Appendix B:

Asterisks indicate technical terms; bold type denotes the page number where a technical term is introduced.

(Extract from John Lyons: *Semantics,* Vol. 1. Cambridge Univ. Press, 1977. p. 357)

Appendix C:

phoneme: a significant unit of speech-sound.

phonemic transcription: a set of graphemes used so as to represent accurately the phonemes of a language; normally enclosed in slant lines: e.g. /kæt/ *cat.*

phonemics: (1) the study of significant units of speech-sound; (2) the structure and organization of the phonemes of a given language.

phonetic: pertaining to speech-sounds, without reference to their phonemic function or organization.

phonetic transcription: a set of graphemes used so as to represent accurately the speech-sounds of a language, whether they have phonemic significance or not; normally enclosed in square brackets: e.g. ['k'æt] *cat.*

phonetics: (1) the study of speech-sounds as such; (2) the speech-sounds of a given language.

phonology: (1) the study of the phonetics, phonemics, and all other aspects of the sounds of human speech (including supra-segmental features); (2) the structure and organization of the phonological features of a given language.

(Extract from Robert A. Hall: *An Essay on Language.* (Chilton Books, 1968)

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Library of Congress Subject Headings: a New Manual

Perreault, J. M.: **Library of Congress Subject Headings: a new manual.**
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Many of the failings of Library of Congress Subject Headings are examined in the context of L. M. Chan's new manual on that influential system. While the system itself is strongly criticized, the manual is highly recommended as a guide to practice; the major criticism directed at the latter is that it only sporadically attempts to be critical of the system. (Author)

1. Introduction

When I began this essay on the failings of the *Library of Congress Subject Headings* (LCSH), I saw it as a review of Lois Mai Chan's recent book (1) on that system. As it developed, it became apparent to me that I was using the book as a sort of diagnostic probe into the system: the real focus had moved beyond the book to the system that it describes. That description is fuller and deeper than has ever before been accomplished or even attempted, but its own focus is more the piece-by-piece workings of the system than its overall theory; but since, in the minds of many, that theory is shaky or even in total disarray, it seemed a great misfortune that Chan's notably keen analytic abilities were not directed more toward the discernment of the outlines of the theoretical framework of LCSH (however rudimentary or implicit), toward the explanation of the bases of its strengths and weaknesses, and most of all toward suggestions for its further strengthening through elimination of those weaknesses.

This essay then is not a systematic examination of LCSH's strengths and weaknesses, nor yet an attempt at the theory called for above, but rather a view of aspects of controversy within LCSH as seen through the lens of Chan's book, sometimes in line with her own cirticisms, more often just because she describes a flaw without making the appropriate criticism.

Despite its vast currency in American bibliothecal/bibliographical usage, both in itself (in libraries), by its example *(Sears' List of Subject Headings)* (2), and by its application to the organization of printed subject bibliographies, – despite not only these positive indications of its virtual supremacy, but also despite the negative indications implied by the fact that resistance to it has historically spurred on the creation of other, more 'modern', systems of verbal search strategization, from

Uniterms to thesauri; despite the interest shown by many American subject-cataloguers in PRECIS as a substitute for it[1] (and the Library of Congress administration's decision not to be so radical as to drop LCSH in favor of PRECIS, even when offered the chance of making a dramatic switch to coincide with the closing of its own card catalog and with the adoption of $AACR_2$); – despite all this evidence of a position of hegemony that would seem to demand more than mere historical explanation founded on the enduring acceptance of the Library of Congress's card distribution service, there has been no real attempt before Chan to see LCSH in any light more penetrating than the merely anecdotal or in regard to some single aspect of its ramifying complexities, no attempt to see t h r o u g h its complexities to its principles, no attempt so see w h y it has on the one hand become so dominant and has on the other aroused so much opposition. Not that the attempt is likely to be very successful, whoever undertakes it, since even more than its sister mountain-chain (no mere mountain of subject headings or classification codes could adequately serve as metaphor for this much variety, this much non-uniformity), the Library of Congress classification, LCSH has grown by accretion: it can be seriously questioned whether it is imbued with principles such that it can be m a d e transparent (since all agree that it is not *prima facie* so), whether its principles can ever be mined out of the mountain-range fastnesses of its external shape and refined into anything like systematicity.

2. The qualifications of the author

Chan does not, in the book under review, take a thoroughgoingly critical attitude. There is criticism, both overt and covert; but for the most part she is content to describe and not always even to explain. But for all that her book is the most important, in its narrower domain, that has yet been published; and even in the larger domain of search strategization in general it is one of the most important of the decade, even though not (who ever is?) wholly successful.

This lack of an attitude of constant critical attention, however, in no way implies any lack of an observant eye. To note a random parir of examples, note first the good distinction p. 171[2] between **–Periodicals** and **–Yearbooks**. These subdivisions are all too often assigned quite whimsically to annual publications that fall into the title-genre 'annual reviews of .../yearbook of .../advances in .../progress in ...'; if the Library of Congress cataloguers would keep Chan's distinction in mind, improvement would be instant: yearbooks "do summarize the year", periodicals "do not summarize the year".

To go on from this abstract characterization and show h o w to tell whether each such title does or does not summarize is really outside Chan's purpose, but two helpful diagnostics are (a) the sort of bibliography each articles includes: is it largely confined to references from one recent year, or is it broadly retrospective? and (b) is the table of contents for each volume of the same title largely repetitive?

Note secondly the examples p. 89 of missing *x*-references from natural to inverted word-order and *vice versa*. Chan's sharp eye and careful compilation of examples and counter-examples is at work here, but the reason for my expectation (and for my disappointment) at the generally uncritical descriptiveness of the book is that the same observantness together with penetrating (and constructive) criticism has been so beautifully characteristic of her periodical publications on LCSH (4–7); nor should we ignore these same good characteristics in her annual reviews of the general domain (8), nor (even though I am far more impressed here by her evidences than by her conclusions) in her paper on corporate *vs.* title entry for serial publications (9). The attitude taken in these papers, had it been manifested in the book under review, could have been an even more powerful impetus than that toward the radical improvement of LCSH a c c o r d i n g t o p r i n c i p l e s that is so sorely needed. LCSH is indeed undergoing radical changes, but the lack of thoroughgoing principles for these changes makes it unsafe to call these changes improvements – and it is clear that Chan well knows this when she argues, in favor of systematicity, that "A logically and consistently constructed system is easier to learn and master than one given to irregularities and exceptions to rules" p.149, and then goes on to point out that principles themselves need to form a system to produce the sought result: "a move towards free synthesis without corresponding development of rigorously-defined citation formulae can create havoc."

An aspect of Chan's treatment of LCSH to which I give very high marks is in regard to the question of whether 'the convenience of the public' is the highest criterion available by which to judge a subject heading language, to which she replies (with a quotation from Dunkin) that the users' preferences are too variable and transient to serve as supreme criteria p. 23. Later, Chan points out that while it could be helpful (as advocated by Haykin) to know "'the approach used by many readers of different backgrounds'", such knowledge is utopian of achievement, while on the other hand "a strict reliance on consistency and regularity ... (i.e., predictability) might ... produce a new level of convenience" p. 148.

But before I undertake my more substantive criticism of Chan (and, *a fortiori*, of LCSH itself), let me point out a few pedagogical flaws (in the order not of their importance but of their occurrence in the book): The symbol *x* (i.e., seen from) is used on p. 71 but not defined till p. 87. On p. 122 the 'direct' place subdivision technique is being discussed, the list of countries for which, "instead of the name of the country, the name of the appropriate first-order political subdivision" is to be employed, consists of "Canada, Great Britain, Malaysia, the Soviet Union, the United States, or Yugoslavia", while on p. 67 and p. 133 and elsewhere only Canada, Great Britain, the U.S.S.R., and the U.S. are enumerated in precisely the same connection. On p. 141 we are being shown replicas of forms for the establishment of new subject headings, but the terms related to the target heading as equivalents and as superordinates are signified resp. as "*See* ref. from" and "*See also* ref. from", instead of what is in fact the universal practice, namely *x* and *xx*. On p. 305 we are told of a change in practice: "The jurisdictions United States and Great Britain which used to be abbreviated are not spelled out, regardless of their location in the heading", but on the very same page there occurs the heading Labour Party (Gt. Brit.), an example (but, alas, not so indicated) of the superseded practice. In the Index, *s.v.* Biography, subtypes are listed with no mention of "True biography", which is discussed as a specific subtype on p. 190 (and which besides is not mentioned in the Glossary); in the Glossary *s. vv.* Pre-coordination and Synthesis mutual see-also references are lacking; and *s.v.* Subject catalog we are told that it consists of "subject entries only", namely that it is "The subject portion of a divided catalog" – but we have been told nothing about any such arrangement in the tcxt[3]. I do not regard these as major defects in the book, I just wish that Chan's (un)-usually observant eye had been directed as much toward her own

work as toward LCSH itself; the usual reviewer's verbiage goes, I think, 'When the inevitable revised edition appears, we trust that ...'. These are all relatively minor matters, except that they may be particularly confusing to a class of readers to whom the book will doubtless be highly recommended, namely library school students (and not necessarily only to "advanced library science students", as is indicated in the Preface). Thus the use of the introductory phrase 'pedagogical flaws' rather than, say, 'formal flaws'.

Formal flaws d o occur, of course: on p. 70 an example is given which evidences a miscounting of the long dashes in the LCSH list: **France–History–Revolution, 1789–1900** (whatever that could mean!); that such a mistake is possible shows well that the promulgators of LCSH should be more concerned about such matters of 'schedule'-intelligibility than they seem to be. But the point that Chan makes with this example, namely that the Library of Congress is chucking overboard one of the most fundamental (and u s e f u l) principles of file-order, namely general-before-special, is correct. That it is deplorable is obvious at least to me, but its deplorability grows when we realize that this counter-productive change is coming about not because of any conclusion about either 'the convenience of the public' or systematicity, but because the computer program that would retain general-before-special is a bit more difficult: the program can call for earlier dates to come first b o t h as i n i t i a l and as t e r m i n a l (1789–1793 is 'earlier' then 1789–1799), or for earlier i n i t i a l dates to come first while later t e r m i n a l dates come first (1789–1799) is 'broader' than 1789–1793) – but it is clear to see that to treat all date-numbers alike makes for a simpler and hence cheaper program – though not for a more service-effective one. Chan does not deplore this, unless she assumes that to describe a foolishness to those who know can call forth only one reaction: deploring. She perhaps forgets that books do fall into the hands of those who do not know.

Formality again more than substantiality is basic to minor filing errors in the Glossary *s.v.* Classed catalog and Class entry, which, in that order, imply letter-by-letter filing, whereas *s.v.* Refer from reference and Reference, in that order, imply word-by-word filing. But the example of filing quoted at 325 from Rather is more substantive, and may also involve the computer as culprit. Under the heading German literature we see the following subdivisions:

– 17th century
– 20th century
– Addresses, essays, lectures
– History and criticism
– Yearbooks
– Alsace

That numbers must either precede or follow letters in the collating sequence is obvious, and therefore that the dated period subdivisions precede the form subdivisions is acceptable. But it is also true that something more than the letter/number distinction is at work in order for –Alsace to come a f t e r –Yearbooks: there must be a non-printing facet symbol. Therefore, there is no in-principle impossibility against having the facet sequence 'form/period/place', rather than that which Rather displays, 'period/form/place' – and if such sophistications can be brought about here, why must general-before-special be sacrificed to our modern-day Moloch?

3. How are subject headings made, and what for?

To mention the sequence of facets lands us nicely in the thick of the real controversy about subject headings, namely the syntagmatic/constructive/relational aspects. Right here, after all, is the primary advantage of PRECIS, that it can construct very elaborate headings and thus avoid the LCSH practice of multiple headings when the document is monothematic, and can at the same time manage to collocate similar subdivisions, while avoiding terminological vagaries of the isolates themselves (or so at least it is claimed). But much that the Library of Congress is up to these days plays right into the hands of PRECIS's sometimes not-critical-enough supporters, except for the beginnings (at long last) of a more reasonable attitude on free synthesis – at the same time that the grouping of subdivisions is suffering from the low level of computer sophistication being provided to LCSH users (who will tend to file in imitation of the published authority document, if they do not computer-file by means of MARC-provided programs), and at the same time that terminological vagaries are growing apace.

But the sequence of subordinate facets implies a relation between these facets and the topic itself that they subtend; just what is the nature of this relation? Haykin imagines, as quoted on p. 62, that –[**place**] does not "'limit the scope of the subject matter as such'", but merely "'provide[s] for its arrangement in the catalog'"; whereas Coates is far closer to being on the right track:

> ... in the alphabetical subject catalogue the degree of subject specification and the mechanics of arrangement are simply two aspects of a single operation. One decides upon a particular heading and by the same token determines the position of the entry in the catalogue.

Haykin's dictum is a half-truth: 'music' in **Music–Europe** is not limited in scope in just the same way that it would be if changed to 'musical instruments' or 'musical form' or 'music of the spheres'; but it i s limited indeed (in quite a different way) as against **Music** *simpliciter*, which concerns the topic without a n y geographic focus. The typical implicitness of most non-analytico-synthetic indexing languages surfaces here: 'music' *simpliciter* differs from 'music' in 'music in Europe' in that the second i m p l i e s a historico-descriptive treatment that the first does not suffer from. Nor would matters be different with a term from a different domain, such as 'physics' *vs.* 'physics in Europe' or 'psychology' *vs.* 'psychology in Europe'. The confusion may be between –**Europe** and, say, –**Bibliography**; form subdivisions do not limit the scope of the preceding topic at all, they only tell us something about the work – as against the place subdivision, which tells us something about the concept(s) with which the work is concerned. This does not mean that 'arrangement in the catalog' is unimportant; it is in fact quite central to the whole enterprise, since without intelligible arrangement in the catalogue, retrieval is impossible – and intelligible arrangement in the file as a whole is ultimately grounded on the syntagmatic arrangement of the parts of the individual subject headings.

At p. 64 Chan indicates (though not in these terms) that topical subdivision should involve synthesis between isolates from different hierarchies (foci from different facets), thus avoiding the appearance of articulated alphabetico-direct headings (such as make up LCSH) being in some sense alphabetico-classed headings, which latter are "of [the] genus-species or thing-part type." She goes on to advert to common usage as preventing **Physical research** in parallel to the acceptable **Chemical research**, and to report that "In order to ensure greater

uniformity among newly established headings, current policy requires the use of the form **[topic]–Research**", a very salutary decision, since whenever two solutions are available, that which can apply to a l l cases is to be preferred to that which applies only to s o m e, because those not covered by the narrower solution must be treated by some other principle and thus in an inconsistent manner, while many users will perceive the problem-cases as similar and will retrieve less than all that is relevant by virtue of having expected a consistent solution. On p. 152 Chan gives an excellent summary of some of the silly inconsistencies of punctuation in LCSH; she finishes by pointing out that "Syntagmatic relationships are expressed by relational words such as 'and,' 'in,' or 'as,' and sometimes expressed in the form of subdivisions." "Sometimes" is less pointed than 'in similar cases' would have been, for she is adverting to inconsistency; but on p. 41 she had given, as examples of synthesis, **Boats and boating** and **Hotels, taverns, etc.**, in both of which the 'and/et' are not really synthetic (i.e., '... in relation to ...'), but rather indicative of partial synonymy. In the same list of examples of synthesis we see **Church and education in Connecticut** and **Church and labor–Italy**, with no mention of the different connectivity manifested in each (nor any reference to such a heading as **[topic], Italian**, which manifests yet another kind of connectivity); we are told that "the geographic aspect may be expressed either by the phrase **[subject] in [location]**, or the subdivided form **[subject]–[location]**." An inconsistency in LCSH practice has been shown, but not fully penetrated: the reader may take 'either/or' to be i n c l u s i v e (as Chan seems to mean) or as e x c l u s i v e (as is true in many such cases in LCSH). On p. 53 we are told that "In some cases, the qualifier[4] is used as an alternative for a subdivided form", and we can agree that such inconsistency is pernicious; but the examples given, "**Marches (Voice with piano)** *but* **Symphonies–Vocal score with piano**", go off at a tangent, since the two subdivisions exemplified are themselves so different, the first giving a further specification of the (musical) form-term ahead of it, the other a bibliographical form subdivision mentioning a mere redaction of the original score(s) – but Chan is indeed correct in calling neither of these true qualifiers.

4. More on the central issue: citation order

In the consideration of synthesis, one of the most crucial matters to settle, in terms of valid and intelligible principles, is that of citation order. Chan's grasp of citation order's function and weight is firm, as shown by her declaration (as against those who would mistakenly insist on a greater rigidity) that the following headings containing the same elements,

Labor supply–Research–United States
Labor supply–United States–Research

have different meanings p. 83.

In other words, not merely concepts but also t h e o r d e r a m o n g t h e m constitute meaning.

Related to the ambiguity mentioned above as so often found in place subdivisions, Chan points out inconsistency in the choice of the established form of a complex heading: "in establishing a subject heading, three choices are often required: name, form, and entry element" p. 25, but the examples tend to overlap: for choice of form we are shown "'Inoculation of plants,' 'Plant inoculation,' and 'Plants–Inoculation'", which show entry-element problems as well; the sensible conclusion p. 47 is that

> unless the proposed phrase heading is very well known by the informed public in exactly that form, it is considerably more useful to establish the proposed new concept as a topical subdivision under the generic heading.

This does not, however, seem to be the direction of the Library of Congress's current practice; LCSH seems more and more to contain l o n g phrases in which are hidden just such subordinate terms as would better have been displayed by one or other of the traditional means of explicit subordination.

Going on from exact to partial synonymy, Cutter is quoted to the effect that "'In choosing between two names not exactly synonymous, consider whether there is difference enough to require separate entry; if not, treat them as synonymous.'" p. 29. The appeal to functionality is a red herring: the real doubt to raise about such a conflation centers on whether the difference is one in language itself or in the works that the library holds. Unfortunately, all too often there is a deleterious change-over-time phenomenon: what is at one time entered under *A-&-B* but is really only about *A*, would later (let's say in another edition, etc.) be entered under *A* when that had been established as a separate heading – and no attempt is likely to be made, for reasons of economy or the like, to change the old entry (unless *A-&-B* had been discontinued as a valid heading).

Cutter's argument against specific and direct noun-&-adjective phrases, by the way, is quoted p. 56 in the case of **Ancient Egypt**, to which Chan rejoins that "A user acquainted with the rule of specific and direct entry should not find these headings unexpected", but neither she nor Cutter (even though he would allow such hypothetical headings to be employed "'if due discrimination be used'") would be likely to tolerate extensions of such a phrase to 'bibliography of Ancient Lower Egypt'. The whole discussion of direct *vs.* inverted word-order in phrases (Chan's "entry element" problem) is really only a symptom of the syndrome 'distributed relatives'; with it also is connected, as a palliative or attempted cure, multiple entry (to be discussed more fully below). What must be remembered is that b o t h direct a n d inverted phrases result in distributed relatives, and we must ask ourselves, before we attempt to solve the obvious and serious problem therein implied, whether we want a solution that can apply to a l l cases (which means that our solution will have to be in terms of broad l i n g u i s t i c or l o g i c a l categories), or want to deal with e a c h phrase on its own merits (which means that our solution will have to be in terms of narrow b i b l i o g r a p h i c a l characteristics). Angell's proposal, quoted on p. 150, to use direct order if inversion would put a word as "entry element" which would be meaningless alone, is an example of a linguistic solution.

Principles that can serve to illuminate citation order seem rather cavalierly chosen by Chan, in that Prevost's "noun rule" is mentioned on p. 58 (though it is not indexed or listed in the bibliography), and PRECIS is invoked p. 80 to justify subdividing "a concrete subject"

by "an action"; the *loci classici* would have been Kaiser's theory of concretes and processes and Ranganathan's categorial order 'personality: energy', which are finally mentioned on p. 150 (though the footnote leads only to Needham's excellent but hardly original survey). That a better developed (or at least somewhat subtler) theory of citation order and categorial analysis is needed can be seen from the semi-defense of such a heading as **Shakespeare, William, 1564–1616–Characters–Fathers** p. 64; it is said to be "of the genus-species type", and accordingly out of place in an alphabetico-direct system; recourse to the concept of dependent facets would have been of greater explanatory value. It is true, of course, as Chan implies (though she offers no examples), that a phrase would do the trick, e.g., **Fathers in Shakespeare.**

Citation order theory applies also to author/title entries, but anomalies in LCSH practice in cases of place names, etc. (based, that is, on author/title practice) are undetected, e.g., on p. 123: Dyrham Park, Eng. (Avon) as against Buen Consejo, San Juan, P.R., in which the order of expansion from part to whole is pointlessly different. Rather is fairly explicitly aware of this nexus, as quoted on p. 326, but we still see exemplified, in the Library of Congress practice, the useless grouping of Spurious and doubtful works at the end of the listing of an author's separate authenticated works; the question is not asked by him or by Chan, 'What user would look here, rather than under the normal author/title position for this work, since from the fact that he is looking under t h i s author for this title we can conclude that he probably doesn't know that this works is n o n-authenticated?'

Some aspects of citation order seem to be implicit rather than explicit in LCSH (this has been mentioned above in connection with place subdivision); it is true in a particularly striking way of such a heading as **Erech, Babylonia** p. 255 for an archaeological work; were an archaeological document to concern itself with an occupied site the subdivision **–Antiquities** would have been required; that it does not (because this site is unoccupied?) seems worth mention, esp. in a chapter entitled "Subject Areas Requiring Special Treatment".

That Chan's observant eye is at work not only on LCSH is evidenced by her remark, p. 151 that "The PRECIS system has not been in operation long enough to have accumulated the problems of obsolescent terms as the Library of Congress has over the years." But the problem of obsolescence in LCSH is not merely that of one-for-one transformation (e.g., from **Mohammedanism** to **Islam**) – there are syntagmatic as well as paradigmatic changes over time. Chan points out p. 144 that "Split files" or some similar solutions are necessary "when the old heading is replaced by two or more new headings", but never mentions an even more insidious change, that by consolidation. As will be seen when I discuss multiple headings more fully below, I am in favor of consolidation of multiple general headings into articulated headings more nearly coterminous with the documents they surrogate; but librarians away from the bibliothecal Mecca on the Potomac, esp. those not blessed with computer time (if indeed this can solve the problem), need to be told that this problem exists and how to deal with it. E.g., whereas in the past a work on Aristotle's epistemology would have received **1. Aristoteles** and **2. Knowledge, Theory of**, it would now receive **1. Aristoteles–Knowledge, Theory of** and **2. Knowledge, Theory of** p. 197; what is being attempted in this second heading could have been more economically achieved by a *see-also* reference from it to the new-style coterminous heading (the point will be discussed more fully below). Whereas in the past a work on psychoanalysis of children would have received **I. Child study** and **2. Psychoanalysis**, it would now receive **1. Child analysis.** After the change takes place, and in the (highly likely) absence of a revision of previous double headings into single articulated headings, the user must also look through the file of each general heading to find works on the special topic; his expectation of consistency will very likely prevent him from looking into the file of general headings if he began his search at the articulated file, and *vice versa.* Thus the creation of such articulated headings (and their absorption of the corresponding general files) is of the highest desirability in that it effects a far closer match between heading and document and thus better exemplifies the principles of a system such as LCSH, i.e., p r e-coordination with references from related headings, in these cases *see-also* references from the two intersected general headings (for the child psychoanalysis-example) or from the one linguistically dissimilar heading (for the Aristotle example).

And to what extent will computers be able to do such updating as transcends the simple one-for-one transformation, at least in the case of subordinate elements that are not linguistically identical or which do not have explicit enumeration of all possible *see-also* links (cf. p.97, "General References")? Chan cites Ganning on p. 32 to the effect that "all bibliographic records previously linked to the old form of the heading would automatically be linked to the new form of the heading"; but there is virtually no way, within the present format of LCSH, to make references between old and new forms in such examples of consolidation as are given above, even though change by one-for-one transformation and (sometimes) by expansion can be handled by the computer. The bibliographical millenium has not arrived simply in virtue of the availability of computers.

5. Multiple headings and the like

We are told, on the authority of the *Cataloging Service*, that

> When a new heading being established contains as part of the heading an existing heading which consists of an obsolete form, the policy is to retain the obsolete term in the new heading if the obsolete portion of the new heading appears in initial position. The reason for retaining the obsolete term is to avoid confusion and to keep the original heading and the new heading together in the alphabetical file. ... However, if the obsolete portion of the heading does not appear in the initial position, the current or preferred form is used ... p. 143

Thus the new compound heading **Moving-picture sequels** (based on the old simple heading **Moving-pictures**) is at some distance from the new simple heading **Motion pictures**, whereas a new compound heading such as **Violence in motion pictures** is, by virtue of the non-entry position of the changed element, no problem either of form or of file arrangement. The reason adduced "for retaining the obsolete term" as entry element of the new compound heading is "... to keep the original [simple] heading and the new [compound] heading together"; but this seems strange and unnecessary if we can call on the computer to move all the old entries from **Moving-pictures** to **Motion pictures.** If the computer is not available, and if we plan a split file for the old and the

new simple headings (*see-also* references both ways), the condition obtains for an argument about where to put the new compound headings; but the Library of Congress's argument is certainly not the only one that could be made, and it is far from conclusive.

Allusion has been made in passing to multiple headings as a feature of LCSH practice. There are more than one kind of multiple headings; as a rough-and-ready classification we can enumerate (a) cases where the whole unitary subject cannot, by the rules of LCSH, be comprehended in a single heading, thus forcing the use of two or more headings to signify (post-coordinately) the one complex or compound subject; (b) cases where the unitary subject has several assymetrical features each of which is desired to be an entry element; (c) cases where the unitary subject indicates a symmetrical relation between two terms neither of which is primary enough to justify treating it alone as the entry element (true "duplicate headings"); (d) cases where the subject of a single document is n o t unitary. Chan adverts to this potentially sense-destroying non-uniformity in the course of comparing (p. 25–26) LCSH's rather limited abilities to PRECIS's fabled permutations of a multiword heading so as to treat every sought term in it as an entry element, but she points out that sought terms that are not entry elements will at least sometimes be quasi-entry elements in LCSH in that references (*see* or *see-also*) are made from them to the entry element of the target heading. But are multiple headings, despite the claims made for them by PRECIS proponents, really all that valuable? Are they not really what it is precisely PRECIS's point to obviate? Chan bases her first two examples p. 26 of "duplicate entry", as that occurs in LCSH, on the authority of Haykin, and they turn out to belong to my kinds (c) and (a): 1. **United States–Foreign relations–France** and 2. **France–Foreign relations–United States**; and 1. **Gnatcatchers** and 2. **Birds–California**. She has declared it to be an LCSH principle that "a heading in the form of a phrase may be entered either in its natural word order or in the inverted form, but not both" p. 26; I must conclude that the qualification "in the form of a phrase" needs to be exceedingly strong, since it is the only defense against all the multiplicity of conceptually identical headings that could be desired to give nightmares to subject cataloguers, since what the Library of Congress (and Chan, I regret to say) need is an awareness of the superficiality of the difference between phrases and headings with subdivisions. As we saw above, **Shakespeare, William, 1564–1616–Characters–Fathers** is conceptually identical to **Fathers in Shakespeare**; it is in principle possible to turn e v e r y subdivided heading into a phrase, however clumsy (and LCSH is showing us the way, as I lamented above). Thus to go on to say that "In ... headings with subdivisions, exceptions to the practice of uniform headings are occasionally made" is to concede that the first statement, the declaration of principle, means nearly nothing. Chan goes on to say p. 27 that

> Haykin fails to distinguish the difference between duplicate headings for the same subject, as in the case of the foreign relations headings, and duplicate entries applied to a particular work in order to bring out various aspects.

I fail to see the distinction too, but the examples Chan next lists a r e of a different kind, namely my kind (b), which seems better to "bring out various aspects":

Bibliography–Bibliography–[topic]

e.g. **1. Bibliography–Bibliography–Outdoor recreation**
2. Outdoor recreation–Bibliography

Bibliography–Best books–[topic]

e.g., **1. Bibliography–Best books–Economics**
2. Economics–Bibliography

She also says that "Another recent change is the assignment of an additional biographical heading representing the class of persons with appropriate subdivisions to an individual biography" p. 27. This is a multiple-heading situation of yet another and far more pernicious kind; it will be discussed below as 'generic posting'. When she later (p. 245–255) discusses multiple headings in genealogy and history she reports that what has previously only been given "headings of the type **[topic]–[place]**" are now given "an additional heading of the type **[place]–[topic]**." This is ambiguous in that the reader might expect, in addition to, say, **1. France–Antiquities, 2. Antiquities–France**. Even though this is not "a heading in the form of a phrase", it surely would be prohibited by the principle that disallows both "natural word order" and "the inverted form", p. 26. What is in fact intended is n o t that the same heading elements be inverted, but that an additional heading be sought by the cataloguer, one that will treat the prepotent place as a subdivision; examples on p. 250–255 show that instead of **[topic]–[place]** it would have been more precise to say **[more specific topic]–[place]**, e.g., **1. France–Antiquities** and **2. Man, Prehistoric–France**, or as she exemplifies p. 255: **1. Erech, Babylonia**[5] and **2. Pottery–Iraq–Erech, Babylonia**. What I cannot help but wonder is 'What does one do if there simply is no more specific archaeological focus in this document than has already been expressed as **[place]–Antiquities**?' I must therefore conclude that this new practice amounts to the directive 'Be persistent enough, when cataloguing archaeological works, to find some topic that does not begin with the place name denoting the site of the excavation – if you possibly can.'

On p. 159–163 Chan discusses "depth indexing" as a partial justification of LCSH's multiple headings. In one exemplified case these multiple headings (for the document containing schedule 'C' of the Library of Congress classification: **Auxiliary Sciences of History**, comprising Civilization (CB), Archaeology (CC), Diplomatics, Archives, and Seals (CD), Chronology (CE), Numismatics (CJ), Epigraphy (CN), Heraldry (CR), Genealogy (CS), and Biography (CT)), for most of which a separate subject heading is assigned[6]. This approach (which, if applied thoroughgoingly across the board, would mean that no general headings would ever be assigned, since every general heading can be enumeratively specified into all its elements, parts, sub-disciplines, etc.; and which would assuredly bulk out the catalogue beyond the capacity of any library to house all the resultant entries) seems to ignore the implicitly hierarchical nature of LCSH with its *see-also* references, which is far more appropriately exemplified by the single heading assigned to the document containing schedule 'Q' of the Library of Congress classification: *Science*, comprising General science (Q), Mathematics (QA), Astronomy (QB), Physics (QC), Chemistry (QD), Geology (QE), Natural history, Biology (QH), Botany

(QK), Zoology (QL), Human anatomy (QM), Physiology (QP), and Microbiology (QR). In other cases, what looks like 'depth indexing' is often only a desperate attempt to concretize an absent heading at the intersection of all the general headings assigned to the one document; e.g., instead of the LCSH-absent heading **Distributive justice** (hardly a new or unfamiliar concept!) we see the headings **1. Economics, 2. Social justice**, and **3. Income distribution** assigned to the same document. This is assuredly an incapacity of LCSH upon which PRECIS has been able to capitalize.

The concept of analytical cataloguing is also brought in[8], but no particular policy or practice in this regard is imputed to the Library of Congress; however, that there is some confusion in Chan's mind about these matters can be seen in that she also refers to the 'C'-schedule "depth indexing" as "analytical entries", p. 163.

That inconsistency is the rule of the day at the Library of Congress is again caught by Chan's sharp eye: on p. 178 two examples of multiple headings for union lists are given:

1. Periodicals–Bibliography–Union lists
2. Catalogs, Union–Brazil–São Paulo

1. Periodicals–Bibliography–Union lists
2. Libraries–New Jersey

– Comment, whether from Chan or myself, is superfluous!

6. Generic posting

I have deferred discussion of what Chan mentions as "biographical heading[s] representing the class of persons" which are also to be assigned "to an individual biography" p. 27. As an example (probably not encountered by Chan, or her sharp eye would have caught it for display in her book), the LCSHs assigned to Frank Shuffelton's biography *Thomas Hooker, 1586–1647.* Princeton University Press, 1977 (BX 7260. H 596 S 55) are

1. Hooker, Thomas, 1586–1647
2. Congregationalists–Connecticut–Hartford–Biography
3. Clergy–Connecticut–Hartford–Biography
4. Hartford–Biography

It cannot be denied that in some sense Hooker is the concrete intersection of the second, third, and fourth LCSHs seen here, nor that one who seeks information about the concepts represented by those three headings would find something useful in this work. But I can still question whether this technique is a good idea, both in general and in terms of whatever principles we can discern to be operating in LCSH.

The practice here exemplified does not fill a need previously unsuspected at the Library of Congress. Chan points out that

> According to Haykin, references from subject headings to personal headings were generally made from headings representing occupations, e.g.,
>
> Architects, British
> *see also*
> Wren, *Sir* Christopher, 1632–1723.

However, this practice has been discontinued at the Library of Congress p. 98. This older (and, I shall argue, far superior) practice is not mentioned further by Chan, although it forms the background to the following:

> The increasing practice of Library of Congress of assigning duplicate entries, i.e., both a general and specific entry to the same work ..., betrays a suspicion that perhaps many users of Library of Congress cataloging data are not keeping up with cross references. p. 153

The process of mind that seems to be at work here could go like this: 'If the syndesis that unites the several subject headings in the catalogue into a system is allowed to perish, there is clearly no system; there is no way that we can force users of LCSH to make syndetic references; therefore let us make each heading carry its system-membership certificate around with it, by showing where it fits in terms of the broader concepts that, when intersected, concretize into it.' To me this is a total abrogation of the principles of alphabetico-directness; indeed, it is much akin to the alphabetico-classed approach[9] except that it does the same thing the latter does (with a single heading) with at least two headings (with their subsumptive relation merely implied instead of being made explicit, as with the alphabetico-classed heading). But, again, to return to Chan, though many libraries do not keep up with cross references, how is any library to be expected to keep up with cross references which may have been made as Haykin describes, but which were made only at the Library of Congress without being entered into the published authority document on which all other libraries' practice was to be based? If you look for Thomas Hooker, 1586–1647, you won't find him either in the latest or in any previous edition of LCSH. Thus the new practice, however suspect as a product to be accepted and put into our catalogues as it stands, can serve as a quasi-model of what would have been done under the old practice, and which any library that wishes to can implement in that old (and superior) way.

That some functionaries at the Library of Congress can still manage to do what their principles call for is seen in that

> If ... the [art] catalog ... is a general catalog to the collection of a general art museum, only the heading for the institution is assigned, since the place aspect of the collection and contents of the collection are covered by the subject-to-name references made for the particular museum. p. 239

The crucial questions (analogous to the resolution of the question of partial synonymy) that can appropriately lead to the Haykin procedure rather than to generic posting are (a) is the relation between the person and the general concept analytic or synthetic?, (b) is the person known (to specialists in the field) to represent the general concept?, and (c) is the relation likely to be more economical in the catalogue by means of references than by generic posting (i.e., are there more than one work about this person as analytically representing this concept, in this collection, or is there at least a good chance that there will be)?[10]. By 'analytic' I mean that the definition of the person permanently includes the general concept with which this document is also concerned. Thus Kierkegaard is analytically a Danish philosopher (a), is well known as such (b), and has many works devoted to him in that connection (c); therefore,

1. Kierkegaard, Søren Aabye, 1813–1855
xx
Philosophers, Danish

is preferable to **1. Kierkegaard, Søren Aabye, 1813–1855** and **2. Philosophers, Danish**, whereas **1. Kierkegaard, Søren Aabye, 1813–1855** and **2. Deformities** is preferable to the reference method, since Kierkegaard's hunchbackedness is a matter of opinion (and thus not analytic (a)), is known (opined?) only by those who agree with Haecker (b), and has been dealt with at book

length only by one work (c). Chan's example of the autobiography of the blind woman Rose Resnick p.199 is thus well chosen to represent multiple headings, because it, like Kierkegaard as hunchback, negatively satisfies all three tests (though I may be corrected by specialists in the field as to the second). Dozens of examples from p. 197 to 203 show the Library of Congress's disregard for economy and analyticity; on p. 210–212 we see further examples. What else is *Humanae vitae* centrally about except **Birth control–Religious aspects–Catholic Church**? Surely such a heading is applied to the encyclical itself; must every commentary on it carry it as well? Would it not be just as helpful (and more economical) to make a *see also* to take care of all such commentaries? Do we not all know that *Das Kapital* is about **Capital** as a specific topic within **Economics?**

I do not mean that this criticism should prevent the assignment of a general-concept heading to a commentary, along with the heading for the work commented on, in those relatively few cases where the commentator discusses the general concept at such length that the cataloguer perceives an additional ("depth indexing") heading as valuable to the library's users.

Where the relation is a matter of opinion, as I have said, or depends upon implication, it is not analytic: *The Merchant of Venice* may or may not manifest its author's knowledge of the law, but it is by no means centrally a b o u t the law or about Shakespeare's knowledge or ignorance of it; thus a commentary on it that singles out this aspect can legitimately be assigned **1. Shakespeare, William, 1564–1616. Merchant of Venice** and **2. Shakespeare, William, 1564–1616–Knowledge–Law**, p. 211.

Some credibility in favor of the Library of Congress's practice can accrue from one distinction that they make:

> ... the heading (indicating the class of persons [namely, artists]) is not assigned unless the accompanying text presents substantial information about the artist's personal life (at least 20 percent of the text). If the text is limited to a discussion of the artist's works and artistic ability, the biographical heading is omitted. p. 203

This may seem to pull the rug out from under my argument that (in accordance with the Haykin testimony) it would be preferable to make "references from subject headings to personal headings" p. 98, since it would surely not do to have

Architects, British–Biography
see also
Wren, *Sir* Christopher, 1632–1723

since that would be a patently blind reference in any case where the document dealt too little with this particular architect's life. But that is not what Haykin said, nor what I urge. Even though it is synthetically true that s o m e but not all of the documents on Wren are instances of biographical documents on British architect(s), it is analytically true that a l l of the documents on Wren, even if they do not deal with his architectural achievements or abilities, a r e instances of documents on British architect(s), and thus that the reference as Chan imputes it to Haykin is analytically and universally true, and can be helpfully and economically made in the reference manner. Whether Wren was or was not also a hunchback, a crypto-Republican, a bigamist, or any other topic that could be treated documentarily, is likely to be adjudged non-analytic by application of the three tests, and a second heading accordingly applied only to such a document as considers any such allegation.

7. Latest jurisdiction and form of place names

Another recent change of practice in LCSH that Chan mentions but either does not discuss fully enough or does not bring her critical acumen to bear upon is that which H. Wellisch has well and justifiably criticized of late (11). I shall not deal with it as thoroughly as I would have had he not done so already. It concerns form of place names (and shows well how important form is to communication of bibliographical/documentary information: form is n o t an insubstantial epiphenomenon, with choice alone worthy of professional concern):

> When subdividing locally, always use the latest name of any whose name has changed during the course of its existence, regardless of the form of the name used in the work cataloged, e.g.:
> Title: *The Banks of Leopoldville, Belgian Congo.* 1950.
> **1. Banks and banking–Zaire–Kinshasa.** p. 67

Nothing more is said of the matter in the chapter from which this is quoted ("Geographic Subdivision"), nor is Wellisch cited here or elsewhere. But the matter surfaces again at least implicitly (though variance from the prescribed practice may be a symptom of cultural lag within the Library of Congress): in exemplifying geographic names in subject headings Chan reporduces an official information card which states that "Works by these jurisdictions are found under the following headings according to the name used at the time of publication..." p. 126. If, as is normal, subject headings are constructed in imitation of author/title practice (when a corporate entity is the topic), we could paraphrase: 'works a b o u t these jurisdictions are found according to the name used at the time o f c o v e r a g e'. This is at least partially confirmed when, in exemplifying corporate names in subject headings, Chan reproduces an official information card which states that "Works by this body are found under the name used at the time of publication", and then immediately goes on to state that for "*Subject entry*: Works about this body are entered under the name used during the latest period covered", i.e., neither under the name used at the date of publication of the secondary work (the new practice that Wellisch criticizes) nor under all the names of the body covered in it. But note that the cataloguer is allowed to use a n y of the forms of name of the body, just so long as that name is the one current when the secondary document was being written. Chan comments that "Earlier names are not assigned as additional subject entries even though the work in hand may also discuss the earlier history of the body when known by the earlier name" p. 207, later qualifying this: "... as long as the territorial identity remains essentially linear" p. 207. There is somewhat of reasonable reform in this, at least if it can eliminate the presence, in the same file, of such headings as **Netherlands (Kingdom, 1815–)–Description and travel–1945-** ... and **Netherlands–Description and travel–1945-** ... But this has less to do with "linear name changes" than with p l a c e names as distinct from j u r i s d i c t i o n a l names. It seems to me that the latter should be used only (a) when the element to follow is a corporate subdivision, or (b) when the element to follow requires the presence of the official qualification to prevent ambiguity, e.g., to keep the two Germanies distinct, or to keep the foreign policies of two successive forms of government of the same territory distinct; it should also

be noted that some jurisdictional names are identical to their names as purely place-denotations, but that historic change could change even that.

The latest-jurisdictional principle seems to have been violated in a couple of Chan's examples: the **Erech, Babylonia** one mentioned above (why not **Erech, Iraq** -- aside from the odd sound of it –?), and **Didyma, Asia Minor. Didymaeum** p. 137, which seems to conform better as **Didyma, Turkey. Didymaeum.**

8. Free and non-free synthesis, etc.

While I agree with Chan both as to the value and the danger inherent in a freer style of synthesis, it needs pointing out that some aspects of freedom in this regard are particularly dangerous. The first has been seen as such in its use in the Universal Decimal Classification, namely the use, alongside the regular jurisdictional place names, of "Non-jurisdictional regions and natural features. These include continents, regions, metropolitan areas, regions of cities, city districts and sections, ..., valleys, ..." Chan also notes that "headings for city districts and sections, e.g., **Georgetown, D.C.**, cannot be subdivided topically, nor are they used as geographic subdivisions" p. 131. This applies only to city districts and sections, not to the whole list, but one still must wonder how useful such a heading could be if its only allowable occurrence is in naked splendor. What is forced upon us, if we want to have a heading for economic conditions in such a district, is to have two headings: **1. Georgetown, D.C.** and **2. Washington, D.C.–Economic conditions**: back in the old **Gnatcatcher-trap**! Chan does not tell us what means the Library of Congress uses to bind together such discrete headings into an integrated system, but it would include such a device as

Washington, D.C.
see also
Georgetown, D.C.

– or even be so luxuriant (or rather, H. Dewey would fulminate, indispensable) as to include such devices as

Washington, D.C.–Economic conditions
see also
Georgetown, D.C.–Economic conditions

– were such a subdivision allowed. But the solution of such situations is child's play compared to the establishing of cross references between such a physiographic feature (whether used as an entry-position subject heading or as a place subdivision) as the Great Rift Valley (Eastern Africa) and the countries (whose boundaries are not, in any case, all that stable) that it touches upon. For it to be used as a subdivision under **Grabens (Geology)** would be normal enough, since physiographic regions are far more appropriate as the kind of places geophysicists are concerned with than jurisdictional ones; but what if it is used as the place-prepotent way of specifying archaeology in that particular supranational part of the continent: **Great Rift Valley, Eastern Africa–Antiquities** may easily enough be related to **Kitchen middens–Great Rift Valley, Eastern Africa**, but how does one get from it to **Animal remains (Archaeology)–Tanzania?** (I would not want the reader to imagine that despair is appropriate; but the fact is that few librarians have bothered or are equipped to think this sort of thing out, which means that few library users are led to all that might be relevant to their information needs.) In other words, the attempt to create coterminous headings can result in unfortunate gaps in systematicity, even though the cataloguer who comes across what seems to be a perfect match (in this case, by using the physiographic place name instead of the more common jurisdictional ones) between term and document cannot but feel that he has scored rather high on the serendipity scale – even though many searchers for whom this document is relevant may never find it; or, if they find it early in their search, may never find those others that are also relevant but are listed under the related place names of the other sort.

Perhaps the freedom of synthesis that is coming into play in LCSH can solve, by analogy, the problem next posed: the impression given to Chan's readers is that on p. 293 she has enumerated all the free-floating subdivisions under **Piano–Methods** and **Piano–Studies and exercises**; the subdivisions (unfortunately punctuated as if they were qualifiers) for the first are:

------	for the second: **(Bluegrass)**
------	**(Blues)**
(Boogie woogie)	------
(Country)	------
(Jazz)	**(Jazz)**
(Ragtime)	------
(Rock)	**(Rock)**

It is hard to believe that there will never be a method for bluegrass or a book of exercises for ragtime. Yet this is listed as a "Model Heading", which to me implies that it is more than a mere enumeration of needs thus far encountered, to be expanded by analogy – but LCSH is not the sort of operation to take very kindly to other people's solving of such problems by such means (or perhaps it's not so much LCSH's authoritarian centralization that is the obstacle as it is the fear of those outside that they dare not meddle because they are not quite sure they understand: and we are dialectically back with LCSH again, asking 'Why is it so hard for all these people to understand it?').

Another matter that greatly concerns cataloguers at every level of experience is the proper way of filling the lacunae left by LCSH regarding species-names of plants and animals; and, even more confusing (but not discussed by Chan), the fact that (a) some plants and animals have only their popular names given in the authority document, (b) some have only their pedantic taxonomic names[11], while (c) some have both; and that the cross references from containing headings to contained are not always carried out in the same way. But Chan does not illuminate the obscurity.

9. A few additional general structural considerations

Almost analogous to the case of popular/pedantic plant and animal names is the ambiguity of the relation between form and topic when they are verbally identical (or even when only almost so). On p. 59, referring to such very general "bibliographic form headings" as **Almanacs**, Chan states that "The same headings are assigned to works discussing the various forms, e.g., a work about compiling almanacs", as well as being used as form headings for general almanacs themselves, and then comments that "In these cases, no attempt is made to distinguish works in and about the forms." (It is not

clear if this is to be taken as implied criticism.) She then goes on to state that "many headings representing bibliographic forms are used only as topical headings and are not assigned to individual specimens of the form", i.e., though such headings conceptually represent a form, they are not used as form subdivisions but only as subject headings properly speaking. Such a heading does not point at itself but only points outside (**Almanacs** as what sort of this this document is as against **Almanacs** as what this other document is about). Again, 'form' when we use it in the context of *belles lettres* and of music "indicate[s] the artistic or literary genre of the work. ... In some cases, a distinction is made between works in a particular genre and works about it, e.g., **Essay** [as a literary form] and **Essays** [a collection]." (p. 60; the brackets are Chan's) What needs examination in this last case is that the heading which points outside differs by a mere pluralizing digit from the heading which points at itself – a sort of distinction which could have been introduced as well into the general bibliographic form headings first mentioned, just as it is characteristic of many (but not all) form headings in music. Chan promises "Detailed discussion on headings for literature and music" later in the book p. 60, but her fulfillment of these promises falls short of completeness at least regarding these headings, neglecting to mention that though indeed "Literary form headings are *not* assigned to individual works of literature" p. 219, they do appear in the printed catalogue – a particularly useful feature given the lack of form classes for literature in the Library of Congress classification and therefore appropriate for any library so classified and desirous of giving its users the help they may need (12). She does, however, introduce an alternative way of conveying the form/subject distinction: **–History and criticism**, added to any such form heading (one pointed at itself) turns it into a subject heading (one pointed outside). This device is also used to subdivide musical form headings; but another, identical to that distinguishing **Essay** from **Essays**,

subject	form
Canon (Music) **Fugue**	**Canons, fugues, etc.**
Mass (Music)	**Masses**
[singular]	[plural]

is mentioned only in a footnote in the Appendix "Free-Floating Subdivisions Controlled by Pattern Headings" p. 293; nor is the order of priorities brought out, namely that the translation of a form heading in the plural into a subject heading in the singular is first to be attempted, and that only if that is not allowed is **–History and criticism** to be employed.

'Form' has yet other meanings in LCSH, and pointless variants of form of heading occur throughout, and are not sufficiently criticized by Chan, as when on p. 48 two examples occur: State, The and The West; no comment is made. On the next page is mentioned, without adverting to the ridiculous filing that results, the change of the heading The One (Philosophy) into One (The One in philosophy).

Aside from form in all its senses, there is still a major lode of structural features that need mining and refining out of the LCSH mountain chain, especially the syndesis that putatively integrates all the headings into a system. On p. 97 the point is made about the implicit hierarchical relation shown in the *see-also* and *xx* references, namely that *see also* indicates subordination, *xx* indicates superordination, and both at once indicate coordination or some other indeterminate relation. But not only is the point not made strongly enough to get through well to the reader who does not already know it, but, even more importantly, the cruciality of the mirror-relationship is not brought out, is not even discussed. If a library is to be set up without the benefit of librarians who have experience with authority files, official catalogs, and shelf-lists (in addition to experience with the public catalog, which after all is far easier to come by) – and one sees this sort of thing happening all the time – then, unless some educational experience (such as reading a book like this or taking a course from someone who either has read it or doesn't need to have – which is no foregone conclusion, alas!) prevents it, what is to keep such inexperienced librarians from "not keeping up with cross references" p. 153, from imagining that all that is necessary for effective service (or, worse, for economical operation) is the public superficies, unsupported by a thorough and proficient exemplification of the behind-the-scenes aspects of LCSH? That there are far too many who lack that proficiency is all too clear, and it is something Chan is quite aware of; why then does she make no attempt, in this most appropriate of situations, to share her expertise in this as well as in the more public-service aspects of LCSH? As to the mirror-relationship between *xx* and *sa.* between *x* and *see,* she does say in the Glossary *s.v.* **Refer from reference** that "It is the reverse[12] of the indication of a *see* or *see also* reference"; but a Glossary entry is not the place where one can derive from the explicit all that is needed in the way of its implications. Why are there people who imagine (as Chan knows there are) that syndesis is a waste of time, except that they were (a) taught by other people who imagined that it was a waste of time. and were (b) never corrected of their error by people (such as Chan so definitely is) who know better? We see that she is critical p. 153 of the lack of systematicity in the hierarchy implicit in LCSH, that she approves of Sinkankas' idea that every heading must be made part of the system by syndesis; but we see very little use of her own researches that point so strongly toward improvement both by helping others understand LCSH better and by explicit indication of flaws (they are cited in the bibliography but not alluded to in the text).

One final syndetic point is touched on under the rubric "General References". Theoretically, there are three possible ways of referring from general to special headings: (a) to list all special headings that apply to this library's holdings and that fall under this general one, (b) to mention some categorial principle that covers all cases of the special headings that fall under this general one, or (c) to do the same as is indicated for (b), but to add to it at least one example of such a special heading that this library holds. Since, by Chan's definition[13], (a) is not a general reference (because it has no loose ends, no unspecified specials), only (b) and (c) come into play. But in fact she lists no examples of (b). Also, within (c), there are two sub-classes: (i) where the specials are verbally unrelated, and (ii) where the specials are verbally related. Now an example of (c. ii) such as

Science

sa headings beginning with the word Scientific

(p. 97) is not a general reference by my definition, because the verbal identity of all the specials referred to removes the loose ends characteristic of the genuine general reference. So Chan's examples, though varied among themselves, are all within the class (c.i.). But what is there to complain about in general references, anyway? They "obviate the need of long lists of specific references and bring to the attention of the user the most direct method of finding the material desired" p. 97. Let us look at the examples to see how the categories of specialization are exemplified: from **Tool**s we are led to "specific tools, e.g. *Files and rasps, Saws*"; from **Mus**cles to "names of muscles, e.g. *Tensor tympani muscle*"; from **Muse**ums to the verbally identical subdivisions "under subjects, or names of wars, cities, or institutions, e.g. *Indians of North America–Museums*" (plus one each for a war, a city, and a university); and to the "subdivision *Museums, relics, etc.* under names of persons or families, e.g. *Lincoln, Abraham, Pres. U.S. 1809-1865–Museums, relics, etc.*"; from **Brass trio**s to the verbally identical "specification of instruments" under "*Suites, Variations, Waltzes*, and similar headings". The question that springs to my mind is 'What other tools (muscles, subjects and places of museums, forms that might be composed for brass trio) might there be whose names I do not at once recall that might be relevant to this search; and of this indefinite cluster which might (in terms of LCSH strictures) be met with in this catalogue, which are really listed here because held in this collection? How shall I go about identifying the answers to the first question (reference books will yield long lists)?, and how long then will it take to find, from that dozens-long list, the three or nineteen or thirty-one that are to be located through this catalogue?' Why this unwholesome concern for economy in construction of the catalogue, when in fact it is the user's economy that should be aimed at ("Save the time of the reader"!)? On p. 117 we see the example

Man o' War (Race horse)
xx Race horses.

According to the general reference attitude, all that would have really been 'economically' necessary at **Race horses** would have been "*sa* individual race horses". Or, as probably the worst possible case, look at LCSH itself *s.v.* **Indians of North America**; why not, with the greatest possible economy, have the simple "*sa* names of tribes and groups of tribes" in place of the over 300 specials extensively and expensively listed in the 8th edition?

But Chan raises no protest.

10. What does this book achieve?

So much of what I have said above is critical that the reader may be hard put to identify the object of this essay with the book that I described earlier as so important both in its narrower domain and in the larger domain of search strategization. One might take 'important' to mean only 'a signally negative example' or the like. That would be quite incorrect.

LCSH is a difficult system to use, and a difficult system to understand. To a very large extent these difficulties are now alleviated: those who need to see what is going on within LCSH have a place to refer to where they will learn much of what they need to know. But the seeker for *téchnē*-information will fare even better than will the seeker for *theōrīa*-information, and we can point out this latter lack in the same act that we point out Chan's passing over in silence so many of LCSH's flaws: to describe what a system c a n d o does not require, to anything like the extent necessary to show why there are things it c a n n o t d o, a critical stance that seeks to understand the sources of both its strengths and its weaknesses.

Chan, in the Preface and many times in the text, calls for a "code for subject cataloging", disclaiming that her book is "prescriptive": it is to be "descriptive". But even a prescriptive code would have to embody particular rules and practices, and it would be, no less than Chan's description could well have been, critical by virtue of comparing 'is' and 'ought'. So I do not see her disclaimer as adequate to excuse her.

But those who need to see what is going on within LCSH should have an authoritative and compendious source of information, including not only useful directions for solving many problems of choice, combination, and relation between headings, but also (and perhaps most to be prized) listing in the Appendices features such as "Free-Floating Form and Topical Subdivisions of General Application" (new and deleted terms to update those at the beginning of vol. I of LCSH); "Free-Floating Subdivisions Used Under Names of Regions [and] Countries" and metropolitan areas; a similar list used only to subdivide cities; „Free-Floating Subdivisions Used Under Personal Names" (for founders of religions, philosophers, statesmen, musicians, and literary authors); "Free-Floating Subdivisions Controlled by Pattern Headings" (i.e., musical instruments, music compositions, legislative bodies, educational institutions by type and individually); "Subdivisions Further Subdivided by Place"; "List[s] of Cities ... for Which the Library of Congress Omits the Designation of [country,] State, or Province"; lists of standard abbreviations, capitalizations, and punctuations practices; the old manual and the new computerized filing rules. In every way a hoard of rare and hard-to-get and useful data with instructions for its use. But the very fact that this bare enumeration of appendices means relatively little to the reader who has not acquainted himself with the problems they can help to solve demonstrates the value of the preparation that Chan has provided to the reader of the whole text.

Perhaps Chan's quotation from Haykin on p. 16 is even more true than she realizes: LCSH is not, he says, "a skeleton or basic list which could be completed in the course of years of cataloging"; this seems to me a terrible thing to say of something that Haykin surely devoted himself to for long years. Let us hope that he is wrong. Let us, since we see how embedded LCSH is in American bibliothecal life, let us hope that completion is not absolutely beyond hope, at least completion in the sense of a complete set of principles and of rules for their practical application. No indexing system, unless it is dead, is absolutely complete; but it must, if it is worth the trouble and expense of using, be moving in that direction. Only if such movement c a n be brought about can American libraries really succeed in their mission, and, even more important, only then can American library users get the information they need. Has Chan contributed to this movement?

I often feel that the value of a professional work is in proportion to the amount and type of comments that it generates – the redness of the margins with notes, of the text with underlinings. There is a great deal that I find to argue with in Chan's book, but very little that I would argue a g a i n s t. On reflection I find that what makes me criticize Chan is what I find unsatisfactory in LCSH; for I am sure, from reading her other works, that she is just as aware as I am of its deep unsatisfactoriness – and she shows, even though in this book often all too implicitly, where many of those flaws lie –; may we hope that a later work will move even further in the direction of their reparation?

Notes:

1 That the arguments for such a substitution are not wholly convincing at least to me can be gathered from my review of the International PRECIS Workshop's *PRECIS Index System.* See (3).
2 The page numbers of this text refer to Chan's work in (1).
3 That Chan does not really envision anything but a single-alphabet dictionary catalog can be seen in her acceptance of the typical lack of a subject heading for a commented-on work if the main heading for the document as a whole is the author not of the commentary but of the commented-on work itself. A better principle to follow here would be that for "Art Reproductions with Commentary" p. 242, namely that "a subject entry under the name of the artist is made regardless of the author entry."
4 I.e., a broader term in parentheses following an ambiguous topical term.
5 Implying, as argued above, [place]–Antiquities.
6 Namely for all except Civilization and Seals – one wonders at the process of mind that would lead to such exclusions, particularly for the former.
7 Defined by Chan as that "which attempts to enumerate all significant concepts or aspects and, frequently, component parts, of a document" p. 159.
8 Defined in the Glossary *s.v.* Analytical subject entry as "Subject entry for part of a work"; a more satisfactory definition would read "Subject entry for a descriptively specified part of a work", precisely to avoid confusion with depth indexing (*cf.* R. J. Hyman in (10)).
9 As also seems to me to be much of what is attempted in PRECIS; *cf.* the review cited in (3).
10 It is remarkable to note that even selection policy can be relevant to cataloguing policy.
11 Note that not all cases of (a) or (b) have *x*-references of the sort shown on p. 88 (Cockroaches *x* Blattariae).
12 Read: converse.
13 "... a *see also* reference ... directed to a group or category of headings instead of individual members of the group or category" p. 97.

References:

(1) Chan, M. L.: Library of Congress Subject Headings: principles and application. Littleton, Colo.: Libraries Unlimited 1978. 347 p.
(2) Westby, B. M. (Ed.): Sears' List of Subject Headings (11th ed.). New York: Wilson 1977. XLI, 617 p.
(3) Perreault, J. M.: Book review of Wellisch, H. H. (Ed.): International PRECIS Workshop. University of Maryland 1976: The PRECIS Index System. New York: Wilson 1977. VII, 211 p.In: Intern. Classificat. 5 (1978) p. 119–121
(4) Chan, M. L.: Period subdivision in subject headings. In: Libr. Resources & Techn. Services 16 (1972) p. 453–459.
(5) Chan, M. L.: 'American Poetry' but 'Satire, American': the direct and inverted forms of subject headings containing national adjectives. In: Libr. Resources & Techn. Services 17 (1973) p. 330–339.
(6) Chan, M. L.: Alphabetical arrangement and subject collocation in Library of Congress Subject Headings. In: Libr. Resources & Techn. Services 21 (1977) p. 156–169.
(7) Chan, M. L.: The principle of uniform heading in Library of Congress Subject Headings. In: Libr. Resources & Techn. Services 22 (1978) p. 126–136.
(8) Chan, M. L.: Year's Work in Cataloging and Classification. In: Libr. Resources & Techn. Services 18 (1974) p. 101–117; 19 (1975) p. 242–259; 20 (1976) p. 213–235.
(9) Chan, M. L.: AACR 6 and the corporate mystique. In: Libr. Resources & Techn. Services 21 (1977) p. 58–67.
(10) Hyman, R. J.: Analytical access: history, resources, needs. Flushing, N.Y.: Queens College 1978.
(11) Wellisch, H.: Poland is not yet defeated: or, should catalogers rewrite history? With a discourse on 'When is an island not an island?'. In: Libr. Resources & Teehn. Services 22 (1978) p. 158–167.
(12) Dewey, H.: The relationship between the headings in the subject catalog and the classification numbers of the books. In: Perreault, J. M. (Ed.): Reclassification. Rationale and Problems. Proc. of a Conference on Reclassification held at the Center of Adult Education. University of Maryland, College Park, Md. April 4–6, 1968. p. 73–74.