Discuss the impact of descriptive cataloging and subject analysis on the user access to resources in a collection. (Dr. Karpuk's grade: Parts I & II= 100%, A for exam and course.)

A library catalog is basically a database that organizes information so it can be retrieved. Catalogs support several kinds of retrievals that users initiate: identifying known items, aggregating like items into groups, discriminating or selecting a specific item from a group, providing a library with an awareness of what they own, and enabling sharing of resources between library catalogs. All of the above serves the catalog's main function: to organize information for the purpose of retrieving the information, for libraries to keep track of their collection, and for users to find what they need.

Several requirements are necessary in order for these types of retrieval to take place. For a catalog to identify known items, the items must have been described in some way that the database understands. The ways that information items are described are collectively called descriptive cataloging. Descriptive cataloging involves describing the physical embodiment of the book or information item according to systematic rules set out in AACR2R and MARC 21. Descriptive cataloging is an objective process whereby the cataloger uses information attained from the item itself based on what the cataloger has in hand. This includes the information from the title and verso pages for the book title, author, publisher, city, date, edition, series name, volume number, from looking through the book for illustrations, index, table of contents, bibliography, and from examining the physical dimensions of the book. The purpose of describing the item is so users of the library can access the collection by identifying the item by physical description.

In order for a catalog to aggregate or group together like items, a second way of describing the information resource must have taken place. This way of describing an information resource is not based on physical description but on a description of the contents of the book, describing the book as an intellectual entity. Describing the book as an intellectual entity requires an analysis of the subject or contents of the book, the books "aboutness." For a catalog to gather together all items with the same or similar subject, the items must be described in ways that the database understands. The ways that the subjects or intellectual contents of books are described are collectively called subject analysis. Subject analysis is a subjective, rather than objective, process whereby the cataloger uses tools created by the Library of Congress and other library agencies to accurately determine the intellectual concepts in the book. These tools have been created over many years and are now recognized by the library world to provide a schema or structure by which all the knowledge known to mankind is organizes into a systematic order that is hierarchical and moves from the general to the specific. This schema of knowledge is called a classification system because it classifies in categories all the knowledge known to mankind and does so in an orderly fashion, moving from general categories such as the academic disciplines of Art, Language, Philosophy, History, Applied Science, Natural Science, to specific instances of these disciplines Biology coming under Natural Science and Medicine coming under Applied Science. The library world has created several of these classification systems, one being the Dewey Decimal System, another the Library of Congress Classification System.

Through the subject analysis process the cataloger assigns a classification number to each

information item based on the subject of the book and its treatment in order to fit it somewhere in to the library's collection, such as a general treatise on the philosophy of science, a specific treatment of experiments in embryology, a reference book on the human genome, a guidebook on building a home computer, a textbook on MSWord, or a video game of science bats. While assigning the classification number provides each book a unique number and places each book in a unique location on the library's shelves, how does the user locate that book either in the catalog or on the shelf? We have already seen that users can locate books by physical description, title, author, etc but what if they don't know these. In other words how does the database recognize the intellectual contents of a book in such a way that users can locate it in the database?

Classification systems provide a structure that organizes knowledge. In order to access this knowledge structure and retrieve books from it, Library of Congress created subject headings that work hand in hand with the classification system. Subject headings also cover all the worlds' knowledge and are hierarchically structured, moving from the general to the specific. So the second part of subject analysis is analyzing the intellectual contents of a book to assign it verbal subject headings. Subject headings enable users to access the intellectual contents of the library's collection because the subject headings are access points to the library's catalog or places where data is retrieved by the database. The data in this case are the subject headings themselves, which the cataloger chooses from a four-volume set called the Library of Congress Subject Headings. The more terms the cataloger applies to a book, the more access points are available for users to retrieve this book. Subject headings, then, are tools that enable library users to recognize, and databases to retrieve, the intellectual contents of a library's collection.

Subject headings serve users and impact users access to the library's collection because they support the aggregating function of a library catalog. Catalogs aggregate by enabling grouping of resources, which could be all the books of a title, all the books by an author, all the books of a series title. An important way that catalogs also aggregate is by grouping all the books under a certain subject, that is all the books that have been given a certain subject heading. This is called subject searching. Users enter the subject they want to find material on and the library catalog matches that term with the subject headings in its database that catalogers have applied to books in the collection. If there is no match, then the catalog will point the user to an alphabetical list of subject headings starting closest to the user's term. This list is portions of the Library of Congress Subject Headings that are currently being used by that library. This list is a controlled vocabulary that is standardized and not specific to that library or that user. Therefore when catalogers apply subject headings to new books in their collection they must keep in mind the needs of their local users and their intellectual levels. For example a cataloger for a public library would not choose the scientific term arachnids for spiders but pick the popular term, while a cataloger for an academic library would choose the scientific term.

LCSH use a precoordinate vocabulary, which means that the coordination or the combining of terms is done by the cataloger rather than being done by the searcher when using a postcoordinate vocabulary. Precoordinate vocabularies are usually in inverted word order with the more general term appearing first and the more specific or modifying term appearing next. For example Art-French combines the concepts Art and French with the more general term Art appearing first and the type of art appearing next, whereas in natural language we say French Art. The advantage of this kind of word order is that related terms appear together. All subject

headings about French Art would appear near each other, such as Art-French--Impressionism, Art--French--Expressionism, Art—French--Renaissance, Art--French--Prehistoric, and at a more general level, all subject headings about Art would appear near each other, Art--Chinese, Art-Japanese, Art--Indian.

Key word searching is subjective and not objective. A word may exist in the catalog record but will it have the same meaning as the word the user is thinking of? Say I choose to search the title field for all titles with the word cherry to get a book about the cherry orchards in Silicon Valley, history of the cherry orchards possibly to find out when they were first planted where, etc. Searching by key word would bring up all titles that had cherry in it and I would get false drops like Cherry Ames: Student Nurse series and The Cherry Orchard, a play by Chekhov. In controlled vocabularies the meanings of the words are controlled. Searching a controlled vocabulary for cherry or cherry orchards would limit the search to a predesignated meaning of cherry.

The objective quality of controlled vocabularies impacts the user access to library resources. Users need to understand that the library is organized by disciplines or subjects such that the intellectual content of each book has been determined and a classification number and subject heading assigned it. Many library users don't realize that when they're browsing through lists of the subject headings in their library's catalog these lists are not arbitrary subjects but are derived from a standard vocabulary called the Library of Congress Subject Headings. Many users also don't realize that a relationship exists between a book's call numbers, either Library of Congress call number or the Dewey Decimal call number, and the subject heading assigned it. I didn't fully understand this until I took library of science classes. I didn't fully understand that I was browsing a standard list of subject headings when my local catalog threw me into a browse mode if I entered a search term it did not recognize. I didn't fully understand that I needed to change my term to match those in the browsable list to find books I needed. This is why some library catalogs, such as De Anza College library's new catalog where I used to teach, don't even have a browse mode on their basic search, just keyword. The librarian in charge of that catalog, whom I interviewed, said that students don't understand what they are browsing because they don't understand LCSH and the browse page just confuses them, like it did me earlier on. The browse mode is there but buried further down. This is how much Google and other Web browsers have affected the way students think about searching. One wonders why these search engines are even called browsers.

Discuss issues involved in classification and assignment of subject headings to library resources. Use the Dewey Decimal Classification system, the Library of Congress Classification system, and the Library of Congress Subject Headings in your discussion.

The whole library collection is organized around subjects, not alphabetically by author name or title. The contents of a library are physically arranged according to the classification code it uses. There are several codes, but two commonly used in the USA: Dewey Decimal Classification (DDC) in public libraries and Library of Congress Classification (LCC) in academic libraries. Any other arrangement, such as alphabetically by title or author, would make little sense because there would be no relationship between the items next to each other except for the order of the alphabet. Public libraries do arrange popular fiction by authors' name when this is more suitable for the needs of users. Organization by subject makes sense because users come to find resources

on a subject and expect to find books they have never heard of. So when they locate a book, they also locate other books on the same subject. Users don't usually come to locate a certain book they already know about, although this happens too.

DDC was invented by a single person, Melvil Dewey, who created this numerical notation system to organize the world's knowledge. Each domain is given 100 digits, for example 200-299 is provided to Religion, 300-399 for Social Science, 400-499 for Language, 800-899 to Literature. The DDC hierarchy builds numbers by starting with the main headings and adding subheading to create more specificity. Within each one hundred range are subdivisions for each domain, each one following the same preorganized format. 401 is philosophy and theory of language, 801 is philosophy and theory of literature. Numbers expand to the right of the decimal place. To the right of the decimal point a similar pattern holds for subdivisions. This is the mnemonic quality of DDC. DDC allows for expanding the decimal system to the right to create more specificity that includes geographic and personal name designators. The complete numbers can get long, up to 19 digits, and in public libraries this level of specificity is unnecessary and unwieldy. Libraries can decide at which notations they want to stop adding. Notations act to separate sections of numbers.

The DCC classification schedules comes in Volumes 2 and 3, the Tables for subdivisions in Volume 1, and the Relative Index and Manual in Volume 4. You start by determining the subject of the item and then looking up the subject in the Relative Index to find out where to look in the schedules. You examine the schedules to identify the best number. The complete call number includes a unique identifier number called the Cutter number that is based on the book's author and the year published. Cutter charts help determine how to abbreviate the author's last name. DDC uses 3 to 4 digit Cutter numbers or Cutter-Sanborn numbers. Tables help the cataloger build the class number by classifying areas that are not treated as main headings. There are tables for geographic areas, languages, racial and ethnic groups, historical periods, and personal names.

DDC is an arbitrary orderings of all the world’s knowledge. The original DCC classification had a bias toward the Western worldview. One example is the Religion section where small space was allotted to nonChristian religions. As the new schedules get published, there is increased recognition of nonwestern worldviews and more space is allotted for knowledge from nonwestern cultures. In DDC biographies are classed with the subject matter.

LCC orders the world's knowledge according to the academic disciplines. LCC schedules are organized into main classes that are assigned an alphabetical letter. For example A is reserved for General Subjects, P is reserved for language and literature, Q for science, T for technology, Z for library and information science. The schedules for the main classes are written by subject specialists in that field and are subdivided by combinations of letters to include all aspects of the subject. Each subclass is subdivided further into alphanumeric notations that include historical periods, geographic details--what in DDC is given in Tables. These more specific, alphanumeric notations are preceded by a decimal point when assigned. A complete assignation may include more than one additional subdivision as well as the main entry Cutter of the author's name and date. LCC main classes are each in a separate volume. Some classes provide their own sets of tables for applying to only that class, but other tables apply to all classes. For example there is a Cutter number for country or region whereby the first letter of the country gets a Cutter code like

the author's Cutter. The advantage of this is that people who write on a subject are classified with that subject and the book placed with that subject .

There is a direct relationship between LC classification schema and LC subject headings. The two lists are both hierarchical, moving from the general to the specific, and are organized around academic disciplines. But there are differences. LCSH is an alphabetical list that behaves like a thesaurus in that every term is entered in alphabetical order along with its syndetic structure. The syndetic structure shows where in the hierarchy each term sits and the vertical and horizontal relationships. Broader terms and narrower terms show vertical relationships, while related terms show the horizontal relationships. Hierarchical relationships go beyond one level with the going down multiple levels. A true thesaurus shows only one level higher and lower. Also are listed unused forms or no longer used forms. Each related term is cross-referenced. Scope notes tell catalogers what concepts come under that heading and redirects them to subject headings for concepts that don't come under that heading. At many subject headings, scope notes give the corresponding LC classification number.

There are some basic principles for classification that are informed by the needs of the library and the needs of the library's users. An item should be classed where it is of the most use for users. One example of this is biographies. Both LCC and DDC place biographies with the subject that the person is connected with: Margaret Meade biography *Blackberry Winter* would be classified with anthropology. But DDC provides an alternative way to classify biographies, in their own section. Each library can decide how to handle biographies, what is the best place depending on their user group. Some users like to read biographies and autobiographies making a special section useful. But consistency is important. Once a library starts a policy, they must uphold it for all biographies and record where there are discrepancies. LCC classifies biographies with the subject matter, or what the individual is known for. While a biography about Lance Armstrong may have more than one subject heading reflecting his fame as a cyclist and his life as a cancer survivor, the LCC classification number would be based on only one: Sports--Cycling. Bicycling-Biography.

An item must be classified in the most specific category it can hold. This means to determine the level of specificity of the contents and find the classification category that applies to it. If two or three topics are covered, the one that the book devotes the most space to should determine the classification category. If the topics are covered equally, the one that is covered first determines the category. If more than three topics are covered, the item is considered a general work and should be classified as that. An example of this is Aveda Rituals, the book about diet, hygiene, physical fitness, attitude, message, skin care, meditation. This book covers many areas and is classified as a general work under Personal health.

There is an order to how you examine the item and build the class number. You start with the subject, then the form, then the subdivisions: historical period, geographic region, personal name. An example of this is Eastern Birds, the book about bird watching in the eastern United States. You would start with the subject Birds, then the geographic region. In the Mother Lode book, the subject is history then the form for guidebook, then the location. You look in the tables for the exact location that can get as specific as the county or city. Form usually appears in the literatures section as short stories or fiction.