Obituary.

Dr. Ingetraut Dahlberg



Dr. Ingetraut Dahlberg, 23 May 2014 at the 13th International ISKO conference in Krakow (photo by Renate Ohly).

October 24, 2017, eight months after celebrating her ninetieth birthday Dr. Ingetraut Dahlberg, founder and honorary member of the International Society for Knowledge Organization (ISKO) and founding editor of this journal, died in Bad König, Germany.

For us in ISKO she was the core founder, prime inspiration and groundbreaking personality. On the occasion of her eightieth birthday, I searched Google and found she was present on over 900 websites. Ten years later, at the end of October 2017, there were as many as 13,000 Google hits. In *Wikipedia* she is listed as having 300 publications, and as of 2014 the Association for Information Science and Technology's Leaders of Information Science and Technology Worldwide project listed 337 of her publications (Dahlberg 2014c)—undoubtedly a great lifetime achievement. In addition to my own notes, my description of her life and work relies mainly on McIlwaine and Marshall (2008), Rohmen (2012), Rehwald et al. (2017), W. Dahlberg (1997), and I. Dahlberg (1998).

She was born as Ingetraut Gessler on 20 February 1927 in Cologne (Rhineland), Germany, the hometown

of her mother Luzie. At this time, the German economy had recovered somewhat from the First World War. Two years later, however, the international banking crisis was coming. Her father Theodor, who came from Wesel (northern Rhineland) and had studied economics in Cologne, worked first in Düsseldorf, then in Frankfurt, where Ingetraut grew up with her brother and sister. Upon receiving a camera as a present at the age of ten, she began to document everything that seemed important to her. After school in Frankfurt, Ingetraut studied philosophy, Catholic theology and English studies in Frankfurt and Würzburg. After an academic year in the United States at Mary Manse College in Toledo, Ohio, she met in 1949 her future husband Reinhard Dahlberg, who came from Opole (Silesia) and also studied in Frankfurt. They married in 1955 and moved to Karlsruhe, Germany, where the birth of their son Wolfgang followed and Ingetraut Dahlberg temporarily switched to the study of biology. Reinhard was later to become famous for his conceptualization of the technique of solar-hydrogen conversion. However, the couple broke up, not least because the parents were against this marriage, and Ingetraut Dahlberg moved back to Frankfurt.

Ingetraut Dahlberg found a position at the Gmelin Institute for Inorganic Chemistry, whose director at the time was Erich Pietsch, in Frankfurt in 1959, where she compiled bibliographies for Atomic Energy Documentation (AED) and thus began her career in scientific literature documentation and information science. In 1961, she joined the Rationalisierungskuratorium der deutschen Wirtschaft (RKW)(German Productivity Center). In 1962-63, she took part in training as a scientific documentalist. Afterwards, she worked at the Deutsche Gesellschaft für Dokumentation (DGD)(German Society for Documentation) on the collection of library holdings and the documentation of literature on the subject of documentation. In 1964-65, she spent a year at the Groth Institute for Crystallographic Data Documentation at Florida Atlantic University in Boca Raton, Florida, USA, and later at the university library. Together with Jean Perreault she worked there on problems of conceptual relations and their representation.

After returning from the United States, she became head of the DGD Library and Documentation Center. With the support of Helmut Arntz, who was chair of the DGD from 1962 until 1972, and with Martin Scheele as chairman, she founded and served as secretary of the committee Thesaurusforschung und Klassifikation (Thesaurus Research and Classification). Out of this emerged an collected edition and later Dagobert Soergel's book *Indexing Languages and Thesauri: Construction and Maintenance.* During this time she developed a descriptor system for information science.

From 1967-1969 she was the chair of a Universal Decimal Classification Review Committee (UDC-03/04) of the Fédération Internationale de Documentation (FID). This resulted in 1968 in the classification of document types and their special aspect auxiliaries with over one thousand terms and a proposal for the revision of the UDC.

From 1967-74 she was responsible for the revision of DIN 2330 "Begriffe und Benennungen: Allgemeine Grundsätze" ("Terminology and Terms: General principles") and DIN 2331 "Begriffssysteme und ihre Darstellung" ("Conceptual Systems and their Presentation"). Later she also worked on DIN 32705 "Klassifiationssysteme: Erstellung und Weiterentwicklung von Klassifikationssystemen") ("Classification Systems: Creation and Further Development of Classification Systems") and on ISO standards TC 37 "Language and Terminology," and TC 46 "Information and Documentation." In 1970 she served on the classification and indexing committee of the UNISIST programme, set up by UNESCO and known in those days as the World Science Information System chaired by

Douglas John Foskett. In 1971 she withdrew from the DGD, and began her doctoral studies in philosophy under Alwin Diemer in Düsseldorf, with general linguistics and history of science as minor subjects. In the same year she was appointed to the advisory board Datenbanksystem für die Bundesrepublik Deutschland (Database System for the Federal Republic of Germany) of the Ministry of the Interior of the Federal Government. In 1972-1973 she received a project assignment from the DGD to collect the names of fields of knowledge. From 1972-1974 she worked on the committee "Subject-Field Reference Code" of the FID/CR (Classification Research) group and took part in the creation of the Broad System of Ordering (BSO) for UNISIST (United Nations International Scientific Information System).

In 1973 at the age of forty-six, she got her doctorate with thesis "The Universal Classification System of Knowledge: Its Ontological, Scientific-theoretical and Information-theoretical Foundations," which was published in 1974 by Verlag Dokumentation Saur as Grundlagen universaler Wissensordnung. Here, the classification concepts and problems of universal classification systems were investigated and proposals were made for a new universal classification system. This led Dahlberg subsequently to tackle applications of classifications and thesauri and the idea of a facet-like division of the UDC with special auxiliary numbers. In 1974, Dahlberg and her co-editors Alwin Diemer, Jean M. Perreault, Arashanipalai Neelameghan and Eugen Wuester started the journal International Classification (IC), which was renamed in 1993 as Knowledge Organization (KO). In the first issue of IC Dahlberg's article on the theory of the term appeared. She understood classifications as systems that could be extracted from the nature of things themselves. She mistrusted systems that worked with blurred terms and adhoc relationships. In conjunction with a lectureship at the University of Mainz, she worked on the Deutsche Forschungsgemeinschaft (DFG)(German Research Foundation) project "Logstruktur" ("Logstructure") from 1976-1979, which was intended to uncover content-related relationships between fields of knowledge independently from their denomination. In 1977 she completed the faceted universal classification system of knowledge areas with approximately 6,500 terms under the name Information Coding Classification (ICC). It was presented in more detail in seminar sessions at the Documentation Research and Training Center (DRTC) in Bangalore, India. This classification down to the third level was later also applied to the International Classification and Indexing Bibliography and the bibliography in the journal Knowledge Organization (since 2009 a revised form of this has been available online at http://www.isko.org/lit.html).

In 1977 together with Robert Fugmann, Martin Scheele, Hanns-Hermann Bock and others she created the Gesellschaft für Klassifikation (GFK, later GfKl) (Society for Classification). The first conference was in 1977 in Münster. On behalf of the Deutsche Bibliothek (German Library), she carried out the "Pilotstudie DB-Thesaurus" from 1978 to 1979 in order to examine keywords as candidate thesaurus terms. Beginning in 1979 she worked on the Committee on Conceptual and Terminological Analysis (COCTA) of the International Political Science Association and the International Sociological Association and organized, amongst others the COCTA conference in Bielefeld 1981.

In 1979, together with her son Wolfgang, Ingetraut Dahlberg founded the company INDEKS for the creation of registers and classification systems. Later it became the INDEKS Verlag (publishing house). From 1981 to1987, Ingetraut Dahlberg chaired the FID Committee on Classification Research (FID/CR). In 1983 she compiled for the FID the expert documentation *Who Is Who in Classification and Indexing* (INDEKS Verlag). She had teaching assignments at the University of Saarbrücken in 1984-85, at the University of Applied Sciences and Arts Hannover from 1985 to 1987 and at the University of Applied Sciences Darmstadt in 1988-89.

When in 1989 the GfKl was taken over by its numerical taxonomy and data analysis group, Ingetraut Dahlberg resigned from office in this society and together with Robert Fugmann, Padmini Raj and Rudolf Ungvary founded the International Society for Knowledge Organization (ISKO) with a more conceptual orientation. The journal *International Classification* (started in 1974) became the publication organ of ISKO and was later renamed *Knowledge Organization* (KO). The first ISKO conference took place in Darmstadt, Germany in 1990. To encourage universal participation, including members from less-developed countries, she arranged for a substantial discount on membership fees. In 1996, Ingetraut Dahlberg received the International Ranganathan Award for her fundamental work in classification research.

After the death of her parents and of her former husband and on receiving a cancer diagnosis (her sister died in 1998 from cancer), Ingetraut Dahlberg retired in 1997 at the age of seventy from her official jobs and moved in 1998 from Frankfurt to Bad König im Odenwald. From a health point of view, there were always setbacks and new impairments, which she was able to mitigate through natural healing and spirituality (she was a follower of Hildegard of Bingen). Last but not least, her deep interest in the ongoing debate about documentary approaches gave her new strength.

Ownership of her INDEKS Verlag was transferred to Ergon Verlag in 1997. New editors-in-chief of *Knowledge* *Organization* were appointed by ISKO. The new president of ISKO was Hanne Albrechtsen. Ingetraut Dahlberg's extensive library on classification, terminology and information science went to the Maastricht McLuhan Institute (MMI), European Center for Digital Culture, Knowledge Organisation and Learning Technology then under the directorship of Kim Veltman, but the library had to return to Ingetraut Dahlberg in 2004 when the MMI project ended. In 2006, she received the Eugen Wüster Special Prize of the Internationales Informationszentrum für Terminologie (International Information Center for Terminology), Vienna (Infoterm).

The years to follow were devoted mainly to explaining the ICC in the context of concordances and internet applications, as well as historical reviews and more general considerations. At the German ISKO chapter conference 2009, Ingetraut Dahlberg presented her "Desiderata for Knowledge Organization," which was later published in *KO* (Dahlberg 2011). In cooperation with Walter Koch, Graz University of Technology, a revised part of the ICC was digitized in 2010. Together with her, Hermann Bense developed in 2013 a graphical representation of the fields of knowledge with their subdivisions to the second level in order to explore possibilities of structuring the Semantic Web.

In 2012, her son Wolfgang died in his adopted home of Santorini, in circumstances that remained unclear. He had completed his study of physics, history of science, philosophy and linguistics with a dissertation. Initially he had given the office of GfKl and the INDEKS Verlag vigorous support, making the emblem of the GfKl a present for Ingetraut Dahlberg's fiftieth birthday. Later he went his own way and made himself a journalistic name, with more than forty published books.

In 2013, Ingetraut Dahlberg gave an invited lecture at the German ISKO chapter conference on "What is Knowledge Organization?" that was subsequently published in English in KO (Dahlberg 2014a). This lecture, returning to the topic of her 2008 interview in KO 2008, stimulated the broader compilation of her accumulated knowledge in a book Wissensorganisation: Entwicklung, Aufgabe, Anwendung, Zukunft (Dahlberg 2014b)(Knowledge Organization: Development, Task, Application, Future). This monograph was written within a few weeks and was published in association with the German chapter of ISKO.

According to Ingetraut Dahlberg, knowledge organization is an independent science, at least a part of the science of science. A treatment as auxiliary science or as part of a technical or economics-oriented view of information she would have always rejected. Accordingly, her last mission was the realization of the institutionalization of knowledge organization. With the handing over of the ICC to the German chapter of ISKO and their library to Ernesto de Luca of the Georg-Eckert-Institut, Leibniz Institut für internationale Schulbuchforschung (Leibniz Institute for International Textbook Research), Braunschweig, this could now emerge.

Her most recent publications were designed to build a bridge between her approach and semantic networking on the internet. Accordingly, she reviewed the Handbook on Metadata, Semantics and Ontologies 2014 by Miguel-Angel Sicilia (a book with 570 pages!). With Ernesto de Luca she also published in 2014 and in 2017 with Lena-Luise Stahn on lexical linked data. At the Ernst-Schröder-Zentrum für Begriffliche Wissensverarbeitung (Ernst Schröder Center for Conceptual Knowledge Processing), Darmstadt in 2015 and again in Dagstuhl at the Workshop Book Project "Corporate Semantic Web" in 2016, she presented "Warum Universalklassification?" ("Why Universal Classification?") and in the journal Information-Wissenschaft und Praxis 2016 (published in English in KO, see Dahlberg 2017) she also went back to her early work with the DGD on UDC auxiliary numbers.

I would like to quote an e-mail received on October 30, 2017 from Otto Sechser, an early companion and member of ISKO from the beginning:

Dr. Inge Dahlberg was and is going to remain one of great personalities of Classification, Documentation, and Knowledge Organization. Her interests, achievements, and worldwide contacts will be the theme of dissertations. Here I want to write about Dr. Dalhberg as a good-hearted, modest, hardworking, high-principled woman, always ready to help, with enormous social intelligence. I met her first in 1969 as a Czechoslovak specialist visiting West European documentation centers. Since that time our correspondence contact was never interrupted. When I emigrated with my family to Switzerland in 1975 her advice helped me to establish contacts to my western colleagues. As member of Gesellschaft für Klassifikation and later of ISKO I had the opportunity to participate in many conferences organized by her, always with success. I know that I am by far not the only one from the "East Block" who has reason to be thankful to her. She will be missed in ISKO."

I too was able to get to know her as early as 1970 by participating in the DIN standards committees, as I was working on the classification of social science methods for the UDC (FID/C 303). For me as a sociologist, her doctoral thesis in 1973 was a concentrated introduction to the world of library classification. Unfortunately, I could not fulfill her wish to collaborate with the bibliog-

raphy because of time constraints. But I did what I could to make up for that by proof-correcting her last book in 2014. I remember well many eventful meetings to which she invited me: the first GfKl conference in Münster in 1977 with the cross-scientific introductions to classification, the COCTA conference in Bielefeld, which led me to consider the interaction between sciences for the first time bibliometrically, and the first German and international ISKO conference in Darmstadt in 1989, where I took part in a pre-conference on social science concepts. Since Ingetraut Dahlberg always gave me important suggestions and fresh ideas, I can say that she worked for me like a mentor in the field of knowledge organization and concept formation. I should not be surprised if others in and out of ISKO look back on her in the same way. I admired the way she did not hesitate to move with the times and to face new technical challenges, be it email, smartphone or social networking. Her life claims were modest, provided that her professional mission was achieved. Despite any difference of opinion, she almost always tried to understand others, as in Christian charity, and to support them in their direction. Her words to me in our last conversation were, "wir sehen uns im Himmel wieder" (we'll meet again in heaven). She knew that she would not live much longer, but that some of her intentions would be carried on by others.

Peter Ohly Prinzenstr. 179, 53175 Bonn Germany

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