

YALE'S STORMY PETREL

In her recently published book *The Great Secret*, historian Jennet Conant describes a meeting that occurred in New Haven in June, 1942 between 28 year old Army medical officer Stewart Alexander and the former head of the Chemical Warfare Service (CWS) Milton Charles Winternitz. During World War I, Dr. Winternitz led the Biological Section of CWS and In 1940 launched the secluded research laboratory at Edgewood Arsenal in Maryland where Dr. Alexander now was working.

In March the young scientist's promising experimental findings about the biological effects of nitrogen mustard were cut off because they were deemed of insufficient importance for the war effort. Desperate to keep the project alive, Alexander requested permission to personally meet with Winternitz who now was chairman of the CWS's Committee on War Gas Casualties. (When the committee was being formed, it was proposed that Winternitz be given the rank of general, but he refused, commenting that he would lose all autonomy and would have to obey orders.) The former dean of Yale's medical school was regarded as the preeminent authority in the field and naturally the young physician wished to personally describe what he'd learned to the great man's attention.

Stewart Alexander grew up in Park Ridge, New Jersey and after completing medical studies at Dartmouth, Columbia Presbyterian and Bellevue, returned home to join his father's long-time medical practice. But within months when war appeared imminent, the neophyte enlisted and, because of his background in chemistry, soon was assigned to perform research at Edgewood Arsenal. After the end of World War I, the Germans had developed a potent new mustard gas and when two samples were smuggled out and sent to Edgewood where Dr. Alexander was assigned to study its effects. Working with rabbits he was astonished at the chemical's toxic effect on lymphatics and marrow with white blood cells virtually wiped out. The young doctor appreciated that in peacetime nitrogen mustard, so lethal in wartime, might be useful in treating certain hematologic malignancies.

Milton Winternitz had a formidable reputation. As Jennet Conant noted, he was "Napoleonic in outlook and stature, a short man with a short temper." Others described him as "a steam engine in pants" and "an intense fountainhead of energy," This is how Conant described the encounter in New Haven:

Alexander arrived for their June meeting armed with a stack of files and charts, but nothing could have prepared him for such a negative reception. He tried to

explain about the “bizarre blood findings” in experimental animals, beginning animatedly, “We found that the agent had the most terrible effects on blood and lymph nodes,” and describing in detail how the nitrogen mustard selectively destroyed certain cells. Winternitz allowed him to go on at length, but his skepticism showed in the set of his shoulders and the hard, thin line of his mouth.

After drilling Alexander with questions, Winternitz told him that he did not agree with his findings on the systemic effects. He doubted their validity, adding that strange effects were not described either in his experimental work or his book. He suggested that errors had been made in observation, or errors in counting white blood cells. When Alexander attempted to defend his work, Winternitz dismissed the results as probably due to an inferior group of rabbits. He had a sharp tongue and in a disparaging tone made it clear that in his considered opinion, the Edgewood figures were “unreliable.”

Although Alexander put up a strenuous argument, Winternitz never budged from his viewpoint that, “if this did happen in animals, it did not happen in human beings because he had seen tens of thousands of cases in World War I and had never seen this. (p. 110)

According to Jennet Conant, Winternitz’s “cruel and utterly disingenuous dismissal of Alexander’s work on mustard-induced leukopenia in rabbits does not reflect well on him and is not in keeping with the true spirit of scientific inquiry” (p. 202.) Deflated, but undaunted, Lt. Col. Alexander’s research terminated several weeks later when he received orders to report to the front in North Africa. It’s not my intent to explain here how the young doctor was vindicated after he was assigned to investigate hundreds of mysterious deaths of allied servicemen that occurred after the Luftwaffe bombed the Italian port city of Bari on December 2, 1943.

That narrative is wonderfully told in Jennet Conant’s new book *The Great Secret*. In it the author acknowledges that Winternitz’s brusque dismissal of Alexander’s work was excessive, but she suggests that a contributing reason for his attitude was that in the run-up to World War II, American research on chemical warfare was highly classified. Although that’s true, I am less charitable and suggest that Winternitz’s behavior was entirely consistent with his caustic personality. Admittedly, I am biased on two scores. For more than two decades, Stewart Alexander was my friend, colleague and medical mentor. Also, as a Jewish physician I can’t forgive him for initiating an

unfair quota system at Yale that limited admission of Jews (like him!) and other minority groups. With that in mind, let us explore further.

The son of a poor Jewish immigrant insurance doctor, Dr. Winternitz was a Baltimore native who graduated from Johns Hopkins in 1903 and obtained his medical degree from there in 1907, working with Osler, Halstead and Welch. In 1917 when Yale needed a new pathologist and bacteriologist, Professor Welch suggested Winternitz who when accepted became the first Jewish professor at the Yale School of Medicine. Three years later Milton Winternitz was appointed the dean and during his fifteen year tenure raised Yale from a second-rate institution to one of the finest in the world. He modeled the curriculum after Johns Hopkins where the emphasis was on scientific medicine based on the German approach. Dean Winternitz simplified the educational program, certain that graduate students, freed from compulsory attendance at lectures, would learn for themselves. They were there “to learn rather than to be taught.”

The so-called “Yale System” provided few lectures or exams supervised by a full-time salaried faculty and provided few lectures or exams. Students were required to carry out a research project before graduation. Winternitz wanted to humanize medical training by having social scientists collaborate with biological scientists so that students were made fully aware of the psychological and social origin of much of their patients’ complaints. History, philosophy and literature were integrated into the curriculum along with scientific subjects so that patients would be studied as whole persons by well-rounded physicians. I suspect that a modicum of eugenics theory probably was included since the dean was a Board member of the American Eugenics Society.

Students and faculty members variously described Winternitz as brilliant, charismatic, inspirational — “a vital and vivid man,” “an inexhaustible generator of ideas,” “a constant stimulator of imagination.” But to others he was abusive and terrifying — “a bastard,” “a sadistic brute,” “a martinet,” “a terrible little guy who dissipated the financial resources of the school on impractical schemes.” His granddaughter recalled that he had “an intense charm that could make you feel that you were the only person in the world - and a raging temper that could make you wish you weren’t.”

At first, the medical faculty was tolerant of the dean’s enthusiasm for “humanizing” scientific medicine, but in the aftermath of the Great Depression as money became tight, many of the very same men whom he’d recruited to Yale pushed back against these “wild ideas.” A full-scale rebellion was mounted against the dictatorial dean with the Board of Trustees siding with the faculty and in 1935 Winternitz was forced to resign

the deanship. According to one observer, "Purely personal animosities and grudges were really the moving causes."

If a man can be judged by his friends, consider Winternitz's relationship with Abraham Flexner. In his own memoir, the author of the famous Flexner Report of 1910 that revolutionized medical education recalled Winternitz as "one of the most energetic, keen and able administrators that I encountered in the whole course of my dealings with medical schools." For his part, Winternitz warmly referred to Flexner as "Uncle Abe." The two first met in 1917 when Flexner agreed to help enlist the political support of Colonel Isaac Ullman, a Jewish tycoon who made his fortune manufacturing corsets and now was chairman of the Board of the New Haven Hospital. During their discussion, Flexner remarked, "I am a Jew myself and have been for years making my way among Christians and working with them...prejudice need not be stirred." Flexner sometimes spoke of his intimate knowledge that American universities had long since risen above denominational or racial prejudice, but in this Flexner was disingenuous.

During the first half of the 20th century, leaders of U.S. medical schools rationalized their objections to the admission of Jewish students on the grounds of proportional representation as well as classic anti-Semitic canards such as bookishness, poor manual dexterity and avarice. Nicholas Murray Butler, president of Columbia University, supported a policy of "selective admissions" to limit the admission of Jews in favor of his perception of an elite "natural constituency." Butler said that that he had not eliminated boys because they were Jews but that he "wanted to limit the lowest grade of applicant and it turns out that a good many of the low grade men are New York Jews." Harvard's President A. Lawrence Lowell disapproved of immigrants who failed to fit his image of mainstream America and argued that a large Jewish presence on the campus would increase anti-Semitism in the student body and cause Gentile students not to attend Harvard. No doubt Milton Winternitz would have agreed.

Dr. Dan Oren, in his book *Joining the Club: A History of Jews at Yale*, described the dean as being almost a caricature of a "self-hating Jew." Judaism seemed to be a badge of shame and although Winternitz retained his Jewish-sounding surname, he preferred being called "Winter." Even his praise of Jewish colleagues could be backhanded; referring to one of them, "He certainly has none of the disagreeable qualities personally of his race." Winter was a Jew in a Christian society and, in order to fulfill his ambitions and remain at his post, he yielded to the prejudices of the time in limiting the admission of Jews, Italian Catholics, and Afro-Americans to the medical school. In order to achieve a "balanced" class, Dean Winternitz introduced a quota

system instructing Yale's admissions committee, "Never admit more than five Jews, take only two Italian Catholics and take no blacks at all."

(Ironically, "Uncle Abe" Flexner suffered a similar fate as his friend Winter. As described in my book *Abraham Flexner: A Flawed American Icon*, although he was brilliant, he was arrogant and had an autocratic leadership style. Diplomacy was not his strong suit. By 1928 Flexner had offended so many colleagues at the Rockefeller Foundation that he was removed from his leadership position. Similarly, in 1939 a faculty coup forced him to resign as director of the Institute for Advanced Study that he had founded in Princeton.)

In 1942 the government's Office of Scientific Research and Development contracted with institutions around the country to study chemical warfare agents and Winternitz, persuaded Yale to establish a center to study the biological effects of gases, especially mustard gas. He assigned two young pharmacologists at Yale, Louis S. Goodman and Alfred Gilman Sr. to study nitrogen mustard concurrent with Stewart Alexander's experiments at Edgewood Arsenal that he had so rudely disparaged. Like Dr. Alexander had discovered at Bari, Goodman and Gilman noted the agent's severe toxicity, primarily to lymphoid tissue and bone marrow, and found dramatic regression of lymphomas in mice; further studies in rabbits were equally encouraging.

Since they were not constrained by the military imperative of secrecy, Goodman, Gilman decided that it was time for a clinical trial in humans to test the effect of mustard on a variety of lymphoid malignancies. The results of their treatments, along with from four other academic centers, 67 patients in all, only were reported after the war ended when they were published in the *Journal of the American Medical Association* (September 21, 1946.) By then Goodman and Gilman's conjoined names were famous for another reason — known to every student of pharmacology because of their classic textbook *The Pharmacological Basis of Therapeutics* (first edition, January 1, 1944.

Stewart Alexander had been correct when he surmised from his experimental work at Edgewood that nitrogen mustard might have therapeutic value in humans and this was confirmed two years later by his observations in Italy. Conan described him as being the unsung medical hero of the Bari Incident, but after the war he eschewed an opportunity to pursue an academic career and receded into relative obscurity joining his father's humble medical practice in Park Ridge, New Jersey where he worked almost until his death in 1991. For some three decades, his role at Edgewood and later at Bari remained classified until in 1971 a book by Glenn Infield, *Disaster at Bari* was

published. Now Jennet Conant's book *The Great Secret* has expanded our appreciation of this long forgotten incident and its aftermath — the dawn of cancer chemotherapy. However, I'll conclude this essay with more about the imperious Dean Winter(nitz.)

In 2010, many years after both of my protagonists had died, Priscilla Waters Norton and Dr. Howard Spiro published a book in which they attempted to provide a balanced perspective on "Yale Medical School's passionate humanist." (Although Winternitz's activity during World War II was described briefly, the nitrogen mustard saga was not mentioned.) Dr. Spiro, who was founding director of the Program for Humanities in Medicine at Yale, was disturbed that this visionary who laid the foundation of the modern Yale School of Medicine had been largely forgotten. The authors' purpose was to rehabilitate the tarnished Dean's reputation, but they acknowledged that although this "great hero...[had] "grand idea, his personal failings hobbled their development. Therein lies his tragedy." (p.424) This is how Norton and Spiro summarized the Winternitz narrative during his glory years at Yale:

Winter had many faults. His terrible temper often made him lose control. The Greeks had a word for it: hubris, pride that goes before the fall, the seeds of destruction within. Winter had the right ideas, he had the right training, and he had the power to reach the right goals. Whether he originated them opr, more likely facilitated them, his determination and, yes, his ruthlessness brought them to the fore. But the good manners he so admired and his hope for social medicine, enriched by the contributions of law and divinity, were swept away by his narcissism and ambition.

Howard Spiro was anxious to dispel criticism of Dr. Winternitz as behaving like an anti-Semite. "It was simply the way Jews had to survive amid the largely Anglo-Saxon and Protestant New Haven population at Yale....Winter did not rise above the prejudices of his time and avoided making a public show of his Jewishness....He never hated himself. He was too proud, too self-assured and narcissistic for that, even though he might not have chosen Jewish parents if he could have arranged matters otherwise." Dr. Winternitz's daughter Mary Cheever was quoted, "If he stood up for Jews and his own Jewishness, he would not have survived at Yale. He wouldn't have been able to do the things he did. On the other hand, by ignoring his Jewishness, he alienated some of New Haven's Jewish community and many Jews within the medical profession." Dr. Spiro concluded:

Winter can be seen as an ambitious Jewish boy, not so much forsaking his Jewish background as being attracted to the Protestant background of the people he most admired. He had convinced himself that he was a WASP and could therefore act as Jewish as he wanted, without appearing (to himself) overly "Jewish." (Notes, p. 458)

We all are imperfect human beings; even the most acclaimed often have character flaws, albeit some more egregious than others. These two Jewish doctors, who met in New Haven in June 1942 to discuss the biologic effects of nitrogen mustard, had dissimilar personalities — one was pugnacious and arrogant, the other, mild mannered and modest. Milton Winternitz died in 1959 at age 74, Stewart Alexander passed away in 1991 at age 77. Although the former was a medical titan, his luster quickly faded. The latter's subsequent career played out on a smaller stage, but he was appreciated by colleagues and patients as much for his kindness as for his professional achievements. It's gratifying that Dr. Alexander's contributions during World War II finally are coming to light and he is receiving the recognition that is his due.

SOURCES

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