If ISI's Weekly Subject Indexes Aren't Perfect— Whose Are?

January 3, 1973

ISI[®] introduced its first *Weekly Subject Index (WSI)* a year ago in the first 1972 issue of *CC[®]/Life Sciences.*[1,2] This week we inaugurate two new *Weekly Subject Indexes,* for *CC/ Physical and Chemical Sciences* and the new *CC/Clinical Practice.*

We expect that these two new *Weekly Subject Indexes* will be as successful as the *WSI* for *CC/Life Sciences* has proved to be.

Perhaps the most important proof of that success is not the high renewal rate, but rather the volume of correspondence from readers indicating changes that would make *WSI* more useful to them personally. We welcome such complaints. They are proof that *WSI* is being used by knowledgeable experts who prefer to find what *they* want where *they* want to find it.

In actual practice, if an expert uses *any* index regularly without some slight dissatisfaction, you can be sure that he knows little about indexes and indexing. More likely, the subject of his search is probably outside his particular field of expertise. A knowledgeable specialist must on occasion be at least slightly dissatisfied with the way any large-scale index handles his subject. No

large index can be designed to meet the needs of any *particular* search. The same index might prove perfect for his next search.

Such is the inherent nature of indexes. They are bound to be imperfect, and beware of those who may claim otherwise. No index can be perfect for every user, nor even "best" for a single user making different searches. Both the scientist and his science change. It is unrealistic to imagine that an index system treating the scientific knowledge produced in one week's journal issues can be either permanently or universally satisfactory. Index design involves a process of optimization with cost considerations uppermost. No one can be omniscient in these matters and inspite of some pretty fancy frequency and other manipulations we often miss the obvious. The complaints we receive are very important not only because of a specific "error", but possibly as an indication of a systems failure.

ISI can produce a *WSI* now because we use systems of input, data processing, and photocomposition that make it possible, essentially with zero delay, to include an index together with the contents pages listed that week. But

technology was not the prime mover. It was ISI's recognition that to make a universally "perfect" index (even perfect from ISI's point of view) is economically impossible and theoretically dubious. The scientific literature grows in such a way that its self-organization is adequate to the objective. Early pioneers in information science like Ohlmann, Taube, and Luhn recognized this point.

These self-organizing properties are the basis of ISI's *Science Citation Index* ®, which uses authors' citations to organize the literature, and of our *Permuterm* ® *Subject Index* and *Weekly Subject Indexes*. In the *PSI* and the *WSI*, the "natural language" of science is the built-in organizer.

In such an index we cannot afford the luxury of standardized chemical nomenclature. Eventually our own *CHEMTRAN* system[3,4] may permit us to do this as is already done for our *Chemical Substructure Index* ™. Our systems do already permit us to translate entries for *5-hydroxytryptamine* into *serotonin* (or vice versa). We could list all entries for *Hansen's disease* as *leprosy*. But it is naive to think that every problem of synonymy is always so clean cut and simple.

Our planned improvements in *WSI* for 1973 will concentrate on a judicious increase in the number of word pairs when the individual words are so fre-quently used as to render them useless for browsing.

As I have often said before, learn to complain! It is a serious expression of users' confidence in us that they complain constructively and assume we know our business well enough to take advantage of their insights.

1. Garfield, E. A *Weekly Subject Index* for *Current Contents/Life Sciences*. Paper presented at the 71st Annual Meeting of the Medical Library Association, San Diego, California, June 11-15, 1972.

2. Harris, R.M. & Garfield, E. *Weekly Subject Indexes* to *Current Contents*. a new aid to complement scanning scientific literature. Paper presented at the 1972 Fall Meeting of the American Chemical Society, New York City, August 28-31, 1972.

3. Garfield, E. ISI's *CHEMTRAN* compatibilizes files of encoded chemical structures. *Current Contents* No. 46, 15 November 1972. p. 5-6.

4. Granito, C.E. *CHEMTRAN* and the interconversion of chemical substructure systems. Paper presented at the 164th Annual Meeting of the American Chemical Society, Division of Chemical Literature, New York City, August 1972.