

# Would Aldus Manutius have used T<sub>E</sub>X?

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## ABSTRACT

*Traditional Typography · Golden Mean · Linear Reading · The Siege of Constantinople · Aldus Manutius · His Ambitious Publishing Program · The Most Beautiful Book of the World · Festina Lente · Would Aldus have used T<sub>E</sub>X?*

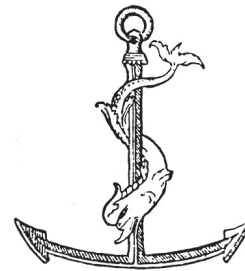
It might be of interest to the participants attending the 16<sup>th</sup> EuroT<sub>E</sub>X conference to hear about the golden age of traditional typography in the 16<sup>th</sup> century and get to know one of the most famous book publishers of all times, Aldus Manutius of Venice.

The word typography is a compound of Greek elements. *Typos* means engraved illustration and *grapho* means to write.<sup>1</sup> *Scrivere sine penne* (to write without a pen), as they called it in the 16<sup>th</sup> century. Typography uses predefined shapes, letters, texts and sometimes illustrations as well. As final output it creates the printed page, which represents another level of visual quality. After the new types of books of the 16<sup>th</sup> century left behind the poor readability and ponderousness of old codices, typographers, who at the time were the printers themselves, followed the rules of the retrospectively labeled “traditional typography”. It was a combined outcome of Renaissance modern style and the lasting effect of medieval lettering. “Traditional typography” determined the encounters of many generations with letters and enjoyed a consciously or unconsciously accepted status in the eyes of readers throughout the centuries.<sup>2</sup>

According to the traditional style the design of books starts with choosing the right proportions for page margins. Setting the inside, outside, top and bottom margins will give us the type area. The height, width and carefully chosen position of the type area influences overall proportions and balance of the book. Not everyone and not every workshop took the time and the trouble to carry out this kind of precision work and fine tuning. As time went by well-tested

<sup>1</sup> Péter Virágvolgyi: *The Art of Typography*. [Osiris Handbooks] Budapest, 2002, Osiris Kiadó.

<sup>2</sup> Suzanne West: *Working with Style. Traditional and Modern Approaches of Page Design*. Budapest, 1998, UR Könyvkiadó, p. 54.



Aldus' emblem, the dolphin curling around an anchor

recipes started to form, incorporating certain elements of antique architecture and epigraphy. The *golden mean* for example, very popular among Renaissance artists also found its way to book design. It stated that the smaller portion should compare to the bigger as the bigger compares to the whole, as in the series 3 : 5 : 8. The relevance of these proportions could be observed in nature or in antique architecture. Like sculptors, painters or architects before them, typographers also wanted to take advantage of this noble rule when designing letters, margins or title pages.

After they made their decision about margin sizes, they could begin to compose the text. Information was organized according to a tight hierarchy, starting with the biggest type size used on title pages through the opening pages of chapters and the type of the body text to the smaller fonts of marginal notes and indices. The rhythm was provided by the repeating order of chapter headings, subheads and paragraphs, all indicated by traditional typographic methods.



Printers  
(16<sup>th</sup> century woodcut)

Further decisive features of the traditional page spread were symmetry and static arrangement. This structure encouraged linear reading, so readers of the 16<sup>th</sup> century did not feel at all that they missed something. They read a book thoroughly from cover to cover. The list of recommended books was short and they had the time to periodically re-read some of them.

Not to mention the Bible itself, which was studied and re-studied by many people every year.

Renaissance typography gradually filled the space created by the newly invented art of printing. New and substantial methods of arranging information profoundly affected reception and the way of thinking of 16<sup>th</sup> century people just like the digital world influences our approaches nowadays.<sup>3</sup>

## ALDUS MANUTIUS

In 1453 the Turks occupied Constantinople. Around the same time Gutenberg was preparing his 42-line Bible for printing. The taking of Constantinople not only coincided with the beginning of European printing, but it also had an indirect effect on it as well. During Byzantine times many Greek schools prospered on the coast of the Bosphorus strait. When the Turkish siege started, these Greek scholars left their schools and fled to Italy. They had an extensive knowledge of classical authors of ancient times. Therefore their relocation turned Venice into a true center of classical erudition and research. There was something in the air in that city and the situation just needed an entrepreneur to take advantage of it.

Aldus Manutius was a modest language instructor at the time, at the side of famous humanists like Pico della Mirandola. He taught them Greek and Latin and surely felt the need to create better editions to be used in education or for other humanists working with the same texts. Understand-



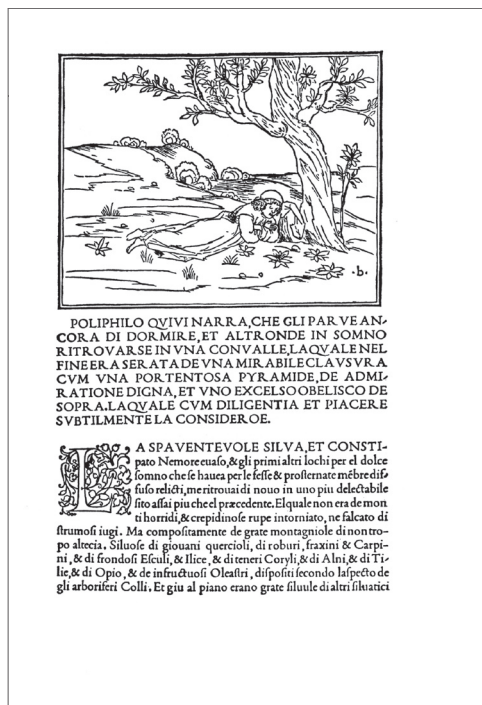
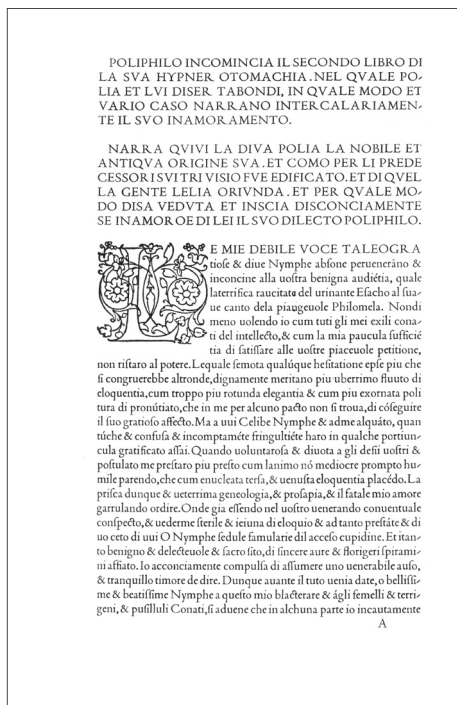
Aldus Manutius

ing the significance of all those Greek scholars arriving in Venice, he moved to the city to try his luck. At first he was employed by a Venetian book merchant and printer called Asola. He was later named the leader of Asola's workshop, and possibly because of this the owner's daughter became Aldus' wife. This was not an unusual step though, as it was Asola's best way to ensure that his talented employee would carry on with his thriving workshop. Aldus, on the other hand, had navigated himself to a position from which he could set about executing his monumental plans. To secure a serious intellectual background he contacted Latin speaking humanists as well as the aforementioned Greek emigrants. Now he could frequently consult Greek scholars of Constantinople and also hired scribes from the island of Crete as Greek typesetters and proofreaders.

The realization of his publishing program started in 1495. The result was the creation of probably the most beautiful and effectual books in the history of printing. Greek authors were published first. The six-volume Aristotle should be mentioned above all, which used a Greek cursive type modeling those scribes' original handwriting, and appeared in print between 1495 and 1498, causing a big sensation among European humanists. This initial success was soon followed by editions of Sophocles, Plato and Thucydides. After them came other classical authors writing in Latin: Virgil, Horace and Ovid. The size of each run was around a thousand copies. A surprisingly modern publishing policy governed these early critical editions. Aldus, being a major representative of the humanist approach to classical literature, preferred to get rid of all the medieval commentaries and foster the reading of original texts in their original languages. Thus it was up to the reader to make up his or her own variant, and to interact freely with ancient authors. To help the learning of classical languages – since originally he was a teacher – he also published quality textbooks and dictionaries.

The most beautiful book of the world, as book historians like to call it, came out in 1499, four years after the initiation of Aldus' ambitious program. It contained Francesco Colonna's allegorical and mythic poem, the *Hypnerotomachia Poliphili*. Using 170 excellent renaissance wood-cut illustrations, fully harmonizing type design and margin pro-

<sup>3</sup> Leah S. Marcus: *The Silence of the Archive and the Noise of Cyberspace*. In: *The Renaissance Computer. Knowledge and technology in the first age of print*. Eds. Neil Rhodes and Jonathan Sawday. London, 2000, Routledge. p. 22.



Pages from the *Hypnerotomachia Poliphili*, one of the most beautiful book of the world

portions, it received a form that still evokes the admiration of today’s typographers and bibliophile book collectors all over the world. Surprisingly enough, though the unique nature of *Hypnerotomachia Poliphili* was certainly noticed by contemporaries (a pirate edition came out soon after in Lyon), it was never reprinted in Venice during the next hundred years.

Aldus’ achievements deserve acknowledgement already, but his most remarkable innovation is still to follow. Production of books in the 16<sup>th</sup> century ever becoming cheaper and faster, workshops could start counting on bigger audiences. He was first to realize that instead of the large-format books printed before, readers who preferred solitary reading needed portable or pocket-size editions – as we call them today. Fifty years passed after the appearance of Gutenberg’s enormous, two-column 42-line Bible, when the Aldus Officina in Venice, leaving the old codex format behind, started to produce the incredibly popular one-column pocket-size editions of the classics.

Soon the *Aldi Neacademia*, a distinguished group of scholars (men of letters) was formed. By this time the workshop’s Greek and Latin consultants had daily meetings to decide about the titles to be published. While the medieval scholar accumulated, the Renaissance humanist judged the old manuscripts: they reconsidered the classic

authors known in medieval times and tried to acquire previously unknown works by research or purchase. This was the way *editio princeps* books (first printed versions of the classics) got published, considered rare gems by later collectors. However, they did not refuse to publish eminent medieval authors either; we can find Dante and Petrarch in Aldine editions. The farseeing editorial policy had its fruitful result, the carefully selected titles were appreciated all over Europe.<sup>4</sup>

Characteristic of the success of the pocket-size editions is the large number of imitators especially in France. Simone de Colines launched a similar series in Paris, while Aldus had to defend himself against the pirate editions of the Lyon workshops by issuing a public protest letter. In this he enumerated the errors made by the printers of Lyon, so that an original copy could be easily discerned from a fake one. The antecedent of the pirate editions, of course, was the appearance and success of Aldine publications in the French market. Classical Roman culture crossed the Alps in the form of these beautiful books, and as Beatus Rhenanus, the biographer of Erasmus, put it: “northern barbarians” could now learn Latin and Greek and save a long journey to Italy.

Being an Italian, Aldus was a faithful supporter of antiqua letters. In the beginning he used fonts strikingly similar

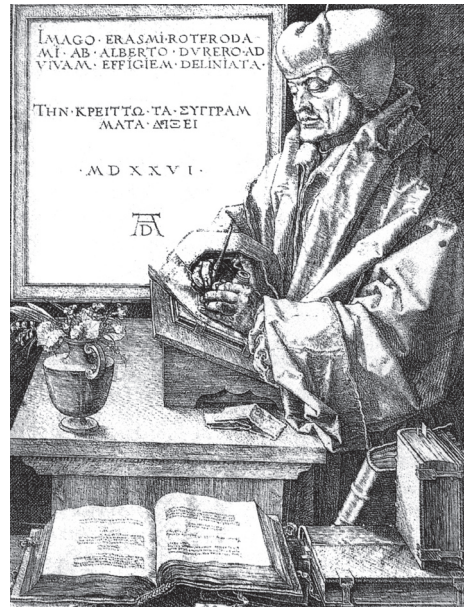
<sup>4</sup> Martin Lowry: *The World of Aldus Manutius*. Oxford, 1979, Oxford University Press.

to those used by the French Nicholas Jenson, also working in Venice. In 1501 he commissioned the talented letter designer, Francesco Griffo (1450–1518) to create a new Latin typeface. This was the first antiqua typeface which used capitals somewhat smaller than the ascenders of lower case letters. In the next year Griffo designed the famous cursive or *italic* type as it was later called, honoring the country of origin. Based on the so-called *cancelleresca*, it became the printed version of humanistic handwriting. Today we use italics to put emphasis on words or passages of text, but Aldus actually used it for typesetting whole books. Italics started its career in his workshop, exercising a great deal of influence on 16<sup>th</sup> century typography and fostering the victory of antiqua type all across Europe.

Page numbering also spread by Aldus' books – he was among the first to recognize its practical importance. Page numbers, apart from assisting the work of bookbinders, made it much easier for readers to refer to a given section within a book.

The Aldus workshop had its heyday at the turn of the 15<sup>th</sup> and 16<sup>th</sup> centuries. In the Juvenal edition of 1501, Aldus set forth his philosophy and goals, many of which were already achieved by releasing the series of elegantly designed and carefully edited classic publications. His logo, the dolphin with the anchor, appeared in his books from 1502. In the eyes of book lovers this mark represents utmost excellence in terms of both content and form. The dolphin curls around the anchor and emphasizes the classic saying which goes with it: *Festina lente* [gr. *Speude bardeos*], i.e. to hurry slowly. It was Erasmus<sup>5</sup> who made this saying popular. Originally it comes from a play called *The Knights* by Aristophanes: “*Speude takheos*” – to hurry up quickly. In its reversed form the saying has several meanings. According to Erasmus this stoic statement should prevent princes from acting in the heat of the moment, to avoid swift and arbitrary decisions. Fabius Maximus is mentioned as the best example for slow diligence, who continuously weakened the invading army led by Hannibal employing his distressing technique. That is why he was labeled the postponer (*cunctator*) by Roman politicians. Supposedly emperor Augustus

<sup>5</sup> Stefan Zweig: *The Glory and Tragedy of Erasmus of Rotterdam*. Budapest, 1993. Holnap Kiadó. pp. 73–80.



Portrait of Erasmus of Rotterdam by Albrecht Dürer (1526)

and Vespasian also liked the saying *Festina lente*. The dolphin curling around the anchor appears on one of the coins issued by Vespasian.

Posterity highly esteems Aldus' publishing activity. Jacob Burckhard (1818–1897), one of the earliest and most famous researchers of the Renaissance period, highlighted his importance. Several contemporary memorials record the exceptional popularity of Aldine books. The following quotation comes from a letter written by the German humanist Heinrich Glareanus to Ulrich Zwingli, dated on 19<sup>th</sup> October, 1516: “I cannot miss to mention, that Wolfgang Lachner, our Frobenus' father-in-law ordered a wagonful of classics from Venice, the best of Aldus' publications. If you would like to have some of them, let me know quickly and send cash. Because as soon as a similar shipment arrives, there are already thirty people surrounding it and keep asking ‘how much is it?’ then start to fight over it. Passion rapidly ignites animated discussions and often seizes men who cannot even understand them.”<sup>6</sup>

As an author and consultant Erasmus worked together with the Venetian printer and publisher several times. He already wrote to Aldus, that his translations of Euripides would make him immortal, especially if they were “printed

<sup>6</sup> Nándor Várkonyi: *The History of Books and Letters*. Budapest, 2001, Széplalom Könyvműhely. p. 352.

using your small [minutius] types, which are the most elegant in the world (*tuis excusae formulis... maxima minutioribus illis omnium nitidissimis*)." But beauty is not everything. Erasmus calls the octavo editions the outstanding products of his age. Not even Ptolemaios of Philadelphia could access literature and science the way Aldus Manutius made it possible in the early modern age. While the great king had built only one extensive library, Aldus raised 'a library without walls,' which will survive all disasters. Willibald Pirckheimer, yet another humanist, esteemed his Theokritos-edition so highly, that he asked the famous German engraver and painter Albrecht Dürer to illustrate its cover and design an *ex libris* sign for it. Every detail of the bucolic idyll created by Dürer follows the text faithfully.

There was feedback from Hungary, too. Sigismund Thurzo, provost and secretary of the king, writes in his grateful letter of 1501: "My different kinds of affairs consume the time I could spend at home in the company of poets and orators. Your books – being very practical, so that I can take them with me for my walks or have them around during conversations or my affairs in the court – cause me much delight."<sup>7</sup>

No doubt, Aldus Manutius was the leading publisher in Europe at the turn of the 15<sup>th</sup> and 16<sup>th</sup> centuries. A generation after Gutenberg, printers overstepped the traditional manuscripts of medieval times and by appeasing the needs of this new generation of readers, published Latin and Greek classics with flawless content and in wonderful form.

Aldus died in 1515, but his workshop continued to operate throughout the 16<sup>th</sup> century. His work, if not to the same effect but still at a very good standard, was carried on by his son and later by his grandchild for a hundred years. In 1597 the grandchild gave up the workshop in Venice and in response to the call of the pope he went to Rome to manage the printing facilities of the Vatican. By that time the humanistic movement was a thing of the past. Public opinion was mainly concerned with the struggle of the Catholic church with Protestants, and its efforts to renew itself.<sup>8</sup>

As they were popular, the number of surviving Aldine books is not too great and oftentimes they are worn-out

because of frequent usage. But their quality is clearly shown by the fact that they were still good enough for the famous French playwright Racine (1639–1699), who got to know the Greek tragedies from Aldine editions nearly a hundred and fifty years after their publication.

Finally let us attempt to answer the question in the title of this paper. As we have seen, Aldus was seriously involved in the business of publishing 'scientific' books. He was open to the novelties of his trade; moreover he also made significant contributions to it with his inventions. Based on this we could assume that if computers, the main representatives of modernity and future, had existed at his time, he would have surely used them. But would he have used T<sub>E</sub>X?

Aldus published many works in Greek. (By the way, the word T<sub>E</sub>X comes from the Greek ΤΕΧΝΗ or techné). Originally T<sub>E</sub>X, being an American software had a limit of working with 128 characters only. This could have raised initial problems for someone planning to bring out multi-lingual publications. However, this limit has been eliminated since then, and at this conference we hear about the both typographically and technologically difficult task of publishing the Koran itself.

Though I am not a T<sub>E</sub>X guru or a T<sub>E</sub>Xpert, I understand the many advantages of T<sub>E</sub>X in the field of scientific publications, especially if they contain a lot of formulae. Well, we must realize that the early modern age of Aldus preceded Newton's scientific revolution. In the 16<sup>th</sup> century we could have possibly found some formulas in esoteric works by alchemists on how to make gold, but usually explained in very unclear terms. As far as the 'serious science' of the century is concerned, it was mainly represented by classical works of ancient authors. They did not perform experiments back then but read Aristotle instead, so science was more like literature.

We can state that Aldus' innovative personality was always ready to accept newer and better solutions. He would have thought about using T<sub>E</sub>X if Donald Knuth had been born several hundred years earlier. But since the works he published were not scientific but rather literary in form, he might have decided otherwise.

<sup>7</sup> Anthony Grafton: *Humanist Reading*. In: *Cultural History of Reading*. Budapest, 2000. Balassi. Eds. Robert Chartier, Guglielmo Cavallo. p. 206.

<sup>8</sup> Lucien Febvre and Henri-Jean Martin: *The Coming of the Book (L'Apparition du livre)*. *The Impact of Printing 1450–1800*. London, 1990. Verso. p. 124.