Published in *Scholarly Publishing*, 22 (1991), 93-108. An earlier version was published in *Editors' Notes*, 9.1 (Spring, 1990), 20-30.

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Processing Electronic Manuscripts on the PC[1]

Daniel Eisenberg

Improved software has made the use of author-supplied files easier.

Most scholars now use computers to prepare their manuscripts. Many small publishers would like to speed editing and save on composition costs by using author-supplied files. As anyone who has tried it knows, this is a deceptively complicated task. The complications have caused many to set aside the idea and continue to pay for re-keyboarding of paper manuscripts.[2]

The problem is not in the transfer of data, a straightforward process if the right hardware is available. It is, rather, that typesetting requires different characters and codes than a file used to produce a manuscript of typed quality. Compounding the problem is frequent authorial error and inconsistency in the files supplied. Finally, word-processing programs format and store text in different ways. As computers and software improve,

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[1] The programs discussed in this article will run on any member of the IBM PC family (or compatibles) with 512K of memory and a hard disk. A prior, related article is "In-house Typesetting on a Tight Budget," *Scholarly Publishing* 21 (July 1990): 205-20.

[2] The only general treatment of the topic is the *Chicago Guide to Preparing Electronic Manuscripts* (Chicago: University of Chicago Press, 1987), reviewed unfavorably in both *Editors' Notes*, 6, 2 (Fall 1987): 32-3, and *Scholarly Publishing*, 19 (July 1988): 232-4.

means are being developed for resolving these problems.

Until the late 1980s, the only common format for electronic text was a generic one, called ASCII, DOS, unformatted, and other terms by various word-processing programs. In it, codes unique to specific programs were removed, and left was a file containing letters, numbers, punctuation, and very basic formatting commands, such as hard returns and tabs.[3] This generic format proved inadequate, as one lost underscoring, superscript, and other attributes, and tedious recoding before or after the transfer was required. Tabs and hard returns produced unsatisfactory formatting, and foreign-language characters were often lost or garbled.

Word-processor conversion programs have recently appeared. These programs are not problem-free, as advanced word processors differ so much from one another that full transfer of all features is impossible. Yet the output of these programs can be made usable for typesetting, and conversion of the advanced features is not usually needed for this purpose.

When the Transfer?

The *Journal of Hispanic Philology* works with electronic texts of accepted and revised material. That is, once a manuscript is accepted, we edit on the computer, using a file sent to us by the author. We then use that same file for typesetting. We cannot yet handle electronic submissions, nor, in the impoverished field of Hispanic studies, is that likely soon. The initial manuscript must be on paper. If we accept the article and the author has carried out any requested revision, then the electronic file is transferred and the typesetting process begins. I rarely send book reviews to readers, and because of their brevity it is practical to peruse them on the screen. Therefore, initial electronic manuscripts of book reviews are welcomed.

Authors using computers are co-operative in sending their

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[3] A hard carriage-return is unchanging. In contrast, a soft return will turn into a space if material is inserted or deleted from a line.

files; the concept is not new to them. Occasionally it takes mailing a formatted disk and return disk mailer with postage. Contrary to my expectation, I have noted neither an improvement nor a decline in the average quality of research as authors switch to computers. It is the quantity that is increasing, a most welcome development.

Publishers have of course been using authors' files since the birth of word-processing in the late 1970's. What is new, however, is that the hardware and software to do so has declined in price greatly, and is now within the budget of most small publishers. The procedures are less complex and more automated than they once were. All the same, using author-supplied files is still not a simple process, and there is a dearth of published guidance. We have had to discover much through trial and error.

Before the Transfer: Instructions to the Author

Publishers have always wished that authors would prepare manuscripts that are consistent, properly spelled and punctuated, with numbers written as 265-75 rather than 265-275, or the reverse. If authors read and follow instructions on these points, it saves time and money. If the author and publisher have a lengthy relationship, authors will usually try to follow publishers' requirements.

With journals the relationship between author and publisher is often brief, and the journal's style requirements count for less with the author. In some fields the style is standardized; others are anarchic. The international nature of some fields adds to the confusion: English journals in language and literature, for example, want a different style than do American ones.[4]

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[4] In England, the Modern Humanities Research Association publishes its *MHRA Style Book*. The standard manual in the United States is of course the *MLA Style Manual* by Walter S. Achtert and Joseph Gibaldi (New York: Modern Language Association, 1985). It is often confused with another MLA style guide with which it is only partly compatible; also, it has received much negative comment by journal

Authors are confused, and not very interested in the topic.[5]

The situation is much the same with electronic manuscripts. It would save time if authors supplied files with the proper characters and formatting codes. Some authors understandably don't want the bother, having already gone to the trouble of preparing a properly styled paper manuscript. They would take their scholarship elsewhere if pushed. Others try conscientiously, but do not know how to use their word-processing programs well, or are confused and doubtful because if they follow instructions, the results look strange on the screen. Because authors use different word-processing programs, it is hard to give more than basic instructions. We have had to develop procedures to deal with diverse and inconsistent manuscripts. No doubt if journal publishers agreed on a standard electronic coding, authors would eventually comply. Publishers do not agree, and electronic style guides differ from

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editors in the fields affected. (See the following articles in the Spring, 1986 issue of *Editors' Notes*: William Kupersmith, "Editors reply to the new *PMLA* [sic] style," 20-4; James C. Raymond, "Reflections on the new MLA handbook [sic]," 25-27; and in response, revealing in the title his confidence that everyone knows which style is being discussed, Robert M. Philmus, "A case for the new documentational style," 28-29. The Council of Editors of Learned Journals, which publishes *Editors' Notes*, briefly considered publishing its own style guide, but abandoned the idea as impractical.)

[5] "I applaud your seeming expectation that authors can be persuaded to study the *Manual of Style* or *Words into Type* and thereafter do their own styling [by which she means putting commas inside of quotes and capitalizing and punctuating correctly]. But I do not share that expectation. I should be content...if you merely succeeded in convincing authors that there are accepted rules of one kind or another in these style matters, so they would not object and think the editor high-handed or pigheaded when he does for them the styling they have been indifferent to." Thus Helen Clapesattle of the University of Minnesota Press, quoted by Henry M. Silver, "Putting it on Paper," in *On the Publication of Research* (New York: Modern Language Association, 1964), 9-20, on p. 13, n 4.

one another.[6]

In short, for a journal with only a brief relationship with each author, coding instructions rarely produce fully satisfactory results. We take whatever the author can supply and work with that, rather than engage in extensive correspondence. We request that authors not indent set-in quotations but leave them flush at the left margin, set off vertically by two hard returns; that they use a single hard return plus tab to separate paragraphs; and that they mark strange characters with an asterisk. Only a minority does any of this, and the number has yet to grow. Occasionally an author tries to emulate the printed final page in his or her manuscript, thereby producing something that invariably takes much more time to fix than it saves.

Data Transfer: Getting the Author's Data into Your System

The most common way to receive data is on disk. Author-supplied disks are of four main types: 3.5-inch 720K IBM disks, 3.5-inch Macintosh disks, 5.25-inch 360K IBM disks, and 5.25-inch 1.2M IBM disks. Occasionally we receive older 5.25-inch CP/M disks. We have an AT-compatible outfitted with the three types of IBM drives; adding the two extra drives cost just over $100 each. Recently it has become possible to install all three types of IBM disks on the less expensive XT-compatible machines.[7] A conversion program, Media Master, reads CP/M

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[6] Compare, for example, that of my own publication, published in *Journal of Hispanic Philology* 13 (1988 [1989]): 1-5; that of the American Association of Teachers of Spanish and Portuguese, published in *Hispania* 72 (1989): 455; and that of the University of Chicago Press in its *Guide to Preparing Electronic Manuscripts* (n 2, above).

[7] A 720K 3.5-inch disk drive can easily be added to an XT machine. Four companies now offer chips and/or boards to permit 1.2 MB 5.25-inch disk drives, as well as double-capacity 1.44M 3.5-inch disk drives, to be installed on machines of the XT class. They are Manzana Microsystems, PO Box 2117, Goleta, CA 93118, (805) 968-1387;

disks.[8] An accessory board permits reading Macintosh disks on a PC equipped with a 3.5-inch drive.[9] There are many other types of disks (Atari, Apple, Wang, etc.) which have not yet come in the door. Data conversion services maintain the specialized hardware to read them.[10]

MicroSolutions, 123 W. Lincoln Highway, DeKalb, IL 60115, (815) 756-3411; Datadisk, PO Box 157, Dixon, NM 87527, (505) 579-4496; and EMT Systems, 18226 McDurmott West, Suite E, Irvine, CA, (714) 863-1092. The products of Manzana and Microsolutions are discussed by David S. Veale, "Equip Your XT for a high-capacity floppy drive," *PC Resource*, May 1990, 87-9.

[8] Media Master is published by Intersecting Concepts, 68 Long Ct, Suite 1B, Thousand Oaks, CA 91360. The price is $49.95.

[9] This is the Deluxe Option Board, from Central Point Software, 15220 NW Greenbrier Pkwy, #200, Beaverton, OR 97006, (503) 690-8090. According to the manufacturer, not all brands of 3.5-inch drives are capable of reading Macintosh disks.

Communication between IBM-compatible and Macintosh computers has an additional complication. While the 128 characters of the ASCII set are the same on both types of computer, the "upper 128" characters (characters 128-255) are not. Software Bridge, discussed below, will convert into the IBM data format files created on the Macintosh with WordPerfect, MacWrite, or Microsoft Word. Some but not all Macintosh software that prepares files for use on an IBM-compatible will do so as well.

[10] Recent advertisements for data transfer services include (alphabetically): Conversion Specialists, 531 Main, Suite 835, El Segundo, CA 90245, (213) 545-6551; Data Conversions, 3576 University Dr., Fairfax, VA 22030, (703) 691-3282; Disc, Inc., 6767 Portwest Drive, Suite 100, Houston TX 77024, (713) 864-7845; Disk Interchange Service, Westford MA 01886; D.C. Document Conversion Services, 1468 S. Bahama St., Aurora, CO 80017, (303) 671-6535 (this company advertises a $10 introductory price for the first disk converted); Pivar Computing Services, 165 Arlington Heights Rd #R, Buffalo Grove, IL 60089, (312) 459-6010; Port-a-Soft, 140 W. 800 N., Deseret Bank Building, Orem, UT 84057, (800) 699-7638, (801) 226-6704 outside the U.S.

A method that will solve virtually any data transfer problem in North America is transfer via modem. Almost all modems in use in the US and Canada are able to communicate with each other. The author's computer, or another computer that can read the original disk format, sends the data via modem and ordinary telephone line to the receiving computer's modem.[11] All modem software used on microcomputers has the ability to send and receive files in the standard XMODEM protocol, in which the accuracy of transmission is verified. Modems, while easy to use, can be complicated to install.[12] Authors not technically inclined are instructed to ask a favor of someone knowledgeable, the computer equivalent of the ham radio operator. A local computer store, computer bulletin board, or campus computer centre can probably provide a referral to a person who will transmit a file for free, provided the author makes admiring small talk.

Most modems in the US and Canada are not compatible with those used in Europe, although this situation is changing as modems are replaced with newer, compatible ones. Commercial electronic mail services will eventually provide world-wide file transfer, but availability is still limited.[13] The linked academic data networks BITNET (in the US), NetNorth (Canada), JANET (UK), and EARN (continental Western Europe and Israel) are somewhat ahead of the commercial services, and offer an option for international transfers that cannot await a mailed disk.

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[11] If two computers are in the same room a transfer via cable is possible. This requires a cable that matches the connectors of the two computers, and modem software on each computer to control the transfer. Incompatible computers connected to a local area network can also transfer files via the network.

[12] A comprehensive guide to modem installation and use is *Dvorak's Guide to PC Telecommunications*, by John C. Dvorak and Nick Amis (Berkeley: Osborne McGraw-Hill, 1989).

[13] For an introduction to international modem communications, see Bruce Page, "Crossing Borders," *PC Magazine*, July 1989, pp. 167-8. The Worldport modem mentioned in that article is reviewed by Peter Ruber, *Computer Shopper*, June 1990, pp. 308-11.

Access is via academic computing centers. However, these networks are complex and frustrating to use, and nowhere near as fast as a direct phone call. Extra steps are required at both ends,[14] and one must both know and precisely type a complex electronic address. The situation will no doubt improve; a "directory assistance" facility is planned, for example.

Word Processor Conversion[15]

If the article is not written using the publisher's word-processing program, one must import (convert) it. Several programs take care of this increasingly complex step. WordPerfect, Microsoft Word, and WordStar now come with utilities to import from the most common formats. An import utility is also available for XyWrite/Nota Bene.

For more conversion power—to have an extensive selection of word processors supported, to transfer files in both directions—one must purchase a conversion program. There are three main programs, Software Bridge, Word for Word, and R-Doc/X, each of which costs $149.

These word-processing conversion programs are strange creatures, that must sometimes "guess" how best to convert incompatible features. All support the major word processors, but each supports some obscure ones the others do not. They

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[14] BITNET and similar systems use a 7-bit bandwidth for data; this produces results similar to the old ASCII format. All recent word-processing programs require an 8-bit bandwidth. Utility programs, including WordPerfect's Convert program and the Communications format of the word-processing conversion program Word for Word, will convert 8-bit files into a 7-bit transfer format and vice versa. The same utility must be used on both ends.

[15] Two topics are not covered in this discussion of conversions: illustrations and tabular (spreadsheet) data. My experience with the first is limited, and with the second non-existent. It is my understanding that both can be converted without major problems; I have used WordPerfect's graphics conversion utility successfully.

become outdated quickly, as new word processors appear and the supported programs issue improved versions. Regular purchase of updates is necessary. They come with lists of problems, most of them unimportant, in the conversions. The conversions are not exact, and the files created are intended to be printed, not edited. However, they are always editable, even if not as easily as a file created with the destination program.

I have never encountered a comparison of these programs. As they seem indispensable to publishers, I requested copies for evaluation.[16] Use and testing produced results unexpected from the advertisements and reviews of each.

R-Doc/X cannot be used, as it deletes all footnotes and endnotes. Also, it would not reconvert a XyWrite file it had created itself.[17] Of the remaining two, I recommend Software Bridge. It is easier to use than Word for Word, has a better manual, and imports tabs, hyphens, and margins more accurately. Software Bridge includes an editable translation table and automatically determines what program and revision number it is converting from. (The latter is a useful feature, as authors sometimes do not know the name of the program their typists use.) The advantages of Word for Word seem less

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[16] Software Bridge is published by Systems Compatibility Corp., 401 N Wabash, Suite 600, Chicago, IL 60611, (312) 329-0700; Word for Word is sold by Software Toolworks, 19808 Nordhoff Place, Chatsworth, CA 91311, (800) 231-3088 or (818) 885-9000; R-Doc/X is published by Advanced Computer Innovations, 30 Burncoat Way, #R1, Pittsford, NY 14534, (716) 383-1939. Word for Word and Software Bridge supplied copies for my evaluation; a copy of the disappointing R-Doc/X had already been purchased.

[17] As this article was about to go to press, the publisher of R-Doc/X announced an improved program, WordPort, which converts notes and many other advanced features. Programs supported are limited to WordPerfect, WordStar, Microsoft Word, and DisplayWrite, in addition to ASCII and IBM's DCA format. The cost is $149.

important.[18] The publisher of Software Bridge has expressed an interest in further adapting the program to meet the needs of so-called desktop publishers.

Editing the Converted Manuscript

Once one has converted the manuscript into the correct format, there are three overlapping tasks to be done. The first is to clean up the converted manuscript, removing or correcting inappropriate coding. The second is to convert characters appropriate for typewriter-style output into those needed for typeset output. The third is to add the codes needed for house design, hyphenate, and adjust page fit. Conventional editing can be combined with these tasks. Hyphenation can be disabled during editing; after editing is completed, one makes a final, hyphenating pass through the document. (Error-free, fully automated hyphenation of English is impossible.)[19]

Substantive editing is of course far easier with the powers of a word processor. Copyediting becomes a matter of electronic searching and replacing. If the author has put quotation marks inside periods, change them all with one command. Moving quotation marks from inside commas to outside requires a second command. An electronic spelling checker accompanies every major word processor, and the time spent using it is worthwhile. Some programs, among them WordPer-

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[18] Word for Word runs faster, but this is a trivial advantage for a program used occasionally. Word for Word supports export to outdated versions of programs such as WordPerfect 3, a feature that is far less important than Software Bridge's support for Macintosh word processors. What seemed from advertisements an important feature of Word for Word, a report on untranslatable features, produced an almost useless series of cryptic codes.

[19] See "In-House typesetting on a tight budget" (n 1, above), pp. 214-5.

fect 5, provide for multilingual checking of spelling.[20]

There are programs that assist with editing. RightWriter, Grammatik, and Correct Grammar, all of which I have used, check style and grammar. Other programs are Express, Readability Plus, which reports on style but does not make suggestions at the sentence level, and PC Proof.[21] All but Readability Plus check words and phrases against dictionaries of colloquial, colorless, misused, obsolete, redundant, and sexist terms. They also flag long sentences and make a report on the style of the manuscript. Some sentence analysis is done: the programs identify the passive voice, which they dislike, by finding a form of "to be" followed by a past participle. The details of what is done vary among the programs, and it would take another

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[20] The cost is $60 per additional language. Language changes must be marked in the text.

[21] Correct Grammar ($59) is published by Lifetree Software, 33 New Montgomery St, Suite 1260, San Francisco, CA 94105, (800) 543-3873, operator 501, or FAX (415) 541-7850; Grammatik ($79) is published by Reference Software, 330 Townsend St, Suite 123, San Francisco, CA 94107, (800) 872-9933) or (415) 541-0222; the publisher of RightWriter ($95) is Rightsoft, 4545 Samuel St, Sarasoga, FL 34233, (800) 992-0244 or (813) 923-0233. Express ($89; $9.99 to "qualified educational institutions") is published by Timp Software, Box 37, Orem, UT 84059, (801) 225-9319; Readability Plus ($94.95) by Scandinavian PC Systems, 51 Monroe St, Suite 110, Rockville, MD 20850, (800) 288-7226; PC Proof ($89) by Lexpertise, 9 Exchange Place, Suite 900, Salt Lake City, UT 84111, (801) 350-9100. Grammatik and RightWriter are reviewed together by Reid Goldborough in *PC Resource*, April 1990, 119-20. In "Your Personal English Teacher," *WordPerfect Magazine*, March 1990, 21-4, Beverly and Scott Zimmerman compare Correct Grammar, Express, Grammatik IV, Readability Plus, and RightWriter. Lifetree Software supplied a copy of Correct Grammar for evaluation; copies of Grammatik and RightWriter had already been purchased. Lexpertise did not respond to repeated requests for an evaluation copy of PC Proof; according to the publisher's literature, the program points out potential errors in style and usage, and creates a "sentence list" and "document structure and repetitions analysis."

article to compare them thoroughly. Grammatik and Correct Grammar can be used interactively, a feature that is often convenient. All of the programs work well with WordPerfect; all will work with files in the generic ASCII or DOS format, which all major word processors can create and read; some work directly with the files of other major word processors. Correct Grammar, though the slowest and most complex, seems to make the most useful suggestions. It also combines spelling checking with grammar checking, and will use existing user-created dictionaries. PC Proof claims to be more convenient than the others.

Their manuals caution that these programs are no substitute for human judgment, a view I strongly support. They require considerable time to use, and scarcely remove the need for attentive reading and copyediting. They miss many specialized items and flag others unnecessarily, though one can customize the programs to ignore classes of errors. (Unless instructed not to, RightWriter will flag every instance of *always* and *never*.) Literary quotations produce a paroxysm of warnings and advice: the programs dislike lengthy eighteenth-century sentences, for example.

At present I use Correct Grammar to check everything I write in English, including this article. I recommend it to authors and apprentice editors. However, a manuscript marked by these programs cannot be sent to an author without time-consuming editing of the markings. Authors would be offended, and rightly so. I am about to experiment to see whether marking of lengthy sentences only could help an author see where to revise. At present, as already stated, such revision is to take place before the electronic file is Sent.[22]

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[22] If not, the text may need to be converted back into the author's word-processing program and disk format, and reconverted after it is received again. The alternative is the time-consuming inputting of corrections written on a paper printout.

Standardizing and Coding the Manuscript: Macros

Manuscripts prepared for typewriter-style output require standardized conversions. Characters appropriate for the fixed spacing of typewriter-style faces must be converted into those of proportionally spaced type. In addition, coding to produce the desired typographic output must be added, and conflicting coding removed. The steps depend upon the nature of the program and the character set used for output. Some utilities help with but do not fully automate the process for Ventura Publisher. Probably assistance for WordPerfect will be available soon, but it's not here yet.

The steps this processing entails can be assembled into master commands called macros. As macros can be endlessly linked, their power is almost unlimited. There are generic keyboard utility programs that will convert single keystrokes into long strings of commands. Macro capability built into application programs is usually more useful, as it allows the macro to respond to changing conditions in the document. Every major word-processing program includes some macro capability, and as programs evolve their macro capabilities grow. At present WordPerfect is by far the leader in macro capability, including a macro editor.[23]

The following WordPerfect 5.1 macros handle common procedures in processing authorial manuscripts. All are in the public domain and available for a nominal charge from the WordPerfect Support Group.[24] The first is described fully; full

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[23] For an introduction to WordPerfect's macros, see B.J. Griffle, "Chocolate Chip Macros," *WordPerfect Magazine*, March 1990, 13-5. (The author envisions that memories of a childhood food, chocolate chip cookies, will make people receptive to programming.) Neil Rubenking examines WordPerfect's macros from a programmer's perspective in "WordPerfect offers a bona fide programming environment," *PC Magazine*, 31 October 1989, 295-315.

[24] WordPerfect Support Group, PO Box 130, McHenry, MD 21541, on Disk Set 29, available for $15 including shipping; they are also available through the online service CompuServe (the CompuServe

documentation on the others is included with the macros.

Quotation marks. Typesetting usually requires differing opening and closing quotation marks (‘ ’); manuscripts usually do not have them (' '). One cannot simply search for ' and replace it with ’ ; one must replace selectively. A macro called QUOTES carries out the following steps:

1/ It assumes all examples of ' followed by space (thus, at the end of a word) are not to be changed, and changes them to an intermediate code unlikely to occur in the manuscript.
2/ Examples of space followed by ' (thus, at the beginning of a word) are changed to space followed by ‘. This would produce an erroneous change if a word began with an apostrophe (’ere), but such is seldom found in scholarly writing.
3/ All remaining examples of ' followed by s are assumed to be apostrophes, not to be changed. They are also changed to an intermediate code.
4/ The macro queries the operator about each remaining ': should it be changed to ‘ ? This means, of course, that someone must sit at the machine and answer whether or not each quotation mark should be changed. Examples are ' preceded by open parenthesis or bracket, tab, double quotation mark, and so on. It is possible to automate more of these changes, but not all of them. Each additional type (for example, changing tab followed by ' to tab followed by ‘) requires another pass through the document, and takes more time than it saves.

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command is GO WPSG). Included is an extensive documentation file which explains their operation.

The WordPerfect Support Group has requested that I mention its newsletter, *The WordPerfectionist*, which contains much information helpful to the serious user of WordPerfect. Subscriptions are $36 per year.

5/ The intermediate codes are changed back to ' plus space and 's.
6/ Using a similar series of steps, the quotation mark of the typewriter (" ") is changed to the different opening and closing marks of proportional type (“ ”).

Spaces, tabs, carriage-returns. Typewriter-style output uses two spaces after periods; typesetting never uses two. Typewriter-style output uses two carriage-returns between paragraphs, typeset output only one. A macro called SPACES converts all examples of five spaces at the beginning of a line into a tab; converts all other multiple spaces into a single space; removes spaces preceding a hard return, which could cause a blank line in the output; and asks whether each double carriage-return should be converted to a single return. This macro should be run before running the macros HYPHEN and ELLIPSIS.

Hyphens and dashes. Typesetting requires dashes; typewriters, and word-processing programs emulating typewriters, have only hyphens. Authors commonly use two hyphens, sometimes preceded or followed by spaces, in place of a dash. Complicating the situation are the different types of hyphens supported by advanced word-processing programs. WordPerfect 5.1 has a soft hyphen, visible only if it coincides with the end of a line; a hyphen character, which is always visible and can be used to hyphenate at line endings (“mother-in-law”); and a hard hyphen, which does not cause a line break, used before negative numbers (-30) and in discussing word suffixes.[25] Word-processor conversion programs do not always discriminate properly among types of hyphens. WordPerfect’s own import utility imports hyphen characters as hard hyphens.

The macro HYPHEN converts two hard hyphens, two hyphen characters, and a combination of hard hyphen plus

[25] In WordPerfect 5.0, the names of the hyphen character and the hard hyphen were (by error) reversed.

hyphen character[26] to em dashes. It also removes single spaces surrounding an em dash, and converts remaining hard hyphens not at the beginning of a word into hyphen characters. Sometimes additional steps are required.[27]

Ellipses. The macro ELLIPSIS removes single spaces before, within, or after multiple periods (except a space after a sentence-final ellipsis). It then converts multiple periods into an ellipsis character (em leader), and asks if a line break should be permitted after each ellipsis.

Els and ones. A surprising number of typists use the el key in place of the number one. Whereas with fixed space (typewriter) output they are identical or similar, els and ones have different widths in proportionally spaced faces. Numeric els must thus be changed to ones. The macro ELL assumes that an el preceded or followed by any digit is a one, and changes it. It also assumes that an el surrounded by spaces is a one, and two els are an eleven. It will not change an el preceded or followed by any other character (el period, el a, tab el, etc.).

Underscore to italic. Authors usually use underscore for emphasis; typesetting requires italic type. The macro UND2ITAL converts all underscore to italic type, including that found in footnotes and headers.

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[26] Hard hyphen plus hyphen character is the correct way to code two hyphens in a typewriter-style manuscript; it prevents the hyphens from being divided by a line end.

[27] With articles converted from WordStar, a soft hyphen at the end of a line is imported as a hard hyphen plus space. Some authors use a single hyphen between spaces, or three hyphens, to indicate a dash. One author using WordPerfect and thus having access to its dashes, and presumably confused because a dash and a hyphen looked the same on the screen, used double dashes between spaces instead of double hyphens. Three-em dashes, used in bibliography entries, are done even more diversely by authors: sometimes with three or more hyphens, sometimes with underscores.

Footnotes. One must inspect notes to see that they do not end with carriage returns or spaces, which could cause blank lines in the output. The macro NOTECHEK moves between note endings, allowing this step to be done rapidly. Notes may begin with combinations of spaces, punctuation, tabs, superscript codes, and hard (unchanging) note numbers, all of which must be removed.[28] As these combinations seldom change within a manuscript, the first note is inspected and an appropriate search and replace strategy devised. Sometimes authors use endnotes rather than footnotes; a macro distributed with WordPerfect changes endnotes to footnotes.[29]

Manuscripts prepared with WordPerfect, Microsoft Word, and other advanced programs have notes linked to points in the text. Authors using simpler word-processing programs place notes at the end of the file, or in a separate file. A macro called NOTE links these notes to their proper locations in the text.

Clean. So that it will not conflict with house formatting, authorial formatting must be purged. A macro called CLEAN removes the following codes: default font, left and right margins, top and bottom margins, line spacing, line height settings, tab settings, page number settings and position, paper size and type, hyphenation on and off, justification on and off, add horizontal or vertical space (advance), headers and footers, and footnote format and number settings. The macro does not remove less frequent codes, such as non-break space and block protect. If we do not spot them when paging through the manuscript, they show up in the proof. If they have no effect on the proof then we forget about them. Traditional proofreading is of course indispensable.

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[28] The format of a note is set in WordPerfect by a footnote or endnote option code. WordPerfect and Microsoft Word generate note numbers internally; these "soft" numbers thus change as notes are added or deleted.

[29] Converting endnotes to footnotes destroys automatic cross-references within the notes. To date there is no technique to automate the conversion of cross-references.

Indents. A major problem area the treatment of which has not yet been systematized is that of indented text. As type size and margins are changed and authorial tab settings removed, formatting accomplished by tabbing (except a single tab at the beginning of a paragraph) will not be correct. For verse we change the left margin; the amount depends on the type size. Verse must first be moved to the left margin, and tabs removed.

Indented prose, and the hanging indents of bibliographies, are even worse. Indentation that will format correctly requires an indent code; authors customarily use tabs, repeated on each successive line. Sometimes tabs, indents, and spaces are irregularly combined. Hanging indents, in which all lines except for the first are indented, should be done with indent plus margin release (shift tab). Instead they are usually done with tabs on each line after the first, preceded by either soft or hard returns, producing nonsensical results when reformatted.

It is possible to write macros to correct any such problem. However, each combination of tab, indent, return, and space would require a separate pass through the document. It is quicker to spot problem areas when paging through the manuscript, and devise search-and-replace operations as problems occur.

Standardizing and Coding the Manuscript: Styles

Once authorial coding has been removed or corrected and character conversions have been completed, codes are added to create house design. These are grouped into master codes; WordPerfect calls them styles. The advantage of a style over a macro that inserts the desired combination of codes is that styles are changed easily. If we decide, for example, that a heading should be in 16-point rather than 14-point type, a change to the style will automatically change all places where that style is used. The styles we use most often are the following:

Margins, font, tabs. Sets the four margins, chooses the default font, provides standard tab settings.

Footnote codes. Specifies footnote size and spacing; specifies superscript for note numbers in the text and in the note; adds two spaces before and a single space after the note number in the note; creates a two-inch line between text and notes; specifies that on a partially filled page, notes should go at the bottom.

Begin article. Forces new right-hand page. Suppresses headers and page numbers on that page. Resets footnote number to one, drops five lines, and starts centreed 17-point type for the title.

Article author. Drops four lines from the title, starts 14-point italic type. After the name, it drops four more lines, and begins 17-point roman for the initial capital.

Reset margin for indented verse (standard size).

Reset margin for indented verse (small size).

Drama. Sets up margins and tabs for lines of verse preceded by right-justified names.

Restore normal margins.

Hyphenate. Turns hyphenation on, sets its frequency, and turns kerning on. After this style has been added to the beginning of the manuscript and the manuscript has been paged through to the end, with hyphenation queries about proper names and unusual words being answered en route, precise control of page breaks is possible.

Other styles contain headings for different parts of the issue: book review section, index, and so on. Several steps must be done manually, such as setting the initial page number for the issue and adding special characters, initial boxed quotes (a candidate for a style), cross-reference codes, running heads, authors' addresses, and block protect codes to material that should not be divided by a page break. Two small macros create the three-em dash needed in bibliographies and provide partial line spacing (down four points).

It is possible to generate an automatically numbered table of contents. This proved so time-consuming, however, that we still create our complex table of contents manually. Two macros extract from edited versions of tables of contents the data to create the annual index, which are sorted and then formatted with another style.

The Fate of Electronic Mss

At present we have no plans for further use of the electronic files. To convert them into a format other than WordPerfect, without significant loss of features, would be a time-consuming project. To date there has been no demand for this service.

We do save the files indefinitely, as the situation may change; also, authors may request files for use in reprinting articles. They are removed from the hard disk, compressed, and stored on floppy disks.

(Daniel Eisenberg is professor of Spanish at Florida State University, and the editor of the *Journal of Hispanic Philology*. This article is a revised version of an article first published in *Editors' Notes*, the newsletter of the Council of Editors of Learned Journals.)

References

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PC Computing, $2.95 single issue, $14.97 per year. PO Box 50253, Boulder, CO 80321-0253.

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