Better Titles, More Effective Publication

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For whose use are titles of articles or books chiefly intended? That titles should be brief and to the point is familiar advice, but I do not recall any discussion which attempts to point out the chief beneficiaries. It seems to be taken for granted that they are the people who may see and perhaps wish to read the articles. Let us examine this more critically.

The average scientific magazine with rather limited field has, perhaps, 1,000 subscribers. Many journals have less; some have more. The number of persons who see the journal is increased, perhaps several times, by library copies. The members of both groups have the journal before them and can examine the article in detail.

The average library has only a small fraction of all journals; the private individual, still less. To meet the needs of persons who do not have access to publications, there are various review, abstract, or index publications. In these, many references appear by title only. Is it not reasonable to conclude that titles are even more important to those who do not have the original article at hand?

If the title is not clear, the abstractor *should* add at least enough to indicate content. For many articles, title is the chief entry in the abstracting journal. Most journals devoted to original material carry reviews or lists of other articles, and reference to a given book or article often appears in several journals. It must be evident that long titles occupy much space and that both shortening and clarifying titles will help in saving space and making information more readily available. This is particularly important in the case of abstract journals, which have always had a hard time to maintain an existence. Selection of a brief, definitive title is often not easy, but a survey of published articles will show that improvements could be made in a large proportion of cases.

The following remarks concern chiefly ornithology and systematic botany but will, no doubt, apply to other fields. One experiment station publication (*Nebr. exp. Sta. Circ. 69*) was entitled "Leoti for starch." This has brevity at least. It would be intelligible to an agronomist familiar with sorgo strains but to scarcely anyone else. Perusal shows that not mere starch but a special type of starch is concerned. Another title is "Orfed wheat" (*Wash. exp. Sta. Bull. 451*). Presumably this is the name of a variety, but present trends might easily suggest some new method of vitamin enrichment. A recent journal article is entitled "Some evidence in favor of a recent date" (*Lloydia*, Vol. 8, p. 70).

Writers of fiction and other material for popular consumption are prone to conceal the real subject under a title designed to attract attention. *Gone with the wind* is a well-known example. Surely there is little excuse for such in scientific writing, yet it is frequent, especially in the border line of semipopular material. *My tropical air castle* is familiar to bird students.

Examination of library shelves shows many books which seem incorrectly catalogued. A cataloguer may be misled by an inappropriate title. He cannot be intimately familiar with subject matter in various technical fields and probably is too busy to examine each book critically. Where subject matter is complicated or touches more than one area, classification becomes difficult. If the author would give special care to selection of title and phrase it so that it has an essential word as a lead, the work of the librarian and of all readers would be greatly facilitated. Two entirely similar books are carded in the Library of Congress as follows: Johnson, *Taxonomy of flowering plants*, QK95, and Pool, *Flowers and flowering plants*, SB405. The cataloguer evidently interpreted "flowers" as floriculture.

The writer had occasion to sort some 200 titles in systematic botany. Approximately 20 titles were of the type, "A new *Masdevallia* from Panama," "A new *Mammillaria* species." The name of the species was not given, and often locality was not indicated. These additions might lengthen the title but would make bibliographic references definite. Two revisions of subgenera failed to indicate the name of the genus.

"Studies in the Ericales: a new name in blueberries" is a long title for a brief note and fails to mention the name involved. Several nomenclatural transfers mentioned only one of the names involved and indicated neither conclusions nor content: "*Hugelia* Bentham preoccupied"; "The status of *Aster longulus* Sheldon"; "*Desmodium glutinosum.*" Geographical location is sometimes indefinite, as in "Key to shrubs * * * of Marin County" and "A botanical expedition to Log Spring Ridge." Sometimes not even the name of the plant is shown: "More Berkshire plants"; "Chile tarweed in Quebec"; "Further flowers of the Presidential Range."

A survey of such a group of titles raises the question: What is worth publishing? Another 20 titles include: "*Euphorbia glyptosperma* in Massachusetts"; "*Carex typhina* in Maine"; "*Plantago cordata* in Indiana." New records for North America form a similar group. Little knowledge is conveyed by: "A plant new to the western hemisphere"; "Two plants newly adventive in North America"; "New from Europe." Often the addition of a word or two would complete the title and obviate further comment needed to make the reference intelligible. "*Polygala vulgaris* new to the North American flora" could better be stated, "*Polygala vulgaris* in British Columbia, new to North America."

But why should we need to print a separate item, of perhaps only five lines, requiring a bibliographic entry, for each new species found in a state or in North America? Surely it should be feasible for a journal to devote one page a year, or whatever might be needed, to bring together in one article a series of such records for the continent. State additions every 5 or even 10 years ought to satisfy most purposes.

I was particularly vexed with the entry, "*Astragalus* versus *Oxytropis*," for I had been interested in a plant

described in the former which I had found to belong in the latter. A facetious abstractor had commented: "*Oxytropis* wins with a new combination." On my complaint he graciously inserted the correction, "with a new name." Since I had no access to the original, I still do not know what species was involved.

The preparation of an index containing some 400 titles in ornithology revealed other examples. In the following titles, words which might be deleted are indicated in parentheses: "Reverse migration (of birds) as (a) result of unfavorable weather (in spring)"; "Notes on (the habits and distribution of the) white-tailed eagle in northwestern Iceland"; "Results of catbird banding in (Camden), New Jersey"; "Rhythm in (brooding and feeding) nest routine of (the) black-chinned hummingbird"; "Adaptability of birds to (changed) environments (in early fall)."

This task raised the question: Why do we use 'the,' 'of,' etc. so much? The index was first prepared with abbreviated titles. The matter of quoting literally was brought up, and restudy showed that in many cases this would require only a generous sprinkling of these superfluous words. Of 10 titles in a current journal number, four begin with "a," "an," or "the," and one with "notes on." A recent title, "A systematic study of the main arteries in the region of the heart—Aves VI" (*Auk*, Vol. 62, p. 408), is specific but too long. The running page title, "Study of arteries in the heart," is incorrect and has two superfluous words. A new book of high merit is *The distribution of the birds of California* (*Pac. Coast Avifauna No. 27*). Surely *Distribution of California birds* would serve as well and would reduce the length by 25 per cent.

On the Preparation of Extensive Bibliographies[1]

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There are many mechanical methods of procedure in bibliographic work, but we believe that the following steps will approximately represent the average stages of action: (1) location of a publication in an index or elsewhere; (2) exactly and legibly preparing an abstract and copying it on a card; (3) checking copied abstract; (4) numbering, sorting, and indexing; (5) stenciling; (6) checking stencils; and (7) mimeographing and binding.

The last three steps, which can be handled by an office assistant, will not be considered here. The other four processes should be attended to by the researchist himself, and for the third item he can use the aid of an intelligent clerk. Copying abstracts day after day, exactly and legibly, including punctuation and checking the copy, is regarded as routinism by most technically trained men. It is this part of the work which we think can be largely eliminated.

In a conversation about 25 years ago H. J. Rose (formerly a senior fellow of Mellon Institute and now vice-president, Bituminous Coal Research, Inc., Pittsburgh) mentioned to one of us that, if a piece of sensitized photographic paper is placed face down on a printed page and held in place by a sheet of plate glass, a negative image copy of the printed words or other markings can be developed after exposure to the rays of an electric light. Positive prints can be obtained from the negative by printing in the conventional manner. While this idea is certainly not new at present, it is by no means in general use by scientific workers. Upon extensive inquiry we have found only an occasional individual, not closely identified with photographic work, who is even aware of this bibliographic aid, which we have applied with success and enthusiasm.

At least two brands of photographic paper for this work are on the market. It is a thin stock paper frequently referred to as "Reflex" printing paper and sells for slightly over $4.00 per 100 sheets ($8\frac{1}{2} \times 11$ inches). Items average about 5.5 abstracts to such a page. The paper cost, including the first positive print, is about $.007 per abstract, and the developing work, which can be turned over to unskilled labor, costs in large batches well under $.01 per abstract. To this expense is to be added the cost of attaching the untrimmed print to a card for sorting. The total cost should be below $.02 per abstract. A darkroom is desirable but not essential for this work.

A young scientist receiving $250.00 per month is paid at a rate of about $.03 per minute. We find it requires about seven minutes to copy in longhand the average item in a 3,000-item bibliography. It costs nearly as much for two people to check it, and experience shows that usually 2 per cent of the errors will not be caught. The cost for the old procedure would therefore be in excess of $.40 per abstract placed on a sorting card.

We have found in our suggested procedure that, with an unshaded 150-watt lamp 30 inches above the page, an exposure of 10 seconds is usually satisfactory. Connecting the light and an electric timer in series with a foot switch greatly facilitates this operation. This means that the worker can copy a desired abstract in little more than the time it would take to put the book back on the library shelf. If we accept the foregoing rough approximations, some of which are ultraconservative, we have a total saving of $350.00 per 1,000 abstracts. In addition, there will be no cross-checking and no transfer errors, most of the drudgery will have been removed, and the work of stenciling will be much facilitated owing to excellent legibility and exact spacing. This inexpensive setup would, of course, also be available for copying letters, graphs, small drawings, or lengthy tables for other purposes.

It is also suggested that work in copying abstracts would be much expedited if the publishers of abstract journals would put at the head of each item the initials of the abstract journal, a serial number, and the number

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