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The DDC and OCLC

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Abstract

This article highlights key events in the relationship between OCLC Online Computer Library Center, Inc. and the Dewey Decimal Classification (DDC) system. The formal relationship started with OCLC's acquisition of Forest Press and the rights to the DDC from the Lake Placid Education Foundation in 1988, but OCLC's research interests in the DDC predated that acquisition and have remained strong during the relationship. Under OCLC's leadership, the DDC's value proposition has been enhanced by the continuous updating of the system itself, development of interoperable translations, mappings to other schemes, and new forms of representation of the underlying data. The amount of categorized content associated with the system in WorldCat and elsewhere has grown, as has worldwide use of the system. Emerging technologies are creating new opportunities for publishing, linking, and sharing DDC data.

Keywords

DDC; Dewey Decimal Classification; Forest Press; OCLC

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INTRODUCTION

OCLC acquired the Dewey Decimal Classification (DDC) system and Forest Press from the Lake Placid Education Foundation in 1988. The promise of OCLC's direct involvement in the DDC is presaged in the publisher's foreword to DDC 20:

The year 1988 witnessed two events which will have a profound effect on the future of the Dewey Decimal Classification and other general classification systems. Curiously, both events took place on the same day. On July 29, a computer tape containing substantially all the text of DDC 20 was delivered to a firm in Massachusetts to begin production of this edition. ... On the same date, Forest Press and the Dewey Decimal Classification became a part of the OCLC Online Computer Center. ... Joining the DDC with the talents and resources of OCLC will allow the development of the computer products and services which are needed by DDC users ([Paulson, 1989](#), p. xi).

While the relationship between the DDC and OCLC predated the acquisition in terms of research projects and inclusion of DDC numbers in WorldCat records, the system has flourished along a number of dimensions under OCLC's leadership. In addition to publishing numerous works based wholly or partly on the DDC, OCLC developed the first electronic version of a general classification system and made it available by subscription. International use of the system and the number of DDC translations have grown, as have mappings of the DDC to other terminologies. OCLC has played a prominent role in classification research in general, one that has resulted in new models of representation, prototypes of new services, and emerging uses of classification in the Web environment. This article highlights important events in the DDC-OCLC relationship, and concludes with prospects for future contributions ([Mitchell, & Vizine-Goetz, 2006](#), Mitchell Vizine-Goetz, in press).

ACQUISITION OF THE FOREST PRESS AND THE DDC

The 1988 library literature contains several reports announcing OCLC's acquisition of the rights to the DDC and the assets of Forest Press (the DDC's publisher) from the Lake Placid Education Foundation for a reported \$3.8 million.

The foundation was broke (revenues from DDC went back into DDC products and development, including contract payments to the Library of Congress); ... it needed a buyer who could carry DDC into the computerized environment of the 21st century.

OCLC, which had worked with Forest Press in earlier cooperative activities, was that buyer ([Plotnik, 1988a](#), p. 736).

In another report, the focus of OCLC on the electronic promise of the DDC is clearly stated: “OCLC will explore publishing electronic versions of the DDC, as well as continuing the ongoing revision and publication in print form ...” (OCLC 1988, p. 443). In yet another report, then OCLC President Roland Brown commented, “The synergy between the legacy of Melvil Dewey and the mission of OCLC is powerful” ([Plotnik, 1988b](#), p. 641).

In a 1999 interview following his retirement as Executive Director of Forest Press, Peter Paulson noted the sale to OCLC first among the most important occurrences during his leadership:

First and most important, the sale of Forest Press and DDC to OCLC in 1988. This move brought us the skills and resources we needed, and OCLC has turned out to be a very good home for us ([Intner, 1999](#), pp. 2-3).

MANAGEMENT OF THE DDC

When Forest Press was first acquired by OCLC, Peter Paulson remained executive director and the Forest Press office remained physically in Albany, NY. The Dewey Editorial Office continued at the Library of Congress (LC), where it had been located since 1923. OCLC took over annual payments to the Library of Congress to fund the Dewey editorial staff positions and operations—in 1988, all of these positions were filled by LC employees.

In late 1991, the editor of the DDC, John P. Comaromi, died suddenly. There was a hiring freeze at the Library of Congress during the period candidates were being considered for the position to succeed Dr. Comaromi. OCLC and LC agreed to convert the editor-in-chief position from an LC employee fully funded by OCLC to an OCLC employee physically located in the Dewey Editorial Office at the Library of Congress. Joan S. Mitchell was hired under these circumstances as editor in April 1993.

When Forest Press first joined OCLC, it was organizationally under a group devoted to electronic publications and information. The following year, it moved under the cataloging area, where it has remained nearly continuously until the present day. Peter Paulson retired at the end of 1998; upon his retirement, Joan Mitchell also took on the business operations of Forest Press and served simultaneously as editor-in-chief and executive director from 1999 through early 2003.¹ In mid-1999, the physical assets of Forest Press were moved from Albany, NY, to OCLC headquarters in Dublin, OH. Also in 1999, the editorial team was expanded by one member. Giles Martin, an Australian, was the first non-U.S.-citizen to be hired on the Dewey team, and the first editor to be based at OCLC headquarters in Dublin. In 2009, Michael Panzer became the first former member of a Dewey translation team to be appointed assistant editor.² In addition to the aforementioned, current editorial team members include Assistant Editors Julianne Beall

(an LC employee) and Rebecca Green (an OCLC employee), both based in the Dewey Editorial Office at LC, plus a part-time editorial assistant.

One other important piece in the management of the DDC is the 10-member international advisory board, the Decimal Classification Editorial Policy Committee (EPC). EPC is a joint committee of OCLC and the American Library Association (ALA), and advises the DDC editors and OCLC on DDC content and strategic directions. The committee has existed in its present form since the early 1950s—prior to 1988, it was a Forest Press-ALA joint committee. The committee plays an important role in bringing a global viewpoint to the development of the DDC—current members are from Australia, Canada, South Africa, the United Kingdom, and the United States. Representatives of DDC translations serve as corresponding members of EPC and receive proposals at the same time as EPC members for consideration and comment.

PUBLICATIONS

Prior to joining OCLC, the Forest Press publications list was focused primarily on the full and abridged print editions of the DDC plus separate publications associated with them, Dewey-related conference proceedings, and a few Dewey-related texts. After Forest Press became part of OCLC, the publications list expanded to a wide variety of Dewey publications in print and electronic form, plus DDC-related products such as bookmarks and posters. A majority of the print publications and all of the electronic publications were developed and produced in cooperation with marketing and research staff at OCLC.

In recent years, OCLC has chosen to license the production of DDC-related products to library vendors and has focused internal DDC publication efforts on the full and abridged editions of the DDC in print and electronic versions. OCLC also licenses the underlying DDC databases associated with the full and abridged editions as XML data files. The electronic editions and data files are discussed further in the Electronic Editions section of the article.

ELECTRONIC EDITIONS

An important relationship between OCLC and the DDC started several years prior to the acquisition of Forest Press with the Dewey Decimal Classification Online Project. The history and results of the study are available in full in the study report ([Markey, & Demeyer, 1986](#)); a short summary follows.

In the early 1980s, the OCLC Office of Research became interested in how classification could assist library catalog users in performing subject searches in an online environment. The Office of Research learned that DDC 19 had been produced by computerized photocomposition—this led OCLC to inquire about the availability of the tapes for research purposes. Also in 1984, Inforonics Inc. was retained by Forest Press to develop an online database management system to support Dewey editorial operations. In January 1984, the DDC Online Project was initiated by the OCLC Office of Research with the support of the Council on Library Resources, Forest Press, and OCLC. In the

study, led by OCLC Research Scientist Karen Markey, researchers built two catalogs, one of which (the Dewey Online Catalog) included subject-rich data from DDC captions, notes, and Relative Index terms linked through the DDC class number to MARC records drawn from participating libraries' collections. This groundbreaking study, along with OCLC's eventual acquisition of the rights to the DDC, no doubt prompted OCLC's continued interest and experimentation in the creation and use of DDC data in electronic form.

OCLC gained access to all of the Dewey schedules and tables in 1989 after the publication of DDC 20, the first edition produced using an online Editorial Support System (ESS). The ESS database was used by the OCLC Office of Research to prototype the Electronic Dewey software. In November 1992, catalogers at eight libraries began testing the prototype CD-ROM version of the DDC. The eight libraries were: National Library of Australia, Carnegie Mellon University Library, Columbus (OH) Metropolitan Library, Columbus (OH) City Schools, University of Illinois Library at Urbana-Champaign, Library of Congress (Decimal Classification Division), Stockton-San Joaquin County (CA) Public Library, and the New York State Library. Electronic Dewey was released the following year making Dewey the first library classification scheme available to users in electronic form. The system ran on a personal computer and enabled keyword searching of the schedules, tables, Relative Index, and Manual of DDC 20 on CD-ROM.

In summer 1996, OCLC Forest Press published DDC 21 and released a new version of the Dewey software. For the first time, a new edition of the classification was published in two formats: the traditional four-volume print format and an electronic version on CD-ROM (Dewey for Windows³). The publication of Dewey for Windows followed several years of close collaboration between the OCLC Office of Research and the Dewey editorial team; the groups continue to work together today on a range of research and development projects.

The year 2000 marked another milestone in the evolution of the Dewey software, the debut of a Web-based product. WebDewey, a Web-based version of DDC 21, was released by OCLC as part of the Cooperative Online Resources Catalog (CORC) service. The CORC release included features to apply authority control to Dewey numbers and to generate DDC numbers for Web resources automatically. Two years later WebDewey and Abridged WebDewey, the latter a Web-based version of Abridged 13, became available in the OCLC Connexion cataloging service.

The DDC is also available in multiple XML representations. The XML files are used in OCLC products and services and distributed to translation partners and other licensed users. As part of an update of the Editorial Support System, the proprietary representations are being converted to ones based on the MARC 21 formats for Classification and Authority data. The MARC 21 versions will be available as XML files.

TRANSLATIONS

The Dewey Decimal Classification is used in over 200,000 libraries in 138 countries—a reach into the global community that extends past OCLC's other services. An important feature of the DDC, its language-independent representation of concepts, makes it ideally suited as a global knowledge organization system. Since OCLC acquired the DDC in 1988, authorized translations of the full and abridged editions of the DDC have been published in the following languages: Arabic, French, German, Greek, Hebrew, Icelandic, Italian, Norwegian, Russian, Spanish, Turkish, and Vietnamese. Updated versions of the top three levels of the DDC are available in Arabic, Chinese, Czech, French, German, Hebrew, Italian, Norwegian, Portuguese, Russian, Spanish, Swedish, and Vietnamese. Plans are currently under way for a new Indonesian abridged translation and the first Swedish translation of the DDC (the latter currently envisioned as a mixed Swedish-English version of the full edition of the DDC). Currently, only the German translation is available in a Web version, but Web versions of the DDC are currently under exploration for the French, Greek, Italian, Norwegian, and Swedish translations.

Translations of the DDC start with an agreement between OCLC and a recognized bibliographic agency in the country/language group. For example, under an agreement with OCLC, Deutsche Nationalbibliothek leads efforts on the German translation with the cooperation of bibliographic agencies in Germany, Austria, and Switzerland. Current translations are localized and interoperable with reference to the English-language edition on which the translation is based—localized in terms of terminology and examples appropriate to the country/language group, and interoperable in terms of authorized expansions or contractions of provisions in the base edition. A common example of the latter is an expansion of the geographic table in a translation. The Vietnamese translation of Abridged Edition 14 contains an extended geographic table for Vietnam in which the explicit provisions for the areas of Vietnam are at a deeper level than those found in the current abridged and full English-language editions of the DDC—in other words, the English-language version is a logical abridgment of the version found in the Vietnamese translation ([Beall, 2003](#)).

MAPPINGS

Mappings between Dewey and thesauri, subject heading lists, and other classification schemes enrich the vocabulary associated with DDC numbers and enable the use of the DDC as a switching system. Mappings to new concepts in other systems also help to keep the classification up-to-date.

The electronic versions of DDC contain selected mappings between Dewey numbers and three subject headings systems—Library of Congress Subject Headings (LCSH), Medical Subject Headings (MeSH), and H.W. Wilson's *Sears List of Subject Headings*. The Dewey editors consult LCSH and MeSH as sources of terminology for the DDC and map terminology from both systems to the classification. Dewey for Windows was the first electronic edition to include intellectually mapped LCSH; MeSH mappings were introduced in WebDewey with the release of DDC 22 in 2003. Mappings between

abridged Dewey numbers and Sears headings are created at H.W. Wilson under an agreement with OCLC and are included in Abridged WebDewey and in various products offered by H.W. Wilson.

In 2008, the Dewey editors began mapping DDC numbers to the BISAC (Book Industry Standards and Communications) subject headings. The work is part of OCLC's Next Generation Cataloging project which is piloting automated techniques for enriching publisher and vendor metadata (How the Pilot Works, n.d., para. 3). The mappings are used to add Dewey numbers to publisher records and BISAC subject headings to bibliographic records.

Subject heading-DDC number pairs statistically derived from WorldCat are also included in OCLC products and services. The OCLC publications *Subject Headings for Children* and *People, Places & Things* are lists of LC subject headings with corresponding DDC numbers. Both include statistical mappings as do all of the electronic versions of the DDC, beginning with Electronic Dewey. Statistical mappings supplement the mappings provided by the Dewey editors.

Several Dewey translation partners have projects under way to map Dewey numbers to local subject heading systems. Headings from Schlagwortnormdatei (SWD), the German subject heading authority file, are being mapped to Dewey numbers in the Criss-Cross project to date, 61,500 SWD headings have been mapped to the DDC ("Mapping of German" Subject Headings n.d.). At the Italian National Central Library in Florence, work is under way to map Dewey numbers to Nuovo Soggettario, the Italian subject heading list (*Nuovo Soggettario*, 2006; [Paradisi, 2006](#)).

In addition to mappings between Dewey numbers and subject headings, several concordances have been developed between Dewey and other classification systems. The Library of Congress's Classification Web system includes statistical correlations among LCSH, Library of Congress Classification (LCC), and DDC based on the co-occurrence of the three in Library of Congress bibliographic records. The National Library of Sweden maintains a mapping between SAB, the Swedish classification system, and the DDC ([Svanberg, 2008](#)). The Czech National Library has built a concordance between UDC and DDC for the purposes of collection assessment ([Balíková 2007](#)).

RESEARCH

For many years, the OCLC Office of Research has focused its DDC-related efforts in three main areas: prototyping classification tools for catalogers, developing automated classification software, and applying and refining statistical mapping techniques. Several of the outcomes of this work are discussed in the Electronic Editions and Mappings sections of this paper. While OCLC remains interested in these areas, recent projects are taking DDC research in new directions.

One of these is the DeweyBrowser prototype ([Vizine-Goetz, 2006](#)). The DeweyBrowser is an end user system that incorporates many features of next generation library catalogs,

including tag clouds and multi-faceted searching and navigation. The clouds provide a visual representation of the number of titles in each of the top three levels of the DDC (known collectively as the DDC Summaries). In the prototype, users can navigate the Summaries in English, French, German, Norwegian, Spanish, and Swedish. The Summaries provide an ideal browsing structure for multilingual environments.

In another project, OCLC researchers have developed an experimental classification service that provides access to classification information from more than 36 million WorldCat records (“Overview,” n.d., para 1). The OCLC FRBR Work-Set algorithm is used to group bibliographic records to provide a work-level summary of the DDC numbers, Library of Congress Classification numbers, and National Library of Medicine Classification numbers assigned to a work. The beta service is accessible through a human interface and as Web service. The Web service supports machine-to-machine interaction. Two additional Web services are being developed to deliver DDC data. One will offer a history of changes for a DDC class (Panzer, 2009); the other will provide a generic view of a DDC class across all editions/versions and languages.

Finally, OCLC is investigating the issues involved in transforming the DDC into a Web information resource, including the design of Uniform Resource Identifiers (URIs) and the modeling of DDC in Simple Knowledge Organization System (SKOS) (Panzer, 2008; Panzer, 2008 August). Emerging data models and new technologies (e.g., SKOS and linked data) will provide new opportunities for publishing, linking, and sharing DDC data in the years to come.

CONCLUSION

As we look back over the 20 years since OCLC acquired the rights to the DDC in 1988, we reflect on how OCLC has impacted Dewey's value proposition. The basic system features—well-defined categories and well-developed hierarchies, all interconnected by a rich network of relationships—have been enhanced by interoperable translations, mappings to other schemes, and new forms of representation of the underlying data. The amount of categorized content associated with the system in WorldCat and elsewhere has grown, as has worldwide use of the system. Dewey's language-independent representation of concepts makes it ideally suited to a myriad of uses in the current and future information environment. Its ongoing success as a knowledge organization tool will depend on the aggressive leadership that OCLC, in cooperation with the worldwide community of Dewey users, is willing to provide along a number of dimensions—updating and development of the system itself, availability of the system for experimentation and use, association of the system with content, mappings to other schemes, translations, and innovative research.

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NOTES

¹ At the request of Joan Mitchell, she returned to serving solely as editor-in-chief in early 2003. Dewey business operations were taken over by a business director in the OCLC cataloging area, and they have remained separate from the editorial operations since that period, mirroring the Forest Press/Dewey Editorial Office organization that had been in place for many years.

² In the mid 2000s, Michael Panzer headed the technical team based at Cologne University of Applied Sciences that first translated Dewey into German. Michael Panzer succeeds long-time Assistant Editor and LC employee Winton E. Matthews Jr., but is based at OCLC headquarters in Dublin.

³ A Microsoft Windows®-based version of the software.