PSYCHOLOGY

Handwriting Analysis May Be Put to Scientific Test

New Scales for Evaluating Handwriting Differences Makes Possible Objective Statistical Study

THE ANALYSIS of handwriting, as a method of studying personality, may be put to scientific test. This is made possible by new scales of measurement developed by Mrs. Thea Stein Lewinson, a graphologist, in collaboration with Dr. Joseph Zubin, associate research psychologist at the New York Psychiatric Institute.

These scales, published in a book entitled "Handwriting Analysis," represent the first attempt in this country to put graphology on a scientific basis, by offering a statistical method of checking results.

The type of handwriting analysis used by these authors is an outgrowth of a method developed in pre-Hitler Germany by Ludwig Klages and Max Pulver, not widely known in this country. Here, graphology has ranged from the fortune-teller type of commercial analysis to the study of handwriting as a collection of isolated signs (size, shape and position of t-bars, i-dots, etc.), each having a definite "meaning."

German graphologists, however, were interested in handwriting as an expressive movement. That is, they studied the muscular movements which produced it, deducing from the finished product whether these movements were jerky, uncoordinated, too contracted or too free or whether they were rhythmically well balanced, which they believed indicated a well adjusted personality.

In addition, handwriting was evaluated according to modern, dynamic concepts of personality, which include unconscious, emotional factors.

The contribution made by Mrs. Lewinson and Dr. Zubin is in establishing objective measurements for the "rhythmic balance" of handwriting, heretofore arrived at mostly by intuition.

On these scales of measurement, the handwriting of abnormal personalities shows more inconsistency, more deviation from ryhthmic balance, than the writing of "normals." Samples are reproduced showing the writing of a mental patient (paranoid schizophrenic) before and after his breakdown. It is hard to believe that the same person wrote them both. Apparently a diagnosis could be made from the "after" sample, but it is not stated explicitly whether a forecast of mental illness could have been made beforehand.

These samples would interest the layman who is accustomed to classify handwriting according to whether it looks nice or not. In the "before and after" series, the patient's writing during his breakdown is smaller, more meticulous, and "prettier" than his previous handwriting. But according to graphology, such terms as "beautiful flowing hand," "neat," "bold" or "feminine" have little to do with the case, nor is rhythmic balance immediately visible to the naked eye. The procedure outlined in this study is to select the first word in the first line, the middle word in the middle line, and the last word of the last line, for detailed measurement and analysis.

Mrs. Lewinson is a trained graphologist who practised in Berlin and Paris. Since coming to this country in 1933, she has made special studies on the handwriting of children and adolescents, criminals, and abnormal personalities. She has also collaborated with physicians in the field of psychosomatic medicine (the interaction of physical and psychological factors in disease). Among her publications is the first English interpretation of Ludwig Klages' work.

Science News Letter, August 15, 1942

GENERAL SCIENCE

Exchange of Microfilms Helps Science War Effort

SCIENTIFIC information and documents are being sent back and forth across the Atlantic in the form of microfilm—miniature photographs that may be read by enlargement — in order to speed the mutual war effort of Britain and the United States.

This is revealed in a statement by Prof. A. V. Hill, secretary of the Royal Society, published in London (*Nature*, June 13). The use of microfilm for scientific purposes began in the country in 1937 when literature in libraries was reproduced in this way for research workers.

Regular scientific collaboration between American and British scientists has now been arranged with liaison officers in both capitals and other research centers. Experts are also ferried by air from one country to the other.

Travel and communication is still too slow to suit Prof. Hill who says that "great difficulty is still experienced from slowness of travel and transmission of scientific people and information." At present, official communication with the United States from England may take from two to six weeks.

Science News Letter, August 15, 1942

In six months the War Production Board has taken over nearly 1,000 miles of abandoned and non-essential *railroad track*.

Flame cleaning of structural steel leaves the surface warm, dry, free of rust and unbonded mill scale, and ready for its primer coat.

Traveling *"musettes,"* museum displays of poisonous plants, toxic insects and disease carriers, are being prepared for circulation among army camps where such enemies as poison ivy and inedible mushrooms are a hazard.

Small quantities of *silver* are substituting for tin, copper, and other scarce metals in almost every motor, generator, transformer and other electrical apparatus now being made by one war plant.