

HANDWRITING— HOW MUCH DO WE KNOW ABOUT IT?

EDITORIAL


Interest in handwriting research has increased in the past few years and maybe this is a good moment to stand back and review the situation—to see how much or how little we actually know about the realities of the written trace, or even about our own writing system. Are we asking the right questions to provide valid answers to many of the pressing problems that need to be solved today, particularly in education?

One persistent difficulty that needs addressing is the frequent inability of one discipline, within the many involved in handwriting studies, to comprehend another's terms. We must ask whether there is a precise enough terminology for letters, not only to communicate with each other but to inform and detail individual investigations.

It is the underlying need to consider the many facets of handwriting that actually limits the relevance of so much handwriting research. Unless the researchers who design a project have some understanding of the complex nature of handwriting before they start, then their



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conclusions, if not their detailed findings, may be limited or worse still, distorted by too narrow a view. It is towards this kind of broader understanding that this particular set of papers was commissioned.

In some areas, in particular motor studies and the computer recognition of letters, a great deal has been published recently, much of this as a result of the formation of the International Graphonomics Society, a group that meets every two or three years and publishes selections of their papers (e.g., Thomassen et al, eds. [1983]; Kao et al, eds. [1986]; Plamondon et al, eds. [1989]; and Wann et al, eds. [1991]). In view of the availability of these specialized publications, those particular fields of study are not represented here.

WHAT WE DO NOT KNOW ABOUT HANDWRITING

This issue first looks not so much at statistical evidence but at some of the imponderables of handwriting. It reviews the literature concerning the origin of our alphabet and suggests a possible solution to a riddle about which solid evidence may never be uncovered. Then, ignoring conventional symbols, the relationship of the wielder of the implement to the individual trace is explored. This surely must be considered in all findings even if it cannot be fully understood, much less quantified.

A terminology is presented for letterforms, also one for the hand, which is necessary to the understanding of how we write. The team from the University of Reading would like to think that their paper concerning letterform terminology is a discussion document that should produce reactions from the wider readership of *Visible Language*. The terminology of the hand has been provided by an orthopedic surgeon with a particular interest in the ergonomics of handwriting.

THE MEDICAL ASPECTS OF HANDWRITING

Handwriting is a valuable diagnostic tool, a direct, permanent and measurable pointer to a patient's progress. Why then is it so seldom used in medical diagnoses? Dr. Kjerstin Ericsson provides an extensive bibliography to show how the graphic trace

has been used in diagnostic work with patients suffering from senile dementia. She illustrates an imaginative use of graphic tests in her native Sweden in assessing elderly patients' ability to look after themselves. It is to be hoped that her work may inspire others to use the written trace for diagnostic and assessment purposes in their own fields.

My own contribution combines two of my main areas of interest, educational research and what might be termed rehabilitation. A non-medical perspective of writer's cramp first links early teaching attitudes and lack of postural training to a more serious condition later in life. The wider implications of the act of writing are discussed, suggesting how writer's cramp may differ from other industrial movement disorders. This approach aims to encourage the medical profession to reconsider its views on rehabilitation—and take into account the contributory causes of the particular condition under discussion.

AREAS OF CONFLICT IN HANDWRITING

The personal quality of handwriting is raised in several instances throughout this issue. It is not only the effects of such individuality, but the inevitability and desirability of personal differences that are stressed. Once it is accepted that handwriting is a reflection of the writer on paper, then the perspective shifts: in research, in diagnosis and in educational planning.

The perception of writers through their writing, whether assessing senility, a psychiatric disorder or neurological impairment, may still be an unfamiliar concept to many doctors. It requires considerable application to analyze and interpret the written trace. At the same time, the writers' perception of themselves should not be forgotten. Whether it is ill health, immaturity, frenzy or perhaps just laziness that is mirrored in a personal handwriting, certain messages would be evident both to reader and writer. Some of these indications may be more distressful to the writer than to anyone else, causing them to seek remedial help. Where the writing problem is a reflection of the writer's condition it cannot be "cured" by cosmetic techniques such as trying to copy a new model. The root cause needs to be



diagnosed and explained before there is a hope of any real improvement.

When the same attitudes are related to education, a whole range of other issues are raised. Teachers' (and parents') perception of children through their writing cannot be ignored. Judgments and criticisms are made that can harm pupils' self-confidence and with it their ability to relax and progress in a satisfactory manner with their written work. Where many of these judgments are colored only by a measure of "neatness" or by how well children may be following an arbitrarily-imposed school model, even more problems are likely to arise. Handwriting models arouse strong emotions. There is a proliferation of proponents for a wide variety of different letterforms, all aimed at being "the ideal solution to handwriting problems." The need for a model in the early stages of handwriting is not questioned. The questions that really need addressing are: first, how soon a model should be dropped to enable the writer to develop a consistent personal hand; and second, what are the long-term effects of imposing certain (or any) models longer than absolutely necessary?

Handwriting and typography are two different letterform issues, so the criteria applied to one may not always be relevant to the other. Typographic letters need only to consider the reader. The writer, however, needs as much consideration as the reader when it comes to handwriting—a fact that is often ignored. Standardization in handwriting may, in certain circumstances, suit the reader, but the pressure for identical handwritten letterforms can only disadvantage the majority of writers. If teachers were to analyze what is illegible, rather than the other way around, they might come nearer to an understanding of the subject. The few points that make a handwriting unreadable do indeed need dealing with, but these are seldom aesthetic points. They are more often concerned with the movement, height differentials and spacing of basic letters.

EDUCATING EDUCATORS ABOUT HANDWRITING

Returning to a point made earlier in this introduction, the


narrowness of much educational research continues to contribute to the school policies that allow handwriting problems to arise. What actually happens in our schools? Details of how handwriting is taught or groups' or individual children's actual performance come very high on the list of subjects that we know little about. Sassoon (1988) looked at the effects of different models and methods on how children learn to write, but had to start by evolving simple ways of analyzing handwritten letters that might inform those whose training did not include the specialist knowledge of letterforms. The same body of work included a critical review of recent educational research. It revealed work that used inappropriate tasks and inadequate samples to provide "norms" of various aspects of handwriting. It revealed examples that had been copied by adults to resemble school children's work, in papers that have considerable influence on educational policies. It also revealed an unfortunate tendency for some of these questionable papers to be repeatedly quoted while others with less sensational or popular findings, but based on more thorough research, were consistently ignored. Perhaps the most worrying finding in this review was how researchers frequently depended on subjective judgments of "legibility" to justify their hypothesis or preferred model. When more closely investigated, many of these judgments appeared to have been made more on aesthetic criteria than on actual factors that affect legibility.

All these somewhat emotive points need to be seen in perspective (and are discussed at length in Sassoon [1988] for those who want further details). However, with these points in mind this might be a good time and place to give a few pointers for those whose work requires that they depend on the findings of handwriting research for educational planning.

SOME QUESTIONS FOR THE READERS OF RESEARCH PAPERS TO ASK THEMSELVES

1 Does the task that the pupils were given bear any relevance to the tasks that you expect to be undertaken in the circumstances in which you work? In a classroom situation, "writing" combines various cognitive functions—spelling, grammar and creativity—with the act of handwriting. So, for example, a task





consisting of a short phrase repeated over a period of time to yield a “norm” may be misleading. A task that involves a lot of copying may measure writers’ copying capacity, not their motor skills; likewise, results from a dictated task may be influenced by the hesitancy or fluency involved in varying spelling capabilities.

2 How specific are the criteria, and are they relevant to you? Was it undertaken in your country or elsewhere? If so, was the educational policy similar to your own? Do the pupils start their education at the same age? Wherever the study took place, did the attitude to models and methods resemble that used in your school/district/country? Is, for instance, the balance between the expected creativity of content and the aesthetic appearance of written work similar to yours?

What method of analyzing the details of letters is used? Are you satisfied that the details investigated, however impressively they are quantified, would be relevant to your conditions? Are terms defined accurately or used in the same way that you would employ them—for example, such loose and subjective terms as “cursive”?

3 Does the study consider only the written trace or does it also look at how the trace was produced—i.e., taking into account such matters as paper position, penhold and posture?

4 Does it take into consideration the degree of training involved? Conclusions can be misleading if drawn from situations where either little training has been given so poor strategies are evident, or alternatively, particularly thorough training has been given. When information has been gathered from questionnaires, there is a further point to consider. Where only a stated proportion of questionnaires has been returned, readers should ask themselves whether the findings from such work reflect only the most concerned teachers rather than a representative sample of those approached.

5 Does any work that tries to justify a particular model or method look at the long-term effects of such teaching. If the study cannot, for whatever reason, be longitudinal it should

attempt to show how pupils with similar training have managed later on in their school life in particular, how they have managed to personalize their letterforms to deal with stress and the increased demands for speed.

6 By what means is the final product assessed? In particular, it is advisable to be wary of “legibility” assessments, which tend to be subjective, however impressive the test and retest results may appear. Legibility is likely to be in the mind of the reader and dependent on many factors, such as expectation, familiarity, personal training and tastes.

Unfortunately, handwriting is often taken for granted, and its complexity as a task is ignored by many of those who profess to be experts in one aspect or another. Modern technology enables us to investigate some areas of writing in great detail while leaving other equally important ones unexplained. Something that many of us depend on every day of our lives is perhaps less understood today than it was a hundred, or maybe even several thousand years ago.

REFERENCES

- Kao, H.S.R., G. P. van Galen and R. Hoosain, eds. 1986. *Graphonomics, Contemporary Research in Handwriting*. Amsterdam: North Holland.
- Plamonden, R., C.Y. Suen and M. Simner, eds. 1988. *Computer Recognition and Human Production of Handwriting*. Singapore: World Scientific Publishing Co.
- Sassoon, R. 1988. “Joins in Children’s Handwriting, And the Effects of Different Models and Teaching Methods.” Ph.D. diss., University of Reading.
- Thomassen, A. J. W. M., P. J. G. Keuss and F. P. van Galen, eds. 1983. “Motor Aspects of Handwriting.” *Acta Psychologica* 54, nos 1-3.
- Wann, J., A. M. Wing and N. Sovik, eds. 1991. *Development of Graphic Skills: Research Perspectives and Educational Implications*. London: Academic Press, Inc.



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