A TRANSLATION OF A PART OF OLOF WERLING MELIN'S "HISTORY OF STENOGRAPHY" FROM THE SWEDISH INTO ENGLISH

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PREFACE

Colonel Olof Werling Melin, originator of the Melin system of Swedish shorthand now taught in most of the schools in Sweden, and author of a two volume work entitled "Stenografien's Historia", passed away early in 1940. According to Dr. John Robert Gregg, he was "one of the most noted of shorthand authorities in the world and in addition was one of the finest men I have ever known". Dr. Godfrey Dewey speaks of his history of stenography as "by far the best and most comprehensive work in its field".

Certainly Melin's history of stenography merits translation into the English language as well as close study on the part of all students of the history.of stenography. In this study an attempt has been made to translate the first part of VolumeI, including Chapters I, II, III, IV, and a part of Chapter V.

The translator desires to express his appreciation to Dr. McKee Fisk, Head of the Department of Commerce, Woman's College of the University of North Carolina, Greensboro, North Carolina, and to Dr. Eleroy L. Stromberg, Assistant Professor of Psychology and Philosophy, Oklahoma A. & M. College, Stillwater, Oklahoma, for their many helpful suggestions and constructive criticisms, and also to J. Andrew Holley, Head of the Department of Business Education, Oklahoma A. & M. College, for his valuable and generous assistance.

Permission to translate any part or all of Olof Melin's "History of Stenography" was graciously granted in a personal letter from Melin to Dr. McKee Fisk who suggested to me the translation of this important work.

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CHAPTER I

INTRODUCTION

Going back as far as the ancient and peculiar hieroglyphics of Mexico and Peru, one finds that among the world's many different writing systems there are two widely separated groups: The Eastasiatic and the Westasiatic-European. The former group, the original form of which is the Chinese alphabet and which has been retained into the present, has, however, had no influence upon our ordinary writing. The Westasiatic-European systems, on the other hand, constitute, despite their multiplicity of forms, a unity, and have their common origin in an ancient Semitic script, from which nearly all the alphabetic characters now in use in civilized countries trace their beginnings.

In the Egyptian hieroglyphics--the holy signs--one will find the history of the common development of forms of writing best preserved. Here one sees most clearly, how the image or picture forms slowly change to word and syllable forms, and finally reach their completion in sound forms, where the old wordsign pictures indicate merely the origin of the sounds. And with these soundforms was the first, most certainly the first vowel recognizing, alphabet ready.

The connection between the Egyptian and the Semitic forms of writing have not as yet been clearly indicated, but presumably the Semitic tribe which gave the world a new script about 1200 B. C. used the Egyptian hieroglyphics as models.

The Semites, like the Egyptians, had signs only for consonants; even their letters can be traced to older sign forms, and both forms of writing were written from right to left. Evidence that Semitic

peoples were familiar with hieroglyphics is found in a discovery made in 1905 on the "Sinaihalvön", where a number of Semitic inscriptions, dating back to the time between 1850 and 1500 B. C. were found to have been executed in Egyptian hieroglyphics.[1]

The Semitic form of writing spread swiftly over western Asia and neighboring Mediterranean countries and was adopted by the Greeks, via the Phoenicians, before the close of the tenth century.

The earliest Greek inscriptions reveal the same letter forms as the ancient Semitic script, and are also written from right to left; but gradually the script, which is more or less independent within each Greek state, is adapted to the sonorous Hellenic language. Many Phoenecian consonants are used with the Greek vowels a e i o (u), and at the same time a few new signs are introduced. Moreover, writing begins to be universally executed from left to right and for this reason requisite changes are made.

And so the first whole and complete alphabet was created.

The first two letters in the Greek list of letters--alpha and beta--have also given us the word "alphabet".

Along with the triumphal march of Hellenic culture over all of the large Roman empire went the Greek form of writing, and during the zenith of Rome's power it became the dominant script in all the Mediterranean lands, and continued as an heritage in the new Germanic countries which arose after the fall of the Roman empire. Even the runic characters, in all their different forms, gave way sooner or later after the introduction of Christianity, to the Greco-Latin script.

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1 R. Stübe. Der Ursprung des Alphabetes und seine Entwichlung. Berlin 1923. p. 6.

The Greek characters were not adapted to the Roman language without some change. Superfluous Greek letters were eliminated, the order of some were changed, and two new letters were added. During the first centuries A. D. only the large Latin letters were used (the large alphabet), but in the beginning of the fourth century the demand for a more facile handwriting led to the development of the "small alphabet" along with the large letters. The script also gradually becomes more distinct and linear, and is freed from some of the Grecian "embellishments".

In this simplified form the Latin script was adopted by both the Roman and Germanic peoples; and despite the decay and confusion of the Middle Ages, its development, thanks to the strict discipline of the Roman church and the beneficent influence of the Irish monks, continued in a very much unified manner. During the 10'th and 11'th centuries, the last remnants of national variations disappeared, and the so-called Carolinian script, with its round, clear, and easily written letters, came into universal use in Middle and Western Europe. It is true that during the 13'th century even the style of writing was influenced by the "Gothic" art form with its pointed angles, but gradually people returned to the round letters of the Carolinian time such as are now in general use.

Only in Germany (and to some extent in Denmark) has the pointed Gothic[2] script been retained up to the present time along with the Latin script, especially for scientific treatises.

The Latin alphabet had only 23 letters. The symbol i was also used for j, and u for u as well as v. J and v became separate letters

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2 That the Germans in this respect went their own way was due in a large measure to the influence of the great artist Albrecht Dürer. Johnen. Geschichte der Stenographie. Erster Band. p. 280.

about the year 1700. J became on i with an added underline; he v-sound was indicated by v in the Romanic languages, while in Germany, where w had been used for a long time in indigineous words, w came to be used for the v-sound, while v became the symbol for the f-sound. The English found in w a sign for their peculiar "semi-vowel".

The German ü, ä, and ö, with their time wasting points and curves, have come about as a sort of outgrowth of u, a, and o, while in the Scandinavian languages å, ä, and ö, occupy a more independent position in the alphabet. During the Middle Ages the ä-sound was indicated in most of the Romance and Germanic countries by ae or æ , and in Denmark and Norway ae has been retained up to the present time. In Germany and Sweden, on the other hand, a was used with a small e above it--aͤ , and from this developed the present ä. The letter ö has developed in the same way: first oe or œ and later, as in Germany (via o͛), ö, or as in Denmark and Norway, directly from oe to ø.

The Swedish å is a particularly telling instance of how the origin of a new letter can depend upon mere chance. As in the case of other letters derived from the Latin alphabet, the Swedish å-sound was first denoted by the letter o, but around the year 1400 as the long a-sound had further evolved to the å-sound, the need for a special å-symbol made itself known. For the Danes and Norwegians the difficulty was solved by indicating the a-sound with aa. But in the meantime in Sweden during the latter part of the 15'th century, two writers had come upon the idea of using å instead of aa. At first this form of a was rarely used, and does not appear in any of the earliest productions in print. But in 1536 this condition changed in that the printer Richolff at the Royal printing office in Stockholm began to use å exclusively.

One of the first books to be printed with this new a was "Thet Nyia Testamentit" and because of the widespread distribution of this book, as well as the almost complete dominance of the Royal printing office in the bookmarket, the å-type came soon to be generally used in all of Sweden, and now, 400 years later, it has also been introduced into Denmark and Norway.[3]

Writing materials have had a great influence upon the development of forms of writing. The ancient symbols inscribed upon stones were made in rigid and inflexible forms with abruptly ended lines. When wax tablets came into use, the forms became flexible and rounder, but it is first with the introduction of papyrus, parchment[4], and above all paper, together with reeds and pens, that writing can be said to have been "turned loose". But as a result of this the style became more remiss, and this at the same time led to symbols that could not easily deteriorate in rapid writing.

Together with the introduction of the new cheap paper, the art of writing came into more common use. People also began to write faster than when writing merely involved the copying of books and documents, and styles of writing lost their former similarity and revealed a more personal touch.

When Gutenberg made his great discovery in the middle of the 15'th century, the caligraphic script for the most part disappeared, and was replaced by bookprint. The common flowing (cursive) handwriting remained, and has spread more widely during the centuries throughout all civilized countries and is now a common possession of even the lowest classes of people.

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3 Nordisk Familybook Volume 33. Columns 905 and 906.

4 Papyrus was produced from an Egyptain swamp plant of the same name, but parchment, prepared from specially treated animal hides, derives its name from the city Parchment in Asia Minor, where it was first made.

But even this "ordinary handwriting" has found a successor during recent years in the typewriter, which has had an unexpectedly wide distribution, especially in the business and professional world.

In spite of all these changes, which writing has undergone because of its spread from one language to another as well as because of the use of new writing materials, the natural evolution of writing has steadily progressed throughout the centuries.

This evolution has been caused first and foremost by the more or less unconscious demand for a more swift and easily written script. The letters are gradually freed from unnecessary incumbrances and ornaments and come to possess curves and loops and to consist of plain and homogeneous forms made at a natural slant, and joined together by convenient connecting strokes.

But the demand for clearness also takes its course. "Over" and "under" strokes appear. Excess in the matter of "simplification" is followed by a salutary reaction. So, for example, during the 12'th century the i acquires its dot so as to be more clearly differentiated from the "simplified" strokes in m, n, and u, and for the same reason, in the 16'th century the t is given its cross stroke.

Efforts were made--among others by Emperor Claudius and the Merovingian king Hilderic I--to create in an artistic manner altogether new letters for some sounds, but symbols developed in this manner were used only as long as the originator's power lasted.[5] Precipitate changes were approved by no one, and the natural development proceeded slowly after a real need for change made itself felt.

In spite of all improvements in ease of writing as well as legibility,

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5 Arthur Mentz. Geschichte der griesch-römischen Schrift. Liepzig 1920. pp. 74 and 98.

chance has played an important part, not only in the origin of the ancient letter forms but also in the matter of adapting the script to new languages, or when other features have required change or expansion. One searches in vain through the many centuries of the development of writing for any conscious effort to permit a regard for the occurence or position of the letters in words to play its role.

Most of our ordinary letters are unnecessarily long or are in other ways unsatisfactory.

Because of lifting the pen from the paper in the writing of i j t å ä ö, which appear together about three times in every four words, much valuable time is wasted. The simple lifting of the pen, regardless of the moving of it, requires about the same time as an ordinary pen stroke. A wasteful procedure with available graphic expedients is also the fact that the connecting strokes between our letters have no function except to join the letters together, whereas they could without any inconvenience be given meaning as independent symbols. The letter m requires seven movements of the hand, and the frequently occuring s ends to the left in such a way as to make difficult a connection with letters following; a, which denotes the most frequent sound in the Swedish language, is not so easily written as u, and likewise the letter k is more involved than the less frequently occuring h, etc. One might suppose that the difference between a and u is insignificant, but to accomplish the small curve at the top of a requires a certain effort of the muscles, which takes time; and small as this loss may be when it involves one a, the situation becomes different when this loss occurs once for every other or every third word. Not only this, but if one examines a piece of hastily written ordinary writing, one will be surprised to find how often u appears in the place of a.

While reading, this is not noticed in most instances, because one has read so much ordinary writing that the word forms are old acquaintances, which one recognizes, without the necessity of the eye seeing the separate letters. But it can happen that other neighboring letters have also been altered, so that the words are not easily recognized, and then the reading becomes difficult.

In each case it must be regarded as a defect that one letter can so easily lose its form and resemble another. The inconvenience of this would be less, if our form of writing was constructed so that various similarly written letters were used for similar sounds such as ëä, oã, bp, fv, gk, and dt, for in that case an eventual mistake in writing would be less disadvantageous so far as readability is concerned.

In spite of many good qualities in certain respects, our present ordinary writing is thus not an ideal script!

Many attempts have been made throughout the ages by means of extreme simplification of the alphabet and by utilizing more or less drastic shortening of words, to construct a more swiftly written script. But the gain has been too small to justify the expenditure of time and effort to learn it, and all such attempts have failed.

In order to accomplish a genuine speed script one must create altogether new symbols and discover new methods of shortening.

And so have arisen not only hundreds but thousands of shorthand systems, which have seen the light of day, and whose inventors have sought in more or less different ways to solve the problem of creating a script which makes it possible to record speech.

CHAPTER II

GREECE

At the excavations in the Old Acropolis at Athens which were sponsored in 1883 by the German Archeological Institute, a badly-used marble stone, with 27 rows of ragged inscriptions, was discovered. The director of the Institute at that time, the well known archeologist Ulrich Köhler, determined that these inscriptions dated back to the middle of the 4'th century B. C. and before long, first Vienna-professor Comperz and later Giltbauer and Wessely--also Austrians--together with several other investigators, including the Germans Mentz and Johnen, discovered that here was no more nor less than the remains of a description of a Grecian shorthand, the so-called Acropolis system.

As early as the 5'th and 6'th centuries B. C., the Greeks had begun to use abbreviations in their ordinary writing, but in the Acropolis system, the unknown author, had, on the other hand, made use of special shorter symbols in place of the ordinary initials or letters, and thus this was not an abbreviation of ordinary writing but a genuine shorthand.

Unfortunately, the stone, which seems to have been used as building material, was so badly damaged, that many of the letters are gone, and for this reason it has been very difficult to interpret the inscription from what is left. The investigators who have attempted to reconstruct the old system have therefore arrived at widely different results, and especially so because the inscription does not indicate any of the symbols of the system but merely describes in ordinary Greek writing what these symbols look like.

That the vowel i is denoted by a straight perpendicular stroke seems evident; and the descriptions of the signs for the consonants m n p t indicate that the Acropolis system is a syllabic script, where principally the vowel signs are written perpendicularly and constitute the framework, while the signs for the consonants consist of small cross or transverse lines, which are joined at different levels.

The inscription mentions a, y (?), and b, but the descriptions of these signs are so unintelligible, or leave so many possibilities open, that one can be sure of no real solution even in the case of these signs. And so far as other symbols are concerned, which are not mentioned in the discovered inscription, so many solutions are possible that it all becomes a matter of pure guesswork.

Acropolis Stone

Reproduction of a photograph which the librarian at the Stenographisches Landesamt in Dresden, Max Scheunig, has generously placed at disposal.

How different such guesses can be, is shown by the two following suggestions for receonstruction of the vowels:[1]

	a	e	i	o	y
Mentz					
Johnen					

Mentz and Johnen, who have arrived at such different results, have both had access to the same comprehensive and valuable documents prepared by previous investigators.

There is thus little reason to believe, that any one of the more or less ingenious reconstructions of the Acropolis system which have been worked out, gives a fully correct picture of the actual system, and this is something that no one of the learned men has claimed to have accomplished.

One questions whether all of this effort has been wasted?

Assuredly not, for if the details of this old script continue to remain unknown to us, yet this research work has shown clearly how the unknown inventor, in the main, built up his system.

He used only purely geometric signs, with sharp differentiation between vowels and consonants, and created out of these a stenographic script.

The vowels consist of large perpendicular downstrokes, and are the framework of the symbols. The consonants, on the other hand, consist of small cross-strokes made in different directions, and have no meaning until added to the vowel signs, which meaning varies according to whether they are placed at the upper, middle, or lower

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1 Johnen. Allgemeine Geschichte der Kurzschrift. Berlin 1924. p. 7.
Mentz. Geschichte der Stenographie. Berlin and Leipzig 1920. p. 12.

part of the vowel sign. The author seems to have consciously striven for the utmost simplicity.

There is no evidence that the Acropolis system ever came into practical use, and the Greek custom of placing such inscriptions in public places, together with the spot where the marble stone was found, suggests that perhaps this was a proposal--to judge from the system's simplicity--with a view of promoting a shorthand system of writing which should entirely replace the ordinary form of writing.[2]

The Acropolis system has had no influence upon later development of the art of stenography, which is only natural since it was never mentioned by the earliest authors and became known in 1884 after the stone of Athens had been discovered. But many of the ideas which were the basis for the work of the unknown Greek inventor, not the least of which is the use of different positions as a means of symbol indication, have again been used in later stenographic systems, and limited as our knowledge is of this more than two thousand year old shorthand system, we nevertheless recognize that its originator was much ahead of his time, and occupies with honor the post as the originator of the first system of shorthand.

As a visible memorial of the unknown man, we have the "Acropolis stone", which after having been lost among the multitude of other inscriptions preserved in the epigraphic museum at Athens, was rediscovered in 1924 by Dr. Hudaverdaglu. He has also procured a convenient and accessible place for it in the museum.[3]

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[2] Johnen. Geschichte der Stenographie. Erster Band. Berlin 1911. p. 108 ff.

[3] "Der Deutsche Stenograph". 1924. p. 109.

The inscription reads, in the Swedish translation, made by Arthur Mentz who has attempted to fill the gaps:[4]

The third vowel is formed altogether naturally
as in ordinary writing
by means of a stroke: I,
the fifth of the vowels, Y,
has above one
added to the perpendicular
the first, A,
has below such a
the following, E, is formed
through both appendices
with omission of
the perpendicular; vowels
must be written thus
For the consonants the
straight and short
stroke,
placed at the beginning
of the vowel signifies:
--- -- --- -----,
at the middle: T
below: N
standing free, above
lines: P
below: M,
before the middle
toward the beginning of: B
--- --- --- --- ----

Somewhat later than the creator of the Acropolis system, it seems that another unknown writing reformer, about 300 B. C., made an attempt to set up signs for connecting consonants. Even these were unknown until French archeologists in 1894, during their excavations at Delphi, at a place where the old Temple of Apollo had stood, found fragments of a stone inscription containing the so-called Delphic tables. However, these stones are also badly damaged, and only a small number of the symbols are readable. It is plainly evident, however, that here is a table in chessboard form, where the current simple consonants are inserted in the upper and left corners, while in the squares where the vertical and horizontal lines cross one another, symbols are found for corrresponding connections. From this one can draw the conclusion that the unknown inventor wished to complete the current alphabet with signs for those consonant connections that did not have their initials (x z ps). One can assume also, that since the plain consonants are placed in the table with their ordinary letters, it was not his purpose to create an altogether new form of writing, but that he confined himself to these consonant joinings, which were meanwhile given such short marks that they could without doubt preserve their place within the speedwriting systems of that time.

Nothing is known of the fate of these signs, but it is probable that this was only another thinker's attempt to create a more swiftly written script.

The legends that the disciples of Socrates, Plato, and Aristotle, recorded their master's lectures by means of shorthand, do not survive under the work of recent researches, which reveal that this was done

by ordinary writers.[5]

Continuing through the centuries immediately preceding the birth of Christ, nothing is known of any use of shorthand in the Hellenic states, and also for a time after the birth of Christ; but despite this it is hard to believe that this art was not in use in the Greek World, especially during the time when Roman shorthand flourished.

About 100 A. D. the historian Plutarch speaks of a Greek semiography (symbol script) in this connection, which could have been none other than a shorthand script (tachygraphy), and traces of a Grecian system, dating back to the middle of the second century have been found in Egypt, Syria, and Asia Minor, from which one can gather that it must have been used some time earlier in Greece itself.

While excavating in Oxyrhynchos in Egypt at the beginning of 1900, English archeologists found a contract for the instruction of tachygraphy, dating back to the year 155 A. D. This contract on papyrus, is not only in itself a most dependable proof of the existence of a Greek shorthand system at this time but its contents are also of great interest.

Translated (into Swedish) it reads:[6]

"Panechotes, also called Panares, Ex-Kosmet of Oxyrhynchos, represented by his friend Gemellos, greets the tachygrapher Apollonius.

I have delivered my slave Chairammon to you for two years to learn the symbols, known by your son Dionysios, beginning with the month Phamenoth (February-March) in the 18'th year of our Lord, Emperor Antonius.

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5 This holds true for an expression in the Psalms, 45'th psalm, 2'nd verse, where we find, "My tongue is like a good writer's pen (griffel)".

6 According to an official English translation by Grenfell and Hunt, 1904 in "The Oxyrhynchos Papyri". Via Robert Fuchs in Korrespondenzblatt, 1904. p. 237 ff.

The fee, which we have agreed upon, consists of 120 silver drachmas, holidays not included. Of this sum you have already received the first payment of 40 drachmas, the next payment of 40 drachmas you will receive when the boy has completed the whole system (commentarius), the third, the remaining 40 drachmas, you will receive at the close of the period (the two years), when he shall be able to write fluently and read without error. If you shall have completed his training before this time, then I shall not delay the payment until the stated time; but I shall have no legal right to take him back before the stated time, and he shall remain with you for as many days or months as he has done no work.

The 5'th day of Phamenoth, in the 18'th year of Emperor Caesar Titus Aelius Hadrianus Antonius Augustus Pius."

That this is not a question of a Latin shorthand system but a Greek one, is evident in that the contract is written in Greek, and all parties, to judge by the names, were Greeks. It could hardly be possible that a Greek speaking Egyptian would send a slave, who certainly knew no Latin, to a Greek tachygrapher to learn a Roman shorthand system.[7]

The use of the word "commentarius" shows clearly that there were connections between the Greek and Roman shorthand systems, for this Latin word was a special term for the Latin tachygraphy, and was not used otherwise in the Greek language. The few and incomplete papyrus remains of this period have also revealed that the Greek shorthand, like the Roman, differentiates between stem and terminal signs, and that both scripts had a common origin.[8]

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7 The prominent authority in this field, Professor Wessely of Vienna, refers to this in the Archiv fur Stenographie 1905. p. 38, "That Latin stenography is here involved is precluded by conditions in Oxyrhynches as well as the names of the stenographers, Apollonios and Dionysios."

8 Mentz. Geshichte und systeme der griechischen tachygraphie. Berlin 1907. p. 9.

Meanwhile, that the Roman shorthand system is older than the Greek seems evident from the fact, (among other proof), that the Greek authors before the time of Christ never once mention stenography.

About the turn of the second century, the Greek shorthand system begins to be more commonly used. Among others, it seems that the Greek church father Origenes permitted his lectures and discourses to be written down by tachygraphers in order that they might later be written out by calligraphers or "lady writers", which also explains his unheard of capacity for literary production; and it is certain that later many of the sermons of the church fathers were taken down in shorthand, sometimes even against their own will.

From the beginning of the third century the art of shorthand is spread more and more, which is best indicated by the many papyrus leaves as well as wax tablets with stenographic symbols found in later times in Egypt. These are now found in libraries and museums in all of Europe, the best in f.d. Archduke Rainer's collection in Vienna, but only a very few have been completely deciphered, due partly to the deterioration of the papyrus and partly to the many difficult word and syllable shortenings. And this despite the fact that a few still legible writing exercises have been found, yes even a sheet of papyrus containing the first page of a shorthand textbook. It is in the meantime evident from available remnants, that here is a Greek shorthand system, where the vowels form the stem and the syllable signs seem to have been at least partly obtained from the rounder and more easily written "large" letters of the time, thus a sort of"mammoth" cursive shorthand.[9]

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9 Johnen. Allgemeine Geschichte der Kurzschrift. Berlin 1924. p. 9.

If these remnants had been cut into marble stone, like the description of the Acropolis system, and had not been left to the perishable papyrus sheets and wax tablets, our knowledge of the Greek shorthand would have been enhanced.

This Greek tachygraphy dating from the 4'th to the 6'th centuries, is known quite universally from its region of discovery as the Egyptian system.

Tachygraphic word and syllable symbols had begun to be blended into the ordinary Greek writing as early as the 5'th century, and this so-called "book tachygraphy" was used as late as the 15'th century for note taking purposes as well as for economy of the precious parchment in handwritten books. In this combination of ordinary writing and shorthand, one finds the easy method of writing out only the first part of a word--one or more syllables--. One also finds the so-called "contractions" for the first time, where the beginning and end of a word were written out, while a larger or smaller number of the syllables lying in between were omitted--a method of abbreviation which is found in greatly extended form in later stenographic systems.

Greek monks, who as a result of the so-called cultural war of the 8'th century had fled to Italy, carried with them the knowledge of the Greek syllabic-shorthand, and in the Greek Grottaferrata-cloister near Rome, there are preserved some stenographic handwritings dating from the 10'th and 11'th centuries, which have been deciphered by diligent research workers and reveal themselves as a fully independent development of the older "Egyptian" system. This new Greek stenography is called the Italian or most often the Grottaferrata-system, while a phonetic form of it,

which is described in a manuscript dated 964, found in the old Roman African province, is called the African system.

These Greek systems, known because of the time of their use as the Byzantine systems, display similarities in several respects, which indicate a unified development. Everywhere one finds the script to consist of syllabic signs, where the vowel symbols make up the stem, while the consonants first get their meaning when joined to the vowels. In this way they have the same basic principle as is found in the Acropolis system.[10]

The Grottaferrata system seems to have influenced in a high degree the four line small alphabet in ordinary writing with its over and underlines, and here the "cursive" element also appears. It became thus a sort of miniature stenography. It is evident that the authors of this system never saw the Delphic consonant tables, for if they had known these signs for the joining of consonants, there is little reason to believe that such a remarkable method would have come into use as where several consonants follow one another only one consonant is used as a rule in the syllable, while the rest are written above this one, but not with stenographic symbols but with diminished ordinary letters:

phlegma= $\overset{l}{phe}\overset{g}{ma}$

The number of contractions, whether fixed (so-called "sigler") or"free" ones, were not nearly so many as in the Roman shorthand, and for this reason, the Greek tachygraphy has always retained its form as a syllabic script. In manuscripts written in the Grottaferrata system one sometimes runs across almost unshortened script.

After the Arabs conquered Egypt in 641, interest in the art of

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10 Johnen. Geschichte der Stenographie. Erster Band. Berlin 1911. p. 137 ff.

shorthand diminished, and when in the 9'th and 10'th centuries ancient culture again revived throughout the Byzantine empire, and the Greek shorthand again came into regard, its function became not so much to record the spoken word as to be used to save time and paper in the writing of books and treatises.

If one judges by the deformed stenographic contractions found in later handwritten books, it appears that the Greek syllabic script, considered as a system, was forgotten during the 12'th century.

Only as uncomprehended remains from ancient times, a few stenographic wordsigns are found here and there.

CHAPTER III

R O M E

Tiro's "Notes".

The Romans began early to use contractions for frequently recurring words.

Thus Bishop Isidorus of Seville[1] relates in his large encyclopedia, that Ennius[2] listed 1,100 such abbreviations; an account which should be interpreted as meaning that Ennius was the first person to collect these contractions which had gradually evolved through the ages in ordinary writing, and which to be distinguished from Tiro's notes were later called "common notes".

With these Ennius contractions as a basis, Marcus Tullius Tiro created his new script consisting of new and original symbols during the last century before the birth of Christ.

It is true that he made use of some of the older abbreviations of ordinary letters along with his own, but his script consisted mainly of original, new symbols, and hence deserves the name "shorthand".

Tiro was born about 100 B. C. and belonged as a slave to the household of the Roman senator Cicero the Elder, upon whose death

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1 Supporting himself by reference to the earlier historians Valerius Probus and Seutonius.

2 There is a difference of opinion as to which Ennius is here involved: the poet born 239 years B. C. or the philologer, who lived 100 years later. Hans Moser gives strong support in his Allgemeine Geschichte der Stenographie (1889) pp. 28-29 to the younger Ennius, but most of the researchers in this field, including Johnen, believe that Isidorus refers to the poet Ennius.

in the year 64 B. C. Tiro passed to the son, the great Cicero. The younger Cicero had for a long time regarded Tiro not as his father's slave but as a comrade and friend; and this friendship did not diminish, when Tiro, after having been freed in the year 53 B. C., remained of his own free will with his former master.

A large number of letters[3] from Cicero to Tiro show how closely attached he was to his former slave, and also how Tiro not only served as private secretary and "homme d' affaires", but also acted as an intermediary in the most delicate undertakings. Cicero, wished to have Tiro with him continuously in Rome, as well as in exile; and when Cicero was finally slain by the daggers of conspirators, Tiro devoted his remaining days to philological studies and to the task of collecting and publishing his former master's speeches and writings. He died, very nearly a hundred years old, one year B. C.

It is not known at just what time Tiro learned the Ennius contractions, nor when he began to construct his own "notes": but there is no doubt that not only many of Cicero's speeches, but also some of Caesar's and other speakers of the time, were preserved for posterity thanks to Tiro's art.

On December 5, 63 B. C., Tiro's notes were used for the first time in the Roman senate, when senators, who had learned from Tiro at least a part of his new notes, recorded the great speech of Cato the Younger upon the occasion of the conspiracy of Catiline. The Greek historical writer Plutarch[4] in his biography of Cato, says of this: "This is the

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3 L. P. et E. Guenin. Histoire de la stenographie dans l'antiquite' et moyen age. Paris 1908. p. 16 ff.

4 Guenin. p. 12.

only one of Cato's speeches we have preserved, because Cicero on that day had stationed at different places in the Senate such as had a swift hand, and which he had (by means of Tiro) taught certain notes and contractions, which in a few strokes represented many letters." And further "this was the first time such note writing had been used".

Plutarch and Suetonius relate that upon this occasion the so-called "exchange writing" was used, that is to say two or more stenographers wrote at the same time, but in such a way that each one would take only a small part in succession, finishing it from memory, after his successor had begun to write his part, etc., after which the series of notes were combined.

Tiro seems for the most part to have set up notes only for prepositions and other frequently recurring words, and used, as has been said, along with these Ennius contractions of ordinary writing. His successors, among whom the Greek freedmen, Vipsanius Philargyrus and Aquila, have appreciably increased the number of notes, and Seneca[5] or one of his freedmen, had collected about 5,000 such notes as early as the middle of the first century, and had arranged them in so-called commentaries. As we shall learn, this collection of notes has been even more greatly extended in later times, so that it came at last to consist of about 13,000 notes.

The Roman notes are therefore not a unified creation of one man; as all of Tiro's successors have followed his example and developed from his groundwork. Tiro is therefore justly regarded as the father

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5 As in the case of Ennius, there have been different opinions as to which Seneca is concerned, but it is now pretty well determined, that it was Seneca the Younger, Nero's tutor.

of Roman shorthand. The name "Tironian notes" is first encountered in more recent times (Gohory 1550). During the Middle Ages, the "notes" were named generally after Cicero or Seneca, who were thought to have been their originators.

Shorthand writers were very active in the time of the first Roman emperors. The professional stenographers of that time were for the most part slaves or freed slaves, and were widely employed as private secretaries for learned men. So, for example, both Pliny the Elder and Younger, speak of their excellent shorthand writers, and declare that they could never complete their work without the help of these men. It is claimed that Augustus himself was skilled in this art. The Emperor Titus is said to have been so proficient, that at times he amused himself by engaging in speed contests with his court stenographers. Indeed, even prodigies were found: the future bishop Epiphikarus is said to have attained great skill at the age of twelve.[6]

But there were poor stenographers even then. Quintilianus, among others, complains that such persons had without permission transcribed and misinterpreted several of his lectures. That reading of the notes had its difficulties is evident from the fact that the Emperor Justinian forbade the use of stenography in public documents "because of ambiguity, which can arise from symbols resembling one another".[7]

In most instances, however, it seems that Tiro's notes

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6 Guenin. Op. cit. p. 28.

7 Scott de Martinville. Histoire de la stenographie. Paris 1849. p. 27.

fulfilled the demand placed upon the shorthand of that time, and among other proofs of this it has been customary to present Martialis's epigrams written at the close of the first century, addressed to a shorthand writer as follows:

"Currant verba licet, manus est velocior illis;
Nondum lingua suum, dextra peregit opus",

or in translation:

The words come swiftly,
But even swifter is the hand;
Before the tongue is at rest
The dextral has completed its work.

Among the many translations of this epigram in various languages, the one by the poet Beauchot in French is worthy of preservation.

Les Paroles ont beau voler,
Sa main saura bien y suffire;
On h'a pas fini de parler,
Qu'il a deja' fini d'ecrire.

Another epigram[8], by Ausonius, the tutor of Emperor Gratianus, not only praises the shorthand writer but relates that the system used had a sign for each word:

"Come hither thou slave, who knowest the swift notes,
thou skillful servant.
Make ready the double tablet,
thou who writest whole phrases
with a symbol for each word,
so that it becomes as one."

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8 Carpentier. Alphabetum Tironianum. Paris 1747. p. v. Introduction.

Court historians of ancient times have left us many examples of the use of shorthand in different parts of the Roman empire; but the risk of confusing Ennius' notae vulgares in ordinary writing with Tiro's notes, and also uncertainty as to what was meant by the title notarius, is reason for great caution in accepting many of these histories.

That in the instance mentioned there was not only a question of individual exceptions, but that stenography in the Roman era actually attained a wide distribution, and that its practitioners, along with other professional men, were recognized by the authorities, is evinced by the fact that the emperor Diocletian in the year 301 when he published his law fixing prices not only for the necessities of life but also for the wages of craftsmen, included the art of shorthand writing, in which the price of instruction was fixed at 75 denares per month, while ordinary writing instructors were allowed to charge only 50 denares.[9] And when Emperor Constantine moved his residence to Constantinople, the imperial shorthand writers, like other corporations, received their official rank at court.

The Roman shorthand writer was early called notarius,[10] a designation which gradually, however, came to be used for other functionaries, who were not shorthand writers; but as a name for the art of stenography as such, the Greek words tachygraphy (speed writing) and semiography (symbol writing) were used alternately. The word stenography (close writing), also derived from the Greek, was not used in former

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9 Moser. Allgemeine Geschichte der Stenographie. Leipzig 1889. p. 40.

10 The old proud notarius-title was retained by our parliamentary stenographers until a couple of years ago, when notary was replaced by "stenographer".

times but was first applied by the father of modern stenography, John Willis, in the 17'th century.

As writing material the Roman shorthand writers used small wooden tablets, covered with a thin layer of wax, upon which they wrote with a stylus made of metal or bone. Such a stylus was pointed at one end, and flattened at the other, so that after the stenography had been deciphered, one could erase the writing and smooth the wax with the flattened end, making possible the continued use of the tablet. These tablets were even used in the place of our present day letters, and frequently bore the entreaty to the recipient that after reading the letter the tablet be returned. Such wax tablets have also been used in later times, and such a one with a list of the members of the Leipzig court in 1426 is still preserved.

The art of taking notes received added importance with the rise of the Christian doctrine. The Christian preachers usually spoke freely with the sole support of the selected texts read from the Bible, and many of the great church fathers permitted shorthand writers to take down their sermons, while in other instances the writers did so for their own use so as to be able later to offer these discourses for sale. When the church father Hieronymus translated the Bible into Latin, he used "notarii", and the holy Augustinus considered the art of shorthand "One of the necessary accomplishments of every day life, and one of which Christians also should avail themselves". Stenographers were often used to record the last words of Christian martyrs.

Stenography was widely used at church councils. At the council in Carthage in 411, in which several hundred bishops took part, four stenographers were employed, each one having a bishop as supervisor when the notes were transcribed. The proceedings were recorded in extenso, but when too voluminous protocols were not desired, they were transcribed in shortened form. By means of these reports which were made public in 1700 by the Frenchmen Baluz and Harduin, many interesting details concerning the work of these stenographers have become known[11]. The first meeting, June 1, commenced at six o'clock in the morning and continued until five o'clock in the afternoon, whereupon it was decided to postpone the next meeting until June 3 "to give the notarii one day to transcribe their notes". Even if necessary interruptions during the eleven hours of work are taken into consideration, the time for transcription was too closely reckoned, and it is no wonder that the stenographers were not ready on June 3, but demanded further delay. When they were asked how long, one of the stenographers replied: "That depends upon how long a time the revising bishops need." Thus here we find an instance of something which has its counterpart in a different form in the parliaments of today. Nothing seems to have been determined in the way of distribution of work among the stenographers, for on two occasions stenographers arose and asked to be relieved because their tablets were filled.

At the so-called "robber synod" at Ephesus, in 449, it is said that stenographers took an active part in the proceedings by smashing to pieces the wax tablets belonging to the shorthand writers of the opposite party.

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11 Guenin. Histoire de la stenographie dans l'antiquite' et au moyen age. Paris 1908. p. 221 ff.

Naturally since stenography came into the service of the Christian church, a demand for new notes for the commonest words belonging to Christian and Jewish terminology made itself known, and it seems that the church father Cyprianus, in the middle of the 3'rd century, added a large number of such special symbols to the already existing collection.

The golden age of the Tironian notes lasted until the fall of the Western Roman empire, but the collection of antique-heathen notes seems to have disappeared as early as the reign of Emperor Marcus Aurelius.[12]

With the decline of the Roman empire and the accompanying fate of arts and sciences, the Tironian script lost its significance as a means of recording speech. The mediaeval knights made no long speeches, and people soon forgot that the ancient shorthand system ever existed.

Only among the monks in the cloister, where the storms of the migration of nations did not reach, was found a calm haven for Tiro's notes; and there they were saved from obsolescence and began to fulfill a new function.

The Tironian notes were originally set up and later completed for the purpose of recording speech; and were used for that purpose in Roman times. But the monks in the cloister needed no speed. It was sufficiant for them to have a short and clear system of recording notes for sketches and documents, for copying the Psalms and other books, etc., and which furthermore conserved the precious parchment.

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12 Johnen. Geschichte der Stenographie. Erster Band. Berlin 1911. p. 171.

For the purpose of making outlines and sketches, the notes came gradually to have a considerable vogue, and they did not remain within the walls of the cloister, but when more peaceful times prevailed, were brought into use even in the chancelleries of kings and princes.

In the days of Charlemagne and Louis the Pious it seems that many of the officers of the court had more or less knowledge of these notes and used them for sketches and writings of various sorts; and thanks to the newly awakened interest for the Roman shorthand--the renaissance of the art of Tiro--the old collections of notes were hunted up, copied and revised in the Frankish cloisters, and new signs were also added until the number of notes increased to around 13,000. Charlemagne himself, who sought in every way to revive the ancient culture, also furthered the study of the old notes, and directed among other things that instruction in them should be given in some of the schools of the cloisters.

But the development of ordinary writing had not remained at a standstill during all these centuries. The letters of the small alphabet had for a long time superseded the awkward letters of the large alphabet and had gradually assumed more convenient forms. Tiro's notes could not in the long run contend with these clear and easily written letters, for the difference in speed of writing had lost much of its significance since the use of writing had come to be mainly that of copying, and could not in any case outweigh the tremendous loss of time involved in the learning of the notes. This learning had also become more difficult as time went on, since knowledge of how the notes were written seems to have been lost, so that at last they had to be memorized, and inscribed without regard for any connection

or coherence with each other, as if they were altogether free symbols. For this reason the ordinary script emerged the victor in the contest, and Tiro's notes gradually disappeared from the chancelleries.

Characters for words in ordinary writing came more and more to be mixed in with the notes. There are even manuscripts in preservation from this time where frequently recurring words and phrases are written in notes, in Latin, while more unusual words are written in ordinary writing and in the language of the country. The last German document with Tironian notes in the margin that we know of, dates back to the court of Otto the Great in the year 941, the last one in French to Philip I in 1067, but in both of these the notes are so poorly written, that one assumes they were copied from older documents by someone who did not know their meaning.[13]

At the end of the 11'th century one can also say that knowledge of the Tironian system was completely lost; and that this happened at the same time or shortly after the time when the Latin (during the 10'th century) even in churches was beginning to be replaced by the languages of the different countries, was probably no accident, in as much as the Tironian notes were created for just this Latin language.

A remarkably long span of life was granted Tiro's notes: more than a thousand years!

Thanks to the court historians of ancient times we are able to trace the fortunes of this Roman shorthand through all these centuries, and in many instances we have detailed descriptions of its use in the service of culture, but what these Tironian symbols looked like,

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[13] Johnen. Allgemeine Geschichte der Kurzschrieft. Berlin 1924. p. 15.

or upon what principles they were based, our chroniclers have had nothing to relate. Neither have any ancient inscriptions in Tiro's notes been found, and the wax tablets upon which the Roman shorthand writers inscribed their symbols have "gone with the wind".

First during the 8'th, 9'th, and 10'th centuries, have handwritings been found,[14] executed altogether or partly in notes, and documents with notes in the margin, and even better, whole catalogues of notes, (commentaries) with translations in ordinary writing. And all this in such form and in such profusion, that it has been possible to interpret the notes and gain an insight into their construction.[15]

But for a long time these fountain heads for the study of Tiro's notes lay untouched and unknown in the libraries of the cloisters. It was not until the year 1496 that the learned abbot in Spannheim, Johannes Trithemius, found in a cloister library in Strassburg a list of several thousand notes with translations, and two years later a psalmbook written in these notes; and it was in 1513 that Cardinal Bembo tried to interest Pope Julius II in a Tironian manuscript found in Milan. In this way interest in the ancient shorthand was reawakened, and since the plundering of cloisters during the wars of the Reformation and the Huguenot wars had brought several remains of notes to the light of day, learned men (including the same Gohory who was the first to use the appelation Tiro's notes) began to study them and to plan careful researches into them: a study which around 1600, thanks to the Hollanders Lipsius and Gruter, was placed upon a higher plane so to speak.

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14 A few such from earlier dates have had no value in the interpretation of the notes.

15 A detailed account of all these sources is found in Johnen's Geschichte der Stenographie. Erster Band. p. 193 ff.

The Benedictine monks Mabillon 1681, Carpentier 1747, and Toustin 1767,[16] each took an important step forward in the trying and difficult work, which the interpretation of Tiro's notes demanded. But first in 1819, when the court archivist in Cassel, Ulrich Friedrich Kopp, published his Palaeographia critica, can it be said that the problem was for the most part solved. Certainly even Kopp's production has required corrections and completions, but as a basis for a study of Tiro's notes, his work has not as yet been surpassed.

Foremost among the more recent investigators in this field was the Rector in Cologne, Wilhelm Schmitz, deceased in 1898, who in 1893 published his Commentarii Notarum Tironiarum,[17] based principally upon the best catalogue of notes available, the so-called Cassilanus, found in the cloister at Fulda and now preserved in the National Library in Cassel.

Besides Schmitz one should at this time mention among many others the German, Ferdinand Ruess, and the Frenchman, Emile Chatelain, who later in his "Introduction a' la lecture des notes tironiennes" (Paris 1890) has left a clear and easily understood presentation of the Tironian system. Ruess acknowledged his great indebtedness to the work of Schmitz for the great care with which it had been executed, but he was not satisfied because the illustrations of the notes were reproduced by hand: He believed that even if the transcriber succeeded admirably in

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16 Mabillon. De re diplomatica libri VI. Paris 1681. p. 457 ff.
Carpentier. Alphabetum tironianum. Paris 1747.
Toustain et Tassin. Nouveau traite' de diplomatique. Paris 1750-1765. p. 499 ff. (Toustain, who wrote the stenographic part of this work, died before it was published).

17 Schmitz. Commentari notarum tironiarum. Leipzig 1893.

copying the original symbols, yet this sort of presentation could not give a real picture of the Tironian script as such: therefore Ruess resolved to publish the "Casselanus" anew; but this time in photographed print.[18] Another splendid example of German thoroughness!

As a result of the persevering and devoted work of these researchers, we have a good insight as to what the Tironian script that was used in the Carolinian time looked like, but even if one can determine from the connection between certain facts how the Tironian script had developed,[19] yet it is impossible to decide definitely which ones of all these symbols and all these methods of contraction, trace back to Tiro himself, to the time of the Roman empire, or to later periods.

When we in our time speak of the essence and appearance of the Tironian notes, we are thus referring to these symbols in their final form, such as they appear in the lists of notes and manuscripts preserved from Carolinian times.

The Tironian script was originally created with the object in view of recording speech. It also became a "word script". But these wordsigns are not altogether indiscriminately selected, for one detects a certain system or better said, several systems, according to which the wordsigns--notes--seem to have a simpler basis than the symbols obtained in ordinary writing from the large alphabet, in which the letters are sometimes indicated amongst joined letters.

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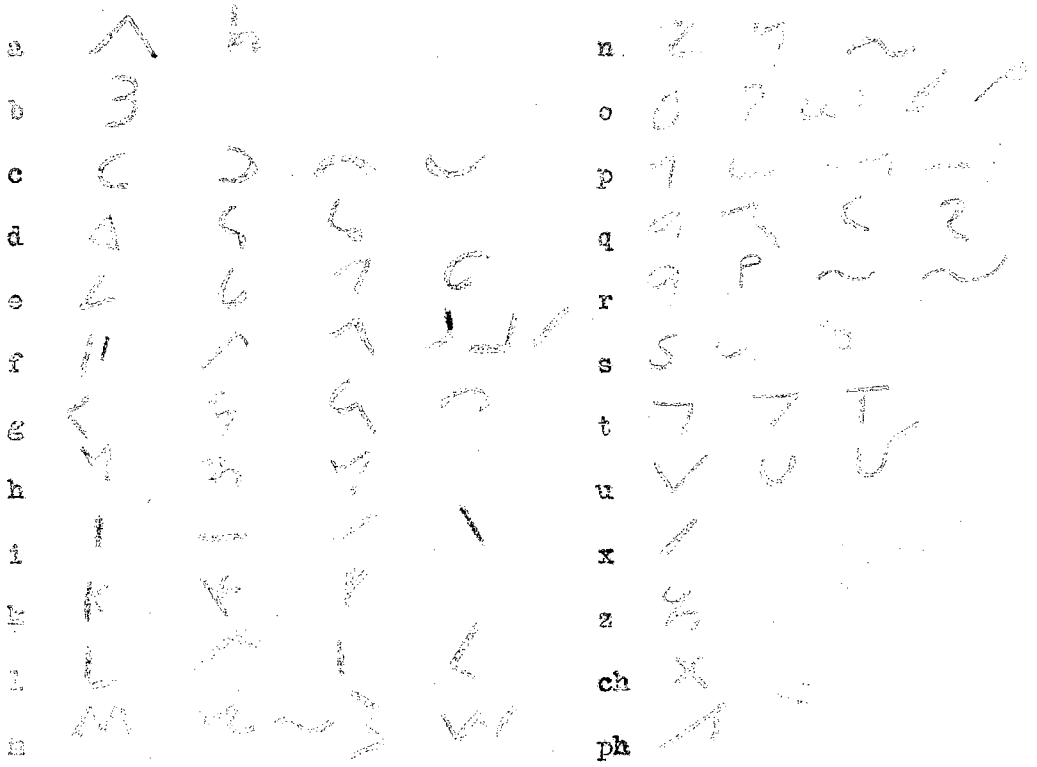
18 Die Kasseler Handschrift der Tironischen Noten. Berlin 1914. pp. 42 and 43 of the "Casselanus" contain both Schmitz's autography and Ruess's photography.

19 Johnen. Geschichte der Stenographie. Erster Band. p. 215.

Alphabet



Reproduction from Émile Chatelain. Introduction a' la lecture des notes Tironiennes. Paris 1900. p. 3.

These basic symbols were not used in a uniform manner; on the other hand, the same symbol was often used for different letters or groups of letters, the same letter can be indicated in several different ways, and even worse, the same basic symbol undergoes such alterations that it cannot again be identified.

None of the 24 fragments of lists of notes, dating back to former times, that are now available, contain an alphabet, and with one exception[20] the lists of symbols are not in alphabetic order, but are arranged according to content in larger or smaller groups, designed to be learned one after the other. Thus these lists can not be used as a dictionary in the ordinary sense of the word.

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20 A fragment of a list of notes preserved in the Royal Library at Brussels.

When one refers to the Tironian alphabet, it is to the interpretations published by scholars of recent times, and since it is then often a mere matter of taste as to whether the symbols shall be considered original or altered basic symbols, the outcome is that different investigators have arrived at different results. Among the many attempts to reconstruct the Tironian alphabet, a proposal by the Frenchman Chatelain is found on page 35, which in the matter of the number of accepted symbols occupies a middle ground.

As we see, Chatelain has accepted only two symbols for the letter a, but by means of partition and changes one can acquire many variations which can very well be regarded as original symbols. The first a--the first symbol--appears to be nothing more than the large alphabet's a (after this has been divested of all unnecessary adjuncts), but if this a is divided into two halves, the first half denotes the prefix ad and the other half ab, and by using both of these two a-feet in different directions we get for example:

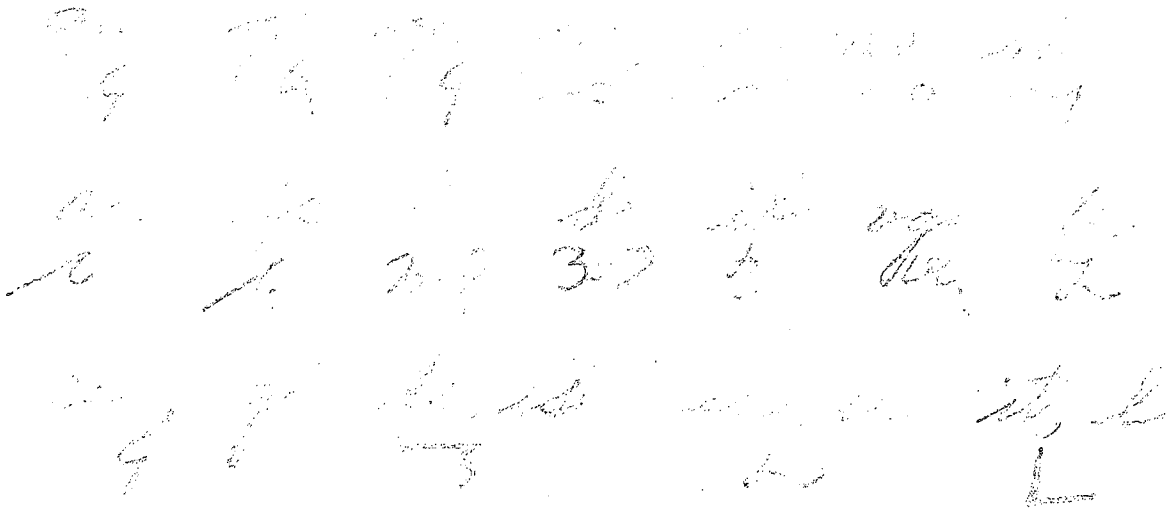
/\ = a : / = ad, \ = ab, \ = as (ending)
/ = am, < = an, > = ap, L = al etc.

Chatelain has listed four signs for c, but if one examines more closely one finds that it is the same c-symbol: in ordinary form, turned backwards, lying down, and upside down.

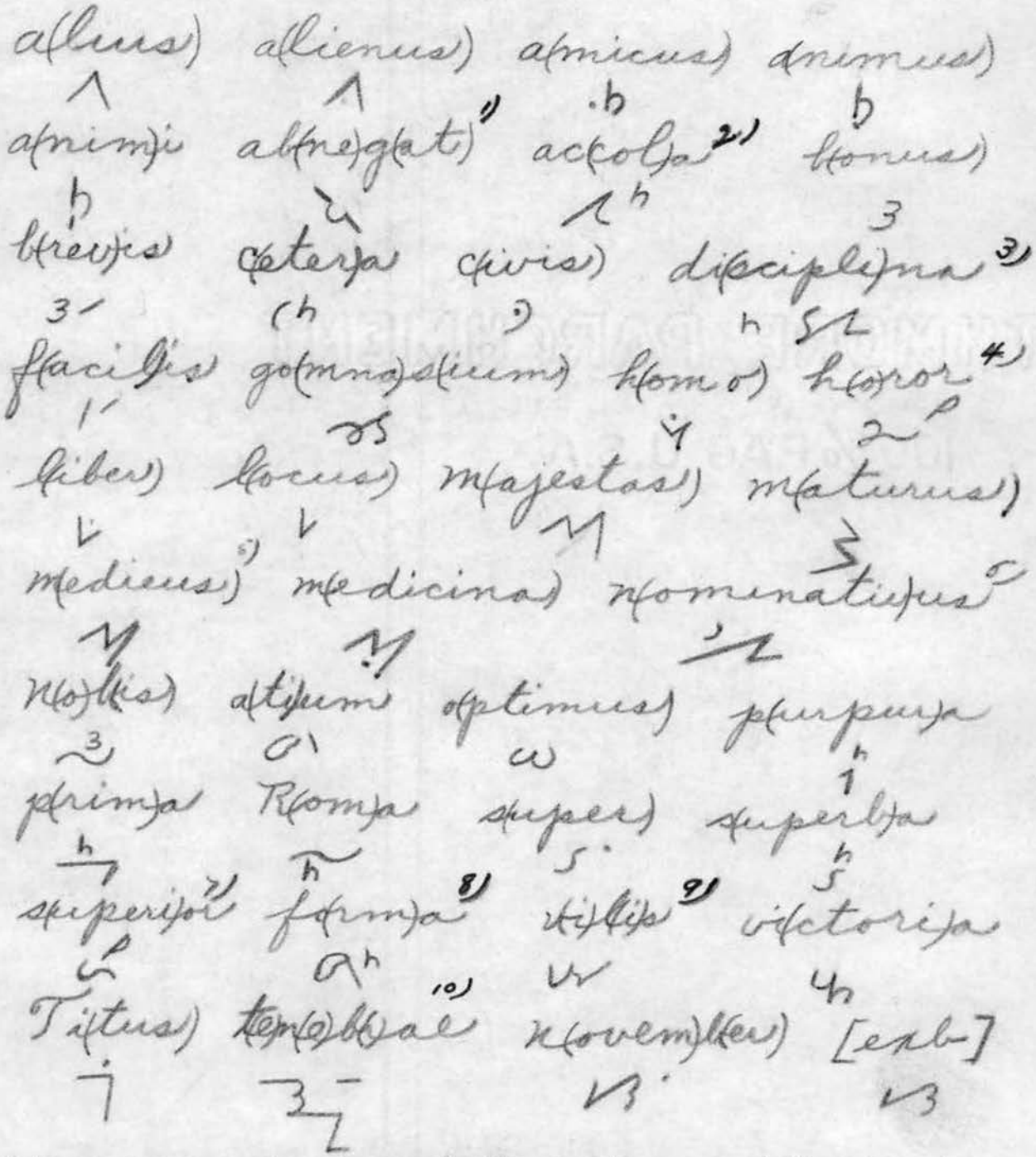
And in the last two m-symbols one finds the original symbol standing on edge, and upside down. The symbols for m and n often assume remarkable forms, where few of the original configurations can be detected (see for example, November, page 38). When this happens, vowel and consonant

symbols generally blend together, but the vowels a, e, and i, are often betokened symbolically in such a way that the straight ending consonant lines if started to the right indicate an a following, to the left e, and remaining upright i; even o and u, though more seldom, are symbolized. That one and the same initial can assume many different forms unturally makes the reading more difficult, but this true to a much greater extent when in many cases the same symbol has more than one meaning. Thus the curved horizontal sign (Melin's u) may stand for both n and r; half of h may be c, b in some cases also c, "crossing" might indicate both l and x, the circle in the first two r symbols (see alphabet) in some instances denotes o, in others d, and in many cases this loop is used only for the purpose of joining other symbols with each other (ib, vg, tr;) and finally in rapid writing the principal signs for d and s can be easily interchanged etc.

Examples



Examples of Notes



1) The symbol for g at a slant-- 2) Half of a plus c. -- 3) The ending here precedes the main symbol. -- 4) Half of h. -- 5) The final downstroke at a changed angle. -- 6) m at an angle. -- 7) Reclining s. -- 8) o f a. 9) u s l. -- 10) t h n e.

Despite all the initial and syllable symbols, Tiro's system remains a wordsign script, where, along with certain bases for construction of the notes as a memory aid, it is necessary to memorize about 13,000 signs.

A Tiro man sign consists of a simple or joined basic symbol, with or without additional signs for the indication of word endings. The added signs, which are for the most part obtained from the ordinary cursive alphabet, are made smaller than the basic symbols and are written separate from them, which more than anything else gives the Tironian script its characteristic appearance. In the case of a prefix, the sign for it becomes the added sign. Among further characters to add to the number of symbols, the so-called diacritical mark is widely used and in various places; and when an end sign is to be added to a symbol this mark is used in the place of a period. The place of the diacritical mark is often of symbolical significance. So, for example, in the words sun, moon, stars, air, and head, it is placed above, while in earth, land, sea etc., it is placed under the basic sign; for gold over, for silver under, etc.

Brevity in the notes is also achieved in that along with the endings one writes:

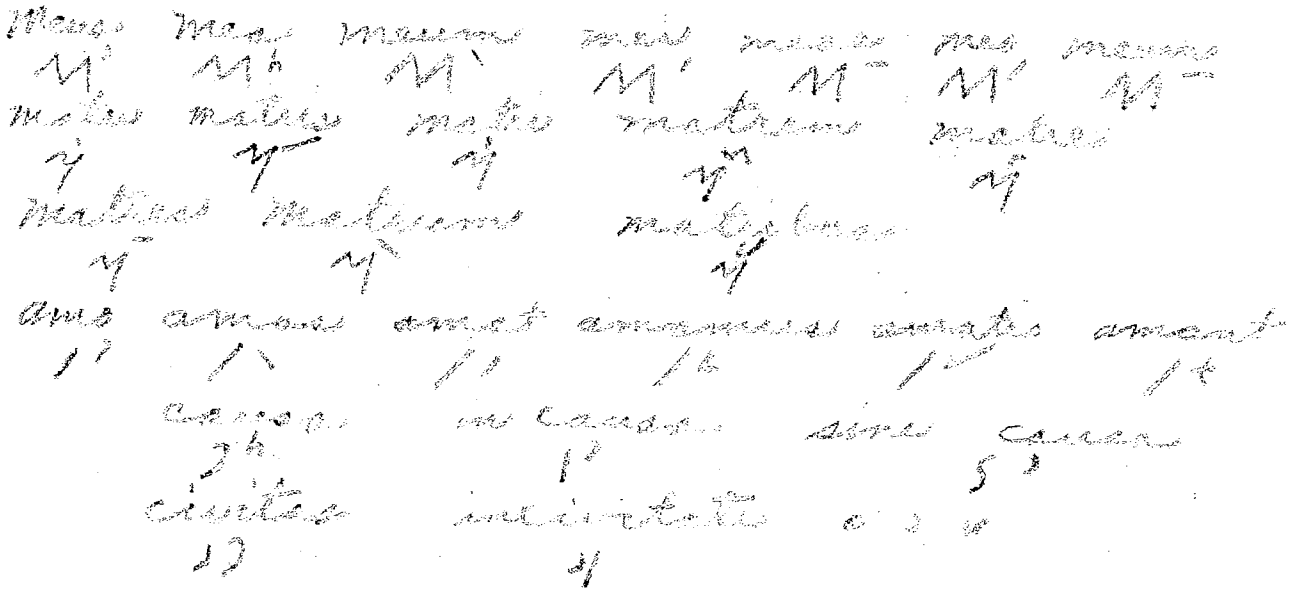
1) only the first letter

2) only the first syllable

3) two or more letters within the word, which are sometimes written in a changed order.

Vowels within words are almost always omitted.

Examples of Signs for Word Endings



It is generally accepted that Tiro regularly omitted indication of word endings, and that it was later, at the beginning of the time of Seneca and the end of the time of Marcus Aurelius, that most of the signs for word endings appeared.[21]

In Tiro's script, such as we know it, the notes appear without signs for word endings only in:

1) words which cannot take different forms, such as adverbs, prepositions, and conjunctions,

2) certain frequently recurring substantives or adjectives in the nominative case, and

3) certain frequently recurring verbs in the present tense, third person, singular.

Ghatelain includes as many as 660 signs for suffixes, but does not claim that his list is complete. When deciphering a Tironian manuscript

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21 Johnen. Geschichte der Stenographie. Erster Band. p. 225.

these suffix-signs often furnish the first clue, because through them one can determine what class of words is involved.

Chatelain lists 292 signs for prefixes: an addition of a number which does not play such a large role when it is a question of learning 13,000 such. But these prefix signs make the reading appreciably more difficult, because they often, together with the following word stems, constitute word symbols of the ordinary type--with the sign for the prefix as the basic symbol and the wordstem as an added sign.

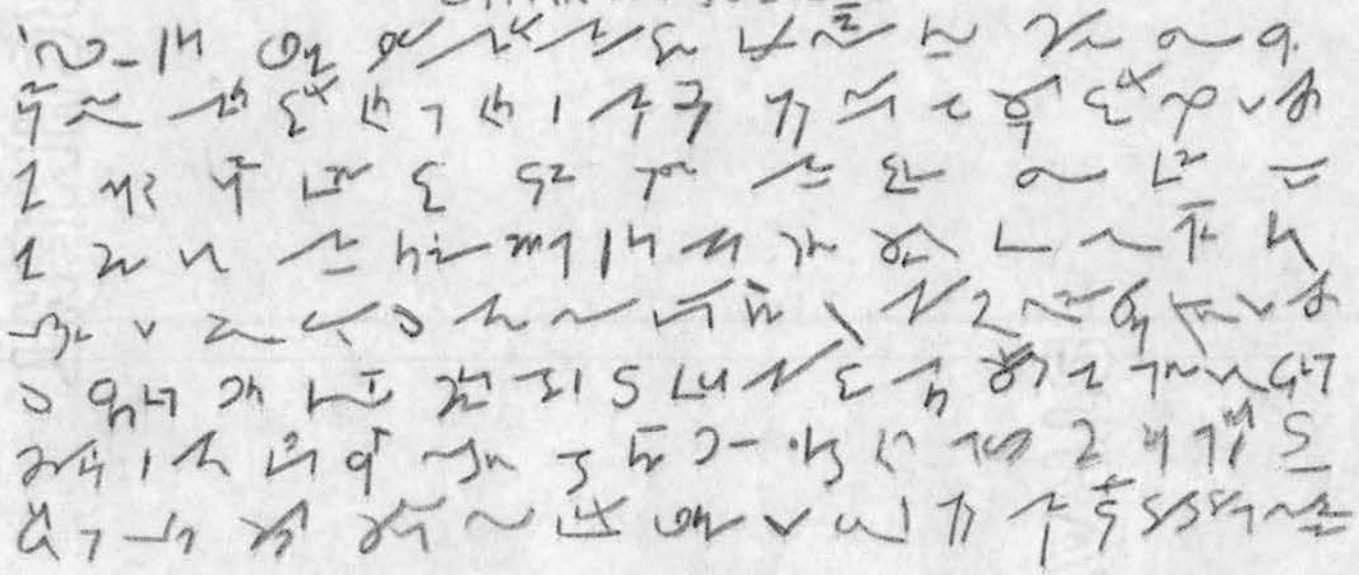
The above account of the growth of the Tironian system is far from complete. Neither space nor the author's knowledge have permitted a deeper descent into the mysteries of Tiro's shorthand with all its separate rules and choices; the purpose having been to give the reader a glimpse in a general way of the essence of these symbols. To be able to decipher an unknown Tironian manuscript isanother matter.

Most of the Tironian manuscripts that are to be found, have meanwhile been transcribed into ordinary writing. The learned men who have given their time and effort to this work, have most certainly found good help in the collections of notes published byKopp and Schmitz.

But the difficulties have been great, nevertheless, partly due to the fact that when an unfamiliar wordsign is encountered, one does not know where it can be found in all these lists of notes, which are not even arranged in alphabetic order, and partly because the Tironian manuscripts are often badly written differing greatly from each other, and are often mixed in with "syllable notes" (see page 48) .

"Chart of Louis the Pious".
according to Carpentier

CHARTA XXXVI



Reproduction from D. P. Carpentier. Alphabetum Tironianum. Paris 1747. p. 64.

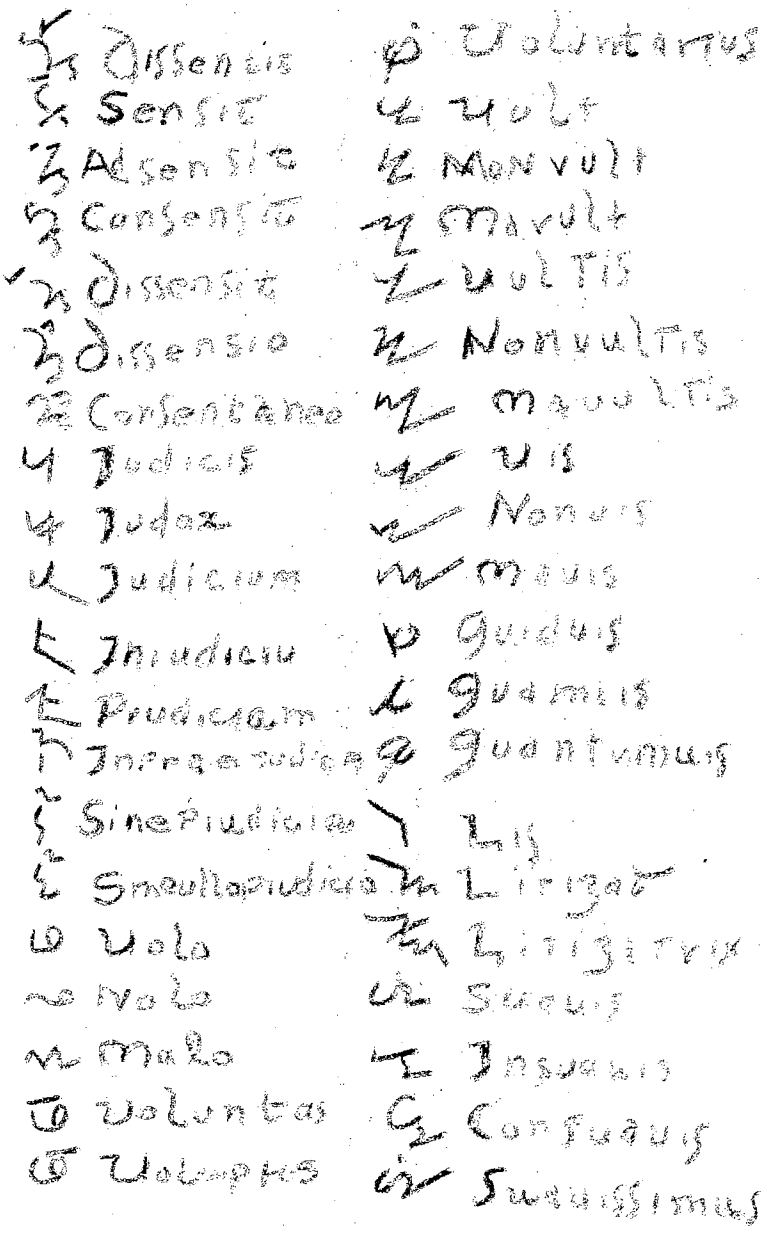
1 paenus
2 paenitus
3 paenetrat
4 paenetral
5 paenetrabilis
6 sententia
7 sententiosus
8 summa
9 summola
10 adsummat
11 consummat
12 studium
13 studiosus
14 studet
15 sentit
16 adsentit
17 consentit
18 dissentit
19 sensit
20 adsensit
21 consensit
22 dissensit
23 dissensio
24 consentaneo
25 iudicis
26 iudex
27 iudicium
28 in iudiciu
29 praeiudicium
30 in praeiudicio
31 sine praeiudicio
32 sine ullo praeiudicio
33 volo
34 nolo
35 malo
36 voluntas
37 voluptas
38 voluntarius
39 vult
40 non vult
41 mavult
42 vultis
43 non vultis
44 mavultis
45 vis
46 non vis
47 mavis
48 quidvis
49 quamvis
50 quantumvis
51 lis
52 litigat

53		litigatrix	79		praenomen
54		suavis	80		nomenculator
55		insuavis	81		nominativus
56		consuavis	82		nominatim
57		suavissimus	83		scio
58		insuavissimus	84		scit
59		consuavissimus	85		sciscitatur
60		diu	86		conscius
61		diutius	87		inscius
62		diutinum	88		rescit
63		diutissime	89		Roscius
64		quandiu	90		conscientia
65		quamdiutius	91		inscitia
66		quamdiutinum	92		adsciscit
67		quam diutissime	93		consciscit
68		dat Gr. 35	94		desciscit
69		dedit	95		resciscit
70		nomen	96		solus
71		ephinomen	97		non solum
72		anomen	98		consolatur
73		adnomen	99		praestolatur
74		connomen	100		solatium
75		cognomen	101		solatarius
76		denomen	102		ad consulandum
77		pernomen	103		solitudo
78		pronomen	104		libet

Reproduction of Schmitz's autographed copy, somewhat diminished. The "notes" from 18 to 57 are also included in the Ruess list on the next page.

A page from the Schmitz collection of notes.

"Casselanus"
Ruess: God. Cass. 21.

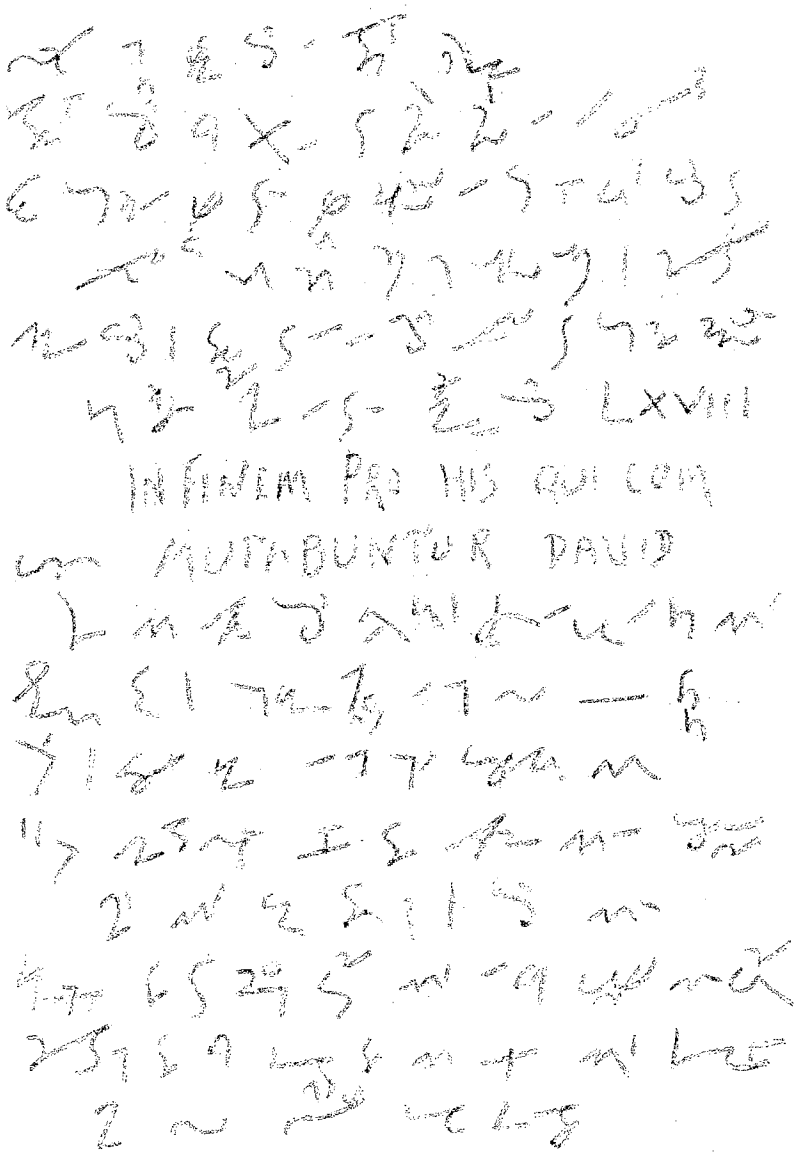


Reproduction of Ruess' photography. Schmitz's"notes" from 18 to 57 are found here.

A page from the Reuss collection of notes.

Book of Psalms

Psalm 68



Bibliotheque nationale in Paris. Lat. 13160. Reproduction from Chatelain. Introduction a la lecture des notes Tironiennes. Paris 1900. Pl. VII, somewhat diminished.

Translation

According to Chatelain; corresponding with the original text line by line.

Regna terrae, kantate Deo, psallite Domino
Psallite Deo, qui ascendit super caelum caeli ad orientem.
Ecce dabit voci sue vocem virtutis. Date gloriam Deo super
Israel magnificentia ejus et virtus ejus in nubibus.
Mirabilis Deus in sanctis suis; Deus Israel ipse dabit virtutem
et fortitudinem plebi sue; benedictus Deus L XVIII

In finem pro his qui com-
mutabuntur David.

Salvum me fac, Deus, quoniam intraverunt aque, usque ad animam meam.
Infixus sum in limo profundi, et non est substantia.
Veni in altitudinem maris, et tempestas demersit me.
Laborami clamans, rencae faetae sunt fauces meae, defecerunt
oculi mei, dum spero in Deum meum.
Multiplicati sunt super Capillos kapitis mei, qui oderunt me gratis.
Confortati sunt qui percecuti sunt me inimici mei injuste,
quae non rapui tunc exoluebam.

If one views Tironian shorthand critically one must certainly regard it highly for the wealth of ideas which its creator has inspired, but on the other hand one cannot fail to find many and serious shortcomings which accompany this effort to build an authentic shorthand.

That such should be the case is altogether natural. The foundation for the building, the old Roman large alphabet, was something entirely different from the convenient and flowing script of our time, and neither did Tiro and his successors have the experience of authors of other systems to support them.

Lack of uniform system within the Tironian structure as well as the bewilderingly large mass of contractions, made the learning of it unbelievably difficult. The natural result of such a large number of basic symbols was that it was impossible to find a sufficient number of characteristic differentiating signs; and when furthermore, the same sign often had more than one meaning, and often the symbols were altered beyond recognition, the Tironian script became to a high degree difficult to read. And this despite the fact that the remarkably distinct symbols for suffixes worked in the opposite direction.

So far as speed is concerned, the first glance at a piece of connected writing in Tironian script tells us that these notes with their divided wordsigns and many awkward basic symbols could not be written rapidly. That the Roman shorthand in any event, as we know, for many hundreds of years fulfilled its mission in recording speech, was no doubt due besides the frequent use of "chain writing", in no small measure to the fact that in those times people spoke more slowly than in our day, and this was especially true when the old Romans addressed the whole people

in open places, whereupon the voice had to be raised and the speed of speaking appreciably diminished.

In spite of their faults, Tiro's notes have aroused admiration among the foremost originators of shorthand systems in modern times, and many of them have, after a study of Kopp's "Paleographia critica", allowed themselves to be influenced in no small measure by Tiro's methods of abbreviation.

For the rest, Tiro's notes have had no direct influence upon the development of the art of stenography, for when modern stenography came to life at the beginning of the 17'th century, the Tironian manuscripts still lay forgotten and unknown in the cloister libraries, and had no influence upon the development of the geometric system. On the other hand the knowledge that a Roman shorthand system had existed, had this significance,--it was this knowledge that gave impulse to the newly awakened interest in the art of stenography.

Tiro's notes were in their construction widely different from the Greek shorthand. They were a consonant word script, while the Greek tachygraphy was a vowel syllable script, but nevertheless certain similarities are found between the two systems. Both had as their first basis the alphabet in ordinary writing from which even the straight strokes of the Greek shorthand were obtained, and it was altogether natural that similarities which are found between certain Latin and Greek letters, can also be seen in both shorthand systems, without one system having obtained symbols from the other. But the longer both systems existed side by side, the one for the Greek the other for the Latin language, the more they interacted upon each other; which explains many similarities in later forms, and to a certain extent the partial conversion of the Roman wordsign script into a syllable script.

The Latin Syllable Notes

While in Frankish and Germanic countries the Tironian notes, previously described, retaining for the most part their original form as wordsigns, dwindled away and were lost in competition with the improved ordinary script, they evolved in their native country Italy into a syllable script: the so-called Latin syllable notes.

Symbols for syllables are, of course, found in the Frankish notes,[22] but this is exceptional and mostly to indicate foreign (Germanic) names. It was a resort in cases of necessity which could also be used for Latin words, for which no symbols were found in the lists of notes, or for signs which the writer had not learned, in which case he either wrote these words in ordinary script, which happened frequently, or used some of Tiro's syllable notes for one syllable words and endings. Such syllable signs interspersed among other notes are called the "Frankish syllable notes".[23]

The Italians on the other hand seemed to have more consciously striven to transform the Tironian word script to a syllable script. In the older form, presumably during the 5'th to the 7'th century, the wordsigns were retained for many common words, and likewise the separation of stem and suffix, while the Italian syllable script in its later form, from the 8'th to the close of the 11'th century, employs syllable symbols almost exclusively and makes no distinction between the indication of stem and endings.

Both forms are very reminiscent of the later Greek tachygraphy with its regular and simple construction, and similarly its syllable symbols

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22 In the first note commentary 7'th and 8'th chapters.

23 To differentiate these from other notes a horizontal line is placed above them.

are written separately. The later syllable script soon crowded out the older form, and came to be used extensively in northern Italy. Recent Italian researchers believe furthermore that knowledge of these notes became a part of a secretary's training.[24]

Only exceptionally did these Italian syllably notes seem to have penetrated into the cloisters, where Tiro's notes continued to exist in their original form, but manuscripts in our possession show, that the syllable notes were used even in the courts of popes and Italian princes. Thus Pope Sylvester II left several encyclicals from the years 999-1002 with his greeting and signature in syllable notes:

Ger----ber----tus Sil----ves----ter

The Italian syllable notes even reached Spain, and valuable manuscripts containing such notes arranged in textbook form are found in the National Library in Madrid and in the Escorial cloister.

Nothing is known as to whether these Latin syllable notes were used to record speech, but one must perhaps assume that this script was only of help in recording the minutes of meetings and in copying books. And so they suffered the same fate as the original notes. They could not meet the competition of the improved ordinary writing, and were consigned to obscurity, to be restored to the light of day by modern research workers in the history of stenography.

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24 Johnen. Geschichte der Stenographie. pp. 232 and 233.

CHAPTER IV

AGE OF TRANSITION

Latin Systems

In the year 1874 Valentin Rose discovered three[1] copies of handwritten papers containing some stenographic notes, which Arthur Mentz[2] and others analyzed and described further.

It became evident that these manuscripts were nothing less than copies of a letter containing extracts from a textbook on Latin stenography together with a treatise on stenography in general. Rose assumed that the writer of the letter and the inventor of the system was the well-known monk John of Tilbury, and this has commonly been accepted as settled; but the only thing one can be certain of from the contents of the letter, is that it was written at the close of the 14'th century by an English monk to some other unknown influential person.

This discovery, nevertheless, is of great value to research in the history of shorthand not only because the stenographic system is of interest in itself, but also because one can learn from the copious introduction what conception a cultured monk of that time had of "Roman" shorthand as well as of the function of stenography in general. The author recounts how the art of Roman stenography, which he believed was originated by Cicero, had flourished in its time, but as a result of the difficulty in learning it and its illegibility, which caused the Emperor Justinian to forbid the use of it, had later been completely forgotten.[3]

He also sharply criticizes these "ciceronian" notes, especially

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1 Two in the British Museum, one in the Bodleian Library, Oxford.

2 Korrespondenzblatt. 1912. p. 163 ff.

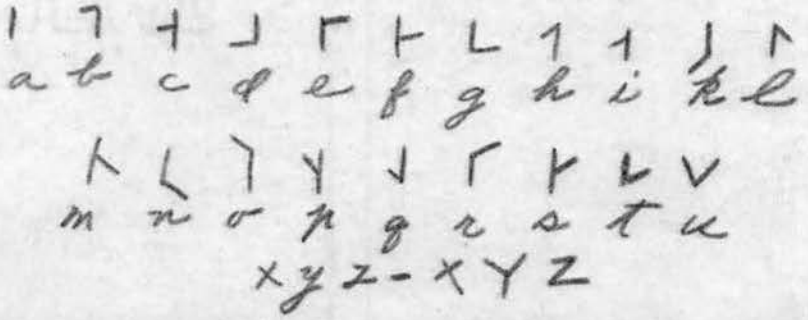
3 The English monk, remarkably enough, seems to have been familiar with the rennaissance of Roman shorthand in the Carolinian age (Age of Charlemagne).

because the basic symbols were altered beyond recognition, and offers in their place his "new notes" which he says he had received in a revelation from Archbishop Thomas Becket, who was murdered in 1170 and later canonized.

He has a high regard for the art of stenography and vigorously describes its advantages. Thus, he says, one can with stenography not only record speech but also do as much work as twenty ordinary writers, and furthermore use only one-twentieth as much paper as otherwise. This art is of the greatest value to all to the young student, who can take down every word that his instructor speaks so that he soon becomes as proficient as his instructor, and even surpasses him, for the "instructor who does not know stenography must first stop to consider before he holds his lecture, but the pupil who knows stenography need only produce his notes and then he can answer all questions!".

But he sharply admonishes that in order to become a stenographer one must put all his energies into the effort of learning, and when one is writing shorthand "one must never turn away from the speaker for an instant, nor scratch one's forehead or eyes, and one should always have 60 to 100 well sharpened pencils ready at hand".

Alphabet
In somewhat "revised" form



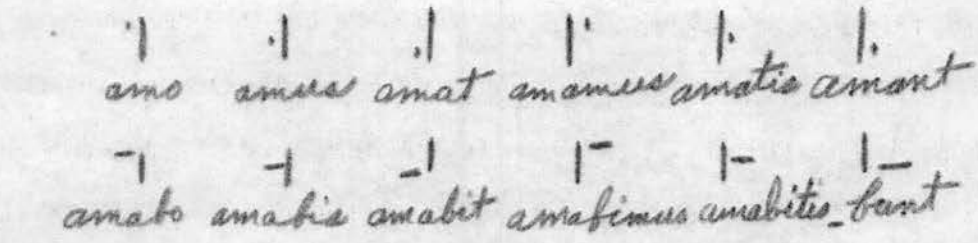
According to Metz in the Korrespondenzblatt 1912, p. 170, and Johnen in the "Allgemeine Geschichte der Kurzschrift" 1924, p. 20. Many historical writers--including Johnen and Mentz in other works--have published another illustration of these symbols based upon the omission of k from the list.

The "new note system" (nova ars notaria) is like Tiro's notes a word script with independent basic and modifying symbols; but the basic symbols are entirely released from the letters of the ordinary alphabet, and consist of the horizontal stroke as a basis with added angles at different levels and slants.

These basic symbols, which remind us of the symbols of the Acropolis system, and even of the so-called "later runic characters" are not syllable symbols in the ordinary sense of the word but symbols for word stems. The symbol a denotes a wordstem beginning with the letter a, the symbol b, a wordstem beginning with the letter b etc. It is evident that the symbols are constructed, according to rule, in alphabetic sequence which is natural in a time when no one had hit upon the idea of grouping them on a more rational basis. To differentiate the different word stems that begin with the same letter, the unknown inventor uses variations and appendices at the lower ends of the basic symbols. With the object of reducing to some degree the number of these symbols, he selected from the Book of Psalms (80,000 words) the most common wordstems, which were given stenographic symbols, while the less frequent words, chiefly names, were written with a so-called semi-stenography (ars exeptoria) where, except in form words and endings, the consonants were written with ordinary letters. This semi-stenography was even regarded as useable independently.

For the indication of verbal inflections, the author had come upon an equally simple and ingenious idea. "Tense" as such is indicated by different sorts of supplementary symbols, "person" by means of different heights in relation to the basic symbols, and "number" by placing the supplementary symbol before or after the basic symbol.

Conjugation of Verbs



The preserved transcripts do not state clearly the heighth of the symbol for substantives and adjectives, and the author himself explains that the rules for their formation are less satisfactory.

The unknown monk's " new note script" unquestionably signifies a substantial step forward. In place of the confusion of symbols and methods in the Tironian script, one finds here a strong and conscious striving for simplicity and orderliness. The number of basic symbols has been greatly reduced in comparison with Tiro's system, and perhaps best of all, these basic symbols are always permitted to retain their original form. It is worthy of note that someone that far back in time had thought of making investigations as to frequency of words. No appreciable speed, however, could be made with these composite and unconnectible symbols. The author remarks that he himself is too old to make practical use of his art and neither is anything known as to its use later.

But that this system was not so soon forgotten, is evident from the fact that the Frenchman Gobory in his work, published several hundred years later in 1550, describes an older system which several investigators believe could have been none other than the " new notes" of this English monk.

A manuscript preserved in the Laurenz Library in Florence was found to have a beginning completely conformable to the above mentioned English system, and was at first believed to be a fourth copy of the same letter, but upon closer scrutiny the Italian Rostagno discovered in 1900 that it was another stenographic system.

Later investigators, especially Mentz;[4] have proved this to be true, and have made clear that this shorthand system, which was given the proud name "Ars Notaria Aristotelis" by its originator, is also of English origin, and dates back to the 13'th century, thus being somewhat younger than the other system.

As to the person of the author, it has not been possible to draw any conclusions from the contents of the letter except that he was also a servant of the Church who wished to give mankind a new shorthand system. This, the so-called Aristotle system, is to an even greater extent than the earlier system based upon Latin grammar. But in its application the author goes his own way, and obtains his symbols directly, partly from the small letters of ordinary script and partly from the Arabian ciphers.

The letters a b c d e and f each form two symbols, while on the other hand g h i l m n o p q and r and the ciphers are used almost without alteration. These basic symbols if they appear alone, become pure wordsigns, which are used for classes of words that cannot take different forms for inflections; and this in such a way that from the letters a to g, prepositions are formed, from g to r conjunctions, and adverbs from the ciphers. In order to make use of these symbols in greater number, they are used at five different heights, whereupon the words are divided

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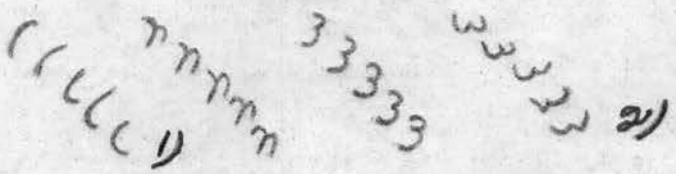
[4] Korrespondenzblatt 1912, p. 173 ff.

into the different rows of symbols in the order in which they are listed in the prevailing Latin grammar, without any regard whatever as to what Letters are in question.

Example



1) First part of a.--- 2) A horizontal 3:a.

Classes of words which take different inflections, such as substantives, adjectives, pronouns and verbs, are indicated by means of these same basic symbols, not by themselves but followed by supplementary signs (periods, circles, half circles and straight strokes in different places); and the interesting thing in this connection is that it is the supplementary sign which denotes the wordstem, while the basic symbol designates the different inflections. The same twelve symbols, which standing alone denote prepositions, now signify, when they are followed by supplementary signs, the six different cases of the substantives and adjectives in the singular and plural, and the level at which the basic symbol is made, shows which declination is in question. In order to secure a sufficient number of supplementary signs for the different wordstems, they can be placed in different positions with relation to the basic symbol; above, below, in front of, or behind them, and furthermore the straight strokes are used with or without "shading". In the same way the twelve symbols, which standing alone denote conjunctions, are used to indicate declinations of pronouns, while the twenty character signs for adverbs indicate the different inflections of verbs (participles). But the rules for verbs are more complicated than those for other classes of words.[5]

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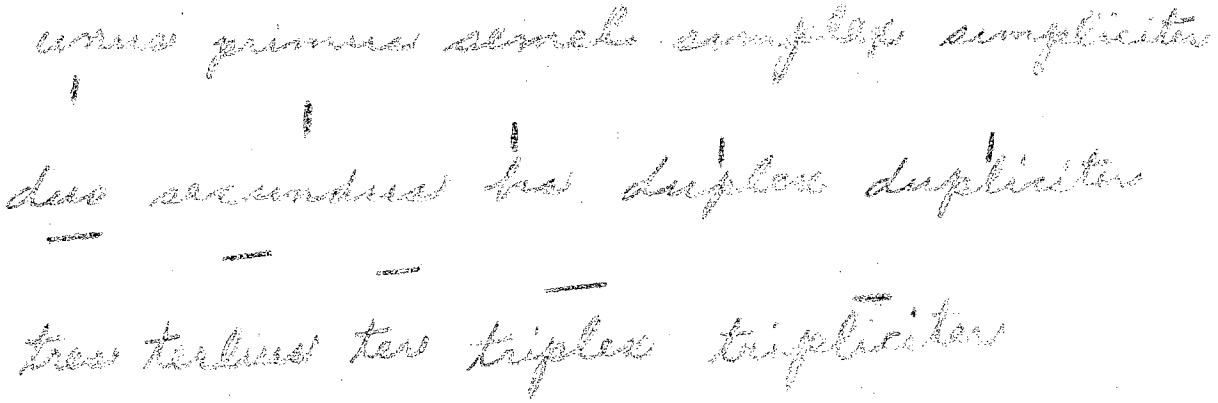
5 Mentz. Korrespondenzblatt 1912. p. 177 ff.

As the characters of the ordinary script have been used for verbs and adverbs, the ciphers are denoted by separated modifying symbols placed at different heights to distinguish between cardinal and ordinal numbers.

Thus the Aristotle system is an altogether independent one despite the fact that it is known, thanks to the borrowing from the foreword to the earlier textbook, that the author was familiar with not only this system but also to some degree with Tiro's notes. In that part of the foreword which does not correspond in both manuscripts, the author gives much good advice to the budding stenographer, and like the first author emphasizes the importance of having all "mechanical" preparations ready

Examples



before one begins to write, so that ears, eyes and mind can be used completely for the act of writing itself. He is not satisfied, however, to place this requirement upon the stenographer as such, but also demands that he be devout and religious. He had heard it said that stenographers of former times were often suspected of witchcraft, and to allay all such suspicions "stenographers must serve the Father, Son, and Holy Ghost, obey the Ten Commandments, and confess the true faith unto death. If they

remain pious and abhor all temptations as mortal sins, then no one can have anything against stenography".

The Aristotle system has left no other traces than the above-mentioned Florentine manuscript, and it is very doubtful that it was ever in practical use.[6]

It is of great interest to us to discover how this author of a system in mediaeval times, in spite of all the oddities of his system, has perhaps applied more ideas, which have since come into use in many modern stenographic systems, than his closest forerunner. He has taken apart the letters of the ordinary alphabet in order to construct his basic symbols from the "parts", and for his additional signs he has used the simplest geometric symbols. Thus the same ideas appear which later became the origin of the cursive as well as the so-called geometric systems. He has further, certainly in much too great an extent, made use of the line of writing as a graphic support, and this not only indirectly by placing the additional signs at different heights alongside the basic symbols, but also directly by assigning meanings to the basic symbols according to their position with regard to the line of writing. Even "shading" is used by this resourceful inventor as a graphic expedient to obtain added symbols.

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6 Arthur Mentz believes that it is not improbable that John Willis was influenced by this mediaeval system, but has not been able to present any strong evidence to support this view.

Shorthand Writers in the Period of Transition

During the later centuries of the Middle Ages, when Tiro's notes were forgotten, the dawning general culture nevertheless created a demand for greater speed in writing; and as a result there appeared a number of shortenings of ordinary writing among the Romanic as well as the Germanic peoples.

These mediaeval "shortenings" thus came to fill a gap between ancient and modern shorthand. When it is told how the zealous students at the newly established universities in Bologna (1158) and Paris (1180) took down lectures "verbatim", which were later multiplied and circulated in transcribed form, there is here no question of anything but a shortened ordinary writing, and the "verbatim" recording was nothing to boast of; and similiarly when it was a matter of taking down the sermons of the Franciscan and Dominican monks. During the 14'th and 15'th centuries nearly all the literature of jurisprudence consisted of this sort of college collections, and in France where the shortened ordinary script was widely used in the highest tribunal, there developed during the 16'th century a special judicial style of writing (style judiciaire). These contractions of different sorts were at first arranged for the Latin language, but were later carried over to the French language also. There is found in the library at Lyon a collection of sheets from 1480 in quarter form with 18 pages of such contractions written down.[7]

In Germany, where the Gothic style with its many difficult strokes fairly compelled shortenings, it was, however, first during the time of

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[7] Rene Havette. Les procedes abreviatifs etc. du XII all XVII sieches. Paris 1903. p. 9.

the Reformation, that these rapid writers of ordinary script came to be used to any great extent. It was the foremost of these, Luther's friend and co-worker Caspar Cruciger--who was called tachygrapher by Melanchton,--of whom it was said that he did not lose a single word when he took down Luther's sermons or lectures. Likewise it was also he, whose speed in "handily recording" speech led the Roman cardinal after the religious debate at Worms in 1540 to exclaim: " The Lutherans have a writer who is more proficient than any of ours."

Besides Cruciger, there were Roth and Rörer--Luther's large cathecism was published with the help of his notes--who are responsible for the fact that much of Luther's speech was preserved for the ages, but on the other hand Luther also complains that many, who were not competent, recorded his sermons without permission, and later published faulty and incomplete reports. Several of Roth's and Rörer's original writings have been discovered in the libraries at Jena and Zwickau, and from these as well as other similar ones, it is plainly evident that his speeches were not taken down verbatim.[8] Luther's lectures in Latin are in general better reported than his sermons in German, due naturally to the fact that the many contractions in ordinary writing were arranged for the Latin language. When these "stenographers" reported a German sermon, it seems that they translated mentally the most important parts into Latin and then by means of the many memorized contractions wrote down the text in that language. But sometimes it happened that in their haste they were unable to recall any applicable Latin terms, and then, such as when some especially characteristic German expressions were

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[8] Johnen. Geschichte der Stenographie. Erster Band. p. 293 ff.

concerned, they wrote down German words such as they were, which resulted in the fact that these manuscripts often contain a mixture of Latin and German.

The exaggeration of this system of shortening was the principal reason why these contractions gradually disappeared, so that the ordinary writing again became what it should be: a somewhat easily learned folk script. The disappearance of these contractions was due not only to the fact that at the dawning of the new age people in nearly all the Germanic and Romance countries had returned to the convenient and plain letters of the Carolinian time, but also, and perhaps mostly, because the discovery of printing had made "copying" of books unnecessary, and had caused people to become accustomed to read unshortened script.

The same circumstances also led to the fact that the so-called Arabic symbols or characters, which had come to be known as early as the 13'th century in Western Europe, a few centuries later came out victorious in competition with the inconvenient Roman characters.

ENGLAND

Historical Works

Philip Gibbs. An Historical Account of Compendious and Swift Writing. 1736. (Published in connection with a textbook on stenography.)

J. H. Lewis. An Historical Account of the Rise and Progress of Shorthand. London 1816.

Isaac Pitman. History of Shorthand. London 1847. (Fourth edition 1922.)

Mathias Levy. The History of Shorthand-Writing. London 1862.

Thomas Anderson.[1] History of Shorthand. London 1882.

John Westby-Gibson. (Died 1892.) Early Shorthand Systems. London 1882; A Memoir of Simon Bordley and a large number of shorter historical works; also the comprehensive Bibliography of Shorthand. London 1887.

Hugh W. Innes and George C. Mares began in the American publication "The National Stenographer" 1892-1893 an ambitious work on the history of English shorthand, but completed it no farther than J. Weston.

Besides these, several authors of systems, among them Elisha Coles 1674 and John Angell 1758 have left accounts of earlier systems in the introduction to their textbooks.

Among the prominent English research workers otherwise in the field of stenography and publishers of separate biographies of authors of stenography the following should be named: Edward Pocknell (died 1911), J. Eglington Bailey, Alex. Tremaine Wright and William J. Carlton.[2]

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[1] Anderson was a strong advocate of the cursive principle and had also worked out an outline for a cursive English stenography. In French he also published "L'art d'abreger en ecriture ordinaire et avec la machine a ecrire." Paris 1891.

[2] Mr. Carlton's stenographic library includes over 4,000 volumes.

Bright

1588

When after the universal reaction in most dominions during the Middle Ages, a new age began to dawn, England became the pioneer country in political as well as religious and literary aspects; and it is here that the art of stenography also first awakened to a new life. More than anything else it was the Reformation and the increased interest in religious questions, which worked toward this result. Knowledge of the new doctrine was spread by lectures and sermons, and the demand for a script, which could be written faster than the ordinary one and by means of which notes could be taken, made itself known. It was also a common practice (at executions for political crimes) to record and later print the last words of the condemned with the permission of the authorities.

Travellers from other countries, who visited England in the beginning and middle of the 17'th century, have also expressed their astonishment over the general use of shorthand in that country.[3] That this was really the case, is best evidenced by the large number of textbooks of English stenography--most of them in many editions--which were published at that time. First in line among all these authors of systems we find Timothy Bright.

Timothy Bright was born about 1550 and received his "Bachelor of Arts" degree as early as 1568, whereupon he began his study of medicine partly at Cambridge and partly abroad, presumably in Paris where he narrowly escaped being a victim of the night of St. Bartholomew's massacre in 1572.

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[3] Hartlieb (who was for a time secretary to C romwell), Comenius, Harsdörfer etc.

After returning to his native land, he continued his studies in medicine and was graduated as a doctor of medicine in 1579, and in 1585 he became a physician at the famed St. Bartholomew's hospital in London.

Extensive work as a writer on medical and religious subjects, as well as a growing interest in the art of shorthand writing, seems, however to have caused him to neglect his ordinary work as a physician. As early as 1587 he had a disagreeable encounter with the College of Physicians, and after repeated warnings from the management of the hospital he was finally dismissed in 1591.

That Bright did not devote himself exclusively to medical work is best indicated by the fact that in 1589 he published an abridged edition of Fox's thick "Book of Martyrs" and also that in 1590 he received an appointment as assistant pastor of Christ Church in London. About a month before he was dismissed from his position in the hospital, he had been named rector at Methley in Yorkshire, and thus had his place of retreat clearly in mind--thanks probably to powerful protectors--and could leave St. Bartholomew's Hospital with composure.

It was not long, however, before Bright, even in Methley, was beset by difficulties. The members of the congregation complained that he spent most of his time practicing medicine and poorly discharged his pastoral duties and also accused him of certain irregularities in collecting his "tithe" . At last conditions became so intolerable, that Bright in 1594 sought another vacant pastorate nearby. But even here he was continually subjected to the accusations of his former parishioners, and peace and quiet first came to him in his declining days, when he had moved to his brother in Shrewsbury, where it is believed that his vicissitudinous life ended in 1615.[4]

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[4] William J. Carlton. Thimote Bright, Doctor & Phisicke. London 1911.

Among Bright's many medical works, his "Treatise of Melancholy" published in 1586, is of special historical interest, because some English and German investigators have regarded it as the basis for Shakespeare's many masterly interpretations of sick souls--an assumption for whose validity, however, no real evidence has been presented.

Before Bright published his "Treatise of Melancholy" he had already begun to occupy himself with stenography. A letter is found among the Burghley papers in the British Museum from Bright's old instructor at Cambridge, Skinner, to Lord Burghley's private secretary, which requests that Bright be recommended to the young Robert Cecil--later first Marquis of Salisbury--whom he hoped to instruct in his newly discovered shorthand. The letter was discovered in 1824 by Benjamin Hanbury[5], but disappeared and was recovered in 1884 by Westby-Gibson. To the letter was appended a copy of Paul's letter to Titus in stenography, written by Bright himself; and here is thus found the first trace that is known to exist of an English shorthand.

The oldest form of Bright's shorthand (1586) differs a great deal from the system published later.[6] To a great extent this is also a word script, but with different symbols from the finally completed system, and for the indication of unusual words Bright devised a special alphabet, whose symbols denoted initials or letters. As far as these words are concerned it was entirely a letter script. Even in the first alphabet he used loops, together with straight strokes in different positions in great profusion.

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5 The prominent collector and investigator, whose "History of Stenography" was, unfortunately, never completed.

6 According to Dewischeit in "der Deutsche Stenograph" 1924, p.136, it was the German researcher Friedrich who first pointed this out, but as early as 1911 the Englishman Carlton in his monumental work on Bright discloses this fact. W. J. Carlton. Thimote Bright. London 1911. p. 65.

Bright it seems had no idea of how much value these loops could be as a means of joining, or what a great step forward his thought--perhaps in exceptional cases--of resorting to the indication of letters instead of words, could mean, since for unknown reasons he departed from both of these good ideas when he published his textbook two years later.

Whether the Skinner letter brought Bright the opportunity to interest young Cecil in his shorthand or not, we do not know, but it is probable that it was due to the influence of the Cecil family that Bright, before he published his book, received from Queen Elizabeth the royal privilege for the system with the accompanying "Patent" valid for fifteen years.

Four copies of Bright's textbook are known to exist: one in the Bodleian Library in Oxford, which was for a long time thought to be the only one, and of which a very unsatisfactory reprint of 100 copies was published in 1888 by the Reporters Journal in London; one in Pepys Library in Cambridge; one which formerly belonged to Benjamin Hanbury with the Earl of Crawford; and one which was sold at auction in London to Lord Middleton for about 1400 crowns during the summer of 1925.

When Bright in the year 1588 made public his system in its final form, he gave it the name Characterie (symbol art), and defines this further in the title page as follows: "Characterie, An Art of shorte, swifte and secrete writing by Character."

The word secret reveals that Bright had knowledge of the fairly prevalent "secret writing" of this time (cryptography or steganography),[7]

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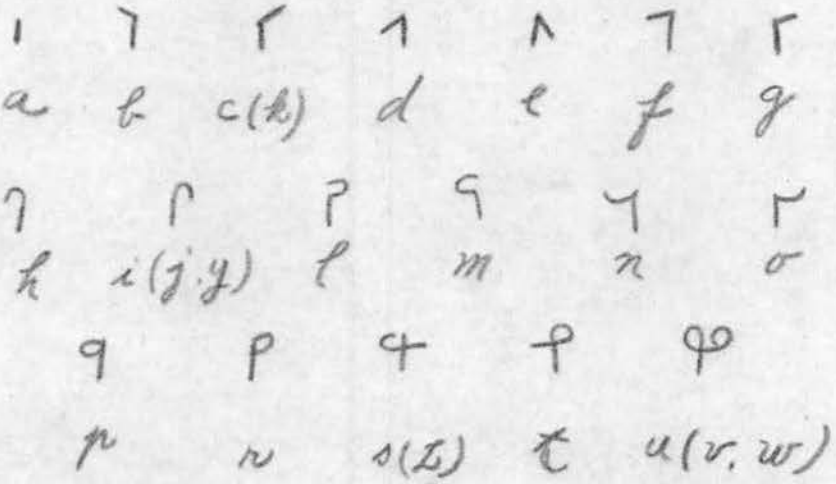
[7] The earliest and best known works in this field are those of Johannes Trithemius (from 1500 in handwritten copies, first printed in 1609) and of the Italian Porta (1563).

which seem to have influenced his work; and that he knew an ancient Roman shorthand system had existed, is plainly evident from his "dedication" to Queen Elizabeth, where he speaks of this "Cicero's" lost discovery, and among other things says that nothing can prevent his own script from measuing up to this except "Her Majesty's permission and Cicero's name".

Bright's shorthand is, like the Tironian, a word script, while as a basis for the wordsigns he has constructed an altogether independently new alphabet from the letters of the ordinary alphabet, whose symbols always indicate respectively the beginning letters.

These symbols, which remind one of the Acropolis system as well as the first of the two Latin systems originated in England, consist similarly of the perpendicular straight line with different appendices near the upper end.

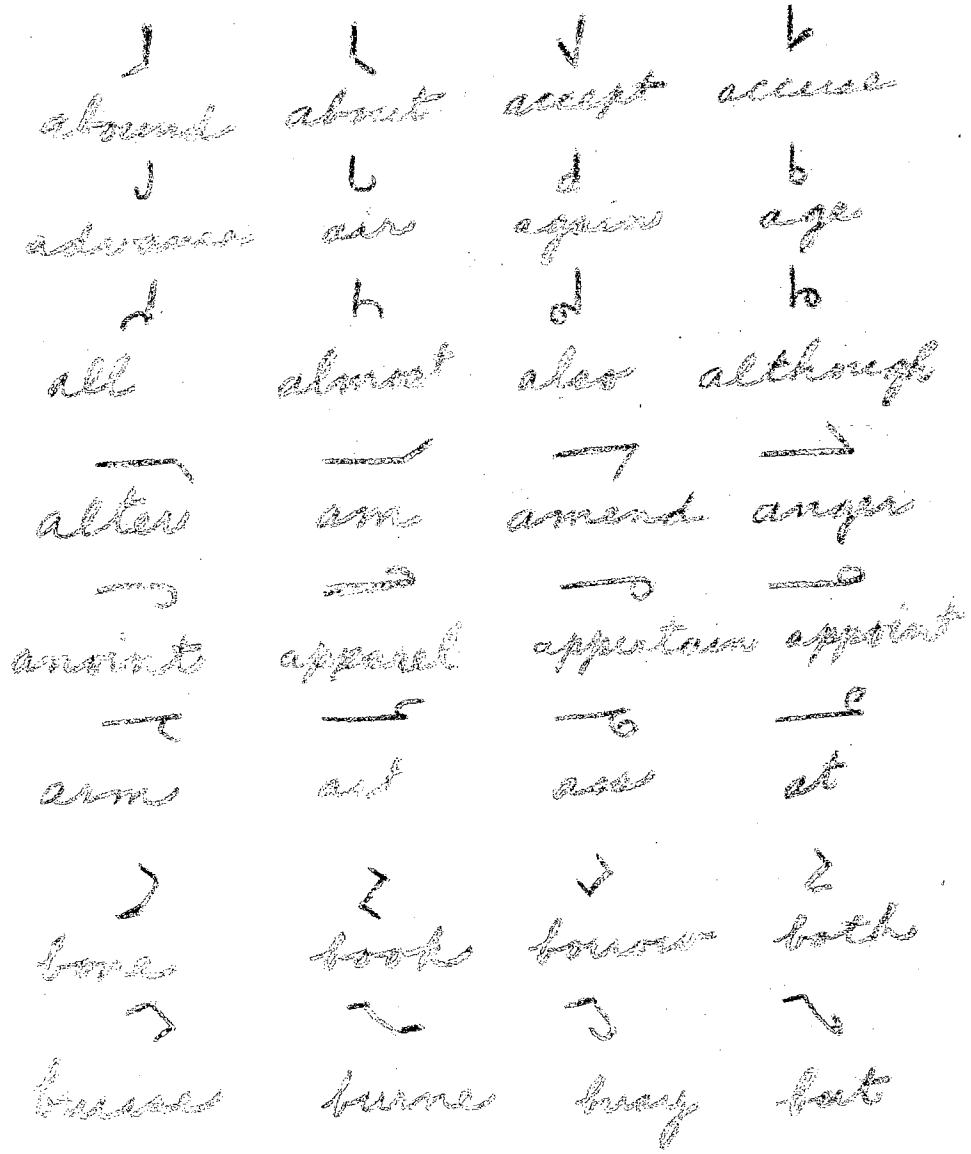
Alphabet



The straight ending strokes, which of themselves denote only beginning letters, can be altered by means of appendices at the lower end, so that one can derive 12 separate wordsigns from each one of them i.e. a total of 216 symbols. Thus a systematic application of the so-called straight line principle which we shall find again in some of the later stenographic systems.

But 216 symbols did not reach far, and to further increase the number Bright used the straight lines not only perpendicularly but also horizontally and leaning in different directions.

Word Construction



In this way Bright obtained 538 wordsigns, but naturally this was not sufficient either. The Roman shorthand contained 13,000 notes. He then hit upon the original idea of creating more wordsigns for words that had a meaning similar to one of these 538 words, by using its symbol, with his own initial prefixed. If one, for example, wished to write the word hymn, which was not found among the 538, one would write the wordsign for sing with the sign for h in front of it etc. Thus hymn= h sing, echo= a grief, divine= d God, apple = a fruit, pear = p fruit, wonder = w marvel, might = m can, perils = p dangers, etc.[8]

And if one can not find a suitable "similar" word among the 538, then one uses in its place a word of opposite meaning, but the beginning letter is then placed after the sign i.e. evil = good e, downe = up d, when = then w, none = some n, etc.

That one could in rapid writing think sufficiently fast of suitable words whether similar or opposite, was unthinkable, and for this reason Bright included a long list of English words arranged for this purpose in suitable groups, which were to be memorized.

Even the readability suffered from this method of word building, for in most cases it was not only one word but many which had the assigned beginning letter. So, for example, if one writes swan = a bird, this can just as well denote snipe, sparrow, stork or swallow etc.

For 32 short ordinary words Bright had special signs, which were independent of the system as a whole; and the period was used to signify certain grammatical forms. So, for example, a period after a word denoted plural, a period in front of a word a verb in the past tense, a period

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8 E. Pocknell. Thimothy Bright. London 1884. Westby-Gibson. Transactions of the International Shorthand Congress 1887. p. 75 ff.

under a word a pause in the reading--the only mark of distinction to be found. The words he, his, she, her had the same basic symbol and were distinguished from each other by means of periods put in different places. "Crossing" of a symbol indicated a negative etc.

Another peculiarity was that Bright's script, like the Chinese, was written in rows from above downwards.

On page 70 there is a piece of fine writing in Bright Shorthand, which if it is compared word for word with both of the accompanying texts in ordinary script, gives a very clear picture of the manner and difficulties of this system. The specimen is obtained[9] from an album preserved in the British Museum which a young English lady, Jane Seager, presented as a new year's gift to Queen Elizabeth in the year 1589, and contains the ten sibyll prophecies in complete Brightian script, every page with five rows written from above downwards.

The criticisms of early authors in regard to Bright's system were very severe. John Willis says: "It required such understanding and memory, that few of the ordinary sort of people could attain to the knowledge thereof." The historical writers Gibbs and Lewis have expressed themselves in a similar tone, even sharper, and their judgments have been repeated without reservation by several authors of recent times.

Without a doubt Bright's Characterie leave much to be desired but we must not forget that this was a first effort without the support of any experiences from other systems.

That he chose to create a word script, was according to our modern conceptions a mistake, but since this was the case, his script must be

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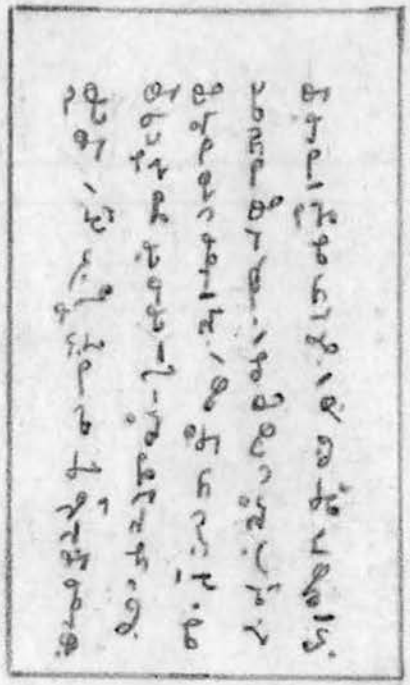
9 Via Carlton's "Thimote Bright".

Translation with transposed words
such as they appear in the stenographic text:

L see thus in great b most s holy m grace
I have sit up d thence v all these sib(yls) were.
What they for t declared, or saw, we see and hear,
And p benefit reap by all their prophecy.
Would God I were a sib(yl) to d God
In worthy v sing your lasting h bliss:
Then only I should be characteress
Of that which worlds vith w marwell m can begin d.
But what n scarce I to w desire then w you are such
Of whose perfections some n can write too much?

Translation in ordinary script:

Lo thus in breife most sacred Maiestye
I haue sett downe whence all theis sibells weare:
What they foretold, or saw, we see, and heare,
An profett reape by all their prophesy.
Would God I weare a Sibell to divine
In worthy vearse your lasting happynes:
Then only I should be characteress
Of that, which worlds with wounder might defyne.
But what need I to wish, when you are such,
Of whose perfections none can write to much.



A Page of Jane Seagers Book of Sibyls

From the original manuscript in the British Museum, according to Carlton's "Thimote Bright". Each one of the perpendicular rows in the illustration corresponds to two lines of the translation.

judged accordingly. If he had followed the thought revealed in his first edition in 1586 and created a letter script, then assuredly his influence upon the later development of the art of stenography would have been otherwise. But even his word script, such as it was, with its orderly constructed basic symbols, and their extensive use in the building of new symbols, is worthy of notice; and even if one does not agree that Bright was "the father of modern stenography" he nevertheless remains the "first creator of an English shorthand".

Another fact to be considered is that Bright's system one year after publication proved that it could be used to record speech delivered at a moderate rate--and more than that Bright himself had never claimed. In Maunsell's "Catalogue of English printed Bookes" from 1595, a booklet printed in 1589 is mentioned which consisted of a report written in shorthand (recorded by means of Characterie) of one of Egerton's sermons.[10]

This was accordingly the <u>first known attempt in modern times to record speech by means of stenography</u>.

There are no copies of this booklet to be found, but in 1908 the eminent investigator A. T. Wright discovered in the Bodleian Library in Oxford the same sermon published in a new edition in 1603 by Egerton himself.[11] On the title page is found: "A Sermon by Dr. Egerton in the Blackfriar's church 1589, recorded by means of Characterie by a young practitioner of this art, and now again re-read, corrected and improved by the author--." Egerton thus was not satisfied with the edition of 1589, which plainly appeared without his permission, and

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[10] Carlton. Thimote Bright. p. 98 ff.

[11] Wright in the "Shorthand Teacher". Volume XII. p. 75 ff.

therefore sponsored a new one himself using a better stenographer. In the introduction to the new edition he stresses the great importance of stenography in recording sermons, and regards such a use as not being wrong from a religious standpoint "with the supposition that the technical work does not disturb the devotional attitude". He advises against publishing such reports in print, and believes it is sufficient that copies be distributed among relatives and friends.

Several of Henry Smith's renowned sermons are to be found, and it is expressly stated that they were "taken by Characterie"; and thus we have these publications based on stenographic reports which appeared as a later edition by Smith himself. This affords an excellent opportunity to compare the two texts, which reveals that Bright's system, despite its faults, nevertheless made it possible to follow a speaker with reasonable speed.

In the meantime Smith and Egerton were not the only Puritan preachers whose sermons were taken down by means of stenography. Many other proofs are to be found that Bright's Characterie were widely used around 1600 for the purpose of recording sermons and discourses.

But the greatest fame has come to the father of English stenography in connection with the great Shakespeare.

Shakespeare and Stenography

It was the rule in the time of Shakespeare that authors of drama sold their works to some theatrical association. There were no judicial determinations in regard to the right of literary ownership, but the practice was that the author, after selling his drama, thereupon surrendered the right to sell it again to another company or to a book publisher.

The dramas were to the authors wholly a means of making a living, and no one thought of preserving his name nor his works for posterity. When the goods were sold, they were sold, and were no longer of interest.

It thus behooved the theater troupe to guard its own right of ownership. To begin with, it seems that no one had any idea that these dramas would be "read", but the public came gradually to show an interest in this, and enterprising publishers hit upon the idea of publishing them in print. This could happen, in that a copy was purchased from another theater company, that actors were persuaded to sell their respective "parts", or that stenographers were employed, without the consent of the parties concerned, to obtain the text during the performance of the play.

The first method seems to have been used only in exceptional cases when it involved a piece which no longer had any value to its possessors. In this way "Titus Andronicus", which was played in London in 1594 when the G reat Plague broke out and all theaters were closed, was sold in an honest manner by the troupe itself.[12]

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[12] The only copy of the first edition of this drama that is known to exist, was found strangely enough in Skåne in Sweden a few years ago, and was sold in the U. S. for 36,000 crowns. (Schuck. Shakespeare and his T ime. Stockholm 1916. p. 254)

It is hardly possible either, that it was worth while to try to acquire the parts of the separate players, for this would have required that all of the players were willing to become involved in such a deceitful affair.

The most natural way for a publisher to obtain a copy came thus to be to use stenographers, who recorded the entire play during the performance.

Shakespeare did nothing to get his dramas printed, and most of those published in his lifetime--the quartos--were doubtless brought out by means of these "thief stenographers". German research workers have also found strong proof that the stenographic system used was Bright's.

It is not only the "fanatic" stenographers who believe in these "thief stenographers". The great Shakespearean authority, Georg Brandes in his impressive work, when he describes the Globe theater, says: "----finally there sat there the wicked stenographers sent there by publishers, who under the disguise of being ordinary reviewers, secretly recorded the dialogue: these men, who were a pest to the actors and as a rule a worry to the authors, we probably must thank for the fact that these dramas were saved for posterity."[13] And our own Schuck says: "The commonest way in which the uncontestably stolen copies were obtained, were through stenographers." And in another place: "that such stenographic copies of plays were very common is attested to by the authors of the dramas themselves".[14]

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[13] Georg Brandes. William Shakespeare. Paris, Leipzig 1896. p. 140.

[14] Henrik Schuck. Shakespeare and his Time. Stockholm 1916. pp.250 and 251.

That this question should be of especially great interest to stenographers is, natural. As early as 1897, Curt Dewischeit[15] declared, that among Shakespeare's dramas published before 1623, i.e. the quarto publications, there were so-called stolen press copies, and these stolen press copies had been procured by means of stenography, and that it is presumable that Bright's system was used for this purpose.

Later research, and this also carried out by Germans, has revealed further proof on the accuracy of this statement, and especially has Max Förster, professor at the University of Leipzig, together with the scholars influenced by him, Friedrich, Schöttner and Kremer, after detailed investigations of some of Shakespeare's quarto and folio publications, arrived at results, which point very strongly in the direction that the stenographic system used was Bright's Characterie.[16]

Seven years after the death of Shakespeare, two men, Hemings and Condell, for many years his theatrical comrades, decided "in order to keep alive the memory of such a worthy friend and comrade as Shakespeare was when he lived", to publish an edition in folio form, containing all his dramas. Hemings had for a long time directed the economy of theater troupes and presumably saved these "regissörexemplar", and in all prpability these copies have been the basis for the greater part of the folio edition. Even a superficial study of the different editions gives evidence that the text in the quarto edition was in most cases recorded by stenographers, which were either too poorly trained or otherwise used a less effective stenographic system. Going through these one finds namely how the text in every scene has been correctly

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15 Curt Dewischeit. Shakespeare und die Anfänge der englischen Stenographie. Berlin 1897. p.2.

16 P. Friedrich. Studium über englischen Stenographie im Zeitalter Shakespeares. Leipzig 1914.

taken down for the first verses, but then a couple of verses are skipped, then a few more lines have been recorded with the same result, and the next lost etc. And when one comes to the end of a quotation we find it, too, uncompleted, in order that the reply following could be included. Typical of these reports then is that in the beginning it is correctly recorded verse by verse, while the continuation has either been omitted or only the main thought included.[17]

One might suppose that these reporters simply used the shortened ordinary script. But professor Förster's three above mentioned successors have, after especially close examination of each drama, collected all differences between the two editions, and have clearly and plainly shown that the dissimilarities not only involved omissions, but also consisted of deviations, which in most cases must be considered as being due to the faults of a stenographic system. In hundreds of cases such changes occur in words next to one another such as appear in B right's system.[18] One can suppose, of course, that the players themselves inserted words and phrases of similar meaning for the words contained in the text, or that such alterations were made with shortened ordinary script, but the large number of these deviations bespeaks strongly that a stenography was used where such exchangesof words were an established fixture of the system.

Bright had, as we have seen, also used the method of transforming the

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17 Schück. Shakespeare and his T ime. p. 257 ff.

18 Similar researches have been made, although not so exhaustive, by the German Pape for Richard III (the first research of its kind) and the Englishmen Price and Hubbard for "Henry V" and "Hamlet".

words in his list of contractions to those of opposite meaning in order to increase the number of wordsigns. When one finds in these dramas then, for example, night instead of day, hate instead of love, virtue instead of vice etc., it is difficult to find any other reasonable explanation for this, than that the recording was done by a stenographer who used Bright's system, who in his haste had forgotten the small independent letter symbols which denoted the alteration of the word.

The German investigators have also made another discovery which gives us added proof that Bright's system was used. They have namely transcribed such words, whose differences in the two editions can not be explained in any other way, to Bright's stenography, and have then found that just these word signs for the different words have frequently been very much alike, and have thus found the explanation for the errors.

Friedrich in his examination of "The Merry Wives of Windsor" also points out that the number of words used is much less in the quarto edition than in the folio edition, and that it is just the more unusual words which are not found in Bright's word list, which are lacking in the first edition. Here is thus another proof that it was not a question of ordinary script, where there could be no reason for omitting these unusual words, but which on the other hand, because of their unusualness, should have made a deeper impression upon the listener.

Another peculiarity of the Bright system was the profuse use of the period for different grammatical indications. If such a period was omitted in haste or overlooked in transcription, the plural could become singular, tense changed, he, his, she, and her become alike etc.---all of them errors found in the quarto edition.

Finally the Englishman Price has pointed out that the same errors

which occur in the Shakespearean quarto edition are also found in the sermons of that time taken down by means of Bright's Characterie.[19] These errors are fewer here than in the Shakespearean dramas, which condition has its natural explanation in the fact that the rate of speaking must have been altogether different from that in the theater, where laughter and applause etc., occur as disturbing factors, and that Bright in building his wordsign collection, did so with special reference to religious terminology, while, on the other hand, the number of words used by Shakespeare has never been equalled.

The similarities between the errors in the quarto edition and the stenographic system holds true only for Bright's Characterie, and there can be no question of any other stenographic system, since most of the Shakespearean quarto editions were published when Bright's system was the only one to be found.

These "thief stenographers" did not seem to be capable of recording the Shakespearean dialogue verbally, and their transcriptions otherwise leave much to be desired; but it is true for a certainty that it was thanks to Bright's system that many of these quarto editions exist; and this is sufficient to establish that this earliest of English shorthand systems, beyond its purely stenographic importance, also possesses an enduring cultural and historical value.

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19 Price. A Fruitfull Sermon etc. Part of the Fifth Chapter of the First Epistle of St. Paul to the Thessalonians by Henrie Smith. Halle 1922. p. 15.

Bales

1590

Peter Bales was born in London in 1547 and died there probably in 1610 (five years before Bright). He is said to have studied medicine at Oxford in his youth, but before long he appeared in London as a professional penman and an expert on "secret writing". As such he became widely known and respected and was finally attached to the king's court. Sir Francis Walshingham engaged Bales extensively not only to decipher and copy the "secret" correspondence; but also for more or less foul purposes to imitate the styles of writing in "captured" letters.[20] Bales' testimony weighed heavily upon the discovery of Babington's conspiracy to murder Queen Elizabeth and Mary Stuart's knowledge thereof, and also at other proceedings of great consequence.

In the literature of stenography one often finds the assertion that Bales as early as 1574, thus before Bright, originated a system of stenography. T his has been thought to be true because of an account in an old English chronicle,[21] where it is related how Bales in that year gave Queen Elizabeth a ring the size of a silver coin containing in miniature handwriting the Lord's Prayer, The C onfession of Faith, T he Ten Commandments, a Latin prayer of Queen Elizabeth, another such for himself, and finally Bales' motto "Omne bonum, Dei bonum". It was natural, of course, to draw the conclusion that all this must have been written in shorthand in order to find room; but when the same chronicle mentions that the queen, who undoubtedly was unable to write shorthand,

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[20] Dictionary of National Biography. Volume III. P. 43.

[21] Raphael Holinshed. Chronicles 1587.

read this writing by means of a magnifying glass, it can be taken for granted that a diminuitive form of ordinary script was used.

At the close of the year 1590 Bales published his "Writing Schoolemaster" (a second edition in 1597), which is very generally mentioned in works on the history of stenography, despite the fact that the Bales script consists mainly of ordinary letters and does not deserve to be called shorthand.

Elisha Coles (1674), England's first historian of stenography, in his charts of the early English system, has, so far as Bales is concerned, merely listed the letters of the ordinary alphabet, and John Byrom relates in his famous journal[22] that he bought Peter Bales' book, but that it contained nothing more than "shortened ordinary script".

That Bales himself believed that he had originated a real shorthand is indicated by his title page, where he says: "Writing Schoolemaster, containing three books in one; the first shorthand, the second correct writing, the third fine writing. The first book called the art of brachygraphy, that is to be able to write as fast as one can talk at a moderate speed with only one letter for each word----."

This Bales Brachygraphy is, so to speak, nothing but Bright's Characterie transposed into ordinary script. Like Bright, Bales has sought to construct a word script, but his basic signs are not new and original symbols, but simply the respective beginning letters in ordinary script. That Bales was familiar with Bright's system is revealed not only because he speaks in his textbook of talented Bright who set up symbols to represent "the ideas of the mind" but also because

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22 The Private Journal and Literary Remains of John Byrom Published by the Chetham Society. 1858. Volume XXXII. p. 277.

he borrowed Bright's word lists for his own book.[23]

The only thing that justifies one to speak of anything "stenographic" in Bales' brachygraphy is that in order to differentiate his wordsigns, he used dots and accent marks which are inserted at various places around the respective initials. There are those who have sought to include this as a "code script"; but since the initial of each word is written, it is impossible to regard it as such.

On the first of January 1600, Bales published his system in a new form under the title: "A New-yeares gift for England. The Art of new Brachygraphie."

The third edition differs substantially from the two former ones and even the appended signs have been supplanted by ordinary initials, whereupon Bales' script has thus become, through simple elimination, purely a shortened ordinary script. Of this new "Brachygraphie" only one copy is known to exist, which is preserved in the Bibliotheque Nationale in Paris.[24]

Bales permits the individual great freedom in deciding how drastic his abbreviations shall be, and in the introduction to his book we find a few examples of such variety.

For example,	The	feare	of	the	Lord	is	the	beginning	of	wisedom
	Th	fe	of	th	L	is	th	beg	of	wisd
Or abbreviated more severely:	Th	f	o	t	L	i	t	beg	o	wis

The main part of Bales' book consists of a table including around

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23 A. T. Wright. Peter Bales Brachygraphie. Reprinted from the Phonographic Magazine and National Shorthand Reporter. 1924.

24 In very small cathecism form, including 118 unnumbered pages.

6,000 word contractions, of which a dozen are included in the list following.

It is of interest, especially when one recalls how meagerly nearly all of the other English systems make use of vowels, how Bales seems to be fond of them, and often ends his contractions with a vowel.

A Selection from the Collection of Contractions

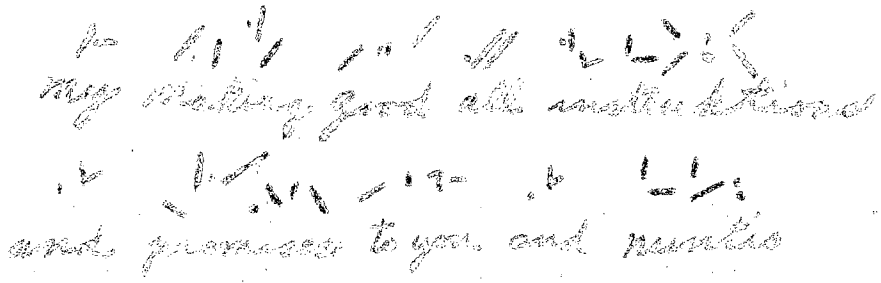
nay	na	narow	nar o
naked	nak	nation	nati
naile	nal	natiue	nati
name	na	nature	nat u
nape	nap	nauie (navy)	nau
napkin	nap k	naught	nau t

Nothing is known as to whether Bales' Brachygraphie, either in the early or later editions, was ever used as a shorthand system and this is, of course, not surprising.

Bales won his fame as the inventor of "The Lineal Alfabet or Character of Dashes", a code script, which he worked out in 1592 for the English diplomatic service. The code script consists of the most simple dashes in different lengths, slants, and positions; thus using the same three graphic aids, which in one or more forms are also found in most of the later stenographic systems.

Bales' code script writing was widely used, and met the competition of all similar codes for more than half a century, which is indicated by the fact that King Charles I used this system in 1846--in somewhat modified form, to be sure--in correspondence with his faithful Earl of Glamorgan (later Marquis of Worcester), who in 1663 revised the system by adding symbols in three different sizes.

Bales Secret Code Writing
The close of a letter from Charles I to the Earl of Glamorgan.[25]



John Willis

1602

John Willis was born about 1572. After graduation from Cambridge he became in 1601 pastor of a congregation in London and was transferred in 1606 to Little Bently in Essex, where he worked until his death, which occurred in the year of the Great Plague, 1625. Besides his stenographic textbooks, Willis also published works on secret code writing and mnemonics, but of his life otherwise, nothing is known.

The first edition of his stenographic textbook appeared in 1602, but disappeared during the 19'th century, and not only the German historical writers Zebig[26] and Moser, but also Pitman have gained their knowledge of Willis' system from Lewis, who left a description of the system[27] in his history, referring to the eighth edition of it. Lewis has been quoted for posterity and critically accepted in many very incorrect judgments by the three authors named and several of their successors. In the year 1884 the English investigator, Westby-Gibson,

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25 Hans Moser. Allgemeine Geschichte der Stenographie. Band I. Leipzig 1889. Tabell X.

26 Zeibig also in the Panstenographikon 1869. p. 47 ff.

27 J. H. Lewis. An Historical Account of Shorthand. London 1816. p. 49ff.

discovered Willis' first edition in the British Museum, and two years later Kieth-Falkoner identified another copy in the Bodleian Library in Oxford, and in 1920, four copies of the first edition were discovered in a church library in East Prussia, from which they were delivered to the State and University Library Library at Konigsberg.

At the first International Shorthand Congress in London in 1887, Edward Pocknell gave some interesting accounts of this Willis original edition[28] and in 1926 A. T. Wright published his biographical work on John and Edmond Willis;[29] but the most complete dexcription of the Willis system has been given us the German researcher Johnen.[30]

Willis was the first person to use the word "stenographie", (In the 6'th edition, 1623, "stenography"), a name which now, except, however, in English speaking countries, has been universally accepted.[31] The idea of "creating", so to speak, this word, which was not used in the ancient world, (but if such had been the case, would have meant "close writing), Willis seems to have arrived at because he himself regarded that his script's principal value lay in the fact that by means of it one could crowd much textual material into small space. That he did not obtain this name from any other source is evinced by his own words when he says: "By which name I call this art".

The first edition was published anonymously, and on the title page we read: "The Art of Stenographie, teaching by plaine and certaine

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28 Transactions of the International Shorthand Congress. London 1816. p. 49 ff.

29 A. T. Wright. John Willis S. T. B. and Edmond Willis. In 100 copies for the Willis-Byrom club.

30 Johnen. Archiv fur Stenographie, 1908. p. 9 ff.

31 The Germans, however, are beginning to use the purely German word "Kurzschrift".

rules, to the capacitie of the meanest, and for the use of all professions, the way of compendious writing: whereunto is annexed a very easy direction for steganographie, or secret writing. At London, printed for Cuthbert Barbie. 1602."[32]

The first edition was richer in content than any of the later ones, because it included a number of observations on theory, which were later transferred to a special work published in 1621: "T he Schoolmaster to the Art of Stenography", which was designed to give more detailed explanations, in the form of questions and answers between pupils and teacher, to the later editions of the textbook.[33]

In these, where the system exhibits a number of changes, it is called: "The Art of Stenography, or Short Writing by Spelling Characterie, by John Willis, Bachelor in divinitie."

The textbook came out in 14 editions, 6 of them after the death of Willis. No copies of the second, third, and fourth editions are to be found, but in the 5'th edition in 1617, Willis is named as the author. Of The Schoolmaster's three editions, only one appeared during Willis' lifetime. The last edition of both books were published in 1647.

During the years 1617 and 1621, a certain Robert Willis, who gave lectures on the system in London, took over the publishing rights to John Willis' books from Burbie; and it is not improbable that this Robert was the son of John Willis.[34] After Robert Willis, who died in 1621, the publishing rights went to Henry Seile, who for more than 20 years after

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32 Wright (John Willis and Edmond Willis, p. 16) raises the question, if the "patent" for 15 years, granted to Bright by Queen E lizabeth, and which gave him a monopoly on publishing books on "new symbols", may not have been the reason why Willis did not expose his name.

33 A second edition of "T he Schoolmaster" published in 1628 is found in the British Museum.

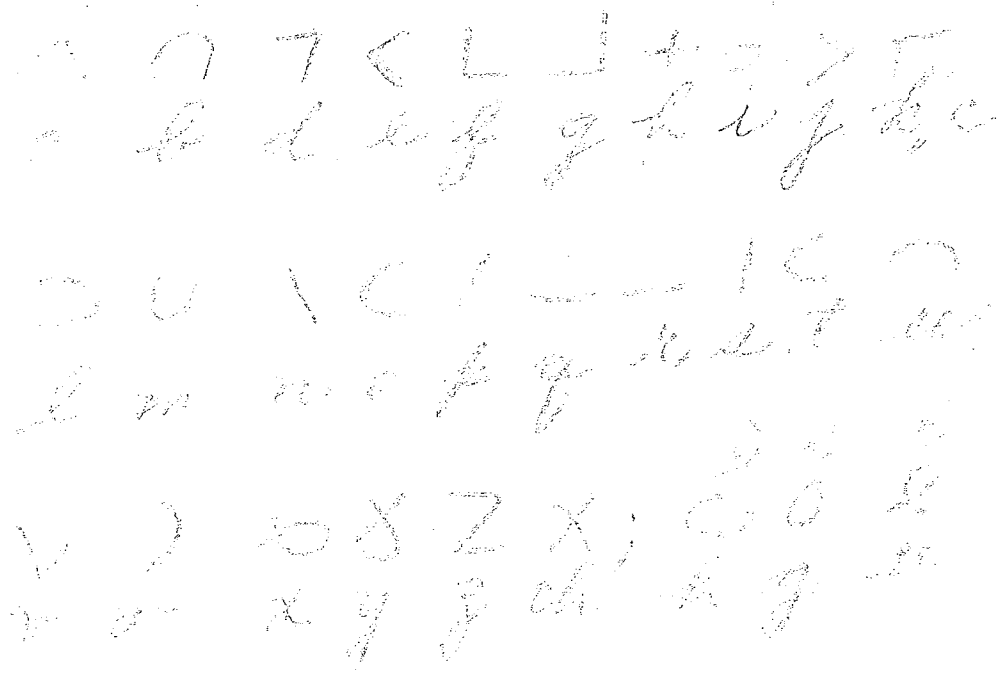
34 Wright. John Willis S. T . B. and Edmond Willis. p. 43.

the death of John Willis continued to publish new editions of his own, despite the competition of such men as Shelton, Metcalfe, Rich, and others.

The first edition of the textbook included 100 pages, of which 16 were taken up by the secret code script. In the introduction, Willis proclaims that his script shall serve the following purposes: 1) constitute a short and compact script, 2) to make possible speedy writing, 3) to serve as a secret script, 4) adapt itself to all languages, 5) to take down speeches made in public.

Willis omits silent letters, does not indicate double consonants, in dipthongs designates only the vowel most sounded, and expresses c with k or s, ph with f, and g with j when they are thus sounded. Thus over 300 years ago, we find a very nearly phonetic spelling.

Alphabet



*) Changed in the second edition.

These characters are not intended, as in Bright's system, to point out the beginning letters in words or syllables, but are pure letter symbols. Willis has thus taken the same great step forward in the evolution of the art of stenography that took place in ordinary longhand when it became a sound script.

He is therefore rightly termed: "The Father of Modern Stenography".

Willis calls his characters "particles", and means thereby "parts" of the letters of ordinary longhand; but when in his textbook, alongside of his stenographic signs, are placed corresponding Latin or Greek letters from which the former are supposed to be derived, we find the derivation in most cases much "sought", and he himself admits that the comparison has been made solely as an aid to the memory in learning.

Judged from every point of view, Willis has taken the commonest strokes from the large Latin initials, and has more or less unconsciously selected straight lines and circle "bows" in various positions, by means of which his script has a geometric stamp, which even in our day characterizes so many stenographic systems.

In certain cases Willis has used the ordinary initials as a direct basis for his characters--a, d (the Greek delta), v, and z--but these ordinary letters are written upright, and in this way the system in its entirety, despite these forms, retains its "geometric" character.

The Willis characters, although in many cases the numerous strokes are unnecessarily long, are nevertheless easy to write and are, above all, very legible. If this had been a question of a word script, there would be little to remark; but when it concerns a sound or letter script, there arises a new requirement, which Willis does not seem to have thought

of: namely, that it should be possible to join the characters together into connected word symbols--and here it failed.

In the meantime Willis was able in certain instances to accomplish relatively short word symbols, thanks to his so-called intermittent (broken off) vowel denotation. Through this he also became the founder of the old geometric stenography, which was further developed and spread, among others, by Edmond Willis, Shelton, and Rich and reached its zenith with Mason and Gurney.

The rules for the intermittent vowels are as follows: 1) At the beginning of words vowels, like consonants, are represented by means of letter symbols taken up from the alphabet, 2) at the close of words by means of dots in different positions according to the diagram following, and 3) within words vowels are not written out, but are denoted symbolically in that the following consonant signs are put in the place where the omitted vowel would belong according to the diagram, if it had been written.[35]

Vowel Diagram

Due to the differences in the form of the basic symbols this vowel plan requires in many instances more or less deviating supplementary rules. The sixth vacant position is used when two consonants follow one another without a vowel between them.

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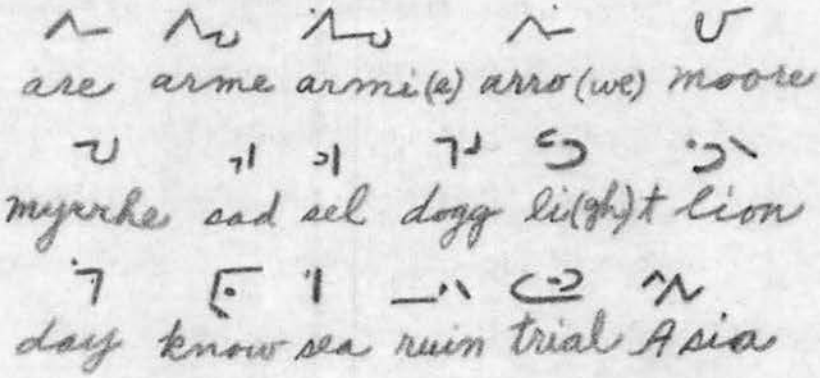
35 This "symbolical" vowel indication (now often in England designated "vowel-mode") can even be applied to dipthongs in such a way that for example m + y in the a position becomes "may", k + w in the e position becomes "kew" etc.

The Willis symbols occur, as is seen, in two sizes. In their large form they are used as beginning letters, and diminished they represent added signs, affixed or disjoined.

The "affixed" added signs, can, however, give rise to difficulties in reading, when they sometimes merge with the basic symbols, so that certain "strokes" become common for both symbols. Moreover, further rules apply for two or more syllable words, which in many cases are so involved, that Willis method of indicating vowels is not nearly so simple as it might seem upon superficial examination.

Word Construction



Lewis and Pitman[36] and other historical writers have asserted that some of Willis' consonant compounds can be confused with certain simple characters--for example rs = r + s becomes d--, but they have forgotten, what Faulmann had already pointed out,[37] that the use of large basic symbols and small appended characters prevents this confusion.

The use of characters in two sizes, in combination with the "symbolic" indication of vowels, is somewhat reminiscent of Stolze's word constructions. Willis' large characters correspond to Stolze's

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36 Lewis. Historical Account. p. 51; Pitman. History of Shorthand. p. 14.

37 Faulmann. Historische Grammatik der Stenographie. Vienna 1887. p. 46.

basic symbols, his small characters to Stolze's appended signs. But the reason why the ending signs are made smaller than the initial characters is an altogether different one with Willis. Certainly he too desired to present the beginning of words as the most important, but for him it was absolutely necessary to know whether a character belonged to the beginning or end of a word, otherwise the vowel positions on both sides of the basic symbol could not be used.

In later editions Willis included a "combination table" for the consonant compounds, where, however, most of the characters have been arbitrarily constructed; and also special symbols for a few suffixes. The plural is expressed by two dots above the word in the singular form.

Willis seems also to have thought of the importance of frequency or occurence of letters, singly and in combination with each other, although much is lacking in his application of this idea. Meanwhile, he remarks in one place in his Schoolmaster:[38] "A letter should have a shorter symbol the oftener it occurs, and one must further see to it that such letters as can be followed by a consonant shall have signs whose last stroke is suitable for joining with the consonant symbol that follows".

In his instructions concerning abbreviations, Willis differentiates between word and phrase contractions.

As a means of shortening words he uses omission of the latter parts of words and contractions, but he also avails himself of the letters in ordinary writing, and a number of mathematical and astronomical signs altogether foreign to his system.

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38 John Willis. The Schoolmaster to the art of Stenography. Chapter I. p. 4.

In his later editions, Willis divides his word contractions into 10 groups (words of sort) where in the first seven groups only the beginning letters are written out.

Words of Sort.

1. Large stenographic symbol.
2. Small stenographic symbol.
3. Large Latin initial.
4. Small Latin initial.
5. Large so-called secretary initial.
6. Small secretary initial.
7. Some other style (For example Greek).
8. Two or more letters written with stenographic signs.
9. Beginning and end written with stenographic signs.
10. Symbolic signs:

sun moon heart congregation appoint matrimony etc.

Mixed contractions often occur:

forefather = stenographic f + ordinary f
money = The sign for moon and a dot in the i-position
overcome = Latin o plus stenographic co
reason = The sign for sun and r in the i-position
commission = stenographic c(k) with the sun symbol in the i-position
The suffix sion = (sjun = sun) = symbol for sun.

Phrase contractions consist of more or less arbitrarily chosen symbols such as, for example, for "that is to say", for "as long as"; and also of purely logical abbreviations, where a long phrase is exchanged for a short one having the same meaning: for example, when the speaker says "The Pioneer of our Lord Jesus Christ", the stenographer writes simply "John" etc.

If Willis' merit was limited to that of being the first to create a stenographic sound script, this would have, notwithstanding what the system was like in other respects, been sufficient to have earned him rank among the great men in stenography; but in addition to this he has given us ideas, which were adopted by his immediate successors, and later bore great fruit in more recent systems.

Willis himself, without any concept of what the future had in store, believed that he had achieved as much as was possible with his "Spelling Characterie", but, on the other hand, he did not overate its importance as a genuine shorthand, but admitted that when it was a case of following a rapid speaker there was nothing else to do but to leave gaps and write down only the most essential".

That Willis' system was very widely spread in England during the first decades of the 17'th century, is indicated by the fact that his textbook, as has been said, appeared in 14 editions.

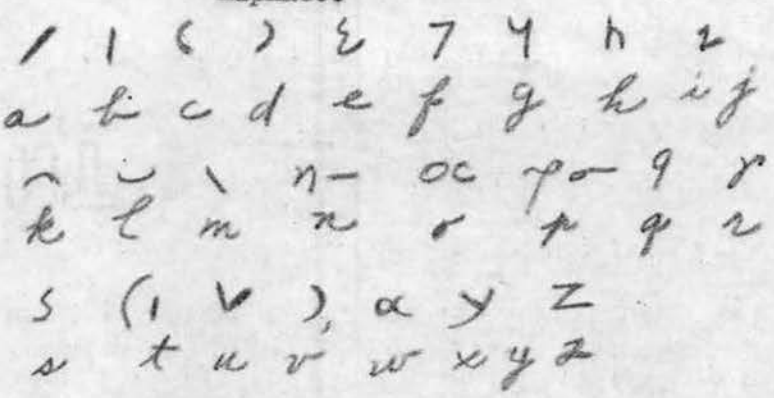
Edmond Willis

1618

Edmond Willis was a merchant in London. The year of his birth and of his death are unknown and nothing is known of his life; nor is there anything that indicates that he was related to his namesake, John Willis.

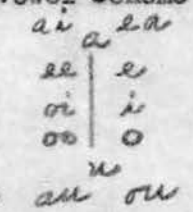
Meanwhile he learned John Willis' stenography as early as 1604 and used it, but did not find himself content with it, and in 1618 published his own system under the title: "An Abreviation of Writing by Character. Wherein is summerily conteyned a Table which is an Abstract of the whole Art, with plaine and easie Rules for the speedie performance therof without any other tutor. by Edmond Willis, Printed by George Burdslowe. London 1618."

Alphabet



As is seen, Edmond Willis has introduced simpler characters for b, l, m, and t than John Willis' half ellipses, and avoided the right angles in d, f, g, k, [39] while in the case of e, h, r, s, he has preferred the longer but more easily joined letters of the ordinary alphabet, and for p and q he introduces straight strokes with joined loops--symbols which have been adopted for the same purpose by Shelton, Rich, Mason--(edition 1672)--and Gibbs, and later came into plentiful use with Byrom, Palmer, Williamson, Mavor, Taylor, and others. Only for (o) v and z did Edmond Willis retain his namesake's characters, and he has himself introduced so many new ones, that he has already, in this way, come to occupy a special position, so far as originality is concerned, among all of John Willis' followers; and this to an even higher degree because it was he who first introduced the important change in the "vowelschemat" in that all simple vowels have been transferred to the right side, or better said taken away from the left side.

Vowel Scheme



39 The right angle, which after Edmond Willis gradually disappeared from the English alphabet, is nevertheless again found in our day in Gurney's h.

At first glance this diagram with all its dipthongs might seem more complicated than John Willis'; but the dipthongs, which are here placed on the left side, occur less frequently and can even be replaced by the nearest simple vowels of similar sound. The main principle is also that none of the five simple vowels have been placed to the left of the basic symbol, so that it is unnecessary to go back with the pen, which was the case in John Willis' system for the most common vowels a e i where these were to be placed to the left of the previously written basic symbol. The advantage of this change outweighs the disadvantage that in certain instances it might become somewhat more difficult to differentiate between a and e or o and u.

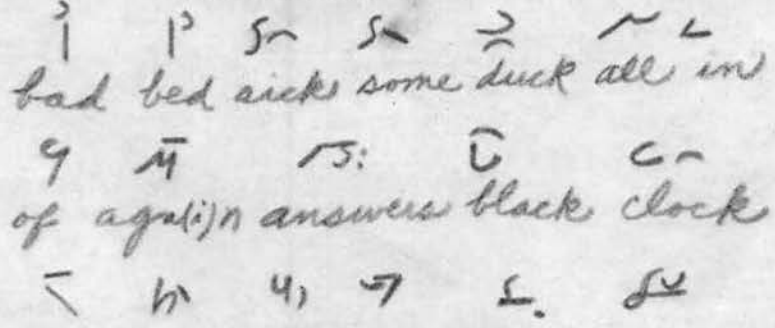
At the beginning of words, as in J. Willis' system, vowels are denoted by letters, and at the end of words by means of dots and respective vowel positions. Two dots indicate the plural.

As in John Willis' system, the vowel symbolizing consonant signs following are written smaller, although nothing specific is said about this in the textbook.

It is worthy of note that Edmond Willis used two characters for each of the letters n o p and t, but, on the other hand, a common sign for i and j and u and v respectively.

Double consonants are represented as one, but otherwise he has little to say about phonetic spelling, which is, however, applied in practice.

Word Construction



Edmond Willis relates how that in the course of "his long practice" he has found that when a word begins with two consonants "it is nearly always l or r that is the second consonant, except when the word begins with s". Some of his consonant joinings also indicate that in his choice of simple signs he considered their joining possibilities.

For prefixes and suffixes E. Willis uses more or less independent signs, and the number of obligatory abbreviations he sets at 200, although the "list" included in his textbook contains only 171 words, among which the conjunction "and" occurs no less than six times! The contractions are based on stenographic characters as well as letters from the ordinary alphabet, wherefore even altogether independent letters are used.

It is of interest to find how Edmond Willis maintains that special symbols (monograms) for prepositions are advantageous in devising contractions for longer words.

To his students he recommends the method used by himself" that when one hears a word spoken in company, to think of how it should be written in shorthand".

Edmond Willis' textbook is not only shorter but also easier to learn than John Willis'. It includes 20 pages in very large print and 8 pages of engravings. A second enlarged edition came out in 1627.

Of the first edition, which came out in two printings, only three copies are to be found: one in the British Museum, one in the Bodleian Library, and one in the Library of Congress, Washington D. C. Of the second edition, on the other hand, two copies are to be found in the British Museum, and half a dozen other copies in different places, one of which is the Stenographic Library in Dresden.

Without a doubt Edmond Willis' system constituted an appreciable improvement over his namesake's creation, and its influence upon the systems immediately following was much greater than early historical writers in general realized.

Viewed not only as a system but also as a stenography for practical use, Edmond Willis' "Abrevitation of Writing by Character" takes its rank among the greater shorthand systems of the 17'th century.

It was this system which Sir E dward Nicholas, private secretary to C harles I, used when he made stenographic reports of the proceedings of parliament in 1641 for his king who sojourned in Scotland.[40] Sir Edward has been called "the first parliamentary stenographer" but this is not correct, because a parliamentary stenographer must be one who has been commissioned by an imperial or state diet to officially record the proceedings. Nor was there in his case a question of literal reports. B ut no doubt it was the first occasion in modern history when the proceedings of a parliament was taken, over its head, by means of stenography, and that this was done at the instance of the king gives a special interest to the matter.[41]

It was also Edmond Willis' shorthand, which General Monk had in mind, as he, when King C harles II expressed his dissatisfaction with

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40 Dictionary of National Biography. Nicholas, Edward

41 The Correspondence between Charles I and Sir Edward Nicholas is contained in Bray's edition of Evelynes D iary, Volume IV.

his minister for foreign affairs replied:

"Sire, je ne connais ausune qualite necessaire a nu secretaire d'etat qui manque a M. Morrice, car il parle le francais, et excelle dans l'ecriture par abreviations".42

Edmond Willis differs favorably in one respect from his contemporary authors of shorthand systems. He despises and warns against all excessive self praise, believing that the public esteem of stenography will thereby suffer, saying further that: "Good wine needs no bush".

Folkingham

1620

Little was known about William Folkingham except his name until 1898, when the English researcher A. T. Wright brought to light two editions of his textbook, and even succeeded in obtaining some information about his personal life.[43] Wright's small brochure, which was not distributed through the book trade, received little circulation, and it is thanks to Johnen, that its contents have reached a larger public.[44]

Folkingham belonged to a family which acquired its name from the small place Folkingham in Lincolnshire. He was born and also died in this province. In the year 1690 he is spoken of as the author of a work on "land measurement", but a few years later he is found to be

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42 Burnet. Memoires de mon temps, tom I, liv 2, "Your Majesty, I know of no faculty, which is necessary for a secretary of state (here foreign minister) which Mr. Morris lacks; he speaks French and is a skillful stenographer". It is true that Monk uses the expression "abbreviated writing" but unquestionably he means by this stenography, especially since the king's elderly private secretary (Nicholas), as mentioned, used Edmond Willis' system, which was called "Abbreviation of writing by Character."

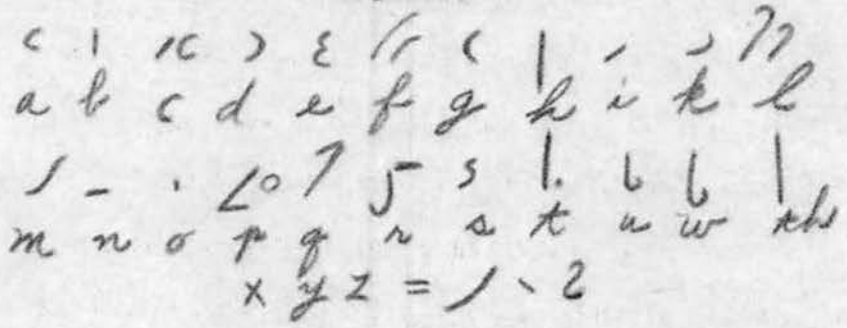
43 A. T. Wright. William Folkingham: Mathesios et Medicinae studiosus. London 1898.

44 Johnen. Archiv für Stenographie 1913. p. 70 ff.

well established as the postmaster in Stamford, where in his leisure time he busies himself with authorship of works on mathematics and medicine, consequently, a man who attempts much.

The "postmaster" meantime does not neglect the stenographic textbook. He calls his system "Postwrit", dividing the book into "Postages" and these into "Stages". On the title page of the first edition we find: "Brachygraphie, Postwrit, or the Art of Short Writing. By W. Folkingham, his maiesties Post of Stamford." This first edition appeared in 1620, and a second edition two years later.[45]

Alphabet



Folkingham's characters are divided into three groups: 1. Those of ordinary size, 2. Large characters resting on the line, and 3. Large characters drawn through the line. The signs of the two latter groups can in certain cases be diminished and combined with the medium sized ones.

Only the symbols for b d e n and s are obtained from Edmond Willis, and only the adjoined sign for r from John Willis. For the rest, Folkingham's fully independent alphabet contains characters that are both simpler and considerably easier to write than the characters of

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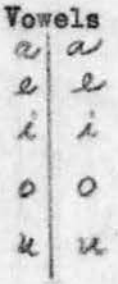
45 In the second edition G. Folkingham G. takes the place of W. Folkingham. The first G refers to "Guill" (the Latin form for William) and the second G. for the word "Gentleman", which at that time one could designate oneself without being considered conceited.

either of the Willis'. He is the first one to use "over and under strokes", and many of his characters are written with the same slant as those in ordinary writing, so that Wright with justice considers him a sort of forerunner of the later cursive systems.

The indication of vowels is most nearly like that of Edmond Willis, but the dot is used in its different positions to denote vowels at the end as well as the beginning of words, and all the five simple vowels are right above and below each other.

Vowels



Most of the consonant combinations are obtained through simple joining (see the symbol for th), whereupon the simple symbols can be written in a different direction than usual. An odd determination is that lp lr fr pr and gth can be changed respectively to pl rl rf rp and ght by putting a dot below them.

The system, as a whole, is simple, but the author's very remarkable language and methods of expression increased the difficulty of learning it in no small degree.

Folkingham's importance as originator of a system has heretofore been greatly underestimated.

That he purposely strove to accomplish a more easily written script than his forerunners by using the simplest strokes from ordinary writing as a basis is clearly indicated by his alphabet and is further revealed in his foreword, where, among other things, says: "While

working out this little shortscript my aim was to find time and space saving hand movements, which did not depart from the best forms of ordinary writing; and for that purpose I have selected part strokes from ordinary writing to form an alphabet, which with the help of a few short rules in two chapters includes the whole system."

Folkingham seems to have returned to his first interest medicine during his later years, since in 1623 he distributes a description of a plant extract, a laxative remedy, which mixed with ale produces a very healthful drink. He speaks with enthusiasm of the benefit of "a neat cup" of his "nappie ale". Instead of devoting himself to propaganda for his system of stenography, he advertises this extract which is sold for 5 shillings apiece. He thinks also that this is "too cheap for such a valuable medicine, especially since during the 14 days that the cure continues one must eat and drink less, and in this way one saves more money in food and drink than the cost of the medicine".

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