlanta Constitution as a reporter. He entered the U.S Army on 30 July 1944 as a private, serial number 38-789-221 and completed basic training at Camp Chaffee, Arkansas. In the Army, Snell held several military occupation specialties, to include service as a writer of military history. In 1945, transferred to a replacement battalion Snell was subsequently reassigned to the 24th Military Police Criminal Investigation Detachment (CID), Seoul, Korea. There he served as a criminal investigator rising to the rank of Tech 5. Though later articles would refer to him as an officer, Snell never rose to become a commissioned officer. In civilian terminology, Snell could be best described as a police officer.

Released from service on 11 September 1946, Snell returned to work with the Atlanta, Constitution where he filed his story "Japan Developed Atom Bomb; Russia Grabbed Scientists" a mere 21 days after discharge. On 3 October 1946, Tsetusuo Wakabayashi, whoever he might be, was front-page news across the US.

⁶ Civil Censorship Detachment. JP/CSA/38323. 7 November 1947. Record Group 331. Stack Area 240. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 3. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

In the days after the story's release, editors and reporters across the country called Snell for additional facts and details, much of which he provided. For several days the story held front page space in newspapers all over the country. Asked about the article General Leslie Groves, director of the U.S wartime Manhattan Project that developed the nation's atomic bomb discounted the story saying; "it's all news to me."⁷ US Army intelligence officers then serving in Japan labeled the story as "most unlikely."⁸ Dr. Harry C. Kelly, a graduate of the Massachusetts Institute of Technology then serving as science advisor to the Supreme Commander for the Allied Powers (SCAP), Douglas MacArthur, told reporters that: "There is no information here to justify such a story."⁹ Dr. Nishina Yoshio, Japan's foremost nuclear physicist labeled the story "a complete lie."¹⁰ But was it?

Perhaps, due to the furor and controversy surrounding the story, Snell never published a follow-up, nor revealed the identity of his source. In October 1950 as United Nation's forces fought their way northward into Hamhung and the area of the Chosin Reservoir during the Korean War (1950-1953), the story was resurrected.¹¹ Contacted about the 1946 story in 1950, Snell had little to add, but again, never revealed his source.

Interviewed in the early 1980s by Robert Wilcox whose 1985 book "*Japan's Secret War, Japan's Race against Time to build its Own Atomic Bomb*," rekindled interest in Japan's wartime bomb program, Snell could not remember the man's real name.¹² According to Snell "I've lost my files and simply can't remember." He ended the conversation with "It was a long time ago." David Snell died several years later at the age of 66 in July 1987.

In his obituary "A Stamp of Approval for a Friend," Charles Champlin, Los Angeles Times Art Editor, stated that "Snell collected things – a radio in the guise of a hand-cranked wall telephone, a large relief map of the United States retrieved from the trash."¹³ Of Snell Champlin said "His reputation as a saver of discarded items stayed with him."¹⁴ In the obituary, Champlin noted "Snell's deliberately low-brow humor was a masquerade for a sharp intelligence, a surprising amount of insecurity and more than his quota of private anxieties and sadnesses."¹⁵ It is unlikely that Snell ever really lost his notes of the 1946 interview, or that he ever forgot Tsetusuo Wakabayashi's real name, he was far too smart for that.

Regardless of the whereabouts of Snell's notes and or his faltering memory in the 1980s, he obviously had sufficient evidence in 1946, to convince the editors and owners of the Atlanta

⁷ *US Writer Says Japs Had A-Bomb in 1945*. Page 18. Syracuse Herald-Journal. Thursday, 3 October 1946

⁸ *Japanese A-Bomb Discovery Story Denied by 'Brass.'* The Charleston Gazette. Charleston, West Virginia. Friday, 4 October 1946

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ *Red Atomic Research Plant Is Found In Northern Korea*. Editorials and Features. Independent Journal. 27 Oct. 1950

¹² Wilcox, Robert K. "*Japan's Secret War: Japan's Race against Time to build its Own Atomic Bomb*." Marlowe & Company, New York. Copyright 1995

¹³ Champlin, Charles. *A Stamp of Approval for A Friend*. Critic At Large. Los Angeles Times. 09 July 1987

¹⁴ *Ibid.*

¹⁵ *Ibid.*

Constitution of the veracity of his source. One doesn't exit military service, return to their former job, and grab front page headlines 21 days later without a solid source for the story.

What possessed David Snell, a credible journalist, to risk his personal credibility, and that of the Atlanta Constitution to run an article more worthy of a supermarket tabloid, on the front page of the most prominent newspaper in the entire southern US? Who was the source of his information? Was the source credible? Was there any truth to it? The answer laid with Snell's source, a man of impeccable credentials...Lieutenant Colonel Suzuki Tatsusaburo, physicist, Imperial Japanese Army.

Suzuki Tatsusaburo



Suzuki Tatsusaburo

Suzuki Tatsusaburo earns his place in history in the spring of 1940 through Lieutenant General Yasuda Takeo, Director of Japan's Army Air Force Technical Research Institute. Yasuda Takeo graduated with the 21st class of the Imperial Japanese Army Academy in 1909. In his early years as an officer in the Imperial Japanese Army he specialized in artillery. From 1913 to 1916 he attended Tokyo Imperial University, graduating with a degree in electrical engineering. Upon graduation Yasuda served as a signals officer with the Japanese China Garrison Army, eventually training in Germany. Assigned to the Ministry of War, Yasuda served as Chief, Fortifications Section, Military Affairs and Military Administration Bureau. By 1937 he was promoted to Director of Army Aeronautical Technical Research and a Major General. The following year Otto Hahn split the atom, publicizing the achievement in January 1939.

In the weeks and months following Hahn's announcement many, physicists recognized the potential of the discovery in the eventual development of a weapon of mass destruction – an atomic bomb. Aware of the danger, Leo Szilard and Eugene Wigner turned to Albert Einstein who wrote a letter, delivered by Alexander Sachs, alerting President Franklin Delano Roosevelt to the danger. Similarly concerned, in April 1940 Yasuda Takeo turned to Lieutenant Suzuki Tatsusaburo. The Lieutenant was imminently qualified.

Suzuki Tatsusaburo was born in 1912 in the city of Nagoya, Owari Province; the center of Japan's porcelain industry. At Nagoya, uranium oxide was regularly used to color glass and ceramics. Displaying superior talent in mathematics and the sciences, Suzuki rose to attend the same university as Yasuda Takeo, Tokyo



Otto Hahn

Imperial, where he specialized in physics and x-rays. Otto Hahn's discovery was publicized the year Suzuki graduated Tokyo Imperial.

Through 1937 Suzuki studied physics under Nishikawa Shoji and Sagane Ryoichi at Tokyo Imperial University. Sagane had studied fission at the University of California under Earnest O. Lawrence who would, in 1939, win the Nobel Prize in physics for his invention of the cyclotron.

Though serving in the Imperial Japanese Army, after graduation, Suzuki was attached to the Institute of Physical and Chemical Research, otherwise known as RIKEN, under Nishina Yoshio, considered by many to be Japan's most eminent physicist. It was while at RIKEN that Suzuki studied the problem assigned to him by Yasuda.

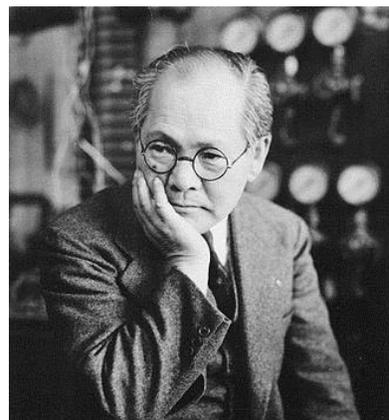
Japan's Maude Report



Lieutenant General Takeo
Yasuda

After speaking with Sagane, Nishina, many other Japanese scientists and researching the problem for about six months, in October 1939 Suzuki submitted a 20 page report to Yasuda concluding that such a weapon could be constructed and that Japan, through its Empire, possessed sufficient uranium to build an atomic bomb.¹⁶ According to the Suzuki report, an explosion of 1 kilogram of pure uranium-235 would equal 18,000 tons of gunpowder. Suzuki recommended thermal diffusion as the most likely method of enriching uranium. Suzuki also concluded that the US was probably already working on the problem and that Japan could be even then, falling behind in a race for the bomb. It was a seminal moment in the development of Japan's atomic weapons program. Admittedly there was much to be done, additional calculations were required, engineering problems had to be solved, but Japan's most eminent scientists, to include Sagane and Nishina believed they were equal to the task.

Suzuki's 1940 report was the Japanese equivalent of its more famous European cousin, the British MAUD Report of 1941 which spawned Britain's interest in developing an atomic bomb and eventually, the Manhattan Project which developed the actual weapon. Suzuki's report was reproduced and distributed to various units of the Japanese Army and Navy. Unclassified, the report eventually made its way into Japan's largest companies such as Mitsubishi, Sumitomo and Mitsui and universities such as Tokyo and Kyoto Imperial University. Following up on Suzuki's report, Yasuda asked Nishina Yoshio to conduct a series of lectures on the subject at several large meetings of Japanese officers. In April 1941 Yasuda formally requested Viscount Okochi Masatoshi, the director of RIKEN to



Nishina Yoshio

¹⁶ *The Day Man Lost: Hiroshima, 6 August 1945*. Pacific War Research Society Kodansha International, Ltd. Tokyo, Japan. 1972.

research construction of an atomic bomb. Okochi in-turn passed the task to Nishina.

Upon completing his report and submitting it to Yasuda, Suzuki was reassigned to work developing stronger steels, but would return to Japan's nuclear project not-later-than May of 1943. Documents obtained after the war suggest that while Suzuki may not have been directly responsible for the program during his absence, he remained informed of its progress in those early months supporting weapons development. As a Captain, Suzuki would later courier shipments of enriched uranium; probably concentrate, from northern China to Tokyo.¹⁷ According to an interrogation of miners operating in Manchuria after the war, between October 1944 and March of 1945, the Japanese were producing one ton of concentrate per month at Haicheng.¹⁸ It is likely that Suzuki's duties as a courier were a by-product of his eventual management of Japanese Army's atomic energy and research facilities located in China.



Fuchida Mitsuo

Suzuki's official return to the program came in 1943, when Japanese Prime Minister Tojo Hideki demanded that General Kawashima Toranousuke speed progress of the Japanese Army Air Force Technical Research Institute's nuclear weapons program. General Kawashima Toranousuke turned to General Yasuda, and once again, Yasuda turned to Suzuki. By 1945 Suzuki, now a Lieutenant Colonel would be found attempting to enrich uranium at Sumitomo's Amagasaki Plant just outside Osaka. His climb in rank, mentioned here is germane to the story.

Suzuki entered the Japanese Army around 1937 and by 1945 was a Lieutenant Colonel Fuchida Mitsuo, a Japanese national hero and leader of the first waves of attack aircraft on Pearl Harbor, entered the Japanese Navy in 1924 and yet reached the same rank as Suzuki only in 1941. By the end of the war Fuchida had only been promoted one rank, to that of captain. Masanobu Tsuji, who planned the Japanese invasion of Singapore, fought in Burma, Guadalcanal and Malaya, was involved in the Bataan Death March and was wounded during the war not-less-than seven times, entered the Japanese Army in 1920, and ended the war as a colonel. While there were obviously differences in the promotion policies of the two services, and far more examples could be listed, it is an inescapable conclusion that Suzuki rapidly rose in rank. Wartime promotions aside, rank is awarded based upon the success achieved in managing the tasks assigned, and overall responsibility. Suzuki's rapid rise in rank suggests that despite his later efforts to downplay his wartime role in Japan's atomic energy and weapons program, he was far from incompetent.

¹⁷ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁸ Search by Japanese Military for Uranium in Manchuria, Apr 44 to Mar 45. General Headquarters, Far East Command, Military Intelligence Section. Technical Intelligence Detachment. 1 December 1948. Record Group 331. Stack Area 290. Row 24. Compartment 2. Shelf 1. Entry 224. Box 2. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

In 1995, nearly 50 years after the war Suzuki would give a public interview admitting that during the war Japan enriched about 11 pounds of uranium.¹⁹ Suzuki had agreed to the interview with the television show “Red de Aarde” (Save the Planet), on the sole condition that it not be aired in Japan.²⁰ Prior to this interview, Suzuki had rarely allowed himself to be questioned about his wartime activities. The enriched uranium Japan had produced was confiscated by US authorities immediately after the war.²¹ However uranium enrichment is a near thing and the confiscated material’s level of purity, was never revealed by any of the Japanese scientists involved, or in formerly classified documents, but Tsetusuo Wakabayashi’s identity was.

Paradoxically, Tsetusuo Wakabayashi’s US Army assigned identity begins to unravel even before it was assigned, just after the US attack on Hiroshima at 8:16 a.m. on 6 August 1945. For the most part, Suzuki’s movements in the days immediately after the US attack on Hiroshima could be documented. If he had not given his 1995 interview his possible role as Tsetusuo Wakabayashi’s would have probably never been discovered. His 1995 interview and statement that he had been at Hiroshima and Nagasaki following the attacks, seemingly contradicted official US documents held at the US National Archives in Adelphi, Maryland. Those documents placed Suzuki in the custody of US forces in China in November 1945. Knowing what takes place in Tokyo and Hiroshima in the days after the US attack on the city, is instrumental in conceding that Tsetusuo Wakabayashi was indeed Suzuki Tatsusaburo.

Hiroshima – The Unraveling

At first, there was little indication that anything unusual had happened at Hiroshima. Shortly after 8:16 on the morning of 6 August 1945, the Tokyo control operator of the Japanese Broadcasting Corporation noticed that the telephone line to the radio station in Hiroshima had gone dead. The control operator tried to reestablish the connection, but found that he could not place a call through to the Hiroshima radio station. At 8:36 a.m. controllers at the railroad signal center in Tokyo realized that their mainline telegraph line into Hiroshima had also stopped working. The railroad signal center traced the break to an area just north of Hiroshima. Additional reports began arriving soon afterwards at the railroad signal center suggesting that there had been some kind of incident at or near Hiroshima. The signalmen immediately began forwarding these messages to Imperial Japanese General Headquarters in Tokyo.

Just before 10 o’clock that morning, Hosokawa Ryugen, the managing editor of *Asahi*, received a call at his home informing him that Hiroshima had “almost completely collapsed” as a result of enemy bombing.²² Hurrying to the newspaper’s office, Hosokawa began sifting through the messages coming into the newspaper from Hiroshima.²³ Hosokawa sensed from the messages

¹⁹ Hall, Kenji. *WARTIME DOCUMENTS SET RECORD STRAIGHT*. Japan’s A-bomb goal still long way off in ’45. The Japan Times. http://www.japantimes.co.jp/news/2003/03/07/national/japans-a-bomb-goal-still-long-way-off-in-45/#.UqO5b_RDukF

²⁰ *Japan: A-bomb program in World War II?* (435.4303) World Information Service on Energy. Amsterdam. 30 June 1995. www.wiseinternational.org/node/1319

²¹ *Ibid.*

²² Fussell, Paul. *Thank God for the Atom Bomb. Hiroshima: A Soldier's View*. The New Republic. August 1981

²³ Knebel, Fetcher and Charles W. Bailey II. *Hiroshima: the Victims. From: No High Ground*. Harper & Row. New York. 1960

being received that something was different with this bombing when compared to the reports of previous bombings against other cities. Hosokawa thought the reports, unusual.²⁴

At about time Hosokawa was studying the newspaper's incoming reports, Major Hirano Tosaku, a staff officer with the Second General Army at Hiroshima, arrived for the day at General Headquarters, Tokyo. Hirano had traveled to Tokyo from Hiroshima a week earlier to report the status of military supplies at Hiroshima. He was scheduled to return to the city on 5 August but had put off his departure for two days. At some point that morning, Hirano received a call from Central Command Headquarters, Osaka, a facility under the control of II Army Corps in Hiroshima, reporting that communications to Hiroshima and points west had failed. Tokyo General Headquarters now began trying to raise the Second General Army's communication center located at the Hiroshima Castle, but could not get through. It never would. In Tokyo, there was no explanation for the failure.

Messages now arriving from the Tokyo railroad signals center and from the Asahi newsroom at Imperial Japanese General Headquarters indicated that something serious had happened, but no one knew yet exactly what that something was.

In Hiroshima, Hiroshi Morikawa, an engineer at Hiroshima Central Broadcasting "...called Osaka on medium and high frequencies and on the Osaka business line [used between stations for the planning of broadcasts]. Fortunately, I got a reply from Okayama. I immediately described the general situation and requested a shortwave broadcast from Osaka issuing orders to each station and asking for assistance."²⁵ At 11:30 a.m. Nakamura Satoshi, a Domei-Tsushin correspondent, sent a message from the Hara Station to NHK-Okayama asking the station to convey the following report to the Okayama Branch Office of the Domei-Tsushin head office in Tokyo saying that, "At roughly 8:16 am. August 6, one or two large enemy planes flew over Hiroshima and dropped a special bomb that devastated the city. The death toll is thought to be about 170,000."²⁶ The Tsushin office didn't accept his story, but forwarded his message on to Imperial Japanese General Headquarters, Tokyo, anyway.²⁷ Nakamura's Satoshi message arrived at the General Headquarters near noon, local time.

The Response – Investigation Teams

Immediately after the bombing of Hiroshima, the Kure Naval Base sent in a rescue and relief team, and then organized the Kure Naval Base Survey Team to assess overall damage to the city. The Kure Naval Base Survey team was assigned to pinpoint the blast's hypocenter; to determine the altitude of explosion and extent of the damage. The damage investigation team was led by Captain Mitsui Matao of the Artillery Experiment Department, and previously involved in

²⁴ Knebel, Fletcher and Charles W. Bailey II. *Hiroshima: the Victims. From: No High Ground*. Harper & Row. New York. 1960

²⁵ Masami Nishimoto, Senior Staff Writer. *Diary of Hiroshi Morikawa*, NHK engineer, made public. Hiroshima Peace Media Center. 6 August 2013

²⁶ A Stillborn First A-bomb Report: "*Hiroshima Completed Destroyed by a Special Bomb, 170,000 Killed*." NKH Peace Archives, http://www.nhk.or.jp/peace/english/chrono/chrono_01.html

²⁷ Masami Nishimoto, Senior Staff Writer. *Diary of Hiroshi Morikawa*, NHK engineer, made public. Hiroshima Peace Media Center. 6 August 2013

Japan's atomic weapons program. Nearly 70 years later, no one has ever explained why a damage assessment team would leave Kure Naval Base to pinpoint the hypocenter from the blast of a weapon that they had yet to identify as an atomic bomb.

The Kure Naval Base Survey Team entered the city a bit before noon, 6 August. At 3 o'clock that afternoon, the team divides the city into more than a dozen zones, and the larger team into smaller sections of several men. Each section was to examine a different area of the city collecting critical data which would allow them to accurately estimate the blast's hypocenter and altitude of weapon detonation. The group also takes photographs the destruction.

Shortly after 1 o'clock on the afternoon of 6 August, Army General Headquarters received a message from the shipping depot of the Second General Army stating: "Hiroshima has been annihilated by one bomb and fires are spreading."²⁸ The depot was only capable of transmitting the message as far as Kure Naval Base, who then relayed the message on to Tokyo. The Second General Army's communications center at Hiroshima Castle continues to remain off the air. Reports continued trickling into General Headquarters in Tokyo. Military district officials soon began reporting that Hiroshima had been attacked by a small number of enemy bombers and something that might be an entirely new weapon. Sixteen hours after the attack, US President Harry Truman, returning from Potsdam, Germany aboard the *USS Augusta* issued a press release describing the weapon dropped on Hiroshima as an "atomic bomb."

Long before Truman's announcement, some high ranking Japanese officers of the Imperial



Mitsumasa Yonai

Japanese Army and Navy had already begun to suspect that the weapon used over the city might have been an atomic bomb. In late 1944, noting the interest of the US government in buying up all available pitchblende, the Imperial Japanese Navy had reported that America was working on such a weapon. Suzuki Tatsusaburo had predicted in 1940 that the US might be working on such a weapon. General Kawabe Masakazu, Commander of the Air General Army, familiar with Japan's atomic research program suspected that the weapon used was an atomic bomb even before he learned of Truman's statement. Kawabe later recalled having learned about atomic weapons from Dr. Nishina Yoshio, the research leader of the Japanese A-bomb project. According to Kawabe's later statements, Nishina's comments were based on information supplied to him by the Japanese Naval Intelligence Service.²⁹ Other high ranking officers, Japanese

Army and Navy were similarly certain.

Lieutenant General Shuichi Miyazaki, Chief, Operations Division, Imperial Japanese Army General Staff wrote in his diary early on the morning of the 6th of August that "it may be the so-called atomic bomb."³⁰ At some point that morning or in the early afternoon of 6 August,

²⁸ Fussell, Paul. *Thank God for the Atom Bomb. Hiroshima: A Soldier's View*. The New Republic. August 1981

²⁹ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

³⁰ *Diary of Lieutenant General Miyazaki Shuichi*, Aug. 6, 1945, Library, Military History Department, National Institute for Defense Studies, Defense Agency, Tokyo

Admiral Yonai Mitsumasa, Minister of the Japanese Navy had scribbled an ultra-top secret memo reading; “Hiroshima destroyed by atomic weapon. This war is lost.”³¹ Like Kawabe, Yonai had held several talks with Nishina Yoshio over the previous two years and was familiar with the concept of an atomic weapon. While Japan’s scientist had earlier assessed that there was no chance that the United States could produce such a weapon for three or four more years, reports emanating from Hiroshima continued to fuel suspicions at Japanese Imperial Headquarters that the US had attacked the city with just such a weapon. Secretly, without informing the Japanese Army, Admiral Yonai sent for Captain Kitagawa Tetsuzo (sometimes referred to as Tetsugo).

A Secret Naval Inquiry

In 1945 Captain Kitagawa Tetsuzo, previously a chemist, but at the time a graduate student specializing in physics at Kyoto University, was then serving as the Chief, Chemical Section of the Navy Technical Research Institute in Meguro, a special ward of Tokyo. Kitagawa was also member of the Japanese Navy atomic energy and weapons development team of Dr. Arakatsu Bunsaku, erroneously assumed by many to be the leader of the Japanese Navy’s atomic weapons program.³² As the chief of the Navy’s Chemical Section, Kitagawa was intimately familiar with the electrochemical production facilities of Nichitsu, the Korea Nitrogenous Fertilizer Company (Chōsen Chisso Hiryo Kabushiki Kaisha) located at Hamhung, Korea, and “Japanese atomic development in Korea.”³³ Kitagawa received a phone call on the morning of 6 August from the Navy Ministry saying only that a “special bomb” had been dropped on Hiroshima and informing him that Admiral Yonai wished to see him. Kitagawa’s movements in the days after the attack on Hiroshima would be relevant in tracking Suzuki Tatsusaburo to Hamhung, Korea and beyond.



Arakatsu Bunsaku

Captain Kitagawa Tetsuzo met with Admiral Yonai at 11 o’clock that morning at Imperial Naval Headquarters. During the meeting Yonai ordered Kitagawa to assemble a secret Imperial Navy damage assessment team, proceed to Hiroshima, and once there to “grasp the actual situation in the area where the atomic bomb was used.”³⁴ Though competition and a lack of cooperation between the Japanese Army and Navy were a hallmark of WWII, there is little to explain Yonai’s desire for secrecy at this late moment in the war or his labelling of the weapon used at Hiroshima as an atomic bomb before his suspicions could be confirmed. Two years earlier in 1943, the Japanese Army and Navy had combined their atomic energy and weapons program.

³¹ Brooks, Lester. *Behind Japan’s Surrender, The Secret Struggle That Ended an Empire*. McGraw-Hill Book Company, New York. 1968.

³² Nishimoto, Masami. *Record of Hiroshima: In the footsteps of the Navy A-bomb survey team*. Hiroshima Peace Media Center. 2 August 2010.

http://www.hiroshimapeacemedia.jp/mediacenter/article.php?story=20100927135950552_en

³³ *Reds Criticize U. S. Story on Jap A-Bomb*. The Troy Record. Series 1946, Number 246. Troy, New York. 14 October 1946.

³⁴ NAKAGAWA, MASAMI. *Lost A-bomb research surfaces in Hiroshima*. The Asahi Shimbun. 25 August 2005, <http://www.energy-net.org/N-LET/EN/0BULL/05825RB.TXT>

Though the two programs were heavily compartmentalized, by 1945 there was little if any information on the subject the two services had not shared. It is more likely however that Yonai did not trust the Japanese Army to accurately report events at Hiroshima, and believed they would downplay damage to the city in favor of one final battle with the enemy: The initial US invasion of Japan under Operation *Olympic* in Kyushu. It was a battle that Japan's Army believed they could win by inflicting so many casualties on US forces that America would enter a negotiated settlement ending the war with Japan, avoiding the unconditional surrender demanded by the Allies. Inexplicably Yonai's use of the term "atomic bomb" with Kitagawa comes before any official information had been received that such a weapon had actually been responsible for the destruction of Hiroshima. After the meeting with Yonai, Kitagawa secretly assembled a ten-man investigation team of naval officers stationed in the Tokyo and Hiroshima area.³⁵ Nearly all of these officers had previously worked on the Imperial Japanese Navy's atomic energy and weapons program.



Arisue Seizo

Throughout the morning and into the early afternoon Imperial General Headquarters continued its attempts to raise the army communications center in Hiroshima, but to no avail. General Headquarters was at a loss for explanations. There had been no large scale attack on the city; there were no large ammunition dumps in Hiroshima that might be the cause of the explosion. In an effort to determine what had happened at Hiroshima, a young staff officer, name unknown, was ordered to immediately fly to the city, land, survey any damage, and report back to Tokyo.³⁶ Most of the headquarters staff still believed that nothing too serious had taken place.³⁷

By the middle of the afternoon Imperial Japanese General Headquarters only knew that three bombers had been seen over Hiroshima when communications with the city ceased. Information being received continued to confirm that only one bomber, dropping one bomb, had destroyed the entire city. Reports received so far indicated that neither of the two additional bombers seen over the city had dropped any bombs at all.

At some point in the late afternoon of 6 August, before the nature of the attack was even determined, the Japanese military established the "Committee for the Study of Countermeasures against the New Bomb."³⁸

After forming the Imperial Japanese Navy team, Kitagawa was then reassigned to the Imperial Japanese Headquarters Team formed to represent both services, The Imperial Japanese Headquarters Team was scheduled to depart Tokyo the next day for Hiroshima under Army

³⁵ NAKAGAWA, MASAMI. *Lost A-bomb research surfaces in Hiroshima*. The Asahi Shimbun. 25 August 2005, <http://www.energy-net.org/N-LET/EN/0BULL/05825RB.TXT>

³⁶ Brooks, Lester. *Behind Japan's Surrender, The Secret Struggle That Ended an Empire*. McGraw-Hill Book Company, New York. 1968.

³⁷ *Ibid.*

³⁸ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

Lieutenant General Arisue Seizo, Second Bureau, (Intelligence); Imperial General Headquarters – Army Section. Assigning Kitagawa to what would have been solely a Japanese Army Team provided that “joint-ness” which allowed the team to represent Imperial Headquarters, not the Japanese Army, and not the Japanese Navy. That joint-ness also put Kitagawa and Suzuki Tatsusaburo on the same team, probably for a reason. Acting under secret orders, Captain Yasui Homon, Navy Technical Department, took charge of the Imperial Navy Survey Team formed by Captain Kitagawa and made plans to depart Tokyo for Hiroshima.

Fuchida Mitsuo, the Hero of Pearl Harbor

For the ten days prior to the attack, Fuchida Mitsuo, the hero of Pearl Harbor, had been in the city discussing defense plans at Second Army Group Headquarters, for the expected US invasion of Japan. Fuchida was, at that point, serving as the Imperial Navy’s overall Air Defense Officer. He had departed Hiroshima the day before the attack for the Imperial Navy’s new Supreme Headquarters at Nara near Kyoto, under orders from Admiral Yanno Shikazo.³⁹ The former Navy Ministry headquarters building in Tokyo had been previously destroyed by B-29 bombers in their incendiary attacks on Tokyo. The new headquarters of the Imperial Japanese Navy was to be almost completely underground. The Japanese Army was constructing a similar underground facility, the Matsushiro Imperial Headquarters near Nagano. Fuchida left his assistant, Naval Lieutenant Hashizume Toshio at the Yamato Hotel in Hiroshima.⁴⁰ He would never see Hashizume alive again.



Hiroshima Castle – About 1935

Learning of the attack, Fuchida returned to Hiroshima. Approaching the city that afternoon, much of the mushroom cloud still hung over the stricken area. Fuchida Mitsuo immediately thought of an atomic bomb, a concept he was familiar with but never explained how he had become aware of the possibility.⁴¹ Flying over Hiroshima, in Fuchida’s mind the city “was simply not there anymore.”⁴² Attempting to contact the Army airfield where he planned to land, he received no answer.⁴³ Though Fuchida could see numerous fires, the fires were not fueled by burning buildings, but debris.⁴⁴ The entire city now resembled a smoldering garbage dump. Fuchida would have no conscious memory of landing his bomber. Shock had set in. His next memory was exiting the airfield on foot. Confronted by hundreds, if not thousands of burned and bleeding Japanese, Fuchida walked the four miles from the airfield to the center of the city. Fuchida would join the Imperial Japanese Navy Survey Team, when it arrived from Tokyo on the morning of 7 August 1945.

³⁹ Coffey, Thomas M. *Imperial Tragedy*. The World Publishing Company. New York. 1970

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² Thomas, Gordon and Max Morgan Witts. *Enola Gay*. Stein and Day, New York. 1977.

⁴³ Coffey, Thomas M. *Imperial Tragedy*. The World Publishing Company. New York. 1970

⁴⁴ *Ibid.*

At 6 o'clock p.m. on the evening of 6 August, Japanese radio reported the attack on Hiroshima saying "A few B-29s hit Hiroshima city at 8:20 A.M. August 6, and fled after dropping incendiaries and bombs, the extent of the damage is now under survey."⁴⁵ The message was repeated several times between 6 and 9 p.m. that evening.

The Swarm into Hiroshima

At 5:30 a.m. on 7 August the secret Imperial Japanese Navy Team, minus Kitagawa, departed Iwakuni for Hiroshima. There the Imperial Japanese Navy Team joined the 13-member Kure Naval Base Survey Team led by Captain Mitsui Matao, already in Hiroshima. The two teams assemble in front of the ruins of Hiroshima Castle. At dawn a report arrived for Lieutenant General Kawabe, Imperial Japanese Army reading: "The whole city of Hiroshima was destroyed instantly by a single bomb."⁴⁶

Shortly after 9 a.m. on the morning of 7 August, Major Hirano placed a call to Nishina Yoshio, reportedly an old friend, informing the scientist of the attack on Hiroshima, Truman's announcement, and asking Nishina to accompany him to the city in a light airplane to survey the damage.⁴⁷ As reports continue to arrive, General Kawabe sent an officer from the Army's Aeronautical Department to call on Dr. Nishina Yoshio.⁴⁸

The Kure Naval Base Team remained in Hiroshima into 7 August with some members returning to base that afternoon to write a detailed scientific report of the damage to the city. Their report is forwarded to Tokyo, intercepted, decoded and reported under Magic by the United States Army's Signals Intelligence Section (SIS) and the United States Navy's Communication Special Unit cryptanalysis program designed to eavesdrop on high-level Japanese communications. "Magic" – Far East Summary No. 507 reports:

"c: A Japanese Navy report, transmitted from Kure at 1124I on the 8th but apparently prepared somewhat earlier, includes the following statements:

- (1) The concussion was beyond imagination, demolishing practically every house in the city.
- (2) Present estimate of damage: About 80 percent of the city was wiped out (destroyed or burned). Only a portion of the western section escaped the disaster. Casualties have been estimated at 100,000 persons.

⁴⁵ Gilbert, Bill. *Air Power: Heroes and Heroism in American Flight Missions, 1916 to Today*. Citadel Press Books New York 2003

⁴⁶ *Kawabe. Statement. #61539*

⁴⁷ *The Ultimate Weapon. End of the Japanese Empire. Illustrated Story of World War II. Reader's Digest Association. Pleasantville, New York. 1969*

⁴⁸ Sheinkin, Steve. *Bomb: The Race to Build--and Steal--the World's Most Dangerous Weapon*. Flash Point. New York. 2012

(3) Relief squads have been dispatched to the area to assist the Army in rescue operations. About 1,000 Army troops and 10,000 [word missing] medical supplies were moved in by dawn on the 7th.⁴⁹

Though aware of the President Truman's statement announcing the use of an atomic bomb, the Kure Naval Base Team's report stopped short of concluding that Hiroshima had been destroyed by an atomic bomb.

The “Phantom Investigation Team”

With the arrival of the Imperial Navy Team dispatched from Tokyo – the “phantom investigation team,” those on the Kure Naval Base Survey Team remaining in Hiroshima, were absorbed into the Imperial Navy Team and continuing their investigation. Kitagawa, arriving in Hiroshima later, appears to have attached himself to the combined Navy teams; however he evidently continued to interface with the Imperial Japanese Headquarters Team. The combined navy team placed the strength of the atomic bomb at 20,000 tons of TNT.

By examining the angles of buildings and trees that had collapsed as a result of the blast and the extent of damage to air raid shelters by the heat rays of the weapon, the two Navy teams independently conclude that the bomb had exploded 300 meters south of Gokoku Shrine at an estimated altitude of 550 meters. Subsequent research determined that the hypocenter was the Shima Hospital in what is now Ote-machi and that the bomb had exploded at an altitude of 600 meters. This combined Navy team was disbanded in Hiroshima with its research taken back to Tokyo where it was believed to be destroyed shortly after it arrived, earning the unit the “phantom” moniker.⁵⁰ Though the combined Navy team had been disbanded, Kitagawa continued to remain in Hiroshima.

In 2005, sixty years after the combined Navy Team's investigation, many of its documents were uncovered and donated to the Yamato Museum in Kure. The documents had evidently been preserved by two of the combined navy team's officers, Kozu Yukinao, a naval lieutenant commander in the Armament Testing Section of the Kure naval station, and Kitagawa Tetsuzo – who as we know, did not officially serve on either navy team. Events now turn to Dr. Nishina Yoshio.

The “RIKEN” Response

According to Robert Jungk in his book, *Brighter than a Thousand Suns, a Personal History of the Atomic Bomb Scientists*, at 9 a.m. on the morning of 7 August an officer of the Japanese Army Air Force arrived at the Nishina laboratory to accompany the famed scientist to the headquarters and the General Staff.⁵¹ Several reports state that Major Hirano Tosaku was the officer that visited Nishina. Hirano himself admitted that he had called Nishina on 6 August from

⁴⁹ “MAGIC” – Far East Summary. No. 507. War Department. Office of A.C. of S., G-2. 9 Aug 1945

⁵⁰ NAKAGAWA, MASAMI. *Lost A-bomb research surfaces in Hiroshima*. The Asahi Shimbun. 25 August 2005, <http://www.energy-net.org/N-LET/EN/0BULL/05825RB.TXT>

⁵¹ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

General Headquarters informing him of the attack, and asked the scientist to accompany him to Hiroshima to investigate the blast; however Hirano was not the officer that visited the scientist's laboratory.⁵²

While research continues in an effort to uncover the name of this officer, some speculation exists that he was Suzuki Tatsusaburo. However it is just as likely that Suzuki was occupied by other issues at headquarters and was not the one to retrieve Nishina. There is evidence that this officer, whoever he was, knew nothing of Hiroshima, Japan's atomic energy and weapons program nor had ever previously met Nishina, as Suzuki Tatsusaburo obviously had. Regardless, as Nishina and the officer readied themselves to depart, a Domei news service reporter arrived seeking a comment from Nishina regarding President Truman's announcement that an atomic bomb had been dropped on Hiroshima. According to Robert Jungk the question shocked Nishina who later claimed that, at that moment, he no idea that Hiroshima had been attacked with an atomic bomb.⁵³ Confronted by the Domei reporter as to whether the city could have been destroyed by an atomic bomb Nishina answered, "Well, yes – it is quite possibly true."⁵⁴ As we know from Hirano, Nishina had known of the attack for at least a day.

Arriving at Japanese headquarters in the late afternoon of 7 August, Nishina was questioned by General Kawabe who asked "Could you build an atom bomb in six months? In favorable conditions we might be able to hold out that long."⁵⁵ Nishina replied that "Under present conditions six years would not be long enough. In any case we have no uranium."⁵⁶ Nishina was then asked if he could suggest any effective method of defense against the new weapon. Nishina had only one suggestion: "Shoot down every hostile aircraft that appears over Japan."⁵⁷ Nishina's comments were far too blunt in a culture where consensus was a requirement and advice was generally presented in an indirect manner. The Army now sought the counsel of other Japanese physicists who advised the Committee for the Study of Countermeasures against the New Bomb, that even the technical skills of the Americans was insufficient to transport such a dangerous apparatus across the entire Pacific Ocean and then by air to Japan.⁵⁸

The Imperial Japanese Headquarters Team

The Imperial Headquarters Survey Team was assembled in Tokyo on 7 August under the orders of General Arisue, Second Bureau, (Intelligence); Imperial General Headquarters – Army Section. The team consisted of not-less-than 30 members to include General Arisue and Nishina Yoshio. The remainder of team was composed officers of the Imperial Japanese Army, primarily from the Army Aviation Bureau, scientists of RIKEN and some members of the Second General

⁵² Knebel, Fetcher and Charles W. Bailey II. *Hiroshima: the Victims. From: No High Ground*. Harper & Row. New York. 1960

⁵³ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

⁵⁴ *Ibid.*

⁵⁵ Sheinkin, Steve. *Bomb: The Race to Build--and Steal--the World's Most Dangerous Weapon*. Flash Point. New York. 2012

⁵⁶ *Ibid.*

⁵⁷ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

⁵⁸ *Ibid.*

Army already in Hiroshima. Most of the team was drawn from men who had previously worked on the Imperial Japanese Army's atomic, biological or chemical warfare weapons programs to include Lieutenant Colonel Suzuki Tatsusaburo.⁵⁹ The team also included one Navy Captain, Captain Kitagawa Tetsuzo of the Imperial Japanese Navy.

Though attempting to leave earlier in the day, the Imperial Headquarters Survey Team's two flights were delayed until late afternoon, to avoid US Naval aircraft now operating at will over Japan. On the evening of 7 August the team departed Tokyo in two separate aircraft from Tokorozawa Airfield, one carrying General Arisue and at least nine other men to include Major Hirano and likely Captain Kitagawa, the other carrying Nishina Yoshio, Suzuki Tatsusaburo



L2D Tabby

and at least four other military officers and RIKEN scientists. During the flight to Hiroshima, the L2D Tabby, a version of the Douglas DC-3 built under license in Japan carrying Nishina Yoshio developed engine trouble and turned back to Tokorozawa field.⁶⁰

As Nishina waited for transport with his student Nobuyuki Fukuda, a single B-29 appeared in the skies over Tokyo. Nishina and Fukuda ran for a bomb shelter. With no air raid signals or any knowledge of what had potentially happened in Hiroshima, none of the other people on the streets paid the warning any attention. As Fukuda would later relate:

“At that moment we were both suffering from acute pangs of conscience. We alone knew, as those around us did not, that even a single plane with a single bomb might cause a more frightful catastrophe than all the squadrons which had formerly attacked us put together. We wanted to utter a cry of warning to all those different people: “Run for safety! That may be no ordinary aircraft with ordinary bombs!” But the General Staff had strictly enjoined us to keep the secret from the uninitiated, even from our own families. Our lips were therefore sealed. Overcome with rage and shame at not being allowed to warn our fellow creatures, we waited for minute after minute in that air-raid shelter. We scarcely dared to breathe until the “all clear” signal was given. Fortunately no atom bomb was

⁵⁹ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

⁶⁰ Low, Morris. *Science and the Building of a New Japan*. Johns Hopkins University. Palgrave Macmillan. 2005

dropped on that occasion. But that temporary piece of luck made no difference to our dejection. As we had not dared to warn our fellow human beings, we felt that we had betrayed them. My revered professor, Nishina, never recovered from the feeling of guilt he experienced that day.”⁶¹

Unaware of the delayed flight, Arisue continued on to Hiroshima arriving on the afternoon of 7 August. Information about the blast, to include fused ceiling tiles, was relayed back to Tokyo probably on the same aircraft that had ferried Arisue and team to Hiroshima. The collected material was provided to RIKEN scientists for examination late that evening. Still in Tokyo, Nishina returned to his office and also examined the material. Using a slide rule and making some calculations, Nishina determined that the bomb dropped on Hiroshima had indeed been an atomic bomb.

Major Hirano, believed to have piloted the aircraft carrying General Arisue reported after flying over the city later stated, “Being a soldier, my eye had been inured to the effect of bombing by that time. But this was a different sight. There were no roads in the wastes that spread below our eyes: that was my first impression. In the case of a normal air raid, roads were still visible after it was over. But in Hiroshima, everything was flattened and all roads were undiscernibly covered with debris.”⁶²

As Hirano exited the aircraft, a Japanese officer ran to meet them. The officer’s face was marked down the middle; one side burned, blistered and blackened the other side smooth without a mark. General Arisue and Hirano would record the condition of the Japanese officer’s face, Hirano in his comments after the war, Arisue in his report later that same evening to Imperial Japanese Headquarters.⁶³ From the airfield the Imperial Headquarters Survey Team headed into the city to locate Second Army Group Headquarters, which now consisted of just a few surviving officers, holed up in a hillside cave.

On the evening of 7 August Arisue composed a message to be sent to Tokyo General Headquarters. The message was not sent until the morning of the 8th. It read:

“Hiroshima totally destroyed by one bomb, a special bomb, a type never seen before. Opinions of survivors indicate we can cope with this new weapon. People directly exposed to blast were either killed or burned. But many not directly exposed show no sign of injury. Therefore burns can be prevented by covering body. Anything covered even slightly escapes burn. This means countermeasures are possible.

Many rumors circulating here. Some say same kind of bomb will hit Tokyo August 12. Advisable to be alert for such a possibility. Though it may be useless to dig more shelters at this late date, I suggest people be told to seek protection in shady places.

⁶¹ Jungk, Robert. *Brighter Than A Thousand Suns, a Personal History of the Atomic Bomb Scientists*. Harcourt, Bruce and Company. New York. 1956

⁶² Fussell, Paul. *Thank God for the Atom Bomb. Hiroshima: A Soldier's View*. The New Republic. August 1981

⁶³ Coffey, Thomas M. *Imperial Tragedy*. The World Publishing Company. New York. 1970

Dr Nishina not yet here. Will begin scientific evaluation when he arrives. –
Arisue”⁶⁴

Once in the hands of the Army General Headquarters staff the message remained closely held. It was not relayed to either the Japanese Navy or the civil government, probably justifying Yonai’s earlier suspicions that the Imperial Japanese Army simply could not be trusted.

Nishina, Suzuki Tatsusaburo and others arrived the next day, 8 August. Nearly every Japanese officer on the Imperial Headquarters and combined Imperial Japanese Navy Team, and most of the accompanying scientists were either familiar with, or had worked on some aspect of Japan’s atomic energy and weapons program. Nizuma Seiichi, also a member of the Imperial Headquarters Survey Team had previously worked on Japan’s chemical and biological warfare programs, most notably Japan’s Biological Warfare Center, Unit 731 at Ping Fan, China.

Taking Charge

Once in Hiroshima, the Imperial Headquarters Survey Team exercised its authority over the several groups already in the city, and those that would arrive over the next few days. The Imperial Headquarters Survey Team organized and directed the work of its own and other teams, consolidating the collection of data, samples and other materials. It is not yet known if the Imperial Headquarters Survey Team limited the communications of the subordinate teams outward from the city, or if such communications had to receive prior approval before being transmitted outward. Members of the Imperial Headquarters Survey Team primarily surveyed damage to military facilities in the city and received reports from the other groups who had already arrived. One of their first observations would be that Hiroshima Castle, once the home of the feudal lord of the Hiroshima fief, no longer existed.

At Hiroshima the Imperial Headquarters Survey Team sponsored two conferences to discuss and weigh their observations and the incoming evidence. The first meeting was held on the evening of 8 August, the second on the evening of the 10th. The discussions were held at the Army Weapons Supply Depot which was then in use as a temporary aid station. The gatherings were open to all members of the various teams and most of those investigating the attack attended. There is no evidence of any member of any group being excluded from either conference.

From what can be determined nearly 70 years later, the conference of 8 August was used to discuss the attack and describe any evidence that might be gathered in the aftermath of an atomic blast. None of those attending the meeting; including former members of the Kure Naval Base team returning to Hiroshima from the base where they had submitted their report of 8 August, seriously suggested that the blast over Hiroshima was definitely caused by an atomic bomb – though many were privately convinced that it was. It is likely, though unknown at this time, that military members at this meeting including General Arisue, Captains Kitagawa and Mitsui Matao, Lieutenant Colonels Suzuki Tatsusaburo and Nizuma Seiichi held a separate, military-only conference after the larger more open meeting to discuss implications of the attack, the

⁶⁴ Coffey, Thomas M. *Imperial Tragedy*. The World Publishing Company. New York. 1970

status of Japanese research into the development of an atomic weapon, and potential Japanese military response to the American assault.

Shortly after the meeting of the 8th, Nishina Yoshio telephoned Cabinet Secretary Sakomizu Hisatsune and reports, “I am very sorry to tell you this, the so-called new-type bomb is actually an atomic bomb.”⁶⁵ As Sakomizu would later relate, Nishina stated “I was virtually certain before I left Tokyo, especially after I visited the army Aeronautical Department laboratory this morning and saw some of the roofing tiles which had just been brought back from here. They were so completely melted no ordinary bomb, no ordinary fire could have done it. But the officers at the laboratory were still doubtful. Then this afternoon, when we arrived here and flew over the city before landing, I was even more convinced. Nothing less than an atomic bomb could have done so much damage. This is still only my opinion, you understand. There are those who may disagree. But tomorrow I plan to conduct some tests, and perhaps those who are now doubtful will then be convinced.”⁶⁶



Shunroka Hata

On 9 August, the Imperial Headquarters Survey Team and other scientists under the direction of Nishina Yoshio took samples from 28 different locations around the city. 26 of those specimens exist to this day. The team packaged the samples and dispatched them by air for testing at RIKEN. Each sample, consisting mostly of sand, was labeled as to the location where the sample was taken.

Solid Evidence – The X-ray Film

The team also located X-ray film at the Hiroshima Red Cross Hospital which had been exposed by radiation from the initial blast. The film, still in its packaging, had been exposed to radiation from the blast occurring over Hiroshima and had turned solid black, as if fully exposed. The film was decisive proof of the nature of the blast. 60 years later, some of the original film obtained by Nishina was located at the late physicist’s office of by Nakane Ryohei.⁶⁷ The Imperial Headquarters Team now turned its investigation to the existence of radiation in the area and sent a telegram to Tokyo requesting a radiation expert. On 9 August the investigation was interrupted by reports of the detonation of a second atomic bomb over Nagasaki.

Arisue and Suzuki Depart

After discovering the exposed x-ray film, Nishina scheduled a meeting with General Arisue, the Imperial Headquarters Survey Team and Imperial Japanese Navy Team. Just as the meeting began Arisue was notified that the Soviet Union had attacked into Manchukuo (Manchuria).

⁶⁵ Arisue, Seizo. *A Secret History of the Termination of the War: A Memoir of Lieutenant General Arisue*.

⁶⁶ Coffey, Thomas M. *Imperial Tragedy*. The World Publishing Company. New York. 1970

⁶⁷ *X-ray evidence of Hiroshima A-bomb found*. United Press International. Tokyo. 4 August 2005.

http://www.upi.com/Top_News/2005/08/04/X-ray-evidence-of-Hiroshima-A-bomb-found/UPI-78601123159203/

Arisue left the meeting to visit with Marshall Hata Shunroka, the Commander of the Second Army, and then departed Hiroshima for Tokyo via air transport. The meeting with Hata was a “mandatory courtesy” call – a military tradition that required higher-ranked visiting officers to call upon the local commander. It is not known, but it is suspected that the meeting called by Nishina with the Headquarters Survey Team and Imperial Japanese Navy Team continued after the departure of Arisue. Shortly after Arisue’s departure, the Asahi Shimbun would run a new headline “Our Retaliation to the Enemy’s Brutality Imminent: Counter-Measure for New-Type Bomb Established.”⁶⁸ As with other events leading up to the investigation of the attack on Hiroshima, the headline emphasized the existence of a “new-type” bomb prior to any official finding that such a weapon existed.

In the absence of General Arisue, Captain Kitagawa as the next ranking member of the team should have assumed command of the Imperial Headquarters Team. Inter-service jealousies aside, command of the team was at this point, no longer relevant. General Arisue was on his way back to General Headquarters to make an official report based on solid evidence of events at Hiroshima, and more importantly, recommendations. Shortly after, or perhaps as Arisue departed for Tokyo, Suzuki Tatsusaburo, separately, aboard a different aircraft departed Hiroshima – for Nagasaki. The use of separate aircraft at this point in the war suggests that Suzuki Tatsusaburo bore some additional responsibility or greater authority than most men equal to him in rank alone.

It should come as no surprise that Arisue, a Lieutenant General and leader of the Imperial Headquarters Team had departed for Tokyo by aircraft. Arisue was in a position of command, and had information, findings and recommendations needed by higher command authorities in Tokyo. Several ranks below Arisue, Suzuki Tatsusaburo, apparently possessed similar authority to command the use of an aircraft, based though, on different responsibilities. In 1995 Suzuki would confirm that he had indeed been at Nagasaki stating “If you saw the women and children of Hiroshima and Nagasaki dying, weeping for water, you would feel the same way.”⁶⁹

Suzuki’s Observations at Nagasaki

Suzuki had arrived too late to observe the phenomena of thirst in the aftermath of the blast at Hiroshima, but not too late to observe the dying at Nagasaki, suggesting that he was there on 9 August 1945. This thirst, noted among survivors of the attack, came from burns experienced during the initial blast. The burns caused the skin to blister, drawing water from the body, which in-turn created the intense thirst that drove survivors to find water anywhere, to include drinking the black rain that was then falling over parts of the stricken city. It wasn’t just a matter of thirst, but instinctual survival. Find water, or die.

⁶⁸ Yamaguchi, Mari. *Japan’s decision to quit. ‘Surrender’ was hard for many to deal with.* The Freelance Star. Fredericksburg, Virginia. 12 August 1995.

⁶⁹ Ferguson, P.H. *Scientist Describes Japan’s World War II Quest for Atomic Bomb.* AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

But if Suzuki had indeed been in Hiroshima until the 9th of August and then went to Nagasaki, how did he get to Korea, Manchuria, and then Tientsin, China? The likely answer lay in Arisue's report, and proof positive that Hiroshima had indeed been destroyed by an atomic bomb.

As many of Japan's General officers knew, research into the development of an atomic bomb, at some advanced level had indeed been achieved; some tests had been likewise conducted during the latter half of the war, parts of the program were widespread in China, Korea, and Manchuria. The program had apparently advanced to a point where, in the aftermath of Hiroshima and Nagasaki some options to unconditional surrender remained available. What those options were is unknown at this time to nearly 70 years later, but options were apparently also unknown to the General Staff of the Imperial General Headquarters in August 1945. In an effort to identify Japan's final options, Kitagawa, Suzuki and several others would be sent on one of the last secret missions of the war, to determine if Japan, attacked with atomic weapons could retaliate in kind. It is the information obtained by this final secret mission, not the blast over Hiroshima, not the Soviet attack into Manchuria, not the explosion over Nagasaki that ended the war.

Nishina's request for a radiation expert now led to Professor Arakatsu Bunsaku organizing the Kyoto Imperial University Survey Team (First). A second team, mostly medical personnel from Kyoto University would follow later that month. The Kyoto Imperial University Survey Team (First) would study the nature of the weapon by observing the state of the disaster in Hiroshima, and measuring the amount of radioactivity produced.

The Kyoto Imperial University Survey Team (First) used three Lauritsen electroscopes to measure β^- and γ^- decay. On the evening of 10 August the Kyoto Team participated in an urgent conference called by the Imperial Headquarters Survey Team. This would be the second of two conferences organized by the Imperial Headquarters Survey Team, the first organized under General Arisue and Nishina Yoshio on 8 August, this second meeting was organized under Captain Kitagawa and Nishina. The meeting was held at the Hiroshima Army Base of Supplies.⁷⁰

According to Yamazaki Masakatsu of Tokyo Institute of Technology, "After the bomb was dropped on Hiroshima, those who were involved in the research speedily began to investigate the bombing. The investigative team determined four days after the bombing that it had been an atomic bomb, because they had a high level of scientific analytical capability as a result of their own atomic research."⁷¹ They had the expertise to recognize the effects of an atomic bomb, but obviously not enough expertise to build one.

The Second Conference – Hiroshima, 10 August 1945

At this second conference, the results of the radiation survey of Hiroshima conducted by the Kyoto Imperial University Survey Team (First) under Busaku Arakatsu were presented, as were images of visual observations of patterns caused by blast. The scientists calculated the force of the weapon at about 20,000 tons of TNT. They located the hypocenter of the blast at 1322729E342329N, with an error of plus or minus 15 meters. The Japanese determined the

⁷⁰ Shimizu, Sakae. *Historical Sketch of the Scientific Field Survey in Hiroshima Several Days after the Atomic Bombing*. Bulletin of the Institute of Chemical Research, Kyoto University. 1 March 1982.

⁷¹ NAKAGAWA, MASAMI. *Lost A-bomb research surfaces in Hiroshima*. The Asahi Shimbun. 25 August 2005.

height of the blast and the approximate weight of uranium used. They also considered the atomic bomb used at Hiroshima as a primitive device.⁷² Niizuma Seiichi formerly associated with Unit 731 prepared the conference's report. In his initial draft, written in pencil, he clearly stated, "We conclude it was an atomic bomb."⁷³ Unknown to those completing the report, it was all for naught.

The Report on Hiroshima – The Train to Tokyo

Following the meeting of 10 August, Captain Kitagawa and Nishina Yoshio departed Hiroshima by train for Tokyo.⁷⁴ It is likely that Suzuki had left Nagasaki by plane for Tokyo several hours earlier. The completed report of the Imperial Headquarters Survey Team did not arrive in Tokyo until 10 August, suggesting that the report traveled to Tokyo via train with Captain Kitagawa or Yoshio Nishina and was not transmitted via radio. The importance of the final report had been overcome by events at Nagasaki, and Arisue's arrival at Imperial General Headquarters, Tokyo the day before. Arisue had delivered the only information required by the staff of Imperial General Headquarters, recommending that Japan either respond in kind by some means to the attacks on Hiroshima and Nagasaki, or surrender.



Members of Unit 731 Removing a Victim of Biological Warfare Experiments

For Niizuma Seiichi and the others, the war was over. Recommendations for a biological warfare attack against the US under Operation *PX*, had already been proposed, planned and cancelled.⁷⁵ If Japan had any options left for a response in kind to the attacks on Hiroshima and Nagasaki, those options rested with Kitagawa Tetsuzo and Suzuki Tatsusaburo.

The military necessity of proving that the weapon used in the attack on Hiroshima was an atomic bomb had already passed. Action was now required. The survival of Japan as a nation lay in the balance. From Tokyo, it is known that Kitagawa, traveled to Hamhung, Korea.⁷⁶

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⁷² Hersey, John. *Hiroshima*. Vintage Books. New York. 1946.

⁷³ *Damage Surveys Immediately after the Bombing. First surveys: looking through the confusion to confirm an "atomic bomb."* http://www.pcf.city.hiroshima.jp/virtual/VirtualMuseum_e/exhibit_e/exh0307_e/exh03074_e.html

⁷⁴ Nishimoto, Masami. *Record of Hiroshima: In the footsteps of the Navy A-bomb survey team*. Hiroshima Peace Media Center. 2 August 2010.

http://www.hiroshimapeacemedia.jp/mediacenter/article.php?story=20100927135950552_en

⁷⁵ Kirby, Reid. *Using the Flea as a Weapon*. Army Chemical Review. July-December 2005

⁷⁶ Conference. Further questioning re newspaper story about atomic bomb explosion in Korea. 31 October 1946.. Record Group 331. Stack Area 240. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 3. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

The Secret Mission of Fujiwara Ginjiro

By 12 August, Kitagawa, Suzuki, if it is accepted that he was indeed Tsetusuo Wakabayashi, and several others mostly unknown at this time, were in Hamhung, Korea with Fujiwara Ginjiro, the former Japanese Minister of Munitions.⁷⁷ Fujiwara had previously held a position with Mitsui, the company that had secretly funneled Japanese government money into the nation's wartime atomic energy and weapons programs. The men were in Hamhung as part of a previously unknown secret military investigation team accessing the status of Japan's atomic bomb, and other secret weapons programs.⁷⁸



Fujiwara Ginjiro

It is likely that portions of Japan's atomic energy and weapons program, but not of all of it, was located in or around Hamhung. Exactly what, possibly the weapon's design and assembly team, was located in Hamhung remains unknown. It should be clearly understood that while Kitagawa was officially in charge of the Chemical Section of the Navy Technical Research Institute under the Imperial Japanese Navy, he also served as the program manager for the atomic energy and weapons program of the Imperial Japanese Navy, which was heavily invested in northern Korea. Japan's atomic energy and weapons program facilities in Korea were under the Japanese Navy; those parts of the program in northern China and Manchuria were under the control of the Japanese Army. The presence of the investigation team led by Fujiwara Ginjiro ultimately places Fujiwara, Kitagawa and possibly Suzuki in Hamhung at the time of Japan's supposed test of an atomic bomb, on or around 12 August 1945.⁷⁹ From Hamhung, the team would continue on to Manchuria,

Secret Tests and Wartime Detonations

The team's interest in investigating the potential of Japan's atomic energy and weapons program in the days immediately following the attacks on Hiroshima and Nagasaki was prompted in-part, by a successful test of an "atomic experiment," in Tokyo in July 1945.⁸⁰ Exactly what this successful test consisted of remains unknown. The experiment gives rise to later urban legends that Japan had tested a bomb in the East Sea along the west coast of Japan. Considering Nishina's reported failure in February of 1945, it is likely that this successful test had been carried out at the Tokyo Imperial University under the leadership of Sagane Ryoichi, or others assigned to that university.

⁷⁷ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

⁷⁸ *Ibid.*

⁷⁹ *Ibid.*

⁸⁰ Subject: Port Summary. Yamazumi Maru. 24 Jun 1948 Record Group 496. Stack Area 290. Compartment 6. Shelf 5. Box 364. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD



Sagane Ryoichi

The special investigation team led by Fujiwara Ginjiro would depart Hamhung, Korea for Manchuria on or about 12 August, where a second test of a Japanese weapon reportedly also an atomic bomb, would take place on the eastern edge of the Gobi Desert.⁸¹ This test is believed to have been supported by Unit 731, primarily through its subordinate detachment, Unit 516; the Kwantung Army Technical Testing Unit.⁸² Though this unit is reported to have been an outgrowth of Unit 731, its involvement in the technical testing of a weapon of any kind, adds some legitimacy to the report of a second test. As Unit 516 was a technical testing unit, it would seem logical that this unit would it be involved in the test of a weapon, any weapon, vice the reported events off the coast of

Hamhung, where the reported weapon was detonated among a number of derelict ships. However, while some information on the activities of Unit 731 was uncovered in the years after WWII, far less is known about the activities of Unit 516.

As Kitagawa was reported to be “traveling through” Hamhung it is likely that he observed the test at Konan and in Manchukuo, no matter what kind of weapon was tested.⁸³ If Tsetusuo Wakabayashi was indeed Suzuki, then he also witnessed the reported test that took place at Konan and the second test which occurred at the eastern edge of the Gobi Desert.

Hurried Observations

It is unknown exactly what Suzuki saw tested off the coast of Hamhung and later reported to David Snell in 1946, or what he saw in Manchuria. According to Tsetusuo Wakabayashi, Japan tested an atomic bomb off the coast of Korea near Hamhung. It is unlikely that the test he observed in Manchuria was related to a biological weapon as the capabilities of those weapons had been previously well-documented, even filmed. Suzuki had no reported connection to Japan’s biological warfare program. As the Chief, Chemical Section of the Navy Technical Research Institute, Kitagawa had a direct connection to the chemical plants located at Hamhung, and any similar such plants located in Manchuria, but there were no known chemical plants along the edge of the Gobi Desert in Manchuria. Suzuki never mentioned the reported test in the Gobi Desert, to Snell suggesting that it was less successful, perhaps less spectacular than what he had seen at Hamhung. However, the opposite could have also been true, with the story of the

⁸¹ External Survey Detachment #44 E. United States Navy. Memorandum to S.I. October 1946. Record Group 226. Stack 250. Row 64. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

⁸² Keiichi, Tsuneishi. *Unit 731 and the Japanese Imperial Army’s Biological Warfare Program*. Translated by John Junkerman. The Asia-Pacific Journal: Japan Focus. <http://www.japanfocus.org/-Tsuneishi-Keiichi/2194>

⁸³ Conference. Further questioning re newspaper story about atomic bomb explosion in Korea. 31 October 1946.. Record Group 331. Stack Area 240. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 3. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

blast at Hamhung serving as a cover for whatever had taken place in Manchuria in mid-August, 1945. What Tsetusuo Wakabayashi related to Snell in 1946 was however, vague at best.

The test in Manchuria probably drew from research in atomic energy that had been ongoing under the control of the Kwantung Army, and in China under the China Expeditionary Army, formerly known as the Tianjin Garrison. The China Expeditionary Army was a component of the Japanese Imperial Army that was far more notorious and secretive than its northern counterpart the Kwantung Army. Less is known of the test of some weapon at the edge of the Gobi Desert than the reported test at Hamhung. Unlike the alleged test at Hamhung with the report of Captain Wakayashi, there are no eyewitness reports of the test in China, just vague rumors.

If there were two separate weapons with two entirely different missions, one of a weapon to be used against a ship-borne invasion force, the other against an overland invading Red Army, two separate tests of two different weapons might have been required. Exactly what was tested at Hamhung and in Manchuria has never been explained by the Japanese government or through formerly classified US documents written after the war. While it is clear that Japan was mining uranium in China, Korea, Vietnam and probably Burma, there is little information to suggest that Japan operated the industrial-scale uranium enrichment plants required to produce the enriched uranium necessary for an atomic bomb.

If we are to believe David Snell, and through him Tsetusuo Wakabayashi – Suzuki Tatsusaburo, the Japanese “destroyed unfinished atomic bombs, secret papers and her atomic bomb plant only hours before the advance units of the Russian Army moved into Konan, Korea, site of the project.”⁸⁴ To be clear, Tsetusuo Wakabayashi never said that the unfinished bombs, secret papers and the atomic bomb plant had been destroyed hours after the test, but that these were destroyed hours before the advance of Russian units into Hamhung. 12 full days would separate the reported test of a weapon off the coast of Hamhung and the entry of Soviet forces into the area.

The Soviet Red Army Invades

The USSR entered the war against Japan in the Pacific with a large-scale invasion of Manchuria at midnight, Trans-Baikal time on 9 August 1945. The attack into Manchuria began one hour and ten minutes after the USSR issued its declaration of war to Japan. Following air attacks, ships of the Soviet Pacific Fleet began shelling the Japanese ports of Yuki (Unggi), Rashin (Najin) and Seishin (Chongjin) located along the northeastern coast of the Korean Peninsula. Less than a week after the declaration of war, Soviet airborne units and naval marines assaulted Rashin and Yuki. These units would assault, occupy and hold the two seaports until the main Soviet Army, entering Korea from Kainei (Hoeryong) on the 12th of August, arrived in the area to relieve them.

On the 16th of August Soviet amphibious forces attacked and secured the port of Genzan (Wonsan), 48 miles south of Hamhung. The city of Hamhung did not fall to the Red Army until 26 August 1945, giving the Japanese two full weeks between the reported test and the destruction of the papers, incomplete bombs, and plants. The Soviet Red Army did not reach Mukden, China

⁸⁴ Snell, David. *Japan Developed Atom Bomb; Russia Grabbed Scientists*. Constitution. Atlanta, Georgia. 3 Oct 1946.

until 19 August 1945. The occupation of Manchukuo by Red Army was announced on 23 August. It is unlikely that even by that date; the Soviets had occupied the area of the reported test.

It is unknown who ordered the destruction of unfinished bombs and papers; Fujiwara Ginjiro was no longer the Minister of Munitions and probably lacked the authority to issue such orders. Other than Kitagawa, the identities of the remaining military team members of the special investigation unit are unknown and await discovery.

Destroying the Evidence

It is likely that the orders to destroy any facilities in Korea, Manchuria and China came from someone in Tokyo, perhaps General Anami Korechika, War Minister, or Admiral Yonai Mitsumasa the Naval Minister, depending upon which branch of service was responsible for that part of the program. In general terms however, the Japanese Navy was heavily invested in the facilities at Hamhung, while the Army was most likely responsible for those facilities located in China and Manchuria. Responsibility for the destruction of facilities in Korea may have fallen to Lieutenant General Uetsuki Yoshio, Commander of the Seventeenth Area Army, while Lieutenant General Kobayashi Asasaburo may have exercised that authority for facilities under the control of the China Expeditionary Army. Authority aside, it is unlikely that any of Japan's facilities were destroyed until after the middle of August after it became clear that the Kwantung Army could neither stop, nor delay, the advance of Soviet forces into Manchuria or onto the Korean Peninsula.

From Manchuria, Fujiwara Ginjiro, Kitagawa and others likely returned to Japan. Warrants were issued by SCAP under General Douglas MacArthur for the arrest of Fujiwara Ginjiro for war crimes on 3 December 1945.⁸⁵ Those charges were later dropped. Kitagawa turns up in SCAP documents in early April 1946.⁸⁶ For Suzuki however, there were things to do, loose ends to tie up. These loose ends would result in his being isolated in China after the end of the war. After departing Manchuria as Suzuki probably headed for China, time was already running out.

It is likely that whatever the plants and facilities located in China were, they were instrumental to the Japanese atomic energy and weapons program. Office of Strategic Services (OSS) documents written under the RAMONA Program, X-2, investigating the Japanese atomic energy and weapons program after the war suggest that through 1944 into 1945 uranium ore was enriched at least to some degree in China. This uranium was then transported by plane from Darien, China, through Hamhung, Korea and on to Tokyo, Japan.⁸⁷ It is likely that Suzuki was sent to China from Manchuria on or around 16 August to affect the shutdown of the facilities or their destruction in the area of Beijing. The Japanese operated at least 17 secret facilities in the area of Beijing during the war.⁸⁸ The US only learned of these facilities in 1946. Some were visited by

⁸⁵ *Here's Listing Of Nippons Facing Arrest*. The Salt Lake Tribune. Salt Lake City, Utah. 3 December 1945.

⁸⁶ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

⁸⁷ *Ibid.*

⁸⁸ Felton, Mark. *The Devil's Doctors: Japanese Human Experiments on Allied Prisoners of War*. Pen and Sword Military. South Yorkshire. 2012

US officers in an effort to determine their purpose, however exactly what was found during these visits, has never been released.⁸⁹ Once in China, Suzuki found himself stranded.

General Order Number 1

On 17 August, Douglas MacArthur, SCAP, issued General Order Number 1, directing all Japanese aircraft to be grounded and disabled.⁹⁰ Suzuki was by this time in Japanese occupied China in the area of Beijing and Tientsin. On the 23rd of August MacArthur would release some Japanese aircraft from the order, but only those involved in the diplomatic effort to end the war. Suzuki was now unable to escape China and return to Japan.

It is likely that for several weeks, perhaps a month, Suzuki and others holding secret information and languishing in China were able to blend into the mass of Japanese refugees awaiting repatriation. There is no available evidence suggesting that American forces managing the occupation and repatriation process in China were ever made aware of Japan's wartime atomic energy and weapons program. Unlike Europe, where the Manhattan Project's Alsos team had scoured Italy, France and Germany seeking information on a Nazi weapons program, little was done in Japan to clarify that nation's wartime effort to develop an atomic bomb; far less was done in Korea, nothing at all was done in China.⁹¹

Alsos in Japan – The Atomic Bomb Investigating Group



Robert Furman

In Japan, the Manhattan Project was far more interested in the aftereffects of its two weapons detonated over Hiroshima and Nagasaki than it was about any Japanese effort to create a similar such weapon for use in the war against the US and Soviet Union. Manhattan Project scientists investigating Japan's wartime research programs into atomic energy and weapons developed a self-fulfilling prophecy which asserted that the Japanese were incapable of creating an atomic bomb, with its subsequent investigations developing only that information which supported that specific conclusion. The Manhattan Project Atomic Bomb Investigating Group, also known as the Atomic Bomb Mission (ABM), was composed of scientists and military technicians already in the Pacific Theater at Tinian where they had previously assembled the weapons dropped on Hiroshima and Nagasaki.

⁸⁹ *Ibid.*

⁹⁰ General Order No.1. Instruments for The Surrender Of Japan. Joint Chiefs of Staff J.C.S. 1467/2. 17 August 1945. <http://www.taiwandocuments.org/surrender05.htm>

⁹¹ Summary Report, Atomic Bomb Mission, Investigation into Japanese Activity to Develop Atomic Power. Headquarters First Technical Service Detachment G.H.Q., AFPAC, ADV., A.P.O. 500 San Francisco, Calif. 30 September 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1-2. Entry 224. Scientific and Technical Division. Box 1. File: Research, Nuclear, Japan.

Departing Tinian on 20 August aboard the *USS Lansdowne* (DD-486), the ABM arrived at Okinawa on 23 August 1945. On 8 September 1945 members of the investigating team landed at Atsugi Air Base, Japan. The mission had been previously divided into three teams with one team each to visit Hiroshima (First Investigation Group) and Nagasaki (Second Investigation Group) with the Third Investigation Group, known as the Tokyo Group tasked to secure all information concerning general Japanese activities in the field of the atomic research. The Hiroshima Team was headed by Colonel Stafford L. Warren (19 Jun 1896–26 Jul 1981), Head of the Manhattan Project Medical Department and chief of the Radiological Division of the District.⁹² Major Furman, formerly part of the Alsos Mission in Europe, would lead the Nagasaki and Tokyo Groups.⁹³

During its investigation, the Tokyo Group inspected the laboratories of all of Japan's primary research centers and national universities to include; the Tokyo Imperial University, the Kyoto Imperial University, the Osaka Imperial University, and the Institute of Physical and Chemical Research (RIKEN).⁹⁴ Some members of the team traveled to the Korean Peninsula where they toured Keijo Imperial University, and met with the school's most prominent researchers, some of whom would eventually defect to what would become North Korea.⁹⁵ Once in Seoul, the Third Investigation Group also visited RIKEN field offices located in the Korean capital and the Korean Bureau of Mines.⁹⁶ In late September 1945 the ABM team completed its inquiry.

Inadequate Investigations – Defective Narratives

Through its investigation, site visits, and interviews, the Tokyo team reached a number of conclusions. According to Furman's investigation "The [Japanese] government and the military gave no priority to research in the field of nuclear physics and had no program to produce a bomb."⁹⁷ The report stated that, "The principle nuclear physicists were diverted to other research" and had not worked on nuclear energy or an atomic bomb.⁹⁸ The narrative suggested that "Science in Japan was organized," but "was organized behind existing industries to the immediate development of production problems" within the Japanese wartime economy.⁹⁹

The report wrote off Japan's effort to obtain uranium stating that "mines were concentrated on essential materials, iron, copper etc., to ease severe shortages" and that even the mining of rare elements for vacuum tube production rated below concerns in easing shortages in other strategic

⁹² Nakayama, Shigeru. *A Social History of Science and Technology in Contemporary Japan. Volume 1. The Occupation Period. 1945-1952.* Trans Pacific Press. 1997

⁹³ Jones, Vincent C. *Manhattan: The Army and the Atomic Bomb.* Special Studies. Center of Military History. United States Army. Washington D.C., 1985.

⁹⁴ Grunden, Walter E. *Hungnam and the Japanese Atomic Bomb: Recent Historiography of a Postwar Myth.* Intelligence and National Security, Vol. 13, No. 2. (Summer 1998). Frank Cass. London. 1998

⁹⁵ *Ibid.*

⁹⁶ Summary Report, Atomic Bomb Mission, Investigation into Japanese Activity to Develop Atomic Power. Headquarters First Technical Service Detachment G.H.Q., AFPAC, ADV., A.P.O. 500 San Francisco, Calif. 30 September 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1-2. Entry 224. Scientific and Technical Division. Box 1. File: Research, Nuclear, Japan.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

areas.¹⁰⁰ The Furman Report noted that Japan's "Geological surveys apparently failed to disclose new sources of uranium to the Japanese within the territory under their military control."¹⁰¹

In reaching their conclusions the ABM team cited the depth of their research, the number of institutions they had contacted, and the number of Japanese scientists interviewed, as sufficiently broad enough to have uncovered any inconsistencies in the information obtained that would have left them wide of the mark.¹⁰² For the most part, Furman, his team members, and his superiors were completely – wrong. However, the Americans operating at that time in China would never see the Furman report, and Suzuki's efforts to remain out-of-sight and out-of-mind, were running thin. After the attacks on Hiroshima and Nagasaki, many of the world's other nations also wanted an atomic bomb for their arsenals. While the USSR was to most Americans the obvious threat, Nationalist China, the French and others also desired a bomb.

The Scramble for Knowledge, Scientists, and Facilities

According to OSS documents written after the war, the USSR entered Manchuria in August 1945 knowing the exact locations of most Japanese facilities involved in the wartime atomic energy and bomb programs. The Red Army captured these facilities as fast as possible to secure their capabilities and Japan's scientists, for the Soviet Union's post-war effort to build its atomic bomb. In the piece penned by Snell, Tsetusuo Wakabayashi showed familiarity with Soviet interrogation techniques reporting that the Russians "took most of the trained personnel prisoner, including the seven key men. One of the seven escaped in June, 1946, and fled to the American zone of occupation in Korea."¹⁰³

Although US Army Intelligence in Seoul had interrogated this man, Captain Wakabayashi had also talked to him. According to Wakabayashi "The scientist told of having been tortured by the Russians. He said all seven were tortured."¹⁰⁴ Note that Snell's Wakabayashi had never been captured or tortured by the Soviets. According to Snell, Wakayashi had learned this information, only by talking to one of the Japanese scientists captured by the Russians who had escaped to the American zone of occupation in June 1946 – not in northern Korea, but in Seoul. The June date given by Snell's informant places the date of Snell's debrief at some point between the escape of the Japanese scientist to the American zone in June, and Snell's departure from Korea in late August 1946 – meaning that Suzuki remained in Korea in mid-1946.

As reported to Wakabayashi, the scientist had told him that "The Russians thrust burning splinters under the fingertips of these men. They poured water into their nasal passages," waterboarding the Japanese scientists. The Soviet Union was not the only nation searching China for Japan's scientists; the Nationalist Chinese were also after them.

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*

¹⁰² Grunden, Walter E. *Hungnam and the Japanese Atomic Bomb: Recent Historiography of a Postwar Myth.* Intelligence and National Security, Vol. 13, No. 2. (Summer 1998). Frank Cass. London. 1998

¹⁰³ Snell, David. *Japan Developed Atom Bomb; Russia Grabbed Scientists.* Constitution. Atlanta, Georgia. 3 Oct 1946.

¹⁰⁴ *Ibid.*

In the aftermath of the war, Nationalist Chinese forces sought to rapidly occupy formerly Japanese controlled Beijing and Manchuria. According to the OSS reports produced under RAMONA, Chinese Nationalist leader Chiang Kai-shek also sought to capture Japan's scientific facilities in China, its scientists, and persuade them to build an atomic bomb for China.¹⁰⁵ A number of Japan's leading scientists did stay in China after the war and worked as highly paid scientific consultants to the Nationalist Chinese. Communist Chinese forces under the control of Mao Zedong, were also rushing into the areas formerly held by Japan.

Unlike Chiang Kai-shek, the Chinese Communist sought to fill the political vacuum left by the retreating Japanese, and to gain a physical hold on Chinese territory at the expense of the Nationalists. Unfortunately, Mao's agrarian masses had little use for scientific materials; flasks and test tubes were for holding drinking water, the papers of Japan's scientists could be better used to cook rice over an open fire. The Chinese Communists would later seek to recoup some of the lost information during the Korean War (1950-1953) through their attack into the area of the Chosin Reservoir, Chongjin and Hamhung.

The Leap to Despair

With forces of the Nationalist Chinese and Soviet Union seeking to co-opt or capture Japan's refugee scientists, Suzuki apparently turned himself in to American forces then operating around Tientsin and Beijing. On 27 November 1945 the Commanding General, China (COMGEN CHINA), sent the following message, number CFBX 15741 to the War Department, G-2 and SCAP. Information copies were sent to the Chief of Staff and Economic & Scientific Section (ESS) (SCAP).

“Jap Army Lieutenant Suzuki now in Tientsin claims to have been student Atomic Physic Tokyo Imperial University. Instructors were Kugawa Nakabayashi and Yoshio Nishina; also experimenting this field were Seishi Kikuchi at Osaka and Hidekie Ukawi [Hideki Yukawa] at Kyoto. Also says experiments conducted with Radium obtained from Korean mines. Further says Japs knew in November 1944 that US had perfected Atomic Bomb. Available for further questioning if desired.”¹⁰⁶

And with that, Suzuki Tatsusaburo came in from the cold.

As noted earlier, in 1937 Suzuki had studied physics under Nishikawa Shoji, Nishina Yoshio and Sagane Ryoichi at Tokyo Imperial University. Nakabayashi had graduated a decade before from Tohoku Imperial University in Sendai.¹⁰⁷ Why Suzuki might mention Nakabayashi is not known, but it is suspected that Nakabayashi was heavily involved in Japan's atomic energy and weapons program. It is also possible that Suzuki believed at the time that US intelligence had more

¹⁰⁵ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁰⁶ COMGEN CHINA. To: SCAP. Message Number: CFBX 15741. 27 November 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹⁰⁷ Kim, Dong-won. *Yoshio Nishina, Father of Modern Physics in Japan*. Taylor and Francis. Boca Raton, Florida. 2007

information on Japan's wartime efforts than it actually possessed. Suzuki obviously believed in revealing these names, that US intelligence would recognize them as prominent Japanese scientists, increasing his personal credibility and overall value to US intelligence. From the remaining US records of Suzuki's time in China: Apparently not.

Russell Fisher

In the weeks to follow, additional messages were sent from the Commanding General, China, to the War Department, G-2 and SCAP advising of the existence of Suzuki in China, some of which remain available. On 3 December 1945 the following message, number CFB 16370, was sent from COMGEN CHINA to SCAP.

“Reference CFBX 15741. WARGTWO advised that Magir [sic] Fisher, Manhattan Engineering project, reports Tokyo 1 January 46. Since no suitable expert is available here to question Suzuki do you request any special disposition or do you wish Suzuki transported to Tokyo for questioning?”¹⁰⁸

The 3 December 1945 message advised WARGTWO - the War Department, G-2: Chief of Intelligence that a Major Russell A. Fisher of the Manhattan Project would arrive in Tokyo on 1 January and would be available to debrief Suzuki Tatsusaburo.



Ashley Oughterson

Before the war Russell Fisher had been a professor at Northwestern University. He had received his doctorate degree from the University of Michigan and joined Northwestern University in 1931. During WWII he served with the Army Air Corps from 1942 to 1946. A member of the Manhattan Project, Fisher had also served with the Alsos Team in Europe. During the war, Fisher advanced under fire onto the Ludendorff Bridge, the famed Bridge at Remagen, lowering three bottles into the Rhine River, obtaining the water samples required to check for the presence of radioactivity in the water. The samples were instrumental in determining if work on atomic energy or a bomb was being conducted in Western Germany.¹⁰⁹

A copy of the above message was also sent to Colonel Ashley Oughterson, Chief of the US Army Medical Investigation Team, Army Forces Pacific who had previously been sent to Hiroshima under the Manhattan Project immediately after the war, in September 1945. Oughterson was a physician and had inspected Hiroshima and Nagasaki. What interest Oughterson might have had in Suzuki remains unknown. How COMGEN was aware of Oughterson is similarly unknown.

¹⁰⁸ COMGEN CHINA. To: SCAP. Message Number: CFB 16370. 3 December 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹⁰⁹ McCray, Patrick. *Oral History Transcript — Dr. Helmut Abt*. Niels Bohr Library and Archives. The Center for History of Physics. Tucson, Arizona. 28 October 1999.

It is believed at this time, that Fisher was being sent, temporary duty (TDY) to Japan as an interim solution to a message sent from Tokyo by Colonel R.C. Kramer, Chief, ESS, requesting the assignment of scientific personnel with Manhattan Project experience to investigate “electronics, applied chemistry and physics” in Japan.¹¹⁰ Between November and December 1945, several messages concerning an existing requirement for scientific advisors to support SCAP investigations into Japanese physics, and to advise the command on the creation of US policy governing nuclear research during the occupation, passed between Tokyo and Washington.¹¹¹

Pressing Issues

On 8 December 1945, a message, number WCL 27025 was sent from Washington D.C. informing command authorities in Japan that Gerald W. Fox of the Massachusetts Institute of Technology (MIT) and Harry C. Kelly, formerly of MIT, but now at Lehigh University, were being processed to fill the earlier SCAP request for science advisors.¹¹² Meanwhile, Suzuki remained on ice in China. On 23 December 1945 COMGEN CHINA sent out a more complete description of Suzuki, a partial debrief, to the Department of War, G-2: Intelligence. Message number CFBX 18157 read:¹¹³

“The following partial report has been received with reference to your radio WAR 85850. Suzuki finished school and did a year Post Graduate work at Imperial University Tokyo, studying Quantum Theory, Theoretical Mathematics and specializing in Physics. Professors here were Yoshio Nishina and Kugawa Nakabayashi. Seishi Kikuchi taught similar courses at Osaka while Nidhke Ukawi supervised the work at Kyoto. Suzuki says these men were the leaders in this field in Japan. Suzuki completed his studies in 1943 at the Institute for Physical Chemistry Research at the Imperial University in Tokyo where 1 of the 2 Cyclotrons in Japan is located; the other Cyclotron being located at Osaka University.

Suzuki studied theory but did not work with the Cyclotron. Radium, element number 86 was used as the metal in the experiments at the institute, obtaining the radium from Korean mines. Suzuki knows of no work done with other metals.

Suzuki said that men working in Germany on Atom Bomb Research were TAYKOR, of the University of Roetoangen [Goettingen], Heidelberg, Weizacker [Carl Friedrich von Weizsäcker], and Pauly [Wolfgang Ernst Pauli] while in the United States he gave the names of Einstein, Conant, Iramie [Enrico Fermi]

¹¹⁰ SCAP. TO: WARGTWO WASHINGTON. Message Number: ZA 8054. 30 October 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹¹¹ See messages: WCL 17875, 5 November 1945; WCL 23552, 27 November 1945; WCL 26146, 6 December 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹¹² WASHINGTON.: To: CINCAFPAC ADVANCE: Message Number: WCL 26146. 8 December 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹¹³ COMGEN CHINA. To: SCAP. Message Number: CFBX 18157. 23 December 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

Millikan, Compton, Flinger [probably Edward Teller] and Rabi. Suzuki said that in November 1944 the Japanese knew the United States had perfected the Atomic Bomb.

Additional report will follow as soon as received.”¹¹⁴

And there, the documents discussing Suzuki and his wartime connection to Japan’s atomic energy and weapons programs sat for the next 65 years, a clue to the identity of Tsetusuo Wakabayashi as Suzuki Tatsusaburo for anyone willing to follow the trail.

In late 1945 into 1946 Tientsin was under the control of the US Marine Corps with no Army CID attached. If we accept the possibility that Tsetusuo Wakabayashi was indeed Suzuki Tatsusaburo then he was not sent from China directly to Japan in early 1946, but from China to Seoul, Korea. Once in Seoul he would undergo further debrief by Japanese speaking Nisei attached to the 24th or 25th CID. In Seoul, and now under the control of the US Army, Suzuki would be assigned the pseudonym Tsetusuo Wakabayashi, explaining how Snell learned of his existence, not in late 1945 as many have assumed, but in late summer of 1946. In 1950 Snell admitted that his interview with Tsetusuo Wakabayashi had taken place in 1946 at some point in June or July of that year, just prior to his return to the US and subsequent discharge.¹¹⁵ It is likely, with the US Army moving at the speed of government that Suzuki remained in Seoul for several months after his surrender to US forces in China in late 1945.

What the Axis knew about the Manhattan Project

As yet, no follow-on messages concerning Suzuki, to include the remainder of the short debrief described above, have been found. It is possible that no additional sections of the report were ever written, or that orders were issued to return Suzuki to Japan through Seoul, before additional debriefs could take place. It is also possible that Suzuki was transferred to Seoul and was held there pending further debrief. Apparently how the Japanese knew that the US had perfected the atomic bomb in November 1944 was never seriously investigated, but they did know. More than two full years before the US attack on Hiroshima, in the spring of 1943, General Tojo Hideki is reported to have said we “have information that the development of atomic bombs is in an advanced stage in the US. This development may decide the fate of the war.”¹¹⁶

During WWII Japan’s ability to conduct espionage was severely limited, for obvious reasons, most of which centered on race. In the immediate aftermath of Pearl Harbor, the Federal Bureau of Investigation (FBI) rolled up and arrested those Japanese whose loyalty to the US was questionable, most of whom had come to the attention of the FBI through their earlier activities, such as membership in pro-Japanese military organizations. These were the amateurs, those whose activities were highly visible and suspect. A professional agent would have known better

¹¹⁴ *Ibid.*

¹¹⁵ *Russ Seized Jap Plant after Successful Test.* Oakland Tribune. Oakland, California. 25 October 1950

¹¹⁶ *(Special Post for August 15 - Part 1) Japan's General Staff Office Knew About Hiroshima and Nagasaki Atomic Bombing in Advance and Did Nothing*, According to 2011 NHK Documentary. 17 August 2013. <http://ex-skf.blogspot.jp/2013/08/special-post-for-august-15-part-1.html>

than to openly associate themselves with any visible or suspect activity that attracted the attention of US authorities. While it is likely that the FBI arrested many Japanese that were for the most part innocent, it is similarly likely that any truly professional agent escaped detection.

In his book, *“Japan’s Secret War, Japan’s Race against Time to build its Own Atomic Bomb,”* Robert Wilcox suggests that Japan learned about America’s worst kept secret, the Manhattan Project, through the efforts of a Spanish spy network operated by Alcázar de Velasco.¹¹⁷ The de Velasco network, labeled by the Japanese as *“To”* was composed of a small number of sailors, diplomats and others who could easily pass into the US without attracting attention. Though the spy network of de Velasco is believed to have detected the existence of the Manhattan Project, it is similarly believed that the group never penetrated the wall of secrecy surrounding the program and its overall goal of creating an atomic bomb.

According to an article published by the National Servicemen’s Association of Australia: “Project leaders also had anticipated that, as the Russians, the Axis powers, particularly Germany would launch an equally vigorous espionage campaign, but they uncovered no evidence of such activity during the war. In early 1944, at a time when available Allied intelligence indicated that the Germans might well have attained an advanced stage in the development of atomic weapons, the Military Policy Committee reported to the Top Policy Group that ‘no espionage activities by the Axis nations with respect to this project have been discovered, although there have been suspicious indications.’”¹¹⁸ Others would tend to disagree.

The de Velasco network is believed to have never had more than one agent in the US at any single point during the war. The FBI rolled up the *To* network in late 1943, at least a year prior to the November 1944 date cited by Suzuki as the date of Japanese knowledge of the atomic bomb. The complete story of how the Japanese knew about the Manhattan Project and what they knew, is complex and beyond the scope of this article, but some of it can be told. One possible source of some information could have been Velvalee Malvena Dickinson.

Old English Dolls - Velvalee Malvena Dickinson

From the late 1920s to mid-1930s, Dickinson was employed in a brokerage company in San Francisco, owned by her future husband, Lee T. Dickinson. For a period of time shortly after the marriage, Dickinson served as a social worker in the San Francisco area until 1937, when they moved to New York City. There she worked for a period of time in a department store. On 31 December 1937, she opened a doll shop, first at her residence at 680 Madison Ave and later established a separate store at 714 Madison Avenue. She operated her store for several years at that location until October 1941 when she moved several doors down to 718 Madison Avenue.

In February 1942, a single letter was intercepted by wartime censors and brought to the attention of the FBI. The letter, supposedly sent from a woman in Portland, Oregon to a correspondent in Buenos Aires, discussed a “wonderful doll hospital” and noted that the writer had sent the

¹¹⁷ Wilcox, Robert K. *“Japan’s Secret War: Japan’s Race against Time to build its Own Atomic Bomb.”* Marlowe & Company, New York. Copyright 1995

¹¹⁸ MDC Rpt, 4 Feb 44, MDR. Found in: Rafako, Frank. *A Counterintelligence Reader. Counterintelligence in World War II.* National Intelligence Center. Military Bookshop. 2011

correspondent “three Old English dolls” for repairs. The letter also made reference to “fish nets” and “balloons.” FBI cryptographers examining the letter concluded that the words served as a talk around; “dolls” served as a reference to warships. The “doll hospital” likely referred to a West Coast-based shipyard where repairs were made; “fishing nets” and “balloons” was again, talk around for coastal defenses and other information critical to the security of the West Coast. Based on this one letter, the FBI initiated an espionage investigation into the matter. Four more letters were eventually discovered; all sent to the same Buenos Aires. It is unknown if these five letters were all that were sent. These five were simply all that were ever intercepted.

On 21 January 1944 FBI agents arrested Dickinson. Her safe deposit box contained \$13,000 in cash, some of which could be traced directly back to Japanese sources. The bill’s serial numbers revealed that a small portion of the money had been previously held by Captain Ishikawa Yuzo of the Japanese Naval Inspector’s Office in New York, suggesting that the FBI had been monitoring the Japanese and tracing the currency exchanges for some time before the attack on Pearl Harbor.

Dickinson was indicted by a federal grand jury in the Southern District of New York on 11 February 1944 for violation of censorship statutes, a conviction of which held a maximum penalty of 10 years in prison and a \$10,000 fine. Dickinson pled not guilty to these charges and was held in lieu of \$25,000 bail. On 5 May 1944, she was indicted on additional charges of violating the espionage statutes, the Registration Act of 1917, and censorship statutes which held a maximum penalty of death. On 28 July 1944 a plea bargain was arranged between the US Attorney and Mrs. Dickinson’s attorney whereby the espionage and Registration Act indictments would be dismissed, if she pled guilty to the censorship violation and agreed to provide information in her possession related to Japanese intelligence activities in the US. Despite the agreement, the truth eluded the FBI as Dickinson continued to lie about her involvement with the Japanese. Dickinson served seven years of her ten-year sentence and was released in 1951. Apparently, the existence of the Manhattan Project was widely known in Japan.



Velvalee Dickinson

In a September 1978 interview of Junkichi Itoh, President of Konan University, Professor Emeritus of Osaka University, he stated: “In 1944, during the War, a newspaper man came to Osaka University to ask me ‘What is the Manhattan Project?’ He had heard it had to do with atomic energy, and he asked me for my opinion about it. I told him that I considered it quite impossible to be achieved during this war, even for the United States.”¹¹⁹

¹¹⁹ Brown L. M. and M. Konuma. Interviews. *Experimental Nuclear Research -- Interview with Junkichi Itoh and Osamu Minakawa* -- This is an interview with Junkichi Itoh, President of Kanan University, Professor Emeritus of Osaka University, and Osamu Minakawa, Professor Emeritus of Kobe University, carried out by L. M. Brown and M. Konuma at Konan University, Kobe, on 23 September 1978. *Progress of Theoretical Physics Supplement No. 105*, 1991

Though a later article is planned to explain in detail exactly what and how the Japanese knew about the Manhattan Project, they were never aware of *Site Y* otherwise known as Los Alamos. While Alcázar de Velasco might argue otherwise, Japanese intelligence had only picked up bits and pieces of information about the Manhattan Project, primarily material concerning the existence of *Site W*, Hanford and some information on the Clinton Engineer Works (CEW) or Oak Ridge through its allies and sympathizers in Europe, primarily Germany and Poland.¹²⁰ The Germans had suspected since 1940 that the US was trying to develop an atomic bomb. German intelligence had been tipped off by reports received from Alfred Hohlhaus, which observed an expansion of helium production in the US that exceeded known demand. German intelligence had previously operated successfully in the US, stealing the Norden bombsight.

German Perceptions of into the Manhattan Project

Like the Japanese, it is difficult to determine exactly what the Germans knew about the Manhattan Project and when they knew it. US investigators scouring Germany for information about their atomic energy and weapons project never seriously investigated the question what Germany might have known of the US project. The atomic weapons that ended the war in Japan were dropped several months after Germany had surrendered, and interest there in things scientific or intelligence related, had receded into the background of the looming Cold War.

Neither the Kriegsmarine nor the Wehrmacht were interested in the reporting made by Hohlhaus, but the German Luftwaffe was. By late 1941, Luftwaffe Intelligence in the form of Colonel Josef “Bippo” Schmidt was following clues to the existence of such a program gathered by German spies, radio traffic and other sources. Schmidt headed the Fremde Luftwaffe (Foreign Air Force) intelligence branch until October 1942.¹²¹ In 1942, helium was considered as a possible coolant for the Manhattan Project’s early atomic piles. Cooling would be accomplished by circulating helium from top to bottom through the pile. On 19 January 1942, Schmidt, reporting his findings to the Wehrmacht high command writing: “As far as it is known, work in the field of nuclear physics is already so far advanced [in the United States] that, if the war were prolonged, it could become of considerable significance.”¹²² Schmidt continued recommending that “It is therefore desirable to acquire through the Abwehr additional information about American plans and of the progress being made in the United States in the field of nuclear research.”¹²³

Duping the FBI – One, Walter Koehler

Schmidt’s requirement eventually resulted in the Abwehr dispatching Walter Koehler to the US to uncover information about the American Manhattan Project. Transported to Spain by the Abwehr, and portraying themselves as devout Catholics dodging the Gestapo, Koehler and his wife surrendered themselves to the US consulate in Madrid. Eventually, convincing the consulate of his bona fides, the FBI brought the spy couple to the US where the Koehlers sat out the war in

¹²⁰ *Japanese Wartime Intelligence Activities in Northern Europe*. Strategic Services Unit. War Department. Washington D.C. 30 September 1946.

¹²¹ Adam, Jefferson. *Historical Dictionary of German Intelligence*. The Scarecrow Press, Inc. Lanham, Maryland. 2009

¹²² Ladislav Farago, *The Game of the Foxes*. McKay. New York. 1971

¹²³ *Ibid.*

a Manhattan hotel, while the FBI relayed disinformation via radio to Germany using the codes supplied to Koehler by the Abwehr.¹²⁴ From 7 February 1943 until the German surrender in May of 1945, a FBI agent, passing himself off as Koehler sent coded messages to Abwehr in Hamburg through an FBI transmitter on Long Island.

As Koehler, the FBI never relayed any information on the Manhattan Project to Germany. However, the fact that the Germans dispatched Koehler to the US to uncover such information, suggests that the Abwehr took the earlier tips concerning America's pursuit of the bomb, seriously. Later works on the subject of the FBI and the Koehlers suggest that Koehler had actually duped the FBI, and spent the war forwarding collected intelligence through a contact in upstate New York to Germany.¹²⁵ Whether the Abwehr knew Koehler had betrayed them or not, remains debatable. Whether Koehler actually duped the FBI throughout the war remains similarly debatable.

In early 1943 the FBI, brought into the secret of the Manhattan Project – late and reluctantly – by the Army, intercepted a microdot message sent from the German Abwehr in Hamburg, Abwehrstelle (Ast-X) to Nazi agents operating in the US stating:

“There is reason to believe that the scientific works for the utilization of atomic energy are being driven forward into a certain direction in the United States. Continuous information about the tests made on this subject are required and particularly the [answers to these questions]:

- What process is used in the United States for transporting heavy uranium?
- What tests are being made with uranium? (Universities, industrial laboratories, etc.)
- Which other raw materials are being used in these tests?

Entrust only the best experts with this.”¹²⁶

It is unlikely that this single intercepted microdot represents the sole request for information sent by the Abwehr to its agents abroad, or that it was sent to only one agent. It is similarly unlikely that the FBI was indeed able to round up all German and Axis spies working in the US before and during the war.

Grace Buchanan-Dineen – The “Countess” of Detroit

On 24 August 1943 the FBI arrested Grace Buchanan-Dineen on charges of spying. Before her arrest she was known as “Countess Buchanan-Dineen.”¹²⁷ Buchanan was caught transmitting information to Nazi agent handlers in Europe. Unlike many of the other German agents captured in the US, Buchanan-Dineen was Gestapo.¹²⁸ Her assignment was “to concentrate on securing

¹²⁴ Breuer, William. *Hitler's Undercover War, the Nazi Espionage Invasion of the USA*. St. Martin's Press. New York. 1990

¹²⁵ Johnson, David Alan. *Betrayal: The True Story of J. Edgar Hoover and the Nazi Saboteurs Captured During WWII*. Hippocrene Books. 2007

¹²⁶ Reader's Digest, March 1946.

¹²⁷ “Countess” Pleads Guilty as Chief of Spy Ring. *Grace Buchanan-Dineen is Sixth Member of Group to Admit Guilt; Death Sentence Not Asked.* The Pittsburgh Press. Pittsburgh, Pennsylvania. 27 October 1943.

¹²⁸ *Ibid.*.

the following data: (1) The location of munition and airplane factories, their production and number of employees, (2) The location of military camps and naval bases, (3) All available information concerning helium, (4) The composition and sailing dates of convoys," etc.¹²⁹ Again, an agent was sent with orders to report on Helium production.

Operation *Elster* (*Magpie*)

On 30 November 1944 two German spies and saboteurs, Erich Gimpel and William Colepaugh were placed ashore on the coast of Maine under Operation *Elster* (*Magpie*). Unlike the previous Abwehr efforts mentioned above, *Elster* was launched by the Reichssicherheitshauptamt (RSHA), the main security office of the Schutzstaffel, Germany's notorious SS. The RSHA served as the security services of the Third Reich and the Nazi Party (NSDAP). Its activities included intelligence-gathering, criminal investigation, overseeing foreigners, monitoring public opinion, and Nazi indoctrination. The RSHA's stated mission was to find and eliminate enemies of the Reich.

Transported to the US aboard the U-1230, Gimpel and Colepaugh were reportedly assigned to gather intelligence on, and sabotage, the US Manhattan Project.¹³⁰ On 26 December 1944 Colepaugh, an American defector, turned himself in to the FBI. Gimpel was in-turn identified and captured using information supplied by Colepaugh. Neither spy admitted to the FBI after their arrest that they were tasked with attempting to spy on, or sabotage the Manhattan Project. In fact Gimpel said very little at all. After the war and his eventual release from prison in the 1950s, Gimpel went on record stating that his mission was to sabotage the Manhattan Project; however his claims have never been supported by any documentation.¹³¹ It is not known if Colepaugh was ever made privy to the actual intelligence target of the mission.

Unlike Los Alamos which was largely self-contained and extremely isolated, the facilities at Hanford and Oak Ridge were larger, harder to secure and their existence more difficult to deny. The Japanese general staff knew that these facilities were involved in research concerning the development of an atomic bomb. They were likewise aware of early US efforts to obtain large amounts of pitchblende from mines in Africa, a route that they had also considered in their effort to obtain better sources of uranium for their atomic energy and weapons program. However, lacking technical information about the activities ongoing within those facilities, the Japanese could never reach any firm conclusions about their purpose until later in the war – too late in the war. The Japanese may have also known far more than this.

According to a Ministry of Foreign Affairs History of the War compiled during the US occupation, a memo written in the Office of the Minister of War stated: "We had the report of a

¹²⁹ Press Release. Department of Justice. For Immediate Release. 24 August 1943.

¹³⁰ MacDonnell, Francis. *Insidious Foes: The Axis Fifth Column and the American Home Front*. Oxford University Press. 1995

¹³¹ Ward, Kent. *When spy meets spy shop talk will have Maine flavor*. Bangor Daily News. Bangor, Maine. 7-8 June 2003. <http://archive.bangordailynews.com/2003/06/07/when-spy-meets-spy-shop-talk-will-have-maine-flavor/>

new weapon tested in New Mexico that had large explosive power. But no one thought it was an atomic bomb.”¹³²

Fisher at the Scene of the Crime

Neither Fox nor Kelly had been part of the wartime Manhattan Project. The two had spent the war working on radar at MIT. Fox, wanting to return to his professorship would remain in Japan for only about nine months being later replaced by Bowen Dees. Harry C. Kelly would go on to be credited with rebuilding Japanese science in the aftermath of the war.¹³³ The two, Fox and Kelly arrived in Japan on 10 January 1946.¹³⁴

Based upon input from Major Fisher, now on-scene in Tokyo and believing that Japan’s wartime bomb program had accomplished little, the requirement for scientists with experience in the Manhattan Project was rescinded. According to a Memo for Record written by Lieutenant Colonel Henry von Kolnitz, and based upon the input of Russell Fisher:

“The level of research in nuclear energy development in Japan had not advanced beyond the university experimental level. There is no existing evidence that even a pilot plant was constructed for the mass separation of uranium 234 from uranium or the production of any fissionable material other than uranium and as late as April 1945, only one plant existed in all Japan which produced uranium on a commercial scale. Accordingly, the task of exercising surveillance over existing industrial facilities does not require the expert knowledge of a Manhattan Project representative.”¹³⁵

It is not known at this point if Fisher ever actually interviewed Suzuki. It is likely however that Fisher did debrief Suzuki, whether he knew him as Suzuki Tatsuaburo or not. The US Army Counterintelligence Corps (CIC) protected its sources and the use of pseudonyms such as Tsetusuo Wakabayashi to protect an identity was not unusual.

To Fisher, if he did debrief Tsetusuo Wakabayashi it is likely that the story he told was simply farfetched and unbelievable. Talk of being at Hiroshima, Nagasaki, Korea, Manchuria, and China in the days immediately following blast at Hiroshima; of viewing two separate tests; one off the coast of Korea, one in the Gobi Desert; of destroying bomb casings and facilities; was a fantastic campfire horror story, but probably spilt milk over Japan’s losing the war, deep seated regrets and some delusion. For the most part, it is likely that Fisher discounted the tale and thought little of the meeting and interview, at least until bits and pieces began to appear that validated enough of the story to increase Fisher’s interest.

¹³² (Special Post for August 15 - Part 1) Japan’s General Staff Office Knew About Hiroshima and Nagasaki Atomic Bombing in Advance and Did Nothing, According to 2011 NHK Documentary. 17 August 2013. <http://ex-skf.blogspot.jp/2013/08/special-post-for-august-15-part-1.html>

¹³³ Yashikawa, Hideo. *Science has no National Borders*. Harry C. Kelly and the Reconstruction of Science in Postwar Japan. MIT Press Cambridge, Massachusetts, 1994

¹³⁴ *Ibid.*

¹³⁵ Memo for Record. 22 May 1946. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

There is no evidence available to suggest Fox or Kelly ever talked to Suzuki. Due to security reasons, it is likely that neither of them were ever privy to the interview, Fisher was a military officer; Fox and Kelly were longhairs – civilian scientists on contract to the Army. Discounted by Fisher as an unreliable, months later, it is likely that Suzuki was eventually returned to Japan and released – whereabouts unknown. However, as later events would show, something, whether Suzuki or not, gnawed at Fisher.

The Conversion of Russell Fisher

Between his arrival in Japan that January and departure in April 1946, Major Fisher's attitude towards his assignment underwent a change. At some point in his investigation, Fisher began to harbor suspicions that more work had taken place in Japan to build an atomic bomb during the war, than most assumed. It is likely, but remains unknown, that Suzuki was the source of Fisher's suspicions.

As an observer to these events, Bowen Dees would later write a considerable amount about Fisher in his book "*The Allied Occupation and Japan's Economic Miracle*," some 41 years after-the-fact, in 1997.¹³⁶ Fisher, Dees and Kelly were only in contact for a period of about four months in early 1946, but the memory of Fisher seems to haunt Kelly and Dees' entire tenure in Japan, 1946 to 1950.

The Deep Dive

As Dees would write "Fisher immediately began a series of investigatory visits to the various laboratories that were likely to have the capability of doing work in nuclear physics."¹³⁷ According to Dees, "Fox and Kelly arrived at about the same time [as Fisher]; although it is certain they had been recruited as a result of O'Hearn's request, neither of them was involved in the work Fisher undertook."¹³⁸ Three officers were assigned to assist Fisher; Major Richard R. Entwhistle, and two Second Lieutenants, George Yamashiro and Charles Nagano. For the most part, Entwhistle and Yamashiro would remain with the team, Nagano stayed only for a few weeks.

To the irritation of many, the Fisher team revisited all the facilities and universities that Major Furman had previously inspected through the Tokyo Investigation Group of the ABM. Then Fisher followed up that effort by visiting all the laboratories originally examined by the Scientific Intelligence Survey, which produced the "*Compton-Moreland Report*," also known as the "*Report on Scientific Intelligence Survey in Japan, 1 November 1945*." The report summarized the findings of a number of notable American scientists who had surveyed Japanese organizations for wartime scientific research and development in September and October 1945. In reviewing the work of the previous inspection teams, Fisher was questioning their results, their credibility and some would take it as a personal insult. Fisher was stepping on toes that should not be stepped on, irritating local commanders and many of America's scientific elite. All

¹³⁶ Dees, Bowen C. *The Allied Occupation and Japan's Economic Miracle*. Curzon Press Ltd. The Japan Library. 1997

¹³⁷ *Ibid.*

¹³⁸ *Ibid.*

that probably saved Fisher from a quick trip back to the US was that, to some extent he represented General Groves and the Manhattan Project in Japan.

Seemingly unsatisfied with these earlier inspections, the Fisher group now moved to reexamine every facility, every program, every installation originally visited by the US Naval Technical Mission (NavTechJap) to Japan. The Naval Technical Mission, designated JICPOA Team Number 29, surveyed all Japanese scientific and technological developments of interest to the US Navy and Marine Corps throughout the country. A smaller team, JICPOA Team Number 30 had inspected Japanese naval facilities in China.¹³⁹ With 105 officers and 84 enlisted men initially assigned, NavTechJap had been anything if not thorough. By 1 November 1945, the team would consist of 295 officers, 125 enlisted men, and ten naval technicians.

The NavTechJap inspected all facilities and programs located on the Japanese Islands of Kyushu, Shikoku, Honshu, Hokkaido; in China; and in Korea south of latitude 38°N. To conduct its investigation, NavTechJap relied in part on the “Compton-Moreland Report,” and even took advice from the scientists involved.¹⁴⁰ The NavTechJap’s summary report alone was 488 pages long. No small achievement in the days of yellow legal pads and handwritten draft reports.

The Navy specifically targeted most of Japan’s Imperial Universities to include; Tokyo Imperial, Osaka and Kyoto universities and scientific institutes such as RIKEN and the Furukawa Physics and Chemistry Research Institute in Tokyo.¹⁴¹ Several individuals such as Captain S. Makino of the Imperial Japanese Navy, Navy Technical Department; S. Hoshino, Assistant Professor of Architecture, Tokyo Imperial University and physicist Asada Tsunesaburo of Osaka Imperial University were also targets of the US Navy investigation.

The NavTechJap compiled only two reports related to atomic energy and weapons; Target Report – Atomic Bombs, Nagasaki and Hiroshima and a later supplement study of medical efforts related to the two bombs.¹⁴² The US Navy’s report on the effects of the atomic bomb over Hiroshima and Nagasaki included assistance from some of Japan’s most prominent RIKEN physicists and university professors to include; Nishina Yoshio, Arakatsu Bunsaku, Asada Tsunesaburo, and Seishi Kikuchi, all at some previous point heavily involved in Japan’s wartime atomic energy and weapons programs. Overall the group produced more than 3,000 documents, but none identifying any Japanese naval interest in either atomic energy or weapons. However, either NavTechJap or the “Report on Scientific Intelligence Survey in Japan, 1 November 1945,” ever visited any of the secret Japanese facilities in China. By the time Fisher arrived in Japan, these facilities were then under the control of the Nationalist Chinese or the Soviet Union and out-of-bounds.

¹³⁹ Summary Report, U.S. Naval Technical Mission to Japan. U.S. Naval Technical Mission to Japan. San Francisco, California. 1 November 1946.

¹⁴⁰ *Ibid.*

¹⁴¹ *Ibid.*

¹⁴² Target Report – Atomic Bombs, Nagasaki and Hiroshima. U.S. Naval Technical Mission to Japan. San Francisco, California. 15 December 1945.

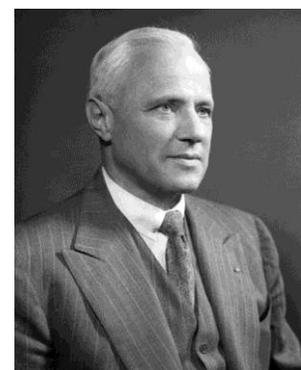
Miscellaneous Target – Atomic Bombs, Nagasaki and Hiroshima – Article 2, Medical Effects, Supplementary studies. U.S. Naval Technical Mission to Japan. San Francisco, California.

The Fisher group now followed in the path of NavTechJap, with Fisher and Entwhistle even traveling to Korea to inspect Japanese installations and universities south of the 38th Parallel, to include the RIKEN facilities at Inch'on. If there was any chance of Fisher meeting with Wakabayashi/Suzuki it had to have been in the early spring of 1946 in Seoul. Recall that message CFB 16370, 3 December 1945, WARGTWO, had previously advised that Fisher would be available to debrief Suzuki, at that point still in China, after 1 January.

If we accept that Wakabayashi was indeed Suzuki, then he was by early 1946, in Korea awaiting repatriation and would have been available in Seoul for interview by Fisher. We know from Snell that Tsetusuo Wakabayashi was still in Seoul as late as July 1946. Fisher departed Japan in April of 1946 and could have never met Suzuki there, but only in Korea when he and Entwhistle arrived to inspect previously examined facilities. As Fisher had already been designated to debrief Suzuki, it is unlikely that Entwhistle would have been present at the interview. Regardless, the deeper Fisher dug into the subject of Japan and its atomic energy and weapons program, the more concerned he became.

Unlike the previous inspections where large teams broke into smaller groups to visit numerous facilities, Fisher, Entwhistle and Yamashiro had seen it all. They were not left at the mercy of previous reports and the observations of others, but their own investigations and experiences.

It is likely that through Suzuki, Fisher had access to previously unknown information. By the rules that applied to informants at that time, Fisher could not discuss the source of his information with anyone to include Entwhistle, Yamashiro or Nagano. The identity of Fisher's source had to remain a closely held secret. Unlike completed reports and fully analyzed information, where names have been removed or left ambiguous to hide any indications of a person's identity, real lives were at stake, primarily Suzuki's. Though the forces that ruled Japan leading up to and through the war had been defeated, arrested, investigated and purged, many Japanese who had supported the war remained free and believed cooperation with the *gaijin* (outside persons) to be traitorous. Major Fisher was in a bind.



Karl Compton

Fisher's task was to successfully conduct his examination, without revealing the identity of his source. He could talk around the source, discuss his own suspicions, describe the information, but not reveal the existence or identity of his informant. Though he might work closely with them; his subordinates; Entwhistle, Yamashiro and Nagano simply had to trust him. Though Entwhistle would eventually rotate back to the US at the end of his tour overseas, Yamashiro would take his military discharge in Japan, and resume his surveillance work against Japan's scientists and industries capable of performing work related to uranium separation into 1949. Entwhistle would go on to become the Commander of the US Army's Ballistics Research Laboratories at the Aberdeen Proving Grounds, Maryland.

Three separate investigative groups had already examined the issue of Japan's wartime atomic energy and weapons program; 1) the ABM under Furman, 2) the Scientific Intelligence Survey, which included Karl Compton, and 3) the NavTechJap. Who, other than Suzuki, could have so

convinced Major Russell Fisher that there more was going on in Japan than the three previous investigations had believed? Who, other than Suzuki, could have provided information that would so disturb Fisher that he would reverse all of his previously held opinions of Japan's wartime atomic energy and weapons? Who, other than Suzuki, could have provided sufficient insight into Japan's wartime atomic energy and weapons programs that would have provided Fisher the courage to overturn all of the previous reports conducted by several hundred investigators?

Japan's top scientists had already been examined by three separate investigation groups. They had already admitted to conducting basic research into the issue of atomic energy and weapons during the war. What could Suzuki have said that could have been sufficiently validated by Fisher, to force him to overturn the findings of three entire reports, one by the Manhattan Project, another by some of America's most prominent scientists that had already rated Japan's wartime atomic energy and weapons programs as far behind that of the US, and NavTechJap? What evidence did Fisher find in validating the source that was so powerful as to frighten bureaucratic naysayers into complete silence? The answer lay with Kyoto University and the Japanese Navy.

The Great Unknown – The Program of the Imperial Japanese Navy

Despite three full examinations of the achievements of wartime Japanese science and technology by members of the US Manhattan Project, top American scientists and the US Navy, something had been overlooked, and that something was – the entire atomic energy and weapons program of the Imperial Japanese Navy. Until Fisher broke the news, not one of the three previous investigations had ever identified the Imperial Japanese Navy atomic energy and research program known colloquially as, "F-go."

Without some inside source of information, such as Suzuki, it is unlikely that the Japanese Navy's wartime research into the power of the atom would have ever been identified. It is not a far leap from Suzuki's knowledge of the Navy's program to Fisher's later identification of the effort. The known information suggests that Tsetusuo Wakabayashi was indeed Suzuki Tatsusaburo. He had been at Hiroshima and Nagasaki that August. Suzuki is known to have returned to Tokyo after visiting Nagasaki. He was the Japanese Army's counterpart to the Japanese Navy's Captain Kitagawa. He was the Japanese Army's single most authority on its atomic energy and weapons program. When the Japanese military combined its several atomic energy and research programs after the defeats at Guadalcanal and Midway, it was the Imperial Japanese Army that held overall responsibility for the combined program: Kitagawa was responsible to Suzuki, they were not "equals." Yet at the end of the war, Suzuki is found not in Japan, but in China.



**Colonel Richard R.
Entwhistle**

It is thought that Japan's alleged test of an atomic bomb off the coast of Hamhung, Korea was the test of a device produced from the atomic energy and weapons program of the Japanese Navy, as located on the Korean Peninsula. Japan's Navy was heavily invested in the industries

located along Korea's northeastern coast, primarily those owned by the Japanese Konzern, Nichitsu, the Korea Nitrogenous Fertilizer Company (Chōsen Chisso Hiryō Kabushiki Kaisha) and Mitsui.

Kitagawa Tetsuzo was the Chief, Chemical Section of the Navy Technical Research Institute in Meguro which, due to its long-term existence, had assumed management of the Japanese Navy's atomic research programs at Hamhung under the Imperial Japanese Navy Headquarters. Kitagawa was the sole member of the Imperial Japanese Navy to remain in Hiroshima through the meeting of 10 August when it was admitted that Japan had been the victim of an atomic bomb. Unlike Suzuki, Kitagawa returned to Tokyo via train. Despite his rank, despite his position within the Imperial Japanese Naval Headquarters, isolated at Hiroshima, Kitagawa did not command sufficient authority or responsibility to require air transportation back to the capital. Kitagawa was believed by subsequent investigators to have traveled through the area of Hamhung, after or around 12 August 1945.¹⁴³ Why?

Trekking Japanese Capabilities

It is likely that Suzuki Tatsusaburo was with Kitagawa in Hamhung as part of the secret military investigation team traveling with Fujiwara Ginjiro, accessing the status of Japan's atomic bomb program, as that mission traveled to and through Hamhung, Korea. If there was a test of some weapon at Hamhung, as that part of the program was under the control of the Japanese Navy, Kitagawa, as the program manager, had to be present as the representative of that service. Both Kitagawa and Suzuki had been part of the Imperial Headquarters Survey Team sent from Tokyo to Hiroshima to survey the damage caused by the US attack of 6 August 1945. Kitagawa, despite his rank, was responsible to Suzuki. Yet, only Suzuki is known to have been sacrificed into China, where he turned himself into US authorities in late October 1945.¹⁴⁴ Great responsibilities are followed by great sacrifices. Whatever his responsibilities, he could have delegated them, but Suzuki retained his authority and completed his assignment.

Because of the closer cooperation between the Japanese Army and Navy after their respective losses at the Battles of Guadalcanal and Midway, only Lieutenant Colonel Suzuki or Captain Kitagawa would have been sufficiently knowledgeable of the details of each service's research programs into the nature of the atom, to have explained them to an outsider, a *gaijin*, Major Fisher. Unlike Suzuki, Kitagawa was in Japan, and would be "confronted" by Fisher in March 1946 suggesting that by March, Fisher had the information he needed to reveal the atomic energy and weapons program of the Japanese navy.¹⁴⁵

Disagreements amongst Friends

¹⁴³ Conference. Further questioning re newspaper story about atomic bomb explosion in Korea. 31 October 1946.. Record Group 331. Stack Area 240. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 3. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁴⁴ COMGEN CHINA. To: SCAP. Message Number: CFBX 15741. 27 November 1945. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 1.

¹⁴⁵ BASIC: Memo for Record, Subj: "Interview with Tetsugo Kitagawa," dtd. 8 March 1946. Signed: Major Russell A. Fisher. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

When Fisher confronted Kitagawa in March 1946 with information about his involvement with the atomic energy and weapon's program of the Imperial Japanese Navy during the war, Kitagawa wasn't talking, and likely never did.¹⁴⁶ With US authorities to include Karl Compton, Major Robert Furman, Philip Morrison, Manhattan Project and US Navy investigators satisfied that the Japanese Army had failed to produce a weapon during the war, what did Fisher uncover about the Japanese Navy program that was sufficiently powerful enough to have shamed the experts into silence?

Apparently the most embarrassing information uncovered by Fisher was evidence of high-level German-Japanese cooperation on the issue of atomic energy and weapons production during the war. With some records remaining classified nearly 65 years later, Fisher may have also gathered more specific information on the alleged tests of some type of weapon, atomic or conventional, at Hamhung, Korea, and at the eastern edge of the Gobi Desert in Manchukuo.

Unlike his predecessors, Major Fisher did not concentrate on the wartime efforts of Nishina Yoshio and RIKEN, but on Kyoto University and Dr. Arakatsu Bunsaku, the alleged head of the Imperial Japanese Navy's program: F-go. With Tokyo being the center of science and technology in Japan, it is somewhat understandable that previous investigators would focus their efforts there, ignoring Japan's provincial research centers. It was solely through Fisher's interrogations of Arakatsu Bunsaku that he learned that Germany had successfully transferred uranium oxide to Japan during the war.¹⁴⁷ Or so Fisher said in his later reports. Fisher also found that Germany had transferred blueprints of their successful high-speed centrifuge designed by Paul Harteck to Japan. Harteck's double centrifuge design had survived testing without damage, and offered the promise of highly enriched uranium.¹⁴⁸

With the last surface German transport sunk in 1943, and only two German submarines reaching the Far East in 1944, how these designs made their way to Japan from Germany during the war remains a mystery, and the source of addition embarrassment to previous investigators.¹⁴⁹ It is possible, that these designs made their way to Japan during the war via some neutral nation, another source of potential modern day embarrassment. Fisher also found that additional uranium, 500 kilograms of material reportedly unavailable to Japan, had been obtained by the Japanese Navy through the black market in Shanghai during the war.¹⁵⁰ The uranium was intended for use by Arakatsu Bunsaku.¹⁵¹ Fisher also located a supply of deuterium oxide, heavy water, in Dr. Arakatsu's lab. Though Arakatsu tried to remain evasive under examination, Fisher told him up front "that we already knew of some material supplied."¹⁵² Without some previous

¹⁴⁶ *Ibid.*

¹⁴⁷ Higgins, Raymond A. *From Hiroshima with Love: The Allied Military Governor's Remarkable Story of the Rebuilding of Japan's Business and Industry after WWII*. Hellgate Press, Central Point, Oregon.

¹⁴⁸ Walker, Mark. *Nazi Science: Myth, Truth, and the German Atomic Bomb*. Plenum Press, New York. 1995

¹⁴⁹ Blockade-Running Between Europe and the Far East by Submarines, 1942-44. [SRH-019] The Navy Department Library. 1 December 1944. Available at http://www.history.navy.mil/library/online/blockade_running_subs.htm

¹⁵⁰ Memo for Files: Subject: Interview with Lieutenant Commander Tetsuya Takao. 23 March 1946. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1-2. Entry 224. Scientific and Technical Division. Box 2.

¹⁵¹ *Ibid.*

¹⁵² BASIC: Memo for Record, Subj: "Interview with Tetsugo Kitagawa," dtd. 8 March 1946. Signed: Major Russell A. Fisher. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

source unknown to the other three investigating teams, how did Fisher already know most of the details? According to Fisher, once confronted with the facts, Arakatsu Bunsaku “revised his statement.”¹⁵³ Arakatsu was not the only one confronted with uncomfortable facts.

Daring Kitagawa

On 8 March 1946, Major Fisher, accompanied by Major Entwistle with Lieutenant Nagano interpreting, confronted the more elusive Captain Kitagawa Tetsuzo. According to Major Fisher,



Mitsubishi J8M

it was Dr. Arakatsu who gave up Captain Kitagawa to the Americans. At least that is how Fisher told the story in official documents. Blaming Arakatsu Bunsaku was good form, allowing Fisher to deflect any interest away from his primary source. Queried about his activities in the last year of the war, Kitagawa claimed “that they had to do with rocket fuels employing hydrogen peroxide...for used in the Japanese copy of the Messerschmitt 163 [Mitsubishi J8M] rocket plane.”¹⁵⁴ According to Fisher, “When

questioned about the nature of the Japanese Navy’s project headed by Professor Arakatsu, Kitagawa became noticeably cautious. At first he said only that there was a project to study the possibility of utilizing energy from uranium. Repeated questioning brought out the following statements:

- a. The uranium project started in May or June 1942.
- b. The project was initiated by Kitagawa himself based upon his own reading of pre-war scientific literature and not upon knowledge on what was going on in the United States or Germany, regarding which he pled complete ignorance.
- c. The Navy supplied the pure iron for the core of Arakatsu’s cyclotron in 1943.
- d. Arakatsu had been supplied by the Navy with approximately 100 kilograms of uranium oxide in April or May 1945. (At first Kitagawa stated that no chemical supplies had been provided by the Navy, as none were available in Japan).¹⁵⁵

Though the remainder of the document is missing, some of the facts given by Kitagawa during this interview continued to be evasive.¹⁵⁶ That Kitagawa initiated the project based solely upon his reading of pre-war scientific literature is doubtful. It is unlikely that, even as a full captain,

¹⁵³ *Ibid.*

¹⁵⁴ BASIC: Memo for Record, Subj: “Interview with Tetsuzo Kitagawa,” dtd. 8 March 1946. Signed: Major Russell A. Fisher. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

¹⁵⁵ *Ibid.*

¹⁵⁶ *Ibid.*

Kitagawa possessed sufficient authority within the Imperial Japanese Navy to singlehandedly initiate a major research program without some prior oversight and approval. Little is available in the US National Archives that would lend itself to tracing Kitagawa's movements in the years after the war.

Kitagawa remained in the Japanese Navy for some period of time following WWII. He eventually completed a doctorate in physics and by 1949, was employed by the Tokyo Industrial Research laboratory, under the powerful Ministry of Commerce and Industry.¹⁵⁷ Possibly softening his postwar attitudes about the US Occupation of Japan, in 1949 he worked with the ESS Special Projects Branch to determine the source of the heavy water found in Arakatsu's lab by Fisher in 1946.¹⁵⁸

It is not known at this time if Kitagawa was ever fully debriefed about the Japanese Navy's wartime atomic research efforts. There is no archival evidence that he was. By 1949 the purges were over, SCAP's ability to enforce the Occupation was decreasing. Continued interrogation of Japan's wartime scientists had become increasingly unpopular.

In the aftermath of Fisher's investigation, possibly because of his findings refuting earlier investigations, no further examination of Japan's wartime atomic energy and weapons programs appears to have ever taken place until the final investigation of late 1948, or early 1949 mentioned above. Interest in the subject was superseded by subsequent events: WWII was over, the Cold War was in its infancy, the Occupation of Japan was coming to an end, and America needed an anti-communist ally in Asia. As previously noted, Fisher's report had embarrassed some big names in the military and not just a few civilian scientists. It would not be the only time that politics in America would deny the existence of evidence of a foreign-based atomic weapons program. But Fisher was also now faced with a new problem, one that he had helped to create.

One's Own Creations

Ultimately, it was with Fisher's support that all previous Army requirements for a science advisor with Manhattan Project credentials to advise SCAP, was eliminated. As early as January 1946 Fisher had believed that any Japanese aspirations for atomic energy and weapons could be controlled administratively.¹⁵⁹ In the interim, Fisher had uncovered new information, possibly concerning a larger Japanese atomic energy and weapons program than previously accepted. Based upon the new information, the requirement for a science advisor with Manhattan Project credentials had become essential. However, due in part to Fisher's previous recommendation, the previously suggested change eliminating the requirement had been accepted. The requirement for science advisors with Manhattan Project credentials had been dropped, permanently. Fisher now returned to the use of policy as an administrative method to control Japanese interest in such

¹⁵⁷ Memo for Record. Subject: Interview with Tetsuzo KITAGAWA (Former Commander, Former Naval Research Center, Ebizu, Tokyo). Economic and Scientific Section. Scientific and Technical Division. Special Projects Branch. 5 June 1949. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

¹⁵⁸ *Ibid.*

¹⁵⁹ Dees, Bowen C. *The Allied Occupation and Japan's Economic Miracle*. Curzon Press Ltd. The Japan Library. 1997

matters as the mining of uranium, uranium isotope separation, the production of nuclear energy and weapons of war.

Returning to the US in late spring of 1946, Major Fisher prepared a detailed report on the subject of atomic energy control in Japan with suggestions for General Groves, who approved the recommendations forwarding them to the General Staff.¹⁶⁰ There is no record of Fisher having briefed Groves on any issues related to the Japanese Navy's atomic energy and weapons program. Fisher's recommendations, accepted by Groves, met strong opposition in Japan from one, Harry C. Kelly.

Innocents out Wandering Around



Harry C. Kelly

As one of several science advisers hired by SCAP in 1946, Harry C. Kelly's job was to research the status of science in Japan and to advise occupation forces on policy and management issues during the occupation. It was Kelly's day-to-day job to visit research institutions and universities, determine capabilities, requirements, and needs and advise policy. From where Fisher sat in Washington D.C., the control of nuclear materials was necessary to prevent future proliferation. From where Kelly sat in Japan, far less control of any kind was necessary for Japanese science to recover from the ravages of war, and aid in reconstruction of the country. Kelly believed that Japanese scientists should be allowed to police themselves with little supervision.¹⁶¹ Each was right; some compromise was required, but none was ever achieved.

Of Darker Secrets Never Revealed

There is no archival evidence to suggest that Harry C. Kelly, Gerald Fox, or Bowen Dees, were ever privy as the source of the information used by Russell Fisher to confront Arakatsu Bunsaku, Kitagawa Tetsuzo and others as yet unknown, or to expose the atomic energy and weapons program of the Imperial Japanese Navy, probably Suzuki Tatsusaburo. Apparently, in their early days as scientific advisors to SCAP, that Kelly and Fox were never made aware of the existence of Suzuki Tatsusaburo. According to Bowen Dees they were never part of Fisher's investigation.¹⁶² If Fisher had interviewed Suzuki in Korea, it is even less likely that Kelly and Fox were ever made aware of it.

Unable to discuss and make written notes, or reveal his source, it is unlikely that Fisher ever told Kelly and Fox of his meeting with Suzuki Tatsusaburo, if it ever took place at all. During the nearly seven years of the US Occupation of Japan, Suzuki's name never appears once in the files of ESS or the Special Projects Branch. Though Kelly would later conduct his own investigations into Japan's research institutions and universities as part of his duties under SCAP, he never once

¹⁶⁰ *Ibid.*

¹⁶¹ Yashikawa, Hideo. *Science has no National Borders*. Harry C. Kelly and the Reconstruction of Science in Postwar Japan. MIT Press Cambridge, Massachusetts, 1994

¹⁶² Dees, Bowen C. *The Allied Occupation and Japan's Economic Miracle*. Curzon Press Ltd. The Japan Library. 1997

mentioned Busaku Arakatsu. He only encountered Kitagawa Tetsuzo in 1949. It should also be mentioned at this point that the OSS would never investigate Japan's wartime atomic energy or weapons program from inside the country.

The OSS – Frozen Out Administratively

The OSS had no assets in-country at the end of the war and was not allowed to operate during the war in MacArthur's operational theatre.¹⁶³ As SCAP, MacArthur continued to limit the ability of national-level intelligence agencies to operate in or out of Japan for several years, relenting in full only after the beginning of the Korean War (1950-1953).

The OSS was never involved in turning Suzuki, nor, from the existing record, were they ever informed of his existence. Suzuki was never under the control of the OSS, the forerunner of today's Central Intelligence Agency (CIA). Suzuki was the exclusive property of the US Army, and remained forever under Army control.

Tepid Conclusions

While the OSS knew of Kitagawa's involvement in Japan's wartime atomic energy and weapons program, ESS records mention Kitagawa's name only once, in late 1946 when Kelly was forced to reinvestigate Japan's wartime bomb program due to the story written by David Snell in October 1946.¹⁶⁴ Kelly entered that investigation with the predetermined notion that Japan had done little work on atomic energy and weapons during the war, and set out to prove it.¹⁶⁵ To his satisfaction, Kelly proved that Japan's wartime program had been small, underfunded, lacking talent, misdirected, and lacked access to the uranium necessary to produce a weapon. Nishina Yoshio told him so.

So confident was Kelly that Japan's wartime interest in atomic bomb weaponry had been minimal, at the end of the one year investigation he let Nishina Yoshio write the final report, of which only bits and pieces exist today.¹⁶⁶ As might be expected, Nishina downplayed the existence of any Japanese effort to produce an atomic pile or a weapon during the war. In fact, Nishina's report never once mentioned either of Japan's two best known wartime atomic research programs, the Imperial Japanese Army's "Ni," or the Navy's F-go. Nishina would spend the remaining years of his life deflecting attention from, and deriding the ability of Japan's military scientist attached to these programs. Yet it was these same inept and incompetent scientists that Nishina retained at RIKEN during the war to prevent their loss in the battle.

¹⁶³ Finley, James P. U.S. Army Military Intelligence History: A Sourcebook. Edited by U.S. Army Intelligence Center & Fort Huachuca, Fort Huachuca, Arizona, 1995

¹⁶⁴ Memo. October 1946. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

¹⁶⁵ *Ibid.*

¹⁶⁶ Nishina, Yoshio. Brief History of Research During Wartime. 29 December 1947

Nishina, Yoshio. Brief History of Research Carried Out During the War as the War Time Project. 29 December 1947

Nishina, Yoshio. Brief History of Research during the war. 30 December 1947

All found in Record Group 331. Stack Area 290. Row 20. Compartment 13. Shelf 5. Entry 224. SCAP. Box 7416

¹⁶⁷Nishina died of liver cancer on 10 January 1951. He was 60 years old. As for Kitagawa, his name is not mentioned again in ESS reports until June 1949 when the Special Projects office attempted to locate the origins of the heavy water found in Arakitsu Bunsaku's office by Fisher in 1946. During Kelly's tenure, ESS records never discussed Suzuki Tatsusaburo.

Being a good bureaucrat, Kelly outlasted Fisher who resigned from the Army in late 1946 as Lieutenant Colonel, and evidently the Manhattan Project. Research suggests that he never again worked for the US government or the Army. Kelly went on to become known as the Father of Modern Day Japanese Science. As for Tsetusuo Wakabayashi, Wakamatsu Tetsuo and Suzuki Tatsusaburo, they faded into the background of post-war-time Japan. Suzuki Tatsusaburo's role as the author of Japan's version of the Maud Report resurfaced in the book *The Day Man Lost: Hiroshima: 6 August 1945* published by the Pacific War Research Society in 1972, and went largely unnoticed by subsequent researchers.¹⁶⁸

The Harvest of the Innocents

The 1949 inquiry mentioned above is significant in that, in late 1948, early 1949, critical information on Japan's wartime research into atomic energy and weapons surfaced. Most likely this information centered on weapons designs and advanced calculations.¹⁶⁹ In response to the new information Japan's most prominent physicists were once again subjected to intense surveillance; interest in its major universities was renewed, visits and inspections increased. The revelations forced yet another investigation into Japan's wartime research, revealing the duplicity of Kelly and Dees in downplaying that effort in their investigation of late 1946, early 1947. In 1950 Harry C. Kelly was promoted to head the Chicago branch of the Office of Naval Research (ONR), where he remained for about one year before taking another position with the National Science Foundation.¹⁷⁰ In 1951 Bowen Dees would accept a position with the State Department.¹⁷¹

Suzuki begins to Surface

Mention of Suzuki occurred again in 1985 when Robert Wilcox published "*Japan's Secret War, Japan's Race against Time to build its Own Atomic Bomb*" in 1985.¹⁷² Had Suzuki Tatsusaburo not given his 1995 interview, it is likely that his possible role as Snell's source, Fisher's possible informant, would have ever been uncovered. The identity of Tsetusuo Wakabayashi would have simply remained one of the last mysteries of the war. As P.H. Ferguson reported in his article titled *Scientist Describes Japan's World War II Quest for Atomic Bomb*, Suzuki "was not clear about his reasons for calling a news conference now, almost 50 years after the end of the war, to

¹⁶⁷ Grunden, Walter, "Science under the rising sun: Weapons development and the organization of scientific research in World War II Japan." Ph. D. dissertation. University of California. Santa Barbara, California, 1998

¹⁶⁸ *The Day Man Lost: Hiroshima, 6 August 1945*. Pacific War Research Society Kodansha International, Ltd. Tokyo, Japan. 1972.

¹⁶⁹ Thompson, Leon. *Japan's Atomic Bomb. Military Magazine*. Sacramento, California. December 1994.

¹⁷⁰ Dees, Bowen C. *The Allied Occupation and Japan's Economic Miracle*. Curzon Press Ltd. The Japan Library. 1997

¹⁷¹ *Ibid.*

¹⁷² Wilcox, Robert K. "*Japan's Secret War: Japan's Race against Time to build its Own Atomic Bomb*." Marlowe & Company, New York. Copyright 1995

describe in detail the effort to build an atomic bomb.”¹⁷³ Perhaps Suzuki had his reasons, one of those being to further bury Japan’s wartime interest in atomic energy and nuclear weapons. Suzuki had seen the devastation of Hiroshima and Nagasaki, and ultimately, he had failed to prepare Japan to respond in kind to those attacks.

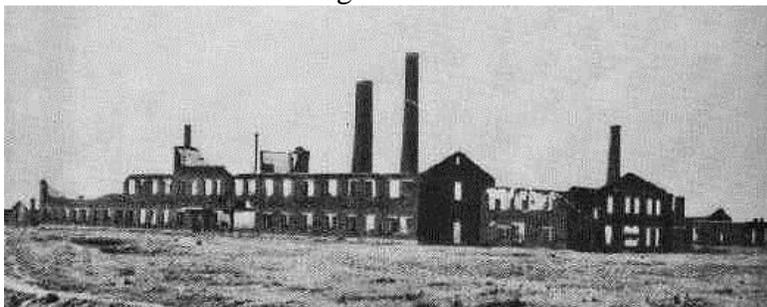
Detrimental Disclosures

Had Suzuki Tatsusaburo not held a press conference fifty years after the war, the identity of Tsetusuo Wakabayashi, or Wakamatsu Tetsuo as he was written about in Japanese newspapers of 1946 Japan, may have remained a mystery forever. The identity of Tsetusuo Wakabayashi was the weak link in the story *Japan Developed Atom Bomb; Russia Grabbed Scientists* written by David Snell in 1946 and Robert Wilcox’s effort to reacquaint the world to the story of Japan’s atomic bomb program in his 1985 book “*Japan’s Secret War: Japan’s Race against Time to build its Own Atomic Bomb.*”

By conducting the interview Suzuki called attention to the fact that he had been present at Hiroshima and Nagasaki just after the attacks. His observation of the thirst experienced by the victims of the blast placed him at the scene of the blast over Nagasaki shortly after the attack, as do wartime Japanese records. However documents in the US National Archives placing him in China at the end of the war begged the question, how did Suzuki get from Nagasaki to China in the immediate aftermath of the war, when MacArthur had already ordered all Japanese aircraft to be grounded? Why was he there? What was so important in the aftermath of Hiroshima, the Soviet attack into Manchuria, and Nagasaki, with the Japanese Empire in its death rattle, that would require Fujiwara Ginjiro, probably Kitagawa Tetsuzo and Suzuki Tatsusaburo, to travel to Korea, Manchukuo and China? What role did this secret investigation team play in Japan’s ultimate surrender?

The Past Shrouded

From the history of the war, and Snell’s interview of Tsetusuo Wakabayashi, we know that whatever facilities that might have been located in northern Korea in 1945 were destroyed prior



Remains of Unit 731 after Demolition Attempt

to the arrival of the Soviet Red Army in mid- to late-August 1945. Unit 731 for example began to dynamite its facilities at Ping Fan on 9 August 1945. After three full days of exploding dynamite and the use of excess aerial bombs, much of the facility remained standing and still stands today. Now a museum, its buildings serve as a reminder of what took place during the dark years of Japan’s wartime imperialism.

¹⁷³ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

Though less is known about what took place at Unit 516, it is likely that its facilities were similarly destroyed. What Suzuki did or did not do in China, remains equally unknown. It seems entirely possible that he was sent there to shut down the remnants of Japan's atomic research facilities located around Tientsin and Beijing, China. Hopefully the writing of this story will prompt Chinese historians to investigate the possibility that facilities supporting Japan's wartime atomic energy and bomb programs were similarly located in China at the time, and were destroyed in the immediate aftermath of the war.

Deflecting Inquiry

In his 1995 interview Suzuki said that "Scientists in Japan developed theories of how to build a bomb...but never came to close to actually making one because they lacked money and materials."¹⁷⁴ Yet as Tsetusuo Wakabayashi Snell's supposed source reported, the exact opposite was true.¹⁷⁵

According to Tsetusuo Wakabayashi the Japanese program was far more extensive; actually testing an atomic bomb off the coast of northern Korea, at Hamhung, just days after Enola Gay dropped a uranium-based atomic weapon known as "Little Boy" onto Hiroshima. According to Suzuki the need for materials to make a bomb were so great "that military officials discussed scrapping a battleship and using the steel for the atomic experiments" and possibly the facilities needed to construct the weapon.¹⁷⁶ History being what it is, an assortment of lessons, facts, dates and times arranged to make sense of previous events and eras, indicates that after 1943 Japan did indeed forego the construction of several battleships, most notably the last two planned battleships of the Yamato-class; the largest battleships ever produced.

The Yamato-class battleships displaced nearly 70,000 tons and were armed with nine 18-inch guns. Two battleships, the *Yamato* and the *Musashi* were actually built and lost during the war. Construction on a third, the *Shinano*, whose keel was laid in May 1940, was halted in 1942 with the ship redesigned as an aircraft carrier. The keel to the fourth of these massive ships, number 111, was laid down around August 1940 and was 30 percent complete when it was dismantled in 1942, the same year that the Japanese Army began its Ni research program, and according to Kitagawa in 1946, the same year that the Japanese Navy began its program, F-go.¹⁷⁷ A fifth Yamato-class battleship, hull number 797 was never built.

In explaining why the last two ships were never completed many would argue that with the coming of the war, the resources needed to finish the last two ships of this class were harder to obtain, hence they were never built. Oddly enough, the Japanese Empire of 1942 had far more

¹⁷⁴ *Ibid.*

¹⁷⁵ Civil Censorship Detachment. JP/CSA/38323. 7 November 1947. Record Group 331. Stack Area 240. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 3. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁷⁶ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

¹⁷⁷ BASIC: Memo for Record, Subj: "Interview with Tetsugo Kitagawa," dtd. 8 March 1946. Signed: Major Russell A. Fisher. Record Group 331. Stack Area 290. Row 24. Compartment 02. Shelf 1. Entry 224. Scientific and Technical Division. Box 2

access to resources than the Empire of 1940. According to the Japanese, it was a case of resource management, with other priorities taking precedent during the war. One of those priorities was aircraft carriers, yet other than the *Shinano*, none were produced. Another competing priority would have been Japan's atomic energy and weapons program. Where the steel needed to complete the two ships, ordered years before went, has never been fully explained.

Reasoning Away the Past

During his interview Suzuki explained that he was “confident at the time we could have built a bomb if we had better equipment.”¹⁷⁸ Others in Japan, such as Admiral Yonai, General Arisue and Kawabe held similar beliefs, but apparently they believed that more progress was being made in 1945 than Suzuki would report 50 years later, spawning the secret investigation Fujiwara Ginjiro in the days just after the blast over Hiroshima.

During the 1995 interview Suzuki said “People like Mr. Tojo said we should hurry in our research...But he said that only after the war situation turned against Japan” dating Tojo's comments to some point after the Battle of Midway in mid-1942.¹⁷⁹ Tojo is known, as early as January 1943, to have expressed the belief that the war would be decided by atomic bombs.¹⁸⁰ In the early days of WWII with Germany occupying all of Western and large areas of Eastern Europe, Groves had also delivered such pep talks. Even after Japan's defeat at Guadalcanal and the Battle of Midway, the Japanese Empire remained the largest empire that ever existed.

As previously discussed, Generals Kawabe Masakazu and Shuichi Miyazaki of the Imperial Japanese Army, were sufficiently familiar with Japan's atomic research to attribute the attack on



Hideki Tojo

Hiroshima to the use of an atomic bomb, days prior to the final determination of Japan's scientists on the scene. During the War Cabinet's discussions in the immediate aftermath of the attack on Hiroshima as to whether Japan should surrender, War Minister, General Anami Korechika argued that the US could only have one such bomb, and had already used it. Had the US been totally reliant on uranium and not produced a second weapons production line using plutonium, Anami would have been largely correct. The second uranium-based weapon would not become available until January 1946. Without the follow up use of an atomic weapon at Nagasaki, the US invasion of Kyushu under Operation *Olympic*, as part of *Downfall*, the long-sought after final battle so desired by the Imperial

Japanese Army with all its projected casualties would have probably been launched on 1 November 1945.

¹⁷⁸ JAPAN HOPED TO USE THE BOMB IN WORLD WAR II. Physicist on atomic research team says there were no ethical misgivings about it. Mercury News Wire Services. 21 July 1995

¹⁷⁹ KRISTOF, NICHOLAS D. Japan's A-Bomb Project: One of War's 'What Ifs'. The New York Times. August 08, 1995. <http://www.nytimes.com/1995/08/08/world/japan-s-a-bomb-project-one-of-war-s-what-ifs.html>

¹⁸⁰ Sinking killed bomb plan. The Bulletin. Bend, Oregon. 20 September 1982.

Contemplating Attacks

At some point before the end of the war Japanese military planners had plotted attacks against the US forces using atomic weapons, suggesting once again that Japanese research into atomic energy and weapons was much further along than present-day historians have led themselves to believe.¹⁸¹ As Suzuki told the tale, “I heard talk of using it on B-29 bases on Saipan and Tinian...but there was no serious discussion since we were far from succeeding in producing one.”¹⁸² Suzuki continued stating that “Because the bomb was never fully developed, the plans were never concluded...but added he believed all targets would have been military.”¹⁸³ With few options left to Japan in delivering an atomic weapon, those devices, if they existed would probably have been delivered by ship- or submarine-borne suicide attack against US forces. Attacks on Okinawa and Iwo Jima, would have been an immediate requirement for Japanese forces to once again take the initiative, and break out of Japan into the Pacific Ocean. It should also be noted that as in Japan, US, target selection was completed months before the first weapon was ever ready to use.¹⁸⁴

According to Suzuki Tatsusaburo, Japan’s “top military leaders pinned desperate hopes on atomic weapons turning the tide of the war in Japan's favor,” suggesting that the country’s atomic bomb program might have been further along than most western historians have been led to believe.¹⁸⁵ “Desperate hopes” are not often penned on weapons that do not exist beyond theory. In his 1995 interview Suzuki said that “the formulas the United States used to create the atomic explosions over Hiroshima and Nagasaki were similar to what his team had worked out,” suggesting that Japan’s weapons program was far more extensive than one laboratory and several scientists in Tokyo.¹⁸⁶ None of that information, the formulas developed by Japan’s scientists during the war has ever made its way out of Japan, and may even today remain highly sensitive. Finally, after seeing the destruction of Hiroshima and Nagasaki, Suzuki said “Nonetheless the first thing I thought of was that we had to act as quickly as possible. Of course I didn't know that the war was at its end. I wanted to produce such a weapon as soon as possible.”¹⁸⁷ However, in the end, that was impossible.

¹⁸¹ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

¹⁸² *JAPAN HOPED TO USE THE BOMB IN WORLD WAR II. Physicist on atomic research team says there were no ethical misgivings about it*. Mercury News Wire Services. 21 July 1995

¹⁸³ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

¹⁸⁴ Memorandum For: Major General L. R. Groves. Subject: Summary of Target Committee Meetings on 10 and 11 May 1945. U.S. National Archives, Record Group 77, Records of the Office of the Chief of Engineers, Manhattan Engineer District, TS Manhattan Project File '42-'46, folder 5D Selection of Targets, 2 Notes on Target Committee Meetings. Dated 12 May 1945.

¹⁸⁵ *JAPAN HOPED TO USE THE BOMB IN WORLD WAR II. Physicist on atomic research team says there were no ethical misgivings about it*. Mercury News Wire Services. 21 July 1995

¹⁸⁶ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

¹⁸⁷ *Japan: A-bomb program in World War II?* BRT (Belgian TV), 29 May 1995. Available at <http://www.wiseinternational.org/node/1319>

A Secret Mission Still Secret

Though no record describing the results of the investigation into the progress and then current capabilities of Japan's atomic energy and weapons program as conducted by Fujiwara Ginjiro has been found. What is absolutely certain is that this last secret mission did indeed take place. It did happen, and the group traveled to all the historically reported areas of Japanese research into atomic energy and weapons in the area of northeast Asia; Korea, Manchuria and China. How and when their findings made their way back to Tokyo is similarly unknown.

It is highly unlikely that any paper-copy of the Fujiwara report will ever be found. It was the end of the war; the need for immediate and decisive information probably dictated the use of verbal reports only, relying upon phone, radio and teletype. By the time most of the group returned to Japan, the Emperor's broadcast revealing the Japanese surrender had already occurred. Fujiwara Ginjiro, Kitagawa Tetsuzo and Fujisawa departed a Japan ready to continue the war, and returned to a nation now on its knees.

What that report said and how it played into the ultimate surrender of Japan is unknown Fujiwara Ginjiro, Kitagawa Tetsuzo and Fujisawa obviously returned to Japan prior to the issuance of General Order Number 1 grounding all Japanese aircraft.

Wars are fought with what you have

It is likely that the Japanese did possess some kind of advanced weapon, possibly several of them or parts thereof as described to Snell by Tsetusuo Wakabayashi in the late summer of 1946. Exactly what those weapons were remains to be determined as it is unlikely that the Japanese government will ever reveal any details of their wartime research into the utility of atomic energy, or the viability of a late-war weapon. It is probably accurate to suggest that the findings of the Fujiwara Ginjiro investigation were less than positive, but likely decisive. In that light, lacking a viable weapon, Japan had few options left other than surrender. Though Hirohito had reached a decision to surrender several days earlier, information that Japan was too far behind in the race for a bomb probably had some impact on the staff of the imperial Japanese Army that sought one final battle on the beaches of Kyushu.

It is possible that the yield of their version of a weapon was not equal to the task at hand. The weapons which were detonated over Hiroshima and Nagasaki were in a sense, the "crowd pleasers" of the time. They destroyed entire cities. A smaller, lower yield tactical weapon, designed for use against the planned American invasion force bearing down on the shores of Kyushu is unlikely to have had the same impact, effect and, if that weapons relied solely on uranium as General Anami had stated in the days after Hiroshima, they could not have had that many of them. Any similar such weapon the Japanese might have had for use against the Red Army would have only been of use against armies massed in the field, and the forces of the Soviet Union were by mid-August, spread out across Manchuria, landing on Sakhalin Island, and entering northern Korea. Questions about the efficiency of a Japanese weapon must also be answered.

The detonation of a dirty weapon might contaminate an area for years if not decades and longer. But the dangers of radioactive poisoning were only just beginning to be realized; those effects might not have been readily attributable to such a weapon the days and weeks immediately following an invasion of Japan. While radiation sickness was known before the war, until the blast at Hiroshima, it had not occurred in any appreciable numbers. It is unlikely, that had some combat doctor or surgeon encountered it on the beach as the invasion of Japan took place that they would have recognized and identified it accurately, much less been capable of treating it. A deeper question to be pondered revolves around why, if the Japanese had some ability, any ability to respond to the attacks on Hiroshima and Nagasaki in kind that they did not launch a counterattack. The answer is probably more complicated than we know, but part of the answer may lie in the Emperor's recorded speech to the nation, of the Imperial Rescript on the Termination of the War, the *Gyokuon-hōsō* (the Jewel Voice Broadcast) which was aired at 12:00 noon Japanese standard time on 15 August 1945. The Rescript read in part:

“... Despite the best that has been done by everyone – the gallant fighting of the military and naval forces, the diligence and assiduity of Our servants of the State, and the devoted service of Our one hundred million people – the war situation has developed not necessarily to Japan's advantage, while the general trends of the world have all turned against her interest.

Moreover, the enemy has begun to employ a new and most cruel bomb, the power of which to do damage is, indeed, incalculable, taking the toll of many innocent lives. Should we continue to fight, not only would it result in an ultimate collapse and obliteration of the Japanese nation, but also it would lead to the total extinction of human civilization.”

And therein lay the answer, “The total extinction of human civilization.” If Japan had a weapon of some type and responded to the American attacks in-kind, a cycle of attack and counterattack would have been the result. At some point in a fight, victory can be achieved by knowing exactly when, to throw in the towel.

Doppelganger Awry

So was Tsetusuo Wakabayashi really Suzuki Tatsuaburo? It would seem so. The information available at this time suggests that Tsetusuo Wakabayashi was indeed Suzuki Tatsuaburo. All available information points in that direction. The timeline of events; the chronology suggests that Tsetusuo Wakabayashi was Suzuki Tatsuaburo. Suzuki is known to have been in Hiroshima and Nagasaki immediately after the attacks on those cities, he was intimately knowledgeable of the atomic energy and weapons programs of the Imperial Japanese Army and Navy, and he was inexplicably found in China several months after the war. There is no information to suggest that the two existed at the same time in different places. The final answer however probably awaits some Japanese historian or researcher.

Did Japan test an atomic bomb off the coast of northern Korea or on edge of the Gobi Desert in Manchuria? It would seem unlikely; however the truer answer is that no one really knows. Though it was true that the islands of Japan themselves lacked sufficient uranium deposits to

build a weapon, as the country's physicist admitted after the war, however the Japanese were mining uranium in China, Manchuria and northern Vietnam. The Japanese had also identified high quality uranium deposits in Burma. The real truth was that by the end of the war, they had far more uranium in the home islands of Kyushu, Shikoku, Honshu and Hokkaido than they needed to produce a bomb. Uranium enrichment to some unknown level was taking place in China, Korea and Manchuria.¹⁸⁸ The 237th Air Corps at Mukden, Manchuria was responsible for transporting the product of this enrichment effort and other materials to Tokyo.¹⁸⁹ As the Furman report noted, Japan had the scientific wherewithal and talent necessary to produce a weapon.¹⁹⁰

According to Suzuki Tatsusaburo in his 1995 interview, Japan had worked out the necessary formulas required to produce the weapon.¹⁹¹ The Japanese had also worked on thermal and gaseous diffusion as isotope separation processes.¹⁹² The mass spectrograph method of uranium isotope separation was already well known in Japan prior to the war, but prohibitively expensive.

As Fisher had discovered, the Japanese also had the German designs for a successful centrifuge.¹⁹³ What Japan appeared to be lacking was the industrial infrastructure required to support a large-scale uranium enrichment process, however the industrial capacity of Japan's Empire outside the home islands has rarely ever been figured into the equation. Until the publication of this paper, Japan's uranium separation efforts in China and Manchuria have been obviously overlooked. Though it is unlikely that any form of large-scale uranium enrichment existed in Korea at the time, far less is known about any facilities that Japan may have operated in Japanese-occupied China and Manchuria.

What did Tsetusuo Wakabayashi witness off the coast of Hamhung, Korea in 1946? Apparently only Fujiwara Ginjiro, Kitagawa Tetsuzo, a man known only as Fujisawa (no further information) and possibly Suzuki Tatsusaburo knew for sure.¹⁹⁴ The same likely holds true regarding those rumors of an event that reportedly took place on the edge of the Gobi Desert.

Final Reflections

¹⁸⁸ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁸⁹ Field Report. Tokyo Kogyo Daigu. Subject: Visit to the Tokyo Technical University 29 June 1946. Record Group 331. Stack Area 290. Row 24. Compartment 2. Shelf 1-2. Entry 224. Box 1. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁹⁰ *Ibid.*

¹⁹¹ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

¹⁹² Memo for Record:RS/JPH/mlm. Technical Intelligence Detachment. 18 November 1948. Stack Area 240. Row 24. Compartment 2. Shelf 1. Entry 224. Box 2. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

¹⁹³ Walker, Mark. *Nazi Science: Myth, Truth, and the German Atomic Bomb*. Plenum Press, New York. 1995

¹⁹⁴ Office of Strategic Services, China Theater. X-2 Branch. Report. Ramona. Record Group 226. Stack Area 250. Row 64. Compartment 33. Shelf 2. Entry 211. Box 34. The US National Archives and Records Administration, 8601 Adelphi Road, College Park, MD

There is no doubt in this researcher's mind that Suzuki Tatsuaburo was anything if not an honorable man. Though Suzuki was a scientist, he was also a patriot and a soldier caught up in a world war. Like millions of other men and women, he answered the call of his country. It is known that Suzuki Tatsuaburo took Japan's 1945 surrender hard. Where Suzuki went after he returned to Japan, and what he did in those years immediately after the war remains unknown to this researcher; a piece of history again, awaiting some historian or researcher in Japan to develop more fully.

Years after the war, Suzuki would write or co-author several scientific papers as a member of the Department of Materials Science, Faculty of Science and Engineering, Iwaki Meisei University, a private university of some several thousand students located in Fukushima Prefecture north of Tokyo. It is unlikely that any of these would ever have the impact of that single paper he wrote for General Yasuda in 1940, Japan's version of the British Maude Report. In June 1991 Suzuki Tatusaburo was named President of Iwaki Meisei University.¹⁹⁵ If Tsetusuo Wakabayashi was indeed Suzuki Tatsuaburo the story began with Suzuki in 1946, and ended with Suzuki in 1995, one of those rare moments in history when stories, tales and legends come full circle.

In his 1995 interview Suzuki said of his wartime efforts to develop an atomic bomb that Japan's "atomic research team had no ethical qualms about its goal of building an atomic bomb and unleashing it on America."¹⁹⁶ According to Suzuki "We had no doubts about using it if we could. No one ever contemplated how terrible it would be... We were just doing our best to put it together."¹⁹⁷ After Hiroshima and Nagasaki, many of the Manhattan Project's scientists would say the same thing.

Though I never met Suzuki Tatusaburo, I find in him much to admire. In many ways I regret writing this paper, possibly revealing Suzuki's role as Tsetusuo Wakabayashi. Yet it is the role of historians to place time and events in some order to explain the past in a search for the truth.

¹⁹⁵ History of Campus. Iwaki Meisei University. <http://www.iwakimu.ac.jp/english/about/history.html>

¹⁹⁶ KRISTOF, NICHOLAS D. Unmasking Horror – A special report.; Japan Confronting Gruesome War Atrocity. The New York Times. 17 March 1995. <http://www.nytimes.com/1995/03/17/world/unmasking-horror-a-special-report-japan-confronting-gruesome-war-atrocity.html?pagewanted=all&src=pm>

¹⁹⁷ Ferguson, P.H. *Scientist Describes Japan's World War II Quest for Atomic Bomb*. AP News Archive. 19 July 1995. <http://www.apnewsarchive.com/1995/Scientist-Describes-Japan-s-World-War-II-Quest-for-Atomic-Bomb/id-9b2cd43fe9e33262ca8195c38c7412da>

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