

## Classification

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### *Auxiliary compositional structures in the Dewey system and UDC: a comparative study*

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#### **Abstract**

In the context of the multidisciplinary approach to information indexing, the study analyzes the compositional structures of the Dewey system compared to UDC regarding the codification of the auxiliary determinations of subjects. The study, by systematic, typological and methodological analysis of the subdivisions for arts, individual literatures and specific literary forms and of the analytical or special auxiliary indices, accompanied by the argumentation of their value and importance in the information management, reflects the findings of a correlational research of the auxiliary structures of the most important indexing languages with hierarchical structure and from the perspective of the information offer, it maintains the fundamentally interdisciplinary nature of the Dewey system and UDC.

**Keywords:** indexing languages, DDC, UDC, auxiliary compositional structures, auxiliary subsystems

#### **1. Informational auxiliary subsystems**

The objective envisaged by M. Dewey by creating *the subdivisions for arts, individual literatures and specific literary forms* aimed primarily at codification of special and multiplicative determinations on all information of the two main classes: *700 Arts* and *800 Literature*. It is clear that the structural core of these subdivisions was taken in the Universal Decimal

Classification and it remained identical for the analytical or special auxiliary indices from *Class 8 Linguistics. Philology. Literature* and less for *Class 7 Art. Recreation. Spectacle. Sports* where, in fact, they have determinations and representations different from the Dewey system.

### ***1.1. Subdivisions for arts, individual literatures and specific literary forms***

The subdivisions for arts, individual literatures and specific literary forms encode mainly systems of determinative categories concerning the literary history and criticism, literary genres and species, movements and schools in literature and art, particular themes and topics reflected in the fields of art and literature. They are the origin of the future special auxiliary subdivisions of the Universal Decimal Classification for *Class 8 Language. Linguistics. Philology. Literature*. The information provided by these subdivisions has a semantic meaning directly linked to the main indices which it determines and for which they were created. In what concerns the scope of use of the subdivisions for arts, individual literatures and specific literary forms, this is marked differently in the Dewey Decimal Classification editions: through arrow (19<sup>th</sup> edition), asterisk (21<sup>st</sup> edition), located at the main indices. Regardless of the graphic sign used, there is the same methodological restriction of the use of these subdivisions, only in the conditions in which at the main indices of classes 800 and 700 there are mentioned special methodical indications. Certainly, the design of indexing must abide by all methodical indications in the main Tabel, but also in the auxiliary Tables of a UDC edition, which in most cases, include also pragmatic examples. Investigation of the main and auxiliary tables of UDC offers the indexing specialist not only methodical specifications to be respected, but also pragmatic solutions for indexing difficult subjects.

### ***1.2. Analytical or special auxiliary indices***

We recall that one of P. Otlet's innovations is the creation and systematization of analytical or special auxiliary indices, which have been awarded specific inclusion graphic signs, within the framework of particular forms of codification: *.01/.09; -1 / -9; '1 / '9*. **The scope of their use** is mainly the entire Universal Decimal Classification scheme, but only on the ranked segments of "*special auxiliary subdivisions*". In fact, the analytical or special auxiliary indices of the Universal Decimal Classification have substituted for the recursion of some determinations for a series of main and auxiliary indices by conventional formulas which summarizes these

multiplicative characteristics and makes it possible to use them at the entire ranking set of the index for which they were created. For example, in the UDC tables, for the division "*literature*", the concept of "*poetry*" will not be repeated at all individual literatures, but will be employed, distinctively, at the special auxiliary subdivisions which automatically increases its operational dimension to all systematized rankings of the field. We also add that the articulation of the concepts to some analytical auxiliary indices is carried out in a semantic dependency only with them.

## **2. Systematized structures**

The fundamentally interdisciplinary nature of both indexing languages (Dewey Decimal Classification and Universal Decimal Classification) is also proved by the systematization of the compositional auxiliary subsystems concerning the subdivisions for arts, individual literatures, specific literary forms and the analytical or special auxiliary indices.

### **2.1. Table 3 of the Dewey system**

The auxiliary subdivisions of *Table 3* determine and supplement from different perspectives the base indices of *Class 800 Literature* and of the main groups *700.4 and 791.4*. These subdivisions are components of the conventional language of DDC, they have specific representations of expression in the indexing process, they have cognitive and operational features which individualize them. These auxiliary indices are never used alone, but together and juxtaposed with the base indices which they determine.

Of course, the scope of applicability is logically represented by the main class *800* and the subclasses *700.4 and 791.4* and they can be considered as variables dependent on the base index and can substitute multiplicative relationships of the same determinations or cumulative values of some concepts: *literary history and criticism, literary genres, movements and schools, etc.*

#### **➤ Table 3A – Subdivisions for works by or about a single author.**

The series of these subdivisions aims at a single author's literary works, including specific references about them. Representative components include: *the literary genres: poetry, theatre, novels, essays, speeches, epistolary genre, various writings and their developmental periods.* We forewarn on the compulsoriness of observing the methodical indications, which are specified both in the table preamble and in the auxiliary subdivisions.

#### **➤ Table 3B – Subdivisions for works by or about more authors.**

These subdivisions are presented in a detailed hierarchy of literary genres and species, and give multiple possibilities for facets of the base indices of *Class 800 Literature*, but also of the subdivisions of Table 3A which they complete from the perspective of a shaded codification of literary history and criticism. In the construction of the base indices with subdivisions for literature there are numerous networking between the three tables: 3A – 3B – 3C, mentioned and illustrated in the DDC scheme, which facilitates multiple possibilities of facets. These indications represent *methodological paradigms* that are, in fact, self-adjustments mechanisms of the Dewey classification system, which aim primarily operational connections which quantify repeatable references in the ranking of the base indices of *Class 800 Literature* and undoubtedly lead in a relevant way to an efficient information management.

➤ **Table 3 – C Additional notations for arts and literature.  
Notations which add to the indications in Table 3 – B; 700.4;  
791.4; 808-809.**

The diversity and amplitude of information coded in this table are structured into six reference levels: *literary movements and schools –1; literary devices –2; themes and specific topics studied from a literary point of view –3; works on particular subjects studied from a literary point of view; literature for and /or for persons belonging to a racial, ethnic, national group -8; literature for and/or by other categories of persons –9.* (1) Each of these structures is subdivided hierarchically in component structures of the representation level. The presentation and analysis of the subdivisions for arts, literatures and literary genres reveal multiple possibilities for the use of simple and complex structures that contribute to a shaded determination of the base indices of *Class 800 Literature* and of the subsections 700.4, 791.4. Undoubtedly, these auxiliary subdivisions contribute to the materialization of the complex indices which in the document processing is equivalent to carrying out complex forms of shaded and exhaustive expression, of the discussed issues, which gives the DDC system an enhanced ability to capitalize and make efficient information.

**2.2. The typical character of the analytical or special auxiliary indices**

Responding to multiplicative functions, the special analytical auxiliary indices or the special auxiliary subdivisions have their own representation systems, built on conventions. Depending on these, we can categorize *the general typologies* of analytical auxiliary subdivisions that have fixed forms: .0; –1; ' (dot zero, hyphen, apostrophe) and *the hybrid*

structures: '01/ '08 for class 2; -001/-009 and -01/-09 for Class 6. The constructions of special auxiliary subdivisions correlate structurally, functionally and semantically with the indices rankings where there is the express mention of those respective analytical indices. These, in fact, summarize some characteristics of the base indices by eliminating at the same time, their repeatability across an entire hierarchical segment of the Universal Decimal Classification. Thus, *Class 8 Language. Linguistics. Literature* benefits of the representations of the special auxiliary subdivisions: with dot zero .0; with hyphen -1/-9 and with apostrophe'.

The general structure of the analytical auxiliary indices which have "facet indicator", dot zero has as a convergence point literary genres and species. In what concerns the analytical or special auxiliary indices with dot zero, they are represented by subdivisions at "82.0 Theory, literary study and technique:

82.02 Literary schools, currents and movements

82.09 Literary Criticism. Literary Studies

82.091 Compared literary studies. Comparative Literature. (2)

For the special auxiliary subdivisions built with apostrophe, the division 82 Literature conducts "hybrid constructions", for the origins and periods of the literatures: 82'0; 82'01; 82'02; 82'04; 82'06, etc. Also in the "hybrid constructions", called by us this way because of their atypical nature, there can be found the special analytical auxiliary indices which cumulate complementary meanings of the literary editions and which are specified at: 82 ... A / Z Writings, papers, works / of some authors. In our opinion, these paradigmatic ways of indexing of the literary works are far too intricate in the conditions in which all the complementary codifications of the author, title, edition types, are access points in the authority file and have the capacity to provide comprehensive information to the beneficiary.

### 3. Methodological determinations

The use of subdivisions for arts, individual literatures and specific literary forms and of the analytical auxiliary indices involves the observation of the functionality rules and regulations specific for the conventional languages of the Dewey Decimal Classification and the Universal Decimal Classification. The methodological rules on indexing through auxiliary subdivisions become the intrinsic attribute of these systems. In the construction of complex forms of informational expression by indexing with auxiliary subdivisions, a great importance has the

methodological rigor concerning the use of special auxiliary subdivisions which correlate, in fact, structurally and functionally their subsystem to the entire classification system.

### ***3.1. The operational paradigms regarding the subdivisions for arts, individual literatures and specific literary forms***

In relation to their functional determinations we will configure certain typologies concerning the use of the auxiliary subdivisions, which are meant to facilitate the design of the Dewey decimal classifications and to assist in the implementation of a fundamental principle, that of consistency in indexing. Operationalization formulas:

a) construction of indices for literary genres of different literatures through base indices taken directly from the main Tables, by observing the methodical indications;

b) determinations of the base index through notations of Table 3 Subdivisions for arts, individual literatures and specific literary forms. Operational formula: base index (main Table). Subdivision for gender (Table 3).

In the construction of the complex indexing with subdivisions for arts, individual literatures and specific literary forms we will need to consider the following ***methodological conventions of the DDC***:

a) *Methodical recommendations* inserted in the general scheme at *Class 800* and sections *700.4* and *791.4*;

b) *Special indications* regarding the use of these subdivisions only to specific sections of *Class 800*, noted by an asterisk;

c) *Methodical delimitations* regarding the scale of applicability of these subdivisions in sections *700.4* and *791.4*.

The ensemble of methodological means for the use of the auxiliary subdivisions for arts, individual literatures and specific literary forms is varied and complex. It includes very many features and special situations in the use of the subdivisions of Table 3, but we must admit that, despite many exceptions, the operational methodology reflects a functional coherence.

### ***3.2. The operational methodology of the analytical auxiliary indices of the Universal Decimal Classification***

The operational character of the analytical auxiliary indices of the Universal Decimal Classification is not so complicated and complex as that of the auxiliary subdivisions in *Table 3* of DDC. In fact, M. Dewey himself appreciated P. Otlet's innovation, who in the new classification system, the

UDC: "constructed ingenious symbols with vast pragmatic advantages. Clearly, these symbols allow the creation of some subdivisions of the same index without creating reasons for confusion". (3) We believe, moreover, that *the semiotics* of the Universal Decimal Classification, by the special signs for the inclusion of the auxiliary indices, gives this indexing language a multiple flexibility to reproduce all facets which determine the basic concept of a work expressed by the main index. From this perspective, our opinion is that *the operational methodology* of the analytical or special auxiliary indices benefit from immutable rules in their use and the principles of organization and operation are simple, clear and effective. The descriptive typology and structure of these analytical indices, which are included in the UDC tables also under the generic name of "*special auxiliary subdivisions*", have a *repetitive nature* that gives them the possibility of being used at the entire hierarchical structure for which they were created. In the utilization system of the analytical auxiliary indices, the model accepted as operational is: main index – special auxiliary subdivisions, **MI – SAS**, in which the whole hierarchical scheme of the main index can benefit of all the special auxiliary indices mentioned at the basic structure.

Sometimes, the functional structure of the analytical indices carries at certain main divisions and subdivisions, a far too broad and detailed scheme which can generate unpredictable errors in indexing. For *Class 8 Language. Linguistics. Literature* we emphasize that the operational methodology of the analytical or special auxiliary indices for Division 82 *Literature* can be summarized and better exemplified in systematized structures in which we set the specific typology of the auxiliary subdivisions for literature, on the following reference levels:

- 82 *Literature in general*: 82: -1/-9, '0 / '282; .01/.091.
- 821 *Literature of individual languages*: -1/-9, '0 / '282; .01/.091.

Further, we note that some of the shortcomings in the constructions of complex indices is due to ignoring, omission or misunderstanding of *the methodical specifications* introduced with a methodological role in the UDC scheme, but unfortunately not mentioned in its electronic version. Certainly, these multifunctional values of the special auxiliary subdivisions contribute to the achievement of complex decimal classifications of publications. Of course, it is also important to optimize the ergonomics of the UDC scheme by multiplying these auxiliary indices at various sequences in some indices ranking, but mainly the special analytical indices contribute to making the indexing word order dynamic.

Through the systematic, typological and methodological analysis of the two categories of auxiliary indices of DDC and UDC, we have affirmed

and argued their value and importance in the information management, and also of their representation as a dynamic system constituted hierarchically and with a good coordination of specific subsystems. It is true, excessive and sometimes rigid applications of common subdivisions in each of the three components of *Table 3 Subdivisions for arts, individual literatures, specific literary forms (T3-A,-B, T3, T3-C)* of DDC diminish and disperse the efficiency of "auxiliary notations", hindering thus the operational methodology of this language. In the same context, in a contrasting report, the Universal Decimal Classification, through special auxiliary subdivisions, facilitates a pragmatic method, efficient through the simplicity and accuracy of these conventions of the special analytical indices. In conclusion, we can estimate that the value, opportunity and interdisciplinary processing of information through the compositional structures of the two indexing languages contribute to the referential functionality of these two systems. Thus dynamic relationships and practical connections are established between the base indices and their attributive determinations, represented by the typologies of these auxiliary indices, which determine the flexibility of the classification operational variables and contribute to a multi-dimensional approach to information indexing.

### **Bibliographical Notes**

- (1) *Classification Décimale Dewey et Index*. 21-a édition. 4 vol. Montréal: ASTED, 1999, vol. 1, pp. 465–473.
- (2) *Ibidem*, vol. 2, p. 511.
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