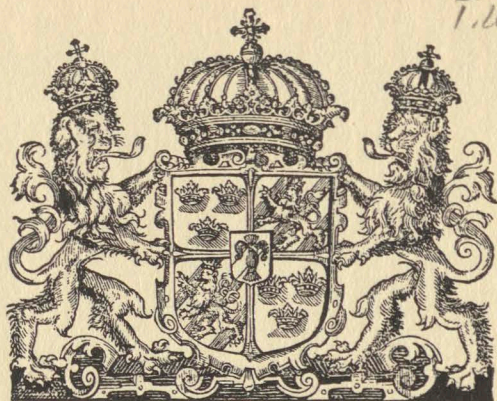


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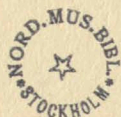


DET SVENSKA BOK- trycket genom tiderna

*Swedish Printing through the Ages.
Der schwedische Buchdruck im Laufe der Zeiten.
L'imprimerie suédoise à travers les ages.*

I samband med den sjätte
internationella boktryckarkongressen
utställt i

NORDISKA MUSEET



Nordiska museets
bibliotek

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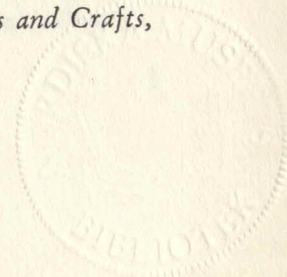
UTLÅNAS EJ

SWEDISH PRINTING TROUGH THE AGES

Commentary on an exhibition arranged in the Northern Museum from August 1st to September 5th, 1948, in connection with The Sixth International Master Printers' Congress in Stockholm.

The exhibition »Swedish Printing Through The Ages» in the exhibition hall of the Northern Museum has been arranged on the initiative of the Committee of The Sixth International Master Printers' Congress, as part of the Congress' attempt to show to its members the position of Swedish Printing in our days and the long tradition behind it.

For the Northern Museum, where our aim is to preserve objects which recall the growth of our civilization, to study its history and make known to the public the results of our researches, it is a special pleasure to be able to provide a display of examples of Swedish printing throughout its four hundred and fifty years of development. In the early days, the founder of our Museum showed a keen appreciation of printing and of its importance in the life of the nation. It has been possible for us to use the collections already in the possession of the Museum, enlarged by the books deposited by the Swedish Federation of Master Printers, as the framework of this exhibition. Moreover, the Royal Library, the University Library, Upsala, the Röhss Museum of Arts and Crafts,



Gothenburg, and others, have very kindly lent us books and publications.

The exhibition is not meant to show rarities, sumptuous publications, or remarkable books. Rather we have tried to show you the historical development of printing as illustrated by typical Swedish books through the centuries. Unassuming popular books are shown side by side with costly publications.

This little guide is intended to help you to find your way among the many books in the exhibition, and at the same time to be a brief summary of the history of Swedish printing.

ANDREAS LINDBLOM

Director of the Northern Museum

THE SIXTH INTERNATIONAL MASTER PRINTERS' CONGRESS

is being held August 1—6, 1948, under the high patronage of H.R.H. The Crown Prince Gustaf Adolf of Sweden. It is arranged by the Swedish Federation of Master Printers, the Swedish Typographic Printing Trade Employers' Federation, and the Swedish Lithographic Printing Trade Employers' Federation.

The President of the Congress Committé is Mr. Nils Ahlund. The General Manager of the Congress and Chairman of the Executive Committee is Mr. Ernst Kulling.

The exhibition »Swedish Printing Through The Ages» has been arranged by Mr. Carl Björkbom, Mr. Fredric Bagge, Mr. Bengt Bengtsson and Mr. Anders Billow. This commentary has been written by Mr. Björkbom (Middle Ages—1700) and Mr. Bengtsson.

This publication is type-set in the School of Printing and printed at Nordisk Rotogravyr, Stockholm, 1948.

THE FIRST SWEDISH PRINTERS

Swedish books from the Middle Age.

In all countries, where the Reformation was introduced, the monasteries and churches were plundered and their libraries destroyed. Even in England, where in general there was not so much violence, hardly anything is left of the mediaeval libraries. To a certain degree Sweden is an exception. Even though, like anywhere else, there was little consideration for the old papistic literature, the thrifty king Gustavus Vasa took care that the costly parchments were not destroyed but used as covers for the account books of the Royal Treasury. Out of the thousands of parchment leaves still existing in the archives one has been able to reconstruct great parts of our mediaeval libraries. Some of the oldest Swedish imprints have been preserved to the present day only in this way. Also several leaves from the 42-line Gutenberg Bible, have been found, from a copy originally in the library of the nunnery of Vadstena.

Parchments
used for
bindings

The introduction of the Art of Printing in Sweden.

Already between 1470 and 1480 the art of printing had been introduced into the leading European nations. During the following decade printing shops were founded in Denmark and Sweden. It was not until considerably later that the art of printing came to the other northern countries, to Iceland in 1524, Finland in 1642 and Norway in 1643.

The first printer of Sweden, Johann Snell, came from Lübeck which had very early become a centre of the printing in North Germany. In 1482 he had been in Denmark and there put up the first printing shop at Odense. The next year he moved to Stockholm, probably for the purpose of printing a missal for the archdiocese of Upsala.

Johann Snell
1483

During his year in Stockholm he also printed a small collection of moralizing fables, a letter of indulgence and a Latin grammar, preserved only in a small fragment.

Missale
Upsalense The only copy known of the *Missale Upsalense Vetus* was collected from covers from the archives. The colophon, probably containing the name of the printer, is missing. A comparison with Snell's other prints shows, however, that it must have originated in his office.

Dialogus
Creaturarum
Moralizatus *Dialogus Creaturarum Moralizatus* is the first of the books printed in Sweden with an imprint. According to the colophon in Latin, it was »printed by Johannes Snell, master printer, begun and by the help of God completed in Stockholm in the year 1483 in December on the day before St. Thomas' day» i.e. on the 20th December.

The Incunabula Period.

As a rule the Incunabula Period is considered to have ended with the 15th century, though a new epoch in the art of printing had already begun earlier in some countries. As regards Sweden it seems to be suitable to consider the earliest period up to the foundation of the Royal Printing Office in Stockholm in 1526.

During that time there were printing shops in five towns, viz. in Stockholm, Upsala, Söderköping, in the Bridgetin Monastery in Vadstena and in the Carthusian Monastery at Gripsholm outside Mariefred. From these there are about 40 imprints still extant. Besides theological literature (manuals and religious books of various kinds) the oldest Swedish imprints consist only of letters of indulgence, circular letters, etc. and elementary text-books.

Bartholomæus
Ghotan 1487 In 1487 Snell was succeeded by Bartholomeus Ghotan, also coming from Lübeck. He too remained here but one year during which time he printed a missale for the diocese of Strängnäs — the most beautiful of the early Swedish books — a psalter, a manual for the diocese of Upsala

and a few smaller works. After his return to Lübeck in 1488 he continued to work on behalf of his Swedish employers.

When Ghotan left Stockholm, his assistant Johann Johann Fabri
Fabri or Smedh stayed here, and in 1489 he probably 1489
printed a letter of indulgence, entitled *Articuli abbreviati*. His name is also found on three imprints from the years 1495—96, viz. breviaries for the dioceses of Upsala and Strängnäs and a little religious pamphlet in Swedish, Gerson's »*Aff dyäffwlsens frästilse*», the first book printed in Swedish. After 1496 no books, as far as we know, were printed in Stockholm until 1526 when the Royal Printing Office was founded.

From the small monastery printing shops only one im- Printing in
print from each is extant, viz. from Vadstena a small monasteries
prayer-book dated 1495, and from Gripsholm a religious work by Alanus de Rupe, *De psalterio beatae Mariae virginis*, dated 1498.

In 1510 a printing office was founded in Upsala for Upsala
the needs of the archbishop. From 1510—19 some ten insignificant imprints were issued.

In 1523 Bishop Brask had founded a printing shop at Söderköping, from which four imprints are known, but Söderköping
only two of these, *Historia sancti Nicolai*, and a manual for the diocese of Linköping are preserved. The shop was closed in 1525 on the orders of Gustavus Vasa in connection with the opening of the Royal Printing Office in Stockholm.

Printing in Upsala was revived in 1525 by Bartholo- Bartholo-
maeus Fabri, probably a son of the above-mentioned mæus Fabri
Johann Fabri, and Georg Richolff junior, a printer from Lübeck. Only a few imprints from that office are extant, all of rather poor workmanship. In one of them, a prayer-book, borders were used for the first time. This printing shop was later incorporated in the Royal Printing Office, founded in the following year.

EARLY VASA PERIOD

The Royal Printing Office, the only printing office during the 16th century.

The art of printing, Martin Luther says, is the foremost and most important gift of grace, which God has given Gospel to its progress. It may also be supposed, that already at an early stage, the leaders of the Reformation in Sweden tried to make themselves masters of spreading the new faith by means of the printed word. Gustavus Vasa also clearly understood the importance of printing not only for the religious revolution but also as a political weapon. In 1523 he himself had had a pamphlet printed in Germany against king Christian II of Denmark. Negotiations had been taken up with Georg Richolff rather early and in 1526 or possibly at the end of the previous year the King had Richolff's office moved from Upsala to Stockholm and so founded the Royal Printing Office. At the same time he disarmed his opponents by closing Bishop Brask's printing shop at Söderköping.

Georg
Richolff
1526

The first master of the Royal Printing Office was Richolff, who, however, was to return to Lübeck already in the autumn of 1526. The Office was then conducted by Swedes up to 1582, when again a German printer, Andreas Gutterwitz, who had previously been working in Copenhagen, was made master. Richolff was, however, recalled for the printing of the Bible of 1540—41, the printing office being transferred to Upsala for the purpose. Simultaneously with this work Richolff printed a few more books in Upsala.

Andreas
Gutterwitz
1582

The Royal Printing Office was the only one in Sweden up to 1604. Of the books published by the Office during the 16th century about 450 are still extant. Of these about a third are royal decrees and other official publications; of the rest about two thirds consist of religious books. The

cultural interests that nevertheless existed in Sweden at least in the latter half of the century, are little reflected by the national book production. With few exceptions this is of little value from a typographical point of view, and can in no wise be compared with the printing not only on the continent but even in our neighbouring country, Denmark.

An exception is the above-mentioned Gustavus Vasa Bible, which, however, is rather to be regarded as a purely German work, even though it was made in Sweden. The type as well as all the beautiful woodcuts by prominent German artists, which Richolff had brought from Lübeck, were not used afterwards in any other Swedish imprint.

The Gustavus
Vasa Bible
1541

During the earlier half of the century the book production consisted almost entirely of religious books, school-books, political pamphlets and royal decrees. Not until Andreas Gutterwitz's time is other literature represented.

Richolff also brought from his own office in Lübeck schwabach types, Gothic title types and several initials with ornaments composed of flowers and animals. Also the Roman and Italic types which were used for the first time in 1559 and 1573 resp. came from Richolff's office. At that time Copenhagen was at its height in its typography and from there Gutterwitz brought a badly needed addition to the type stock. Through him the fraktur type was introduced as main type in Swedish typography. Besides he brought a Greek type, types for printing music, French initials, etc.

Types

As regards book ornament Richolff already from the beginning introduced the title borders characteristic of the German Renaissance books, with ornaments and figures as well as with architectural design. For the embellishment of the title page sometimes very plain borders were used. From the middle of the century decorative repetition borders were also introduced, at first rather awkwardly composed out of type material at hand. Margin and

Book
decoration

paragraph marks and regular type ornaments were first used by Gutterwitz. Decorative tail-pieces were made great use of, partly with simple line ornaments, partly also with leaf patterns. Finally loose flourishes were used for the decoration of single letters, of the type of the famous Theuerdanck.

The illustrated books are few. Except in the Gustavus Vasa Bible woodcuts are found in some prayer-books and other religious books. They are all German — in several cases evidently only borrowed for the occasion — or rough copies from German originals. It is a clear exception when in Agricola's *Rucouskirja*, 1544 and the Finnish New Testament, 1548 is found a copy of a French engraving, an image of Christ from one of Kerver's prayer-books, printed in Paris, 1511.

THE PRINTERS OF THE GOLDEN AGE

The Typography of the Baroque Period.

The art of printing in Europe during the 17th century reflects the cultural life in general with its strong contrast between a rich and flourishing court life on one side and the need and destitution among the lower classes on the other. The printing of this period is characterized by a series of outstanding works produced with an unprecedented extravagance, but on the other hand by a mediocre typography.

The typography of the Baroque Period is characterized by large size, overdimensioned types, overcharged ornaments and copper engravings for illustrations and decorations, in which the prevailing predilection for allegories played an important rôle. The large size demanded

above all a particularly sound artistic sense for good results. Also did the copper engraving not harmonize with the letterpress to effect a homogeneous work of art as did the woodcut during the previous century.

Sweden holds a unique position during the 17th century. It had taken no part in the imposing development in the art of printing during the 16th century but the 17th century became a brilliant period in its typographical history. Swedish typography of this period is characterized by a modesty in the use of the typographical forms not met with in other countries. The general standard was also very high.

This fact is of course a result of the general cultural expansion under Gustavus Adolphus and Christina. At the beginning of the century there was still only one printing shop in the country, but at its close there were seventeen. Also the provincial towns had got their own printing shops, Uppsala in 1613, Västerås in 1622, Kalmar in 1626, Linköping in 1636, Nyköping in 1645, Göteborg in 1650, Malmö in 1659, Lund in 1663, Jönköping in 1688. Besides these there was a private printing shop on the island Visingsö in Lake Vetter from 1666 to 1685.

In general the typography of the period was still under German influence. Practically all the leading printers — Reusner, Meurer, the family Keyser, Burchardi — were German immigrants. A certain influence from the Dutch typography can, however, be noticed. A Dutch type founder, working in Stockholm from 1618 to 1649, furnished several of the newly established shops with types. The Dutch printer and publisher Janssonius also established a branch office in Stockholm in 1647. About the middle of the century Meurer published a few works in small size, for which he evidently took the Elzevir books as models.

The fraktur type predominated even if the schwabach type was still in use. As before the roman and italic types were used only for works in Latin. The attempts

made by Meurer to use the types also for Swedish works did not meet with success.

The composition of the title page was characterized by a mixture of types of different sizes and forms. The old Renaissance borders were still in use, but became more and more replaced by repetition borders and plain rules. Rule-frames were also very often used throughout the whole of a book, especially in the case of books, having side-notes.

Copper engravings The copper engraving was of secondary importance for title pages and illustrations owing to the fact that this form of art had not yet gained ground in Sweden. With the exception of the grand Gustavus Adolphus Bible, printed by Olof Helsing in Stockholm in 1618, it was not until the middle of the century that, introduced by Henrik Keyser, the copper engraving gained importance in book art.

Ignatius Meurer The leading printers during the 17th century were Ignatius Meurer and the eldest members of the family Keyser. Meurer, who worked in Stockholm from 1613 up to 1672, carried on an important printing and publishing business, embracing especially theological and historical literature, law books, school-books, almanacs, etc. In 1646 he also published the first Swedish newspaper. Keyser especially published bibles and law books.

FROM BAROQUE TO NEO-CLASSICISM

Late Baroque and Rococo.

And so the development went on. After the unsuccessful wars of Charles XII, when the country began to recover, the art of printing was given an acknowledged place in society which it had never had before. During the

Period of Liberty, distinguished by constitutional monarchy with great political activity of the parties, there was admittedly a censorship, but literature began to blossom as it had never done before. The new factor in society, the middle class, became a supporter of culture, creating scope for a rich production of books. It became fashionable to read books and to own books.

Science was taken into the service of society in accordance with the fundamental principles of Mercantilism, and the new Academy of Science, founded in 1739, led the way in the publication of the most up-to-date results of research. Men like Carl von Linné, the botanist, and C. W. Schéele, the analytic chemist, made Swedish science famous far beyond the borders of the country. Political and economic research was the favourite subject of the age, and gave rise to a number of scientific publications.

At this time too the periodical was born, first scientific periodicals and then literary, with Lars Salvius' »Lärda Tidningar» in the van. Periodical literature

The daily press received many new additions now, not least out in the country, where at the end of the century practically every printing office published a newspaper of its own.

Baroque still dominated Swedish printing during the first half of the 18th century, but Rococo, the fashion for art and art-handicraft in the middle of the century, left no particularly remarkable traces in typography proper, although an increasing liking for roman type can be noticed in the leading printing houses. The fraktur type, the angular ascenders and descenders of which in no way matched the soft lines of rococo, maintained its place tenaciously in simple printing. In religious books it was used exclusively. And even schwabach still appeared for a long time for emphasis in Bibles, as we now use italics. Fraktur dominating

One of the pioneers of roman was the treatises of the Academy of Science, where fraktur was abandoned in the coming of roman

1743. The influence of rococo was most clearly noticeable in the appearance of text pages and title pages. Baroque's horror of empty spaces was lessened and its strong contrasts between the different lines on the title page, often printed alternately in black and red, were abolished in favour of quieter proportions.

The rococo ornaments, often borders or bunches of flowers, helped to soften off the impression of the rectangular rows of letters.

Stockholm was still the predominant city for printing, and the printing houses with their traditions from the 18th century, still flourished under their new owners. The Royal Printing Office (formerly the Keyser Printing House) was taken over in 1738 by Peter Momma, an industrialist who contributed in many ways to raising the standard of Swedish printing, although his type-foundry, established in 1741, was not so successful as he had hoped. From the time of van Selow, Swedish printers had imported all typographic material, but with the help of public funds Momma had wanted to make this import unnecessary. Two type-foundries were later established in Stockholm and were able to supply printers with a good deal of the type they needed.

Peter Momma

J. L. Horrn Johan Laurentius Horrn, of German origin, was a skilled expert and energetic publisher, who was printer to the Academy of Antiquities. In this capacity he printed some handsome memorial publications. His printing house was transferred after his death to Lars Salvius, who married his widow. He extended the publishing business and is reckoned as one of the great pioneers of the Swedish book trade.

Lars Salvius

Henrik Fougst Henrik Fougst, Peter Momma's son-in-law, took over the Royal Printing Office in 1770, after having attempted to start a type-foundry in the 1760's, among other things for casting music in a way he had invented himself. But he became far more successful as a printer than as a type-

founder, and his publications are distinguished by beautiful type and even, spacious composition.

The printing shops in the country usually did not possess the resources with which the Stockholm printers could work, particularly in their stocks of type. Their work too was of a simple nature — religious tracts, sermons and occasional writings. One of their specialities was broadsides with coarse coloured woodcuts — *kistebrev* — sold to the peasants at markets or by pedlars; another was ballads to be sung in popular tunes. Occasionally however very fine specimens of printing were published by these provincial printers. The most prominent of them were the University printers, in first place Johan Edman in Upsala, but also his fellow printers in Åbo and Lund. In Lund, Carl Gustaf Berling, a German, had taken over an old printing house in 1745, after having been some years in practice in Copenhagen at his brother's, the founder of Berlingske Tidende. C. G. Berling's printing house did not only work for the university. His production of popular material was very great. In Karlskrona a printing works was founded in 1746 in connection with the naval station. It was called The Admiralty Printing House, and published among other things the distinguished 'Evolutioner til siös', a remarkable work by this small printing house. Elsewhere the printers in the cathedral cities were best able to maintain their position, with the Cathedral Chapter and the Grammar School giving regular orders for official matter and religious books.

University
printers

C. G. Berling

NEO-CLASSICISM

It is difficult to say when Neo-classicism first appears in printing. The use of Roman type is in itself no sign of a tendency to Neo-classicism. It is not until the typography itself, the lay-out of the text pages, title pages,

etc., receive a strict, classical line, that one can speak of a new style in printing. This begins to appear during the 18th century; and when the Didot types began to be imported on a larger scale, which was in the 1790's (by the Ekmansson Printing House in Stockholm), the foundation of a new typography was laid.

Sweden is almost completely under French influence during this period. In Paris a printing works had been founded in 1713 by François Didot, who became the ancestor of a line of famous printers and type-founders. His son François Ambroise Didot cut new Roman types which were distinguished by classic form as well as refined proportions. During the last decades of the 18th century and a good way into the 19th, the Didot types set the tone for Roman type both on the continent and in Sweden. Admittedly it was difficult for the Swedish printers to get type from France during the Napoleonic wars, but Breitkopf in Leipzig and other German type-founders were using Didot matrices and delivered types to Sweden. Swedish type-founders also bought matrices for Didot type and advertised for them.

Bodoni Giambattista Bodoni, the great Italian pioneer, did not exert any direct influence on typography in the northern countries during the Neo-classical Period. He is the genius, the pioneer, relatively isolated in his own time. It was not until much later in the 19th century that his ideas came into general acceptance.

Among Swedish printers during the Neo-classical Period, in addition to those already mentioned, like Fougé and Johan Samuel Ekmansson, we notice also Anders Jacobsson Nordström who in 1782 established a type-foundry. Ekmansson's successor in the printing business

Carl Deléen was Carl Deléen, a man with gifts in many fields, whose printing house during the first twenty years of the 19th century was doubtless the best one in Stockholm for type. He published a number of dictionaries. Prominent printers

included also the members of the Lindh family. Johan, Lindh the father, was a skilled printer in Örebro who gave his sons a thorough training. Johan Pehr Lindh, his son, moved to Stockholm, where among other things he printed the almanac for the Royal Academy of Science and had an extensive publishing business in addition. At the beginning of the 19th century, when Stockholm was left without a type-casting works, Lind put into practice the plan he had long cherished of establishing a really first-class type-foundry. He bought up the Popp foundry in Copenhagen and provided it with new matrices and other material from France. After the death of Lindh in 1820, his firm passed over into the hands of P. A. Norstedt and in this way the firm of P. A. Norstedt & Sons was founded, who further improved Lindh's foundry.

P. A.
Norstedt

The brother in Örebro, Nils Magnus Lindh, ran his business on big lines. First of all he was very successful in printing cheap hymn-books and other publications for the masses, which he sold at markets and through pedlars. After a while the business was extended to belles-lettres and he became the first major publisher in Sweden with connections over the whole of the literary world during the 1830's and 1840's. He was also the first Swedish printer to acquire a modern cylinder press (a multi-process machine from Applegath & Cowper, London).

The Liberty of the Press Act of 1812 created an entirely new situation for publishing in Sweden. »By 'Liberty of the Press' is to be understood the right of every Swedish man to publish without any hindrance in advance from the public authorities», runs the royal decree. So the censorship was removed and an important step towards civil freedom was taken. And the number of printing houses increased rapidly during the early years of the 19th century. In Stockholm at the turn of the century there were thirteen printers and by 1817 the number had grown to twenty.

Freedom of
the press

FROM WOODEN PRESSES TO CYLINDER MACHINES

Early techniques.

Printing techniques remained for about 350 years on the same level as in the time of Gutenberg. There had admittedly been minor improvements from time to time, but the main technique — hand setting with composing stick and galley, and printing in a press built of oak, had remained unaltered.

In order to understand 19th century printing, one must be acquainted with the remarkable new inventions which were brought into use during the early decades of the century and fundamentally altered the technical basis of the printing trade.

The wooden press Printing in a wooden press was relatively complicated and needed great skill, although — as the exhibition gives us many instances — the result could often be brilliant. Because of the individual peculiarities of the press and the knowledge and proficiency that it demanded, being a printer became an art handicraft which mercilessly showed up a poor workman but gave a skilful man correspondingly good results. The main drawback of a wooden press was its inability to produce a firm impression, due to the springiness of the wood, however powerfully the press was built. In actual practice, it was not possible to make the platen larger than half the bed which meant that normal formes, for instance those for a book in octavo, had to be printed in two motions. Further the press had to be seen to frequently, so that warping and shift in the wood could be neutralized. In addition it was easily damaged.

Nineteenth century technique.

The Stan-
hope press

In 1800, Charles Stanhope, Earl of Stanhope, invented

a new hand-press, entirely of iron, where the earlier drawbacks were almost entirely absent. The iron did not give, and so the platen could be made as large as the bed, and even the largest formes could then be printed in one motion. The adjusting and fitting of the formes was made much easier, and of course the speed was considerably increased.

Stanhope's presses spread across Europe and were introduced into Sweden in 1828. Norstedt bought the first of them. In 1832 Theofron Munktel, the machine manufacturer in Eskiltuna, began to build Stanhope presses, which began gradually to find their way into most Swedish printing works.

The printers' eagle holds in its claws a couple of ink-balls, used for applying the ink to the formes. These Ink-balls balls were circular pads of cotton or hair, covered by leather, and provided with a handle. They had their advantages during 'drawing up' as it was called, but they had to be treated with very great care. Between printings too the ink-balls had to be looked after so that they did not dry or get flattened. When these dabbers were replaced by cast rollers, made of a soft, tough mixture of syrup and paste, it was a great step forwards. Draw-ink-balls ing up became easy and could be entrusted to quite inexperienced apprentices. Rollers

But the greatest importance of the invention of 'roller paste' was for roller presses (cylinder presses) which now began to capture the world market. Friedrich König, a German, had constructed a press in 1812—1814, where the paper was printed by a revolving cylinder instead of a flat platen. This made possible the change from hand presses Machine to power presses, driven by a steam engine or some other presses mechanical means. König constructed a number of kinds of presses, among which a multi-process machine, a press that printed both sides of the paper in the same process, was highly successful. His presses were constructed in

England to begin with, where he lived until 1817. It was one of these presses that Lindh in Örebro acquired in 1829. After him, Lars Johan Hierta, the publicist and printer, bought a similar machine and in 1835 a third press of this kind was set up in the printing office of the Official Gazette (Statstidningen).

After that development was rapid and a number of power presses found their way to Sweden. König & Bauer, König's factory in Germany, delivered a number of presses during the second half of the century and at the same time a Dane, J. G. A. Eickhoff of Copenhagen, who set up in business in 1848, constructed both hand and machine presses for Swedish printers. After a while American presses too began to come to Sweden. This is not the place to tell of the development of printing techniques during recent decades. Power presses, wherever they are made, are variations and improvements of König's original invention.

The Scandi-
navian
press
Lagerman
It might be worth while mentioning a few Swedish press constructions. In 1838, S. A. Holm, a mechanical engineer, invented a machine press for platen printing, which was manufactured in England and on the continent under the name of Scandinavian Press. The first one of these to be sold to Sweden came to Norstedt & Sons in 1843. Alexander Lagerman, whose inventions covered many fields and who is famous for his match machines among other things, constructed an automatic platen-press in 1902, which has been most successful and is still being manufactured.

Type-
founding
Type-founding, the technical basis of the art of printing, like other technique, remained quite stationary until the 19th century. The type-foundries which have been mentioned earlier were run entirely as handicraft. But the construction of matrices had been so far rationalized that the big German and French type-founders used to sell not only type but also matrices to their humbler Swed-

ish colleagues. It was not until about 1840 that the first type-casting machine appeared, a relatively small machine, turned by hand. It was invented by a Dane, I. Brandt, and the first of these machines sold to Sweden came in 1846 to Norstedt, who were using machines of this type right down to 1890 when the entirely automatic machines were introduced.

An important addition to Swedish type-founding came in 1837 when the Berling Printing House in Lund established a first-class foundry, which became very important for the printing trade throughout the country.

ROMANTICISM

New type-faces.

The predilection for antiquity, prevalent in art and handicraft from the 1780's to the second decade of the 19th century, became more and more tinged with romanticism. The pure and simple classical forms became mingled with foreign elements gathered from various epochs and cultures, until at last what is generally called romanticism emerged.

This romanticism is visible in no slight degree in typography. The neo-classical typefaces are still being used, but their characteristic features, e.g. the contrast between stems and hairlines is emphasized. Under the influence of the prevailing fashion in handicraft new type-faces saw the light: Egyptienne, 1811, Sans Serif, designed already in 1816 but commonly used only after 1830's and several other ornamented faces, both of Roman and Gothic character. A special group is formed by the »gothicized» types, imitating the old Gothic of the Incunabula Period. These types were a result of the enthusiasm for the Nordic antiquity, which was identified with the Gothic style in the church architecture of the mediaeval period.

Typography and illustration.

Confused
typography

The effect produced by all these new type-faces was of very different quality. At its best it was a lively and variegated but at the same time moderate typography; often, however, the confused mixture of different type-faces, out of harmony with each other, produced an impression of fussiness and instability. Even though the compositors were as highly skilled and the printers as ambitious as ever, they could not master all this profusion of forms, temptingly displayed in the type-specimens, not to speak of flower types, borders and similar details. An asymmetric typography, contrasting with the classical axial composition, was created in the years between 1880 and 1900. It first appeared in commercial printing, but gradually invaded the books, where title-pages and even illustrated pages were laid-out with a tilted vignette as the principal element. This »Free Style» was something quite new in typography, but the over-worked decoration soon led to degeneration.

The Free
Style

The precision-made iron handpress admitted of a perfect technique and multicolour prints came to be used for book as well as for commercial printing. A special trick of the compositor was also to use lines bent in complicated curves either by hand or by means of ingenious machines.

This period also saw the creation of new methods for illustration. The wood-engraving was a new form of the old woodcut, using hard woods (pear or buxwood) cut across the grain in order to effect very fine lines. Lithography, invented by Alois Senefelder in 1796, reached the height of its popularity during the romantic period and acquired a more fully developed technique.

Illustrations

Book illustrations now enjoyed a revival and prominent artists illustrated books and published collections of engravings, as for instance the beautiful county topographies with lithographed plates, published by Bonnier between

1840 and 1850. Wood engravings were used also in illustrated weeklies, Hierta's Lördagsmagasinet (Saturday Magazine) being the first. Illustrations were originally used for instructive articles but later also for actualities. The pictorial presentation of news was born.

Increasing production.

Book production showed a tremendous increase during the 19th century. This fact is reflected in the number of printing houses in the country. One must, however, remember that the expensive technical equipment now required a considerably greater capital outlay, a fact which encouraged amalgamation of smaller units rather than establishment of new plants. Thus Norstedt, our first printing establishment on a large scale, absorbed several more modest firms.

The number of published books increased, as did the number of copies. Besides the more pretentious literature there was an efflorescence of popular fiction and »useful reading». Philanthropic book societies issued Läsning för folket and similar series. Books were now within the reach of the common man.

The number of printing houses in Sweden was							
in 1800	35	of which	13	were in	Stockholm		
» 1828	47	»	»	19	»	»	»
» 1840	55	»	»	19	»	»	»
» 1870	136	»	»	26	»	»	»
» 1883	186	»	»	32	»	»	»

The newspaper press during the 19th century grew up to become a power in the state. Lars Johan Hierta's paper Aftonbladet had led the way, and under the protection of the press laws there grew up a rich crop of newspapers. It is interesting to observe the changes in size of the papers between 1800 and 1890. First they were of very modest dimensions, limited by the small size of the bed of the

press, then considerably large pages appeared, as the iron hand press came into use (1840's and 50's); then finally, when the cylinder press had started to spin, a steady increase in size is notable until about 1890, when the full capacity alike of the press and of the readers' arms had been reached. Then the pages grew smaller again but at the same time the number of the pages increased.

Advertisements continued to appear in about the same manner for two hundred years from 1645, but in the middle of the 19th century the abundant variety of type-faces began to be used on the advertisements pages, the weeklies (e. g. *Illustrerad tidning*) leading the way.

THE NEW RENAISSANCE

Reaction against the confusion in typography.

The tremendous technical evolution of the 19th century had created an antagonism between man and machine. It is, however, not to be imagined, that the use of machines inevitably brought about inferior craftsmanship and bad taste. It was rather the case that ability to produce good results with the help of machines created an aesthetic dizziness and an intense desire for new forms. There came, however, a reaction against this confusion in the arts and crafts. This movement started in England and had its repercussion in other countries also.

Morris The man, who brought to life the dormant sense of quality was William Morris. Here in Sweden we can observe the influence which he exercised on the art of printing through his personal friend, Waldemar Zachrisson, in Gothenburg, one of our leading printers at the turn of the last century.

Morris has been labelled a romanticist who wanted to create a new art by banishing the mechanized art-industry

and reviving the old handicraft. This is, however, something of an exaggeration. What he wanted was to find the mean between these extremes and to ensure that everything made should bear the stamp of the process by which it had been produced. From his typography he pruned away extravagances in all its forms, finding his models in the Italian typography of the 15th century. Waldemar Zachrisson who had been impressed by Morris' ideas, championed his cause in Sweden, winning acceptance for these ideas among his fellow printers.

Modern Swedish typography.

Moreover in Sweden a new typography made its way. Hugo Lagerström, who in 1903 started the journal *Nordisk Boktryckarekonst*, campaigned hard for a new and national Swedish typography. Lagerström and Zachrisson soon won the sympathies of Swedish illustrators and book artists, among whom Arthur Sjögren and Olle Hjortzberg deserve particular mention. Sjögren's edition of Strindberg's *Antibarbarus* and Hjortzberg's *Bibel* edition (Gustavus V's Bible) are perfect expressions of the new ideas. They did not despise decoration, but called for a clear distinction between text and illustrations. The typography is somewhat heavy and solemn, in line with the Vasa Renaissance and Caroline Baroque. Similarly the old style type, *Nordisk antikva*, made by Genzsch & Heyse in Hamburg, possesses something of the same harsh strength.

During the first World War new fashions developed. The Morris period was closed, and Renaissance and Baroque were no longer the models to be imitated, but Rococo and Neo-classicism gained popularity instead. Lightness and grace characterizes the typography and the covers designed by Akke Kumlien, who became artistic adviser to Norstedt & Söner in 1915, and is one of the leading personalities in modern Swedish book art. The Coch-

type, recalling the French Rococo in its graceful delicacy, is typical of Kumlien's style in the 1920's. But Garamond and Bodoni were restored to importance and these two type faces, together with Caslon and Baskerville, now dominated Swedish book art.

Asymmetry

The year 1930 marks a revolution in Swedish typography. The Stockholm Exhibition that year raised high the banner of functionalism and also the book came up for discussion. The asymmetric typography used by the German printers had been discussed already in the 1920's, but in the catalogues and pamphlets published on the occasion of the exhibition one had cleared away all traditionalism and used a typography absolutely unhampered by the axial principle. One must keep in mind that this new asymmetry, being exclusively concerned with readability and clarity, had nothing at all to do with the »Free style» of the typography from about 1880, which aimed at embellishment. Even though some people went to extremes in their love for the Sans Serif as main type, the functionalistic typography was victorious all over the line. One of the foremost representatives of this new trend was and is Anders Billow, Nordisk Rotogravyr.

Billow

Development in recent years shows a return to classic ideals. The old axial composition is very often used and decorative details are to be seen now and then. Illustrating books with reproductions from photographs gives still an opportunity for using the possibilities of the asymmetric typography, implicating a free arrangement of the illustrations, whereas the classical principles are followed in books without illustrations. Lettered covers are very common, even where the use of typographical elements would give an equally good result. The many prominent type-designers with Kumlien in the first line, who have brought lettering to perfection, have undoubtedly opened the eyes of many printers and also of many laymen to the inherent beauty of letters.