

## HANDWRITING AS A FACTOR IN CREDIT ANALYSIS

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Credit is the name given to that business operation by which delivery of money or merchandise or other consideration is made on the promise of future payment. Credit is based on confidence; confidence in a man's resources and ability to pay, in his character and integrity; confidence in the stability of the locality in which he conducts his business; confidence in the government under which he lives. Credit-making is an estimate or opinion of future commercial conditions and of the ability and intention of men to carry out a contract. So important has this aspect of American business become, that up to the present emergency roughly one-third of American merchandising was done on credit.

Credit extension has long been granted on what is largely a mechanical and statistical approach, based chiefly upon economic factors. One widely used method seeks to determine the credit character of a customer from the information furnished by him. The applicant is asked to answer certain questions with respect to race, marital status, length and type of employment, age, income, other credit affiliations, references, etc.

While tangible assets may be an important basis for the extension of credit, yet it can be stated absolutely—and it is an agreeable evidence of the large part which the human element, man himself, plays in the more or less sordid operations of business—that the rock-bottom foundation upon which the whole system of credit is based is character. Those characteristics of the applicant himself most significant to the credit man are rightfully identical with the most essential elements of success in any man: honesty, good habits, ability, industry, economy, and care in the conduct of his business. Of these assets none can be levied upon by law, but just as a man cannot attain success without them, so a credit man cannot safely give credit to an applicant lacking them. In fact, if a

credit man could be absolutely sure of an applicant's honesty, most other considerations could safely be eliminated. Not that honest men never fail, for they often lack ability and other essentials, but between the man with large resources and doubtful honesty, and the honest but financially weak man, the latter is the better credit risk.

Undoubtedly in credit extension there are at least two aspects: an economic one (the ability to pay) and one largely psychological (the intent to pay). It appears most likely that our credit concerns are better equipped to deal with the economic aspect than with the psychological aspect. This paper will report the research which has convinced one Chicago concern, which does a large credit business, that handwriting can be an important factor to be considered in the extension of credit.

The prevailing attitude toward handwriting analysis among American psychologists is one of scepticism and distrust. Along with phrenology, palmistry, and astrology it is contemptuously dismissed or deplored as charlatanism. The commercial abuses of graphology seem to have disqualified this type of analysis for impartial experimental study. Consequently very few American psychologists have studied its methods or claims seriously; in their unfavorable criticisms they seldom refer to more than one or two inconclusive experiments. The typical American attitude has been expressed by John B. Watson. Depending as many of the critics of graphology do, upon a single experiment of Hull and Montgomery, he concludes that all claims for graphology are "a tissue of exaggerations" which "will not bear critical experimental testing". Since this famous experiment has only remote relation to most of the claims of graphologists and practically none to their methods of work, it is a meager and insecure foundation for such a sweeping opinion. Watson wrote twenty

years ago, yet this attitude toward graphology still prevails.

Briefly, it may be said that American psychology and science regard handwriting as unrelated to the deep-lying central factors of personality, and as a product essentially of peripheral manual movement. In addition they consider it to be influenced greatly by external conditions of instruction and example. European psychologists on the other hand see in handwriting the essence of expression, reflecting many, if not all, of the inner constituents of personality.

In sharp contrast to the scepticism and neglect in this country we find an alert and sympathetic interest in Europe. Many reputable psychologists on the continent are following the topic and experimenting in the field of handwriting.

It was one of these European psychologists, Dr. Walter Marseille, who initiated the research reported in this paper. Dr. Marseille, in addition to completing his doctoral dissertation analyzing and criticizing the methodology of the various European schools of graphology in 1926, had many years experience as a private consultant. He saw the possibilities of handwriting analysis as a factor in credit extension, and a large Chicago merchandising company, which we shall call the X-company, became interested. The X-company is a progressive company with special credit problems. Over the past ten years its research department has developed a rather extensive and complicated point system which it applied to individual applications for credit. Its management, however, anxious to cut down credit losses, have long been on the alert to improve their credit rating system and invited Dr. Marseille to conduct research to demonstrate the validity of analyzing the handwriting of the applicant before extending him credit.

It took him two years to integrate the experience with the American handwriting with its own national character and its peculiar conditioning. In the United States rather uniform conditions of instruction and example, such as the Palmer Method, have resulted in a certain amount of what might be called "conventionalized handwriting". The European work was mainly with handwriting of individuals on a much higher economic and cultural level than the Chicago firm's customer. Dr. Marseille, together with

Prof. Paul Zagersfeld, has done special research on this very question of educational level. These results, based on Senatorial mail, were published in part in "Public Opinion Quarterly", Fall 1941.

But after acquainting himself with the handwriting level of the typical customer of company X, Dr. Marseille was given two tests devised by the company.

The first test was taken in New York. Two hundred order blanks were sent to him. Half of these orders were from customers who have proved themselves to be good credit risks; experience had shown that the other half should not have been given credit. Dr. Marseille was asked to separate the good from the bad credit risks after analyzing the handwriting on the order blanks. He did this with an accuracy decidedly better than their point system based on social and economic factors. The X-company was so impressed that they invited him to come to Chicago and carry out further research and take a second test. The second test included six hundred cases and the results were just as impressive. Dr. Marseille was able to demonstrate that credit losses were due not so much to dishonesty on the part of the applicant as to lack of adjustment, instability, and lack of integration. Furthermore, the characteristics were apparently revealed in the handwriting of the applicant.

The X-company was convinced that here was a method of analyzing credit risks that had great potentialities. But was this ability subject to training? Could it be applied to mass production? This was very important, since the X-company had, depending on the season, from 2,000 to 6,000 applicants for credit daily.

Dr. Marseille was given the task of selecting and training in his methods five young men and women. None of these trainees had any previous handwriting training or made any claim to intuitive gifts in this field. After twenty-five training sessions of three hours each for subjects 1, 2, and 3, and fifteen sessions of three hours each for subjects 4 and 5, all were given a test. The test material consisted of 500 order blanks, half of which were those of good credit risks and half were those of bad credit risks. The testees were asked to select roughly twenty percent of the cases which were called the extremes. These

TABLE I

Subject	Cases Rated	Cases Correct	% Correct	Extremes Rated	Extremes Correct	% Correct
1.....	356	250	70	106	87	83
2.....	363	238	66	100	72	72
3.....	373	220	59	100	71	71
4.....	375	228	61	100	69	69
5.....	322	197	61	100	70	70

were the cases which the testee felt most sure of being good or bad. In addition the testee could select as many other cases which he felt sure were good or bad as he wished. The criterion of whether a case was good or bad was of course the X-company's experience with it. If a customer had paid he was good, if he had not paid he was bad. The results of the test have been summarized in Table I.

The X-company felt that subjects 1 and 2 had performed satisfactorily on the test and they were permitted to carry on some private research which was designed to acquaint them with the operations and problems of the company and to see in what actual operational area their services could best be used. It was decided that subjects 4 and 5, who had had less training, should be given more training and a second test. Subject 3's performance was deemed unsatisfactory and he was eliminated from further consideration. It is interesting to note, however, that his results were on the positive side and definitely above chance.

Subjects four and five and a new trainee, subject six, who had previous training in Europe, were given twenty

additional training sessions by Dr. Marseille and a second test. The results of this second test are summarized in Table II.

The X-company was satisfied with the performance of these three subjects and had them follow the same pattern of further training as subjects one and two. At the present time the handwriting analysis is definitely a part of the credit extension policy of the company. Credit applications are being examined by the handwriting analysis who accept certain applicants, reject others, and refer a third group of applicants to the regular credit extension programme.

It is impossible to discuss the method of handwriting analysis in the short time at my disposal. However, it should be emphasized that the method does not consist of looking for certain definite signs of dishonesty in a handwriting. Rather it is an evaluation of an individual's writing style as a whole. The Chicago firm is concerned primarily with negative aspects which are: lack of integration of the handwriting style, discrepancies in the handwriting style, and evasiveness of the style.

TABLE II

Subject	Cases Rated	Cases Correct	% Correct	Extremes Rated	Extremes Correct	% Correct
4.....	329	221	67	92	72	78
5.....	311	206	66	95	69	73
6.....	338	224	66	85	62	72