be. Eine solche Liste müsse die folgenden „Klassifikatoren" enthalten: Produktion, Konstruktionsdokumentation und technische Dokumentation, Republiken, Zweige, Betriebe und Institutionen, Gebiete und Kreise, Standards und technische Bedingungen, Arten der Dienstleistungen und der Produktionstätigkeit, Berufe und Beschäftigungsarten, Eigenschaften von Stoffen und Materialien. Es müsse auch eine Norm für die Bezeichnung der Chiffren der „Klassifikatoren" augearbeitet werden.

In einem weiteren Artikel („Über System- und Subsystemkodierung in komplizierten Informationssystemen") kommt die Autorin zum Ergebnis, daß bei schwacher Informationsbeziehung zwischen den Subsystemen es vorteilhafter sein dürfte, wenn jedes Subsystem seine eigene Kodierung habe, umgekehrt bei starker Informationsverflechtung einer einheitlichen Systemkodierung der Vorzug zu geben sei.

W. M. Žerebin, C. P. Aksjutina, G. A. Romaškova und *O. N. Čirčenko* („Das linguistische Herangehen an die Kodierungökonomischer Kennziffern") vetreten die Auffassung, daß große Massen ökonomischer Kennziffern statt nach dem populären Verfahren der Klassifikationskodierung vorteilhafter nach dem linguistischen Verfahren kodiert werden sollten, bei dem vom „Text" oder der verbalen Aufzeichnung der Kennziffer ausgegangen werde. Das „linguistischeVerfahren" bietet sich in zwei Versionen an: 1. das „formale Verfahren", bei dem der Reihe nach alle die Kennziffer ausmachenden Elemente (Buchstaben und Wörter) kodiert werden und 2. das für aussichtsreicher gehaltene Verfahren der „Sinnkodierung von Kennziffern", bei dem eine grammatisch-semantische Schablone benutzt wird.

B. Kruglikov und *L. Saenko* („SSÖIN" – eine Sprache zur Projektierung automatisierter Systeme ökonomischer Information") sind der Ansicht, daß künstliche am Informationssinn orientierte Zeichensysteme erforderlich sind. Ihre Systemsprache SSÖIN würde beispielsweise folgende Funktionen erfüllen: Abbildung des Inhalts der Informationsströme, Kontrolle des wechselseitigen Sinnzusammenhangs, logische Basis für die Chiffrierung von Sätzen komplizierter Struktur, hierarchische und assoziative Verbindungen von Deskriptoren. Die Autoren berichten über eine erste Version ihres SSÖIN-Thesaurus, der 399 nach Sachgruppen (wie z. B. „Kosten", „Rohstoffe und Materialien", „Bevölkerung") gegliederte Deskriptoren enthält und über eine „grammatische Schablone" zur Sicherung der Einheitlichkeit der Aufzeichnung.

Weitere Beiträge: *Charchardin, M. V.*: Quantitative Charakteristika der „Nützlichkeit" von Informationen in ökonomischen Dokumenten. – *Komarov, A. N., Filippov, M. V.*: Zwei Methoden der Erkennung und Klassifikation von Objekten. – *Cerkasov, E. V., Demitriev, M. K.*: Die Klassifizierung der Begriffe bei der Datenverarbeitung auf elektronischen Digitalrechnern. – *Tumasov, N. D.*: Prinzipien der Bildung der Kennziffernbenennung. – *Čirčenko, O. N.*: Die Dokumentation als Zeichensystem. – *Mal'cev, V. N.*: Über ein Modell zur Entscheidungsfällung. *Kučyk, B. S.*: Datenkontrolle in ökonomischen Systemen. Diese Beitragsserie regt zu einer Reihe von Fragen an: Kann man von einer nationalen ökonomischen Semiotik sprechen gegenüber einer internationalen und wenn ja, welche Beziehungen lassen sich feststellen, inbesondere angesichts der starken transnationalen Wirtschaftsaktivitäten? Welche Beziehungen gibt es zwischen einer Semiotik der Ökonomie und den außerhalb der Ökonomie liegenden Zweigen der Semiotik? Sollte sich nicht idealerweise eine „ökonomische Semiotik" nur auf ökonomiespezifische Zeichen beschränken und die „ökonomie-unspezifischen", die aber dennoch auch benötigt werden (z. B. Menschen, Gebiete) einer „allgemeinen, anwendungsbezogenen Semiotik" entnehmen?

Wir stellten unsre Frage in der Terminologie des Buches, obwohl uns dabei nicht recht wohl ist. Denn es erscheint, als werde hier die Argumentation zu einseitig von der Zeichenseite her geführt. Die Objekte der realen Welt werden ja doch zunächst im Denken und Sprechen durch Begriffe erfaßt und erst danach mit Hilfe von Zeichen fixiert oder be-zeichnet. Es kommt daher darauf an, die richtigen Begriffe, die richtigen Zeichen und die richtigen Beziehungen zwischen Begriffen und Zeichen zu haben. Ganz gewiß braucht man nicht nur bessere Zeichen, sondern auch bessere Begriffe. Den existierenden Wirrwarr und die erkannten Unzulänglichkeiten kann man prinzipiell gar nicht beheben, wenn man entweder nur in den Begriffen oder nur in den Zeichen Ordnung schafft. Man hat es unlösbar immer mit zwei Seiten (Begriff *und* Zeichen) ein und derselben Medaille zu tun, des weiteren aber auch noch mit Objekt und Subjekt. Der Einfluß, den die Wahl des jeweiligen Zeichensystems auf die Darstellung der Begriffe und ihrer Relationen hat, ist jedoch nicht zu unterschätzen. Wer die Problematik nur von der Semiotik oder der Sprache her angeht, unterbewertet das Begriffliche; umgekehrt tendiert ein nur begriffsorientierter Ansatz zur Unterbewertung von Zeichen und Sprache. Vielleicht sollte der Buchtitel und seine thematische Behandlung nicht von der Sachgebietsbenennung „Ökonomische Semiotik" zusammengefaßt werden, sondern treffender durch „Begriffs- und Zeichensysteme für die Ökonomie"; es würden dann Charakter, Bedeutung und Tragweite der Problematik schon von der Adresse her deutlich. Es scheint, daß eine so wichtige Sache doch das richtige Zeichen verdient! *Otto Gekeler*

GEKELER, Otto; HERDT, Klaus-Dieter; OBERENDER, Walter: *Warenkatalogisierung und Kommunikation über die Ware*. (Commodity cataloguing and communication). Hrsg. v. Ausschuß f. wirtschaftl. Verwaltung in Wirtschaft u. öffentl. Hand (AWV). München: Verl. Dokumentation 1974. XV, 232 p., size A4, 63 figs., 391 refs., index. = AWV-Schriftenreihe 125; ISBN 3-7940-4198-4; DM 68,–

The book is a revised and an expanded edition of a 1970/71 report in three parts with the same title. It represented the findings of a Westgerman interdisciplinary study group, comprising members from AEG-Telefunken Corp., the Battelle-Institut in Frankfurt, Dornier Corp., and the University of Cologne, ten members altogether. The research was done for the AWV (Committee for Economic Administration in Industry and the Public Sector) and was funded by the German Ministry of Economics. Three members of the original team undertook the reprocessing

of the report and the input of newer material into this well-made book, and completed it with an alphabetical index and an extensive bibliography.

Its large A4 format is especially suited for the display of the many tables and charts and the abundance of information (content structure, headings, bold-face print, figures) to be perused at one sight. However, it seems that perhaps a 2-column print would have facilitated reading. Three of the charts were reduced to A4 (p. 183, 208 and esp. 207) resulting in poor legibility. Why is it that the printing and aligning of an A3 chart over 2 pages, customary in magazines on commodity testing and in mail-order catalogues have not been utilized in a book on commodity cataloguing and communication?

The book contains a wealth of ideas, theory and facts, not only of German but of international interest. The main idea of the authors is that many improvements and large savings would occur if harmonized methods of naming, describing, classification, specification and numbering of commodities not only within narrow boundaries of organizations or groups but over such boundaries therefore become necessary. For the Federal Republic of Germany alone, savings of .3 to 1.1 x 10^9 DM per year are estimated (p. 122).

I disagree with the opinion of the reviewer W. M. Paass[1], University of Cologne, that the economic considerations (chapter 7) had better been left out. Certainly the estimation methods can be improved, but it is better to have some idea, even a speculative one, of the economic orders of magnitude involved than none at all. For instance the hard fact of how much money was saved through the introduction of just the International Standard Book Number (ISBN) in one large British organization is well worth reading.

The ISBN is one example of over 100 existing commodity numberings or information systems and related activities described or mentioned in chapter 5. Necessarily the description is very short, but a reference is given in a footnote. This reference is not repeated in the bibliography (others are), so that both the footnotes and the bibliography (plus its adderdum) should be consulted when using the book as a source of references. In this respect some improvements may be incorporated in a new edition or an English translation, or a machine handled bibliography on commodity cataloguing, which could use this bibliography as a starting point. E. g. in order to find the literature on the NATO system of codification one has to scan the whole bibliography and stop at Barker, at Brückmann etc., as the chapter on the NATO system does not give any references. The two-way referencing method used by Ranganathan, Soergel and others, referring in the bibliography to the relevant points in the text is strongly recommended. Besides this such a book would be a good occasion to strengthen the practice of stating the ISBN and, if possible, price information for the books listed. This would mean a great help for librarians and dealers already using standardized forms and/or computers to handle the commodity "books". A sign, e. g. a preceding dot, to quickly distinguish books from articles in the bibliography would also be helpful. Many entries do not include the page numbering, which is a nuisance when ordering photocopies or a remote display (when ordering "information", a "commodity" or "service" of a special kind), or when trying to estimate the price of a book or report.

Besides the ISBN and NATO systems the spectrum includes such systems and activities as:
- Pharmaceutical Central Numbering System, West Germany (Computer produced microcards are used)
- Universal Product Code used in US. supermarkets etc. where article numbers are read off a package via a light pen into a cash register computer system at the point of sales
- Kompass Classification for products and product related services (37 000 entries), a Zurich-based international activity
- Brussels Tariffs Nomenclature (BTN)
- Standard International Trade Classification (SITC)
- International Standard Commodity Classification of all Goods and Services (ISCC)
- Classification and identification number system of the European Toy Institute
- International Thesaurus of Textile Terms
- International Exchange of Authenticated Electronic Component Performance Test Data (EXACT)
- International Organization of Consumer Unions
- Classification systems for parts of articles
- Activities of international and national standardisation institutions
- United Nations Industrial Development Organization, Vienna

The standards activities, the materials cataloguing system in the governmental and logistics area (NATO, etc.) and the harmonizing activities of the Brussels Customs Cooperation Council (BTN, SITC, etc.) are seen by the authors as the three big systems that should get together at a round table to harmonize the "language" on commodities, if possible on a world-wide scale and in all its parts (from naming to numbering) (p. 97, 101). They do not envisage a single "mono-system", but rather a broad standard in which some existing systems could find their place and new ones could be developed being compatible with others (p. 7, 36, 52). The proposed British standard specification for product reference numbers of 1973, which is reprinted in full, is considered a step in the right direction.

One point where compatibility is considered to be important is the method of error protection in numbers, which may be numerical or alphanumeric. A check digit or none may be used. Check digit moduli of 10, 11, 13, 17, 19, 31 and 37 are mentioned (p. 60, 99, 158–171).

Numbering is an area where the authors state that hardly any theory exists and, because of its practical importance, work on a theory of numbering should urgently be undertaken (p. 38, 51, 184, 185). Fundamentals for the design of efficient numbering (or code-number or notation) systems should be developed. I wholeheartedly support this opinion and would like to add that such a theory would benefit all other areas of classification and identification as well, e. g. the classification of services (not only commodity-related services) besides goods (for consumer information, statistics etc.), the classification

1 Review by W. M. Paass in: Betriebswirt, Köln (1975) No. 4/5.

of objects in general, of activities, terms, concepts, subjects and what other items might be usefully classified.

The authors' own contribution towards a theory of numbering is a strong part of the chapter 4, which deals with the problems of commodity cataloguing and the communication of data on commodities in a fundamental way.

The book also contains a chapter "outlook into the future" and one with the conclusions and proposals. Limits of growth, the information needs of developing countries, commodity databank networks, remote shopping by electronic catalogue and television display are some of the subjects covered. A little more consideration might have been given to possible negative consequences of too much computerization and ease of information handling, as well as to methods of coping with the ensuing problems, e. g. of highly transparent computerized markets with little or no damping.

On the whole, the concern, ideas, and work of the authors should be furthered in every possible way. It is hoped that the natural language barriers may not impair the wide distribution the book deserves.

Horst Körner

AUSTIN, Derek: *PRECIS: a Manual of Concept Analysis and Subject Indexing.* London: The Council of the British National Bibliography, Ltd. 1974. X, 551 p., £ 7.00. ISBN 0-900220-42-2.

PRECIS – PREserved Context Index System – is an innovation more nearly related to SYNTOL and the *Thesaurofacet* than to most other modern subject analysis systems. Colleagues who dismiss it as just another rotated or permuted indexing method should take another look. The system has both rotation and permutation factors, but there is much more to it than that.

In the first place, the means used to retain context are solidly based on modern language studies and derived from analysis of English grammar and syntax. Unlike so much work in computational linguistics or other language-plus-computer experimentation, the semantic factor has been given prime consideration.

Secondly, the origin of the system actually lay in a combination of three things: the results obtained under research grants made to the Classification Research Group in the 1960's (in which Derek Austin succeeded Helen Tomlinson as principal investigator), the adoption of the 18th edition of the Dewey Decimal Classification by the *British National* Bibliography, and developments in British MARC. It was impossible to use the old BNB system of chain indexing with Dewey 18 and obvious weaknesses in the subject heading system used by the Library of Congress caused the officers of the *Bibliography* to seek an indexing system that would be applicable to the whole universe of subjects, and at the same time unambiguous, logical and amenable to computerization – no small order. Furthermore, this need was urgent. Obviously the *Bibliography* could not shut down while experimentation took place. Nor could its list, which is arranged by Dewey classes, be issued without means of access via an A–Z index.

Austin and his associates developed the basic PRECIS system well enough to cover the full publication output of the United Kingdom so that in January 1971 the BNB could use it for a three year trial period. By 1974, enough had been learned about the operation of PRECIS on a day-to-day basis to correct major weaknesses and redesign the system for optimum results.

The final version is presented in this *Manual.* PRECIS is a completely open-ended subject analysis system operated with a number of routines which are as a rule, well defined and explained. The system has a very significant back-up definition component: a modified tree structure of Reference Indicators, which covers hierarchical, generic and associative relationships of all terms used to describe content of documents. In addition, synonyms and antonyms, as used in thesauri and subject heading lists, are included. Each index term is given its own Reference Indicator Number (RIN), which is its address in its family tree.

Each record for an item catalogued, classified and indexed for the *Bibliography* has its subject interrelationships collected in a single file document identified by a unique Subject Index Number (SIN). Thus in one place, identified by its own number (SIN), it is possible to find the Dewey Decimal Classification assigned to the document, its Library of Congress Classification number, Library of Congress subject headings, and PRECIS string elements, with applicable Reference Indicator Numbers (RIN). Each such item is identified in turn by the appropriate MARC tag. All of this subject package is available in machine-readable form and accessible through the MARC Process. The possibilities for access to the document through British, Canadian, Australian and American machine-readable catalogues are built-in.

The *Manual* is made for reference purposes, for the indexer with a specific problem to solve. Readers who expect to learn how to do PRECIS indexing by reading the *Manual* straight through from cover to cover will find themselves in difficulty. While the whole system is described in it, and in reasonably logical order, this is not a textbook. It is strongly recommended that the potential user who cannot go to London and take the course at BNB acquire three items. First he should read Austin's descriptive article in the *Journal of Documentation* (v. 30, no. 1, March 1974, pp. 47–102). This should be followed by his Canberra lectures given in November, 1974. If possible, the potential user should try to get a set of the mimeographed material used for the London course because this contains a graded sequence of solved problems and is very valuable employed simultaneously with the *Manual.* Since the *Manual* was published on a priority basis, before a PRECIS primer or elementary textbook, the user, for his own convenience, will probably want to make his own primer or at least a set of quick references to procedure. The actual procedure for producing index entries via PRECIS calls for making one or more title-like statements describing the content of the item being indexed. These are converted into words in a string, each identified by an operator which indicates