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IS THERE FUTURE FOR CATALOGUING?
A relatively-ordered dialogue

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TO CATALOGUE OR NOT TO CATALOGUE?
THIS IS THE QUESTION

The author comprehends cataloguing as a method of organizing knowledge and perceiving the world. This confirms the necessity of maintaining the cataloguing process in libraries and information centres. However, cataloguing must be optimised with regard to information needs and competencies of the users: if the user is to be provided with more freedom in the information retrieval processes, the tools should be constantly upgraded. There is also the question of catalogues' objectiveness, e.g. with regard to the cultural differences of the users and the information professionals.

The question posed in the title of the conference: "Will we survive?" can be interpreted as aimed at determining the sense of the activities performed by the librarians until now; not the historical sense, but the prospective one. Which of the undertaken actions will retain their sense and aim in the changing reality? Which library works, if any, are worthy of continuing? And if there are such instances, how should these be guided? Which of their aspects should be considered in order to ascertain the indispensability and attractiveness of the whole? All these questions will be contemplated with respect to cataloguing, treated as one of the key library activities, whilst trying to disregard neither the perspective of the user, nor that of the librarian.

Should we continue cataloguing? To answer this question, one must first define what is cataloguing and what is it done for? The primary end of creating a catalogue is to facilitate (in contemporary circumstances even to enable) the use of information resources of a library, or the holdings, or the electronic resources in the broad meaning of the term, of any other information institution. This assistance should primarily consist in saving time, because cataloguing results in summarized information, arranged in accord with a predefined method, concerning the given holdings, and allows for quick orientation in available materials.

In a broader sense cataloguing can be treated as a method of ordering the world in general, and the world of information, we are so dependent on, in particular. Such organised sets of information are to be found not only in the electronic environment. Various offers pertaining to production, commercial, service, or entertainment activities are organised with helping the addressees in mind; the information recipients, or potential clients, are

assisted in making their choice and purchasing. There are numerous instances of such organising: information signs notifying the customer as to the range of the stores in a shopping centre, direction maps and listings of available services and goods (usually by appointing each type to a specific colour). Supermarkets tend to assign special areas to specific ware groups, which helps the patrons in finding the desired kind of pasta or cheese. Here, we must acknowledge one exception which is aimed at assisting the retailer instead of the client: every now and then the product areas are reassigned in the markets. The idea is to confuse the buyer and make him/her wander about the shop, abandoning the predefined route, and stumble on the way on to goods originally not put on the purchasing list. Other instances include various catalogues: auction catalogues, publishing catalogues, mailing catalogues, shop catalogues and so on.

The level of higher initiation is represented by those, who are capable of constructing catalogues in a manner more persuasive for the user, in a way that encourages to look deeper inside and find out what is to be found on the subsequent cards, pages, or behind the corner. Various tools are utilised to this end, depending on the circumstances. Returning to the shopping analogy, the most commonly recognized stimulus in a grocery store is the scent of fresh-baked bread, but coming from the most distant part of the shop, so the customer is obliged to walk past many other articles, before he reaches the coveted fresh rolls. The catalogues of internet portals use catchy terms and titles, which suggest more attractive contents than the actual information to be found. Colour attracts the eyes and lures with opportunities one would dare not to decline. One can rightly claim that the whole world is "catalogued" on maps in order to allow orientation in space and finding of places; a specific information retrieval apparatus is in operation here. Tourist guide-books fulfil a similar function, by showing which places are worthy of seeing in a given region. Cultural, regional, national, or religious differences are not to be omitted here – with respect to the cultural conditioning of the author and the addressee these specific information retrieval tools can differ between one another considerably.

Thus cataloguing, understood as a method of ordering the world, is an indispensable feature of contemporary culture. With the information-tool offer so highly developed the modern individual cannot do without some kind of guidelines, which suggest the value of the available objects. And, it must be stressed, that it is not the objective value, which is seldom to be established, that is at stake here. Rather, we are dealing with describing the object with as many of its features as will allow the user to work out whether this object is appropriate for his/her information needs, however subjective such an evaluation may be.

All this seems to tip the balance in favour of cataloguing. So let us move to the next problem: how to catalogue?

To say that cataloguing should be executed in such a manner, as to ascertain the usefulness of the end product for the user is a truism. Indeed, it should be based on precise and clear rules. It seems decisive then, that the quality of cataloguing relies on the adopted ordering key of the metainformation introduced to the catalogue. The keys utilised in library catalogues predominately consist in applying classifications of the arts and sciences and in utilising the terminology pertinent to the given discipline of knowledge. The user is required therefore to be acquainted with such terminology and must display at least rudimentary orientation in the division and hierarchy of the sciences. Doubtless, such a tool is more convenient for the librarians, who due to their professional engagement are familiar with the subject headings and the basic grammar rules of the system.

Unrestricted access in the Internet to information of various type and quality demands that the libraries undertake promotional activities. These activities should encompass two objectives. Primarily, to make the users conscious of the fact that such an institution functions and confirm the sense of the very existence of a given library, in particular in the eyes of the financing authorities. The other objective is of educational character. The reader should be provided with access to plausible and valuable information, which meets the criteria of scientific approach, so that the user will not have to pay the costs of dealing with insecure, outdated, or false information, the kind the Internet is full of. These objectives are realised nowadays by publishing the catalogues in the Internet, which allows the users to inspect them from any place at any time. The possibility of talking to the librarian, asking questions and solving doubts is also important.

The promotional character, i.e. encouraging the use of cataloguing encompasses also such choice of terminology and grammar, and such formal and factual construction of the interface, which would enable individual research, not hinder it. There is absolute need for up-to-date indices, which will refer the terms unavailable in the dictionary to those, which are to be found there; need for explanation of the basic grammar rules (grammatical number and gender of the nouns, the word order in a heading, etc.); need for demonstrating of the potential of the headings related to the researched term. Most of these solutions is already used in contemporary libraries.

Starting close cooperation with the users as to the choice of the terminology, its ordering and determining of possible uses would be the next step to undertake. Such needs are voiced both by professional groups and individual users. The cooperation between the governors of the Programme ICNP®[1] and the group Sigma Theta Tau International[2] started in 2004 is a good instance of this type of collaboration. The Programme ICNP® (International Classification for Nursing Practice®), run by the International Council of Nurses is aimed at constructing a classification for professional nursing terminology, used primarily in the electronic documentation of the patients and in the broadly understood professional communication. The works are in progress since the mid-eighties of the twentieth century; in 2005 a new version of this classification was made public, which, translated into the national languages, is tested in many countries around the world. The merits of this tool for description of the work of nurses is its compatibility with the standard of professional terminology ISO FDIS 18104 *Integration of a reference model terminology for nursing* and its "translatability" into other existing classifications, above all the American NNN (Nanda, NIC & NOC). Works on its "translatability" to the SNOMED CT and the UMLS Metathesaurus National Library of Medicine are in progress.

The implementation of the ICNP® in the UMLS is related to the wider group of problems concerning the concurrence of the terminology used in professional practice (in this case the so called clinical terminology) with the scientific vocabulary, which – as it was noticed above – usually forms the basis for the subject headings systems. Apart form that, the terminology used in document cataloguing must fulfil two conditions: public accessibility and machine readability, i.e. be applicable in computer processing.

The probable introduction of the ICNP® terminology, which is familiar to many nurses around the world, in the dictionary utilised among others by the Medline service, will facilitate the use of this information source. This assistance will consist in increased reliability as to the meaning of the terms, and, in result, will increase the number of the words used,

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[1] ICNP® [electronic document] http://www.icn.ch/icnp.htm 19. 04. 2006.
[2] STTI [electronic document] http://www.nursingsociety.org/ 19. 04. 2006.

rendering possible an increased number of submitted information requests. Enhanced effectiveness results in enhanced self-assuredness and is an encouragement for further searching, thus more frequent use of a given catalogue and the knowledge resources made available in this way.

Naturally, the adaptation of terminology to the potential and lexical needs of a given user group, i.e. the representatives of a single professional group, is easier when dealing with the needs of specialised information systems than in the catalogues servicing universal holdings. Catalogue authors face in the latter case the necessity of choosing between the scientific and the popular everyday terminology, which is utilised commonly by the public library users; the authors also have to deal with the problem of ambiguity dependent on the context of the terms used.

Hence, providing the user with a considerable measure of freedom in the use of catalogues and library holdings paradoxically necessitates development of the information-retrieval system. The system must adapt itself to the information competencies and enable the user, despite his/her limited in numerous cases qualifications, to find the answer to the posed question. This also confirms the necessity of enhancing the quality of the cataloguing of the growing information resources.

The next question, which is becoming ever more important with the shrinking of the contemporary world into a "global village", concerns the multiple possibilities of cataloguing, depending on the country, or region, and the background of the librarians. It is the question for the cultural dimension of the catalogue, which can be observed in various aspects: beginning with the choice of the subject headings system, through the development of its individual divisions, to end with the selection of the terminology. It should be assumed that each catalogue has such a dimension; hence, in the shape of the information apparatus the localisation of a given collection and the way of perceiving the world by the librarian can be detected. The application of the Library of Congress classification in the Warsaw University Library is a good instance of such a culture clash, which resulted in the initial confusion and consternation of the users. One can only imagine the quantity differences in the sections of medical knowledge, which in the Western world are dubbed "unconventional medicine", between Europe and the Far East. Similar problems can arise in the interpretation of the terms introduced into the basic vocabulary of a given subject headings system.

Is the cultural conditioning a drawback of a catalogue? The answer to this question is neither easy, nor unequivocal. Uncritical transfer of foreign patterns is considered a fault in all types of activities; hence this rule should also apply to cataloguing. But differentiation on the level of details of the subject headings systems in individual divisions, or disciplines, should be considered a merit, because it mirrors the specific development of writing (hence both theory and practice) in a given field, at the same time pointing out the differences, which exist between individual cultures not only with respect to the purely cultural aspect, but also to the scientific and professional achievements. But it is also important that the subject headings system should remain an objective tool, thus reflecting the contents of the collections, not imposing their interpretation. So the limitation in this respect can point not as much to the cultural background of the librarians, but to the observation of discipline and professional ethics in the cataloguing processes; otherwise, the constructed information tool may not be objective.

The condition of objectivity applies also to the necessity of not going along with fashionable themes. One can for instance easily imagine that the expressions nowadays very popular, due to their actuality and frequent appearance in questions put forward by library

users, terms such as: "information society", or "information management", can acquire a disproportional frequency in the catalogue descriptions of documents.

Thus the question how to catalogue and at the same time not to render the information retrieval tools obsolete vis-à-vis the development of science, the ever-growing mass of printed materials, and the information needs of the users, is returning again. If the catalogue is to be considered the key to the world of knowledge, the question is: whether the individualisation of the tool through its adjustment to the needs of the user is possible. Can we make many keys to a single lock in a single door? Or is it so, that the opening part of the key should remain the same, always effective, while the grip be changed, so it befits many hands and various tastes? In that case the manipulation could be executed within the interface-mask, reaching even the level of the various terminology used, equivalent to the profile of the user (established by research, etc.) The level of detail in the descriptions can also reflect not only the contents of the document, but the level of detail of the inquiry submitted by the user.

Nevertheless, in spite of the fact that the keys remain in the hands of the users, they still have to be created prior to the moment of being handed over. Moreover, even if the first stage of the making of a key may be done in mass production, but it still has to receive the finishing touch from the master craftsman.

Jadwiga WOŹNIAK-KASPEREK

IS THERE FUTURE FOR SUBJECT CATALOGUING?

The paper presents the author's opinion on the future of subject cataloguing. Two major questions are addressed: (1) what are the pros and cons of subject headings systems, and (2) has the time to announce the end of controlled indexing and indexing vocabularies really come?

The subject approach to the documents gathered in libraries is over five-centuries old: subject catalogues and subject cataloguing were used already in the Middle Ages. But a more substantial development in the theory and practice of cataloguing can be observed in nineteenth-century United States, and in twentieth-century Europe. The category of a "heading" was formulated and the contemporary form of subject catalogue developed. With respect to the subject catalogue it is important to state that its aim is different now, than it was originally. Formerly, it was the role of the subject catalogue to provide information on a particular book. The new function consisted in gathering information on literature pertaining to specific objects under special headings, which assigned names to the described objects. The abandoning of the rule which demanded the cataloguing of books under the main word in the title relieved the subject catalogue of the problems deriving from e.g. the use of different languages in the titles and allowed for the compiling of catalogues in the vernacular languages. With time references and subheading came into use too.

The alphabetic catalogue of the Library of the Society of Physicians in Warsaw executed by Stanisław Grabowski in 1854 is generally considered the first subject catalogue on Polish soil. Treating the history of subject cataloguing in Poland one should also remember the *Bibliografia polska* ('The Polish Bibliography') by Karol Estreicher, which, starting with the first volume published in 1872, contained subject references alongside the names of the authors and the titles. This practice was retained and developed in the subsequent volumes, thus creating the foundations of the Polish subject (dictionary)

catalogue tradition. In the first half of the twentieth century one can point to numerous instances of catalogues and bibliographies in the subject order, or with subject indexes. The theoretical[3] and practical[4] works of Adam Łysakowski, the "father" of the subject cataloguing theory in Poland, were the highest achievements. But the question is: are the long-term traditions and the sound theoretical foundations of cataloguing a guarantee of its usefulness, effectiveness and enduring?

Since I have no intentions to treat the complete issue of the future of cataloguing, I will concentrate on two problems: (1) What are the pros and cons of using subject headings? (2) Can we, in the face of the problems which bother the users of subject catalogues, already proclaim the end of the era of vocabulary controlled indexing?

Merits and shortcomings of using subject headings.

The vocabulary of the subject headings systems consists of headings and subheadings. The headings and subheadings have an identical appearance as their counterparts in the natural languages, e.g. Lecanora, School libraries, Soap, Timber, or are similar to the terms of the natural language, e.g. Indexing (Machine-shop practice), Legal deposit (of books, etc.), Meaning (Philosophy), Fertilization (Biology). The similarity in form of the headings and subheadings with respect to the terms taken form the natural language is not always matched by identity of meaning, e.g. Metabolism in the Library of Congress Subject Headings System is equal to three different terms used by the English language: metabolism, anabolism and catabolism.

Catalogue users are usually unaware of the phenomenon known as semantic artificiality of the subject headings system. Yet, even if they were conscious of it, there is no guarantee that they would use that knowledge to modify their information seeking behaviour. Hence, it is very important that the semantic artificiality of the indexing language does not exceed the limits of common sense. The specific naturalness of the vocabulary of the subject catalogue (on the contrary to the usually artificial notation of the classification symbols) is to its great advantage, although at the same time may cause misunderstandings and frustration of the users. Excessive artificiality of the system and in consequence of the catalogue, on the one hand leads to diminishing of research efficiency, while on the other to avoiding of such systems by the users.

In the case of indexing languages with natural vocabulary, to which category belong among others the subject headings systems, in order to avoid unnecessary divergence from the expression of the natural language, it is important to pay special attention to the meaning of individual headings. Finding a "familiar" term in the catalogue the user will tend to ascribe to it the same, or similar meaning as it has in the natural language (or in the idiolect of the given user). Thus, finding the headings: "Animals – Habitations"[5] and "Animals – housing"[6], the user may start to wonder, where is the difference.

Excessive semantic artificiality results in many cases from the wideness of the vocabulary, which exceeds the number of the words in the mental dictionary of an individual.

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[3] *Łysakowski A.* Katalog przedmiotowy [The Subject Catalogue]. – Warsaw, 2002 (1st ed.: Vilnius, 1928). – Pt. 1: Teoria [Theory].

[4] *Łysakowski A.* Katalog przedmiotowy: podręcznik [The Subject Catalogue: A Handbook]. – Warsaw, 1946.

[5] The heading Animals – houses is used by the KABA subject headings system in application to general works on lairs, nests and other dwelling places of animals, lest these have an individual gender term.

[6] The heading Animals – housing places is used in application to works dealing with buildings destined for keeping animals by the humans. For works dealing with individual types of buildings special headings are used, e.g.: stables, hen-cotes, cow sheds.

In such instances it is difficult not to exceed the limits of the admissible artificiality. On the other hand there is an actual need for constant upgrading, including enlargement and adding of details, of the information language vocabulary. One way of dealing with the negative consequences of such conflicting interests could be the obligatory furnishing of subject headings systems with a systematic part, as it is mandatory in the case of thesauri. But it is difficult to imagine the constructing of a non-limited systematic to a vocabulary of several thousand, or even over-ten-thousand items, and raise no fierce opposition!

In my opinion, grammar artificiality, which finds its expression in the rules regulating the order of individual elements in a heading, and even more so in the exceptions from these rules, is even greater a drawback for the subject headings than the semantic artificiality. The user is not a graduate of a foreign language course, while the subject headings system is a foreign language. The user has to learn that language by way of trial-and-error and by analogy. Hence, diversions and exceptions are an additional, serious difficulty in the use of a catalogue, or an index. The costs of creating a system of grammatical rules and the implementation of this system generally do not result in enhanced effectiveness and satisfaction of the user. The users seldom formulate complex subject headings themselves. They usually search in the catalogue, or browse through (e.g.) the subject index. or use the key terms, also these which were abstracted from the headings. In the former instance the ordering of the elements is of consequence; in the latter – it is of no consequence whatsoever.

I may seem then, that we are faced with the following alternative: either continue the practices pursued until now, or quit and start something new and better. But there are collections numbering millions of documents, which are described in various subject headings systems. This fact cannot be ignored, just as one cannot ban into oblivion and erase from human civilisation the knowledge stored in books, journals and other library documents. The casting away of linguistic tools such as the subject headings systems would be comparable to archiving into a computer program and than removing it from the market. I am convinced that today we should, on the one hand, contemplate how to "humanise" the researching of subject indices, and on the other, how to change the attitude towards indexing, in order to make it more simple and more effective for researching. It seems that two solutions are immediately at hand. One would consist in furnishing complex subject headings with both see references and see also references, which form bridges between the natural language of the user and the artificial language of indexing. The system of references created for servicing the dictionary, also in the form of an authority file, which fulfils its task there satisfactorily, in the catalogue is usually insufficient. A specially designed search interface to work with the existing databases which have subject descriptions could be another solution. This interface would have to pose questions to the user and create subject headings on its own based on the answers. But it must be emphasised here that these propositions are not prospective solutions, but attempts to minimise the growing discomfort of the users, who deal with subject indices. Apart from solutions of this kind, there need be more future directed activities. Nevertheless, not one replacing the other, but one alongside the other for as long as it is reasonable and necessary.

Can the end of controlled indexing and indexing vocabularies already be proclaimed?

Hasty observations of Internet users' information behaviour result in the growing number of opinions, which proclaim the approaching replacement of all types of vocabulary control by uncontrolled key words. Doubtless, key words are universally used in web searches, but that does not necessarily imply the lack of any kind of dictionary, even in the

form of a synonyms ring. If in response to a typing error the search engine asks: "Do you mean…", the question results from the fact that the engine possesses some kind of dictionary knowledge (the problem, how this dictionary knowledge is expressed, is of course a different matter), thanks to which it knows that the semantic value of "cataloging" is equivalent to "cataloguing". Rosenfeld and Morville devoted a lot of attention in their *Information Architecture for the World Wide Web*[7] to thesauri, controlled dictionaries and metadata, demonstrating how a controlled dictionary enables combining various systems (organisation, tagging, navigation, searching, etc.) of a single service, in order to enhance its functionality and effectiveness. In my opinion, reasonable control of naming is both necessary and desirable. I think that opinions which claim that key words are a universal cure for all searching problems are dangerous. Key words are important, necessary and indispensable, but are not the only and exclusive tool available and advisable in use. They are a complementary solution, an additional proposition for effective use in certain information-retrieval situations, e.g. in uncontrolled full text searches. Key words knowledge cannot, and should not, be the only knowledge utilised by a system. The user is entitled to the comfort of using key words in his dialogue with the system, but it is our duty to make sure that behind the scene the transparent knowledge of the system assists the search processes going on in the foreground. We shouldn't do away with professional experience and results of scientific research. And I am not advocating uncritical copying of established models. WWW services, intranets, and digital libraries function in an environment, which requires new and in a certain sense revolutionary solutions, which, at the same time would create conditions favourable for such solutions. It would be a sin not to take advantage of this opportunity. But, it would be no lesser sin to destroy the achievements of subject cataloguing only because they stem from a pre-google and pre-amazon era.

Analysing contemporary subject headings systems one can't help reaching the conclusion (in my opinion a valid one) that they are strongly tied both to the card-catalogue tradition, as well as with the techniques and capabilities of the computer technology dating form the nineteen-sixties. For instance, indexing only of certain fields was dictated by the limitations of the early computer systems, and in consequence by the forecasted time necessary to answer the query. The past is clearly visible not only in the subject headings systems, but in document description formats and the perception of the elementary description unit. It is perhaps worth contemplating, whether the physical document-object is still the optimal description and retrieval unit. Shouldn't the description of the physical unit be substituted, at least in indexing, by the description of the information unit? The description of the book as a whole for instance was justified when the system provided access only to whole books. Nowadays, in the digital library era, individual fragments, and portions of the content have become accessible, at least some of which are worthy of individual metadata identification, backed up by key words. Let us consider the example of sound documents as a distinctly recognisable case. The oldest of such documents are characterised by a limited data-storage capacity, which allowed for placing of only one piece (e.g. song) on a single carrier unit (physical object). With time, as the data-storage capacity of the carrier began to grow, on a single vinyl record, tape, or CD-ROM more and more compositions could be placed, but the same traditional model of cataloguing was used. This was caused by several factors, among which the existing models, accepted methods of description, necessity to keep the card catalogue in reasonable dimensional limits, and problems foreseen with future ameliorating of

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[7] *Rosenfeld L., Morville P.* Architektura informacji w serwisach internetowych. – Gliwice, 2003.

the growing information holdings were of significance. Thus, solutions developed for the card catalogues were implemented in computer catalogues, primarily in the MARC format. In result, certain types of searches become impossible, or if not impossible then very difficult.

It is high time for a revision of the prevailing way of thinking about indexing: its essence, mechanisms, tools and the methods of compiling document representations. Changes are necessary and unavoidable. One of the conditions of these changes is collaboration of librarians with formal linguists, psycholinguists, and specialists on artificial intelligence, or neuron networks. As the times of scientists working in the quiet refuge of their studies is long past, the times of the splendid isolation of the libraries is over too. This is common knowledge, especially among the librarians. Specialists in the field of economy have noticed, that due to the Internet the differences between the producer and the recipient are becoming vague. The web is no longer exclusively an information place; instead of only advertising products, it has also become a forum of real use for economic exchange. According to the offer of the Levi Strauss Co. ("Your Individual Pair"), through the web the customer can actually design his clothing. Perhaps also we could invite the users to cooperate in creating our products and information services. Today is a good time to look to the future with hope and courage.

ЧИ КАТАЛОГІЗАЦІЯ МАЄ МАЙБУТНЄ?
Відповідно впорядкований діалог

Малґожата КІСІЛЬОВСЬКА, Ядвіґа ВОЗНЯК-КАСПЕРЕК

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1. *Малґожата КІСІЛЬОВСЬКА*: **Каталогізувати чи не каталогізувати? Ось у чому питання.**

Автор розуміє каталогізацію як метод організації знання і сприйняття світу. Ця дефініція підтверджує необхідність каталогізації у бібліотеках та інформаційних центрах. Каталогізацію слід оптимізувати, ураховуючи інформаційні потреби і компетенцію користувачів: якщо ж надавати користувачу більшу свободу пошуку інформації, тоді і засоби такого пошуку слід постійно поновлювати. Виникає також питання об'єктивності каталогів, наприклад, стосовно культурних розбіжностей між користувачами та фахівцями із інформації.

2. *Ядвіґа ВОЗНЯК-КАСПЕРЕК*: **Чи є майбутнє у предметної каталогізації?**

Дослідження засвідчує погляд автора на майбутнє предметної каталогізації. Розглянуто два питання: 1) "за" і "проти" системи предметних заголовків; 2) чи прийшов час припинити контрольоване індексування та індексний вокабуляр?