Computers for Choreologists

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COMPUTERS FOR CHOREOLOGISTS?

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For a choreologist, is there any relief quite so great as filling out the registration information that precedes a finished score? This signals the end of so many hours of painstaking copying, recopying and editing. Each page feels like an old friend, but one that we are glad to part with, at least temporarily. For another score is always lurking in the background, waiting to be tackled.

Few company choreologists are equally proficient at all the varied aspects of the job. Some excel in the rehearsal environment, maintaining and polishing a company's repertoire, or setting new works from existing scores. Relatively few, however, thrive on producing master scores of works as they are introduced into a company's repertoire. This is understandable, for a number of reasons. The immediate demands of the job focus on getting the show onstage. The administration is less concerned with preserving the work for future performances, especially until its success has been guaranteed. When a work becomes part of a company's active repertoire, a *working score* is generally sufficient for the purpose of ensuring that new cast members learn the choreography originally set. *Master scores*, however, are less frequently produced: the additional time and effort required are more practically spent in rehearsals producing working scores. The value of a good master score is proven only in the long term, when works out of active repertoire are revived, as in the case of "Petrouschka" and "L'Après Midi d'un Faune".

This emphasis on the practical value of a working score over the production of complete master scores is to the liking of most choreologists, who have long since packed up their India ink pens with their theory notes! Hunching over a drafting table can hardly compare with the excitement of the rehearsal room, especially when a new work is being created. But there are times when, faced with a work that is sure to become a staple, the choreologist would be eager to complete that special score. If only recopying, reformatting, and inking were not such frustrating drudgery. Like the Benedictine monks, choreologists yearn for a breakthrough akin to the Guttenberg press. While today's computer technology has all but rendered the traditional printing press obsolete (replacing it with the *word processor* which drives a computer typeset printer), choreologists continue to toil with pen and ink. Although text editors have been developed for most *verbal languages* in the world, analogous systems for *movement languages* are in their infancy.

For the past four years, a team of researchers has been at work at the University of Waterloo, Ontario, Canada, to explore what types of computer systems can best assist choreologists in the preparation of working and master scores. Two systems with complementary goals are under development. The initial system, now called "**ChoreoScribe**", aims to provide its users with the ability to *produce*, *edit*, and *verify* notation of master score quality. By following a format based on the theory of Benesh notation and guided by the computer, the user enters notation signs which are "understood" by the computer. These signs are "interpreted" according to a body model set up within the computer program, and the computer keeps track of all information entered to provide a check for certain aspects of the notation. Such a system will eventually be able to generate computer animation, that is cartoon-like displays of human figures performing the movements recorded in Benesh notation. This "intelligent" editor, as it is called by computer scientists, is slightly more time-consuming to use than its counterpart, which is called "**MacBenesh**". The "MacBenesh" editor works like an electronic pen and paper, allowing the user to enter notation signs in a less structured way. Like "ChoreoScribe", "MacBenesh" enables the choreologist to enter notation and perform a number of editing functions such as erasing, modifying, moving, copying, changing the layout, and ultimately producing an excellent quality master score. Unlike "ChoreoScribe", it performs no checking of the signs input, relying on the user to enter only information that is physically possible and notationally correct. Since the editor does not interpret the signs, they can be entered more quickly. It will be more complex to extend "MacBenesh" to produce animated human figures.

Both systems share one essential feature: they are intended for use by people who have little experience with computers. To use computer jargon, they are extremely *user friendly*. Choreologists who use the systems require only a few sentences of instruction, learning as they go along. Trial and error can be a particularly enjoyable experience when mistakes can be erased at the push of a button! Certain aspects which may be of interest are described in the following articles.