

Herbert Haviland Field (1868-1921): Bibliographer of Zoology

by Colin B. Burke and Michael K. Buckland

EDITOR'S SUMMARY

Before the field of bioinformatics was imagined, zoologist Herbert Haviland Field advanced the Concilium Bibliographicum, a comprehensive bibliographic resource for zoology. Born in New York to a wealthy family, Field pursued his early interest in science and earned multiple degrees but was frustrated by the difficulty of searching publications. Field developed a vision and plan for the Concilium, garnering financial support from donors and his family's resources and implementing the young Universal Decimal Classification for the project. Despite contacts with scientists throughout Europe, reliable funding for the Concilium eluded him. At the start of World War I, Field shifted his attention to relief missions, eventually using his international social position and language skills in commerce, the intelligence field and ultimately peace efforts. Attempts to rebuild the Concilium after the war failed, and Field died of influenza in 1921 at age 53, falling short of his goal to use the best technology of the day to improve information access.

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Herbert Haviland Field developed a very sophisticated bibliographic service for zoology through his Concilium Bibliographicum in Zurich. He did intelligence work for Allen Dulles during World War I and then was largely forgotten for decades until recently. (See also the related article in this issue of the *Bulletin*: "Precise Zoological Information: The Concilium Bibliographicum, 1895-1940.")

Early Life

Herbert Field was born in Brooklyn, New York, in 1868. His Quaker family attended meetings, used "thee" and "thou" and sent the children to their city's Quaker grammar school. They stood by the Quakers' commitment to peace while being deeply involved in modernizing American society, were devoted to education and very involved in civic affairs. Although not radicals, the adult Fields of the 19th century were progressive reformers, playing roles in causes ranging from building libraries to advancing knowledge, from educating the masses to women's rights.

Field grew up in a lavish multi-level home in Brooklyn's stylish Heights district with its own wine cellar and an indoor swimming pool. Servants helped maintain the home and cared for the children, who enjoyed the theater, art galleries and museums of New York City, as well as the family's rural retreat in Great Neck, Long Island, with its tennis court and pool. His



Herbert Haviland Field as a young man

father, Aaron Field, ran thriving trading and auction businesses and the family of his mother, Lydia Haviland, owned a famous ceramics factory in France. Despite childhood sickness and a stammer, Herbert and his younger brother Hamilton attended Brooklyn's best private secondary schools and the world's best universities.

Even in his early years Field showed special talents and interests. He had a photographic memory, impressed his teachers with his brilliance in all subjects (especially science), and at an early age became multilingual. When he attended the new and very expensive Brooklyn Polytechnic school, he did not opt for its practical engineering program, but selected its college-prep track, with an emphasis on science and history.

University

After he entered Harvard University, Herbert's parents allowed him to pursue zoology, an interest that was unlikely to generate wealth as his father had and given his continued stammering, was unlikely even to lead to a job as a teacher. He completed his bachelor's degree in 1888 and MA in 1890. He was by now fluent in Dutch, French, German, Italian, Latin and Russian. He was interested in embryology and amphibian morphology.

In 1891 he completed Harvard's recently introduced Ph.D. degree, working on embryology under the guidance of Professor Edward Laurens Mark. As he recalled later: "For the purposes of the research undertaken, it was necessary to work through all previous publications on the subject. The search for these publications was a most laborious task and in the later stages would have seemed quite incommensurate with the results gained, if at the last some forgotten observations of considerable theoretical importance had not been unearthed" [1 p. 1]. This experience led him to crusade for improved bibliographical services. He found that information systems for scientists were very slow in notifying researchers of publications in their fields, seriously incomplete in coverage, too expensive and published using old-fashioned technologies that prevented creative use of bibliographic records. Attempts to provide remedies by, for example, the Royal Society in England and *Zoological Abstracts* had fallen short and seemed to him unlikely to ever produce solutions.

Europe and a Calling

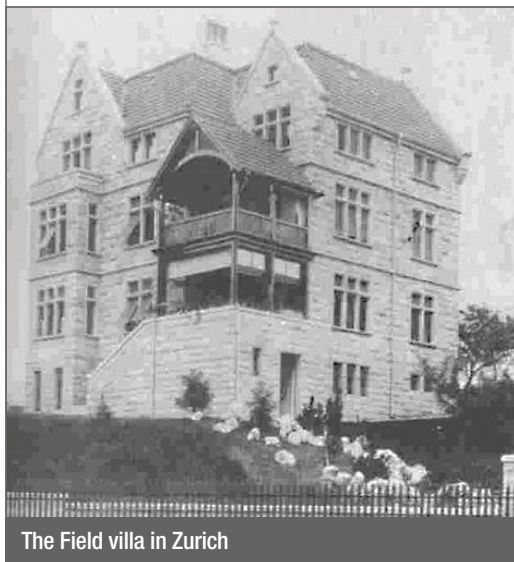
After corresponding with Julius Victor Carus, the distinguished bibliographer of zoology in Leipzig, Field moved to Europe where he received doctoral degrees from the universities of Freiburg, Leipzig and Paris. He visited every country in Europe, except for Portugal and the Balkans, seeking out whomever seemed able to give advice or aid on the bibliographical problems of zoology. Felix Anton Dohrn, the enterprising German who had conceived and established the world's first marine biology station in Naples, persuaded Field that he should not merely study the problem, but should himself take action to solve it. This endeavor became Herbert Field's lifelong calling.

The winter of 1894-1895 was spent in Naples developing a plan. Dohrn pledged to find ways to provide five years funding. In 1895 the French Zoological Society took the lead in voting a small annual subsidy for the period of five years and initiated formal endorsement by the Third International Congress of Zoology, which provided a mandate. However, Field would always depend upon his own funds and those from his family, even after the Swiss government provided a minimal subsidy.

Classification and Cards

Herbert accepted the merits of Dewey's Decimal Classification, even though he had some reservations about its emphasis on genetic relationships. After spending months alone in a Paris apartment experimenting with classifications he concluded that the elaboration of that system as the Universal Decimal Classification (UDC) by Paul Otlet, Henri La Fontaine and others at the International Institute for Bibliography (IIB, later FID) in Brussels was superior. Field was not only attracted by the UDC, he wanted his venture in zoological bibliography to be part of a general scheme of universal bibliography that would be in harmony with the fundamental principles of mutual aid that he had proclaimed as the policy of his own program, which he named the Concilium Bibliographicum. Field strongly shared the idealism, internationalism and pacifism of Otlet and La Fontaine.

The plan was to generate bibliographic references on standard-sized index cards, topically coded using UDC, as the basis for a system that



The Field villa in Zurich

would provide scientists with coverage of the entire world's zoological literature in installments supplied every two weeks. Field envisioned his subscribers integrating new cards into a local file, thereby building a cumulative, retrospective bibliography covering their field in addition to being promptly notified of new publications. The UDC notation would be the equivalent of a universal language, using cards would allow users to

rearrange their files at will, and precise, complete subject indexing would save researchers from having to read lengthy summaries of articles.

The Concilium Bibliographicum

Field believed that there were enough scientists with enough money to support such a service to quickly make it self-supporting. By 1895, after becoming associated with Paul Otlet's grander IIB in Belgium and gaining the approval of the International Zoological Congress for a test period of five years, Field decided to turn his dream into a reality. With his own and his family's funds, the Swiss subsidy and hopes that his friends would pay for subscriptions even before he could produce any cards, he leased a villa and established the Concilium Bibliographicum in Zurich, Switzerland.

Geographically central, on politically neutral territory and having a major science library, Zurich became the chosen location after the Swiss federal and cantonal authorities offered financial support and local libraries promised cooperation. In November 1895, two rooms in the neighborhood of the university were secured for operations and on November 15 the work of the Concilium Bibliographicum commenced with a staff of two: Herbert Field as director and Marie Ruehl as his secretary.

Support

Small grants were received from some learned societies and the Elizabeth Thompson Science Fund, and there was increased support from the Swiss federal government. But Field was not, nor would he ever be, a good academic politician. Although he traveled throughout Europe to make friends with its leading scientists, the Concilium became entangled in conflicts with other nations and organizations over the control of science information services. He was also a less than proficient businessman. While by 1903 the Concilium had some 700 subscribers and had sent out close to 12,000,000 cards, the operation remained in debt, and keeping it running was eating into the inheritance from his father and putting his other investments in the United States, Switzerland, England and Germany at risk when he used them as collateral for loans needed to maintain his service.

Seeking to strengthen support for the Concilium, Field made more commitments than could be sustained. For example, he took on editorship of a bibliography of human and comparative anatomy and of a bibliography of physiology, but the resources of the Concilium were quite inadequate and both eventually had to be abandoned. At the best of times around 1906 the Concilium's income briefly cover its operating expenses, but never its capital expense and debt repayment.

Family

In 1903 Herbert finally married at age 35. His bride was Nina Eschwege, also a Quaker, whose wealthy merchant father had moved from Germany to London. Nina gave up her work as a journalist and in 1904 their first son, Noel, was born, followed by Hermann, in 1906, and a daughter, Elsie, in 1910. Meanwhile, Herbert made other commitments, ones reflecting both his youthful upbringing and his rather poor business skills. Although now having the responsibility of a family, he did not abandon his calling despite his Concilium salary being less than his expenses. In fact, he deepened his commitments to international science and to Switzerland. He built a new villa in Zurich, one that outshone his fathers' elegant Brooklyn Heights townhome, and he used more of his investments as collateral for a loan to erect an impressive new building for the Concilium. However, he recognized

that his family needed protection. He changed the legal status of the Concilium to a for-profit corporation so that if it did fail all of his assets would no longer be at risk.

War and Peace

The Concilium's financial situation improved somewhat but Field's recurrent health problems sometimes led to it falling behind in its work and he had to make some demeaning trips to America to try to raise the funds needed to rejuvenate it. Then, came the great disaster: World War I. The Concilium had to shut down. Nina and the children were sent to the Italian Alps for safety as Herbert moved into a small apartment and began another career and his life's greatest adventure.

He decided to work for the Quaker's relief agency in Europe. Handsome, charming, multilingual and accustomed to moving in elevated social circles, Field had a special pass allowing him to travel throughout the war areas. He helped arrange the delivery of food and medicine and learned much of the politics of the conflict's coalitions. He also worked for America's fledgling intelligence effort led by Allen Dulles, the young State Department employee based in Bern, Switzerland. After the United States declared war on Germany his travels and his information sources were restricted, but he continued to make important contributions, such as being on the boards determining trade between the United States and Switzerland, furnishing special information on Germany's gas warfare technologies and, near the war's end, acting as an intermediary in peace proposals between Austria and the Allies.

His work was so admired that as the war was winding down he was asked to serve as America's eyes and ears in Bavaria. He traveled to Munich, where he found himself in the midst of the chaos of civil war and famine. He reported on conditions, emphasizing his fear and hatred of the Bolsheviks who, he said, were ruining Russia and were about to do the same in Germany and Central Europe.

Herbert Field received more honors. He was asked to help with the peace settlements in Paris and with the first plans for the League of Nations. That work led him into contact with more influential people and even an

invitation for a personal visit with Woodrow Wilson, the United States' idealistic president who, like him, was an internationalist.

Rebuilding the Concilium

After the peace settlement, Field turned his attention back to the Concilium and to his family. In dire need of funds for the Concilium and worried that his personal investments had been lost during the war, Herbert made a hurried trip to the United States. He visited with many important figures in the U.S. government, as well as its liberal universities and philanthropic organizations, expecting to quickly raise money for his international information effort. He also lobbied for support for the League of Nations and he attempted to solve his own financial problems, ones that he exaggerated. He became frustrated and depressed, especially after he discovered there was a new competitor to the Concilium, the United States' National Research Council's proposed international science information service. He fretted that both the Concilium and his family would be destitute. At one point, he thought about accepting offers to become an international banker or to work for the State Department, but he stayed with his calling. He returned to Europe in 1920 with only some hints of funding from the giant Rockefeller foundations and a bit of hope that his investments would recover from the losses of the war and the post-war financial turmoil. Nina and the children returned to the villa in Zurich.

Herbert began to rebuild the Concilium, the children returned to their private schools, and Herbert and Nina resumed their role in Zurich's social circles. Then, before secure funding was arranged, Herbert's poor health intervened. He died of complications from influenza in April 1921, at age 53. His family returned to the United States. When he died he may have been happy because of the indications that his family's financial situation was improving, but it is certain he would have been shocked and disappointed by their subsequent behavior. All became believers in the Communist doctrines he detested. Two joined the Communist Party. His older son Noel Field became a Russian intelligence asset and in 1949 Noel and Hermann were kidnapped by the Soviets and held for five years. They were used in the great purges in the satellite nations. Meanwhile the

Concilium went into a steady decline and, with the outbreak of World War II, was abolished.

Herbert Field and Paul Otlet

There are strong parallels between Herbert Field and Paul Otlet. Both visionaries were born in 1868. Both were pacifists dedicated to international collaboration. Both saw improved access to recorded knowledge as central to progress and efficiency. Both were committed to using the best, new

technologies and standards. Field is credited with inducing Otlet to change to the emerging standard card size, 75 x 125 mm. They collaborated closely and both launched their ambitious institutes in 1895.

Sources

The only modern accounts are Colin Burke's detailed biography of Field, *Information and Intrigue* [2], and Kupper [3]. This article also draws on Field's autobiographical account of the Concilium [1] and Henry Ward's obituary [4]. ■

Resources Mentioned in the Article

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