RESEARCH PAPER: TYPOGRAPHIC REFORM IN PARIS UNDER THE SUN KING

Alice Longtin YSDN 2107

June 2020

- 1. Introduction
- 2. History
 - 2.1. Louis XIV
 - 2.2. French Royal Print Works
 - 2.3. Bignon Commission
 - 2.3.1. Abbot Jean-Paul Bignon
 - 2.3.2. Jacques Jaugeon
 - 2.3.3. Gilles Filleau des Billettes
 - 2.3.4. Father Sébastian Truchet
 - 2.4. Craftsmen
 - 2.5. l'Académie Royale des Médailles & des Inscriptions
 - 2.6. Completion of Romain du Roi
- 3. Modern Day Implications
 - 3.1. Type Creation Process
- 4. Conclusions
- 5. Bibliography



FIGURE 1 *Portrait of Louis XIV*, oil on canvas by Hyacinthe Rigaud, 1701; in the J. Paul Getty Museum, Los Angeles.

Source: Encyclopædia Britannica, Philippe Erlanger $Louis\ XIV$

Introduction

We in design, are fortunate to live in a world that has changed dramatically over the last 500 years. The importance of learning history is to understand our past which in turn allows us to understand our present. I will be delving into one of the typographic innovations that came out of France in the Enlightenment era, specifically looking at the impact of Romain du Roi, the King's roman, being the "first digital typeface" and how it changed the way typefaces have been designed since then.

History

The Enlightenment era in Europe was an intellectual movement beginning in 1601 and lasting until 1800.1

"Central to the enlightenment thought were the use and celebration of reason, the power by which humans understand the universe and improve their own condition. The goals of rational humanity were considered to be knowledge, freedom, and happiness."

(Brian Duignan, Encyclopædia Britannica, Enlightenment)

This sets the place for which Romain du Roi was born and now thrives.

Louis XIV

The Sun King's (Louis XIV, born September 5, 1638 - September 1, 1715) (Fig. 1) reign started at the age of 4 and lasted over 72 years making him the longest reigning monarch in history. There are a few reasons why Louis XIV was known as the Sun King, some say it's due to the King's habit of waking up and preforming certain tasks at precise times.² That being a favorable option as the Sun King devoted himself to his reign for 8 hours every day, being meticulous and controlling everything from court etiquette to troop movements, from Road building to theological disputes.³

To further elaborate on Louis' character and his grandeur, a passage from his Mémoires⁴:

"In my heart I prefer fame above all else, even life itself... Love of glory

- 1 Encyclopædia Britannica, Brian Duignan Enlightenment
- 2 From Louis XIV article by Dr. Stuart D. Willis of Michigan State University
- 3 Encyclopædia Britannica, Philippe Erlanger Louis XIV
- 4 Memoirs of Louis XIV by the Duke of Saint-Simon



FIGURE 2 Portrait of Abbe Jean-Paul Bignon (1662-1743), President of the Academie Royale des Sciences. Portrait by Lucretia Cath. de la Roue, engraved by Edelinck, 1700. Source: wikipedia

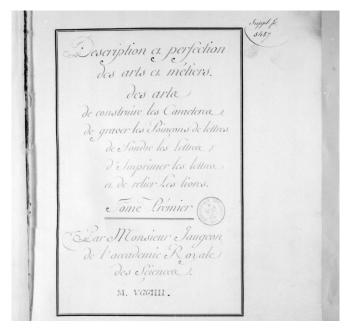


FIGURE 3 "Description and perfection of the arts and crafts, the arts of building characters, engraving hallmarks, melting letters, printing letters and binding books, by Monsieur JAUGEON, from the Académie roale [sic, for royale] of Sciences. 1704. Shelfmark: French 9158. Publication date: 1701-1800

Source: circuitousroot

has the same subsidies as the most tender passions... In exercising a total divine function here on earth we must appear incapable of turmoils which could debase it."

(Philippe Erlanger, Encyclopædia Britannica, Louis XIV)

French Royal Print Works

l'Imprimerie Royale⁵ was the French Royal printing works created by King Francois I in 1538. It's important to note this due to the power the monarchy had over the printed works. This allowed the King full control over royal propaganda and blocking royal opposition and religious authority. When first founded, the typeface Grecs du Roi was created by Claude Garamond in 1541, in the "oldstyle". Romain du Roi was created as a replacement to represent the new era under Louis XIV by having the word of the King be a "transitional" typeface.

Bignon Commission

The Bignon commission was the brain child of one of Louis XIV ministers, Colbert, who decided to prepare a compendium on existing arts, crafts and trades and appointed four scientists to head this work. After Colbert's death in 1683, it wasn't until 1693 the Bignon commission initiated and started with "that art which will preserve all others" - printing. Everyone selected to work on the Commission had never worked with type or had any previous knowledge of type before this.

Abbé Jean-Paul Bignon

(1662-1743)(Fig. 2) was a French scholar and writer. He was ordained as a priest in 1691, and became abbot of Saint-Quentin-en-l'Isle and preacher of Louis XIV in 1693.8 In the same year, he was charged to head the Bignon Commission and selected Jacques Jaugeon, Gilles Filleau des Billettes, and Father Sébastian Truchet to help conduct this work, which investigated the

⁵ The royal print works still exists in a certain capacity today. It has changed names numerous times and was the exclusive provider of printed material for the French government until 1994. It operates today as official printing works for passports and holds collections of punches and a printing historical library.

⁶ TUGboat Volume 20, 1999 pg. 8

⁷ Met Museum Firmin-Didot: A French Legacy, 2015

⁸ Biography from the University of Kent, Jean-Paul Bignon

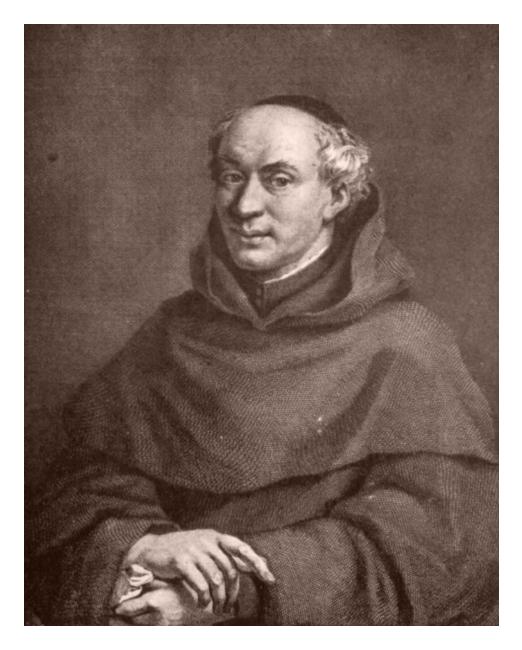


FIGURE 4 Portrait of Brother Sébastien Truchet in 1703, published in Revue de l'histoire de Versailles et de Seine-et-Oise in 1929

Source: France Pittoresque

feasibility and began a guide of French arts. In 1699 he became an honorary member of the Académie des Sciences.

Jacques Jaugeon

(1655-1724)(Fig. 3) was a scholar and royal typographer attached to the service of the King. At the request of the King, Jaugeon's position was as secretary and designer for this project.¹⁰ He was the man who finally wrote up the typefounding material in a manuscripts finished in 1704. The reason this wasn't included in the final book is unknown however one source states a possibility that:

"Jaugeon's prose gained a reputation for unreadability. Mosley says of it 'To read Jaugeon's leaden and prolix text can be a depressing experience' (James Mosley 1991, p. 64)" (Circuitous Root 2017)

Gilles Filleau des Billettes

(1634-1720) was a scholar who "acquired a well-deserved reputation for scholarship in history, genealogy, bibliography and, in the sciences, the study of insects. It was through his aristocratic connections that he came to know and impress Bignon"¹¹, who invited him onto the project.

Father Sébastian Truchet

(1657-1729)(Fig. 4) was a priest who was also a scholar.

"Recognized as a mathematician (especially for "Truchet tilings"), as an expert in hydraulics he designed most of the French canals and as an inventor (he invented a fantastic number of things such as sundials, guns, engines to transplant adult trees), very few typographers know that he is the genius behind the typographic point."

(TUGboat 1999, pg 8)

Truchet's plan from 1694 established two mathematic rules12:

1. Typefaces are measurable. Their measurement is based on a legal unit of length.

9 CircuitousRoot, *The Académie Royale* by Dr. David M. MacMillan and Rollande Krandall 10 Bulletin des Bibliothèques de France, *Le romain du roi La typographie au service de l'État*, 1702-2002 by Dominique Varry

11 Science and Social Status: The Members of the Academie Des Sciences 1666-1750, David J. Sturdy 1995 pg, 301

12 TUGboat Volume 20, 1999 pg. 9

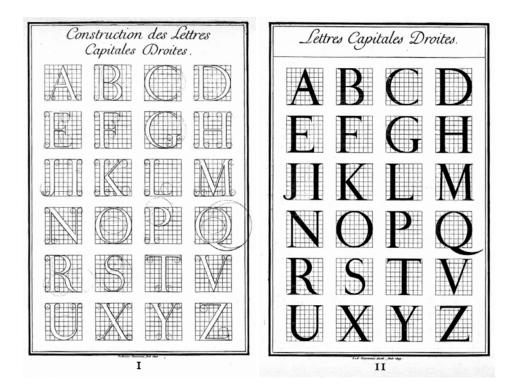


FIGURE 5 Plates signed by Louis Simonneau and dated 1695

Source: Riccardo Olocco

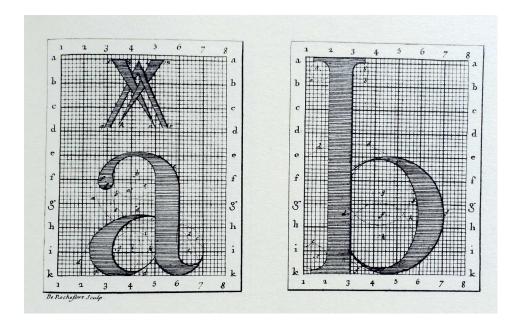


FIGURE 6 The 'a' and 'b' of the Romain du Roi, showing the bitmap of Truchet points used in their construction, signed by Pierre de Rochefort.

Source: wikipedia

2. Types sizes are expressed in multiples of c_i of the second line of the "king's inch" (i.e. $1/12 \times 1/12$ of an inch, today's 0.1879583mm)

He also created the bitmap a bitmap that could mathematically explain metal type. The accuracy of this system created here was actually too perfect for type to be cut, Truchet being ahead of his time. He was also accredited to writing the only surviving manuscripts from the commission.¹³

Craftsmen

There were multiple craftsmen that played a large role over the 52 years it took to bring the full Romain du Roi typeface to life. The three I will mention are Louis Simonneau, Pierre de Rochefort, Philippe Grandjean, along with Jean Alexandre and Louis Luce who took over after Grandjean's death.

Louis Simonneau

(August 30, 1645-March 22, 1728)¹⁴(Fig.5) was an engraver who transformed the drawings of the letterforms (probably drawn by Jaugeon) into copperplates. This process formalized the drawings allowing them to be printing and presenting in a way that is easier to present to the punch cutter.

Pierre de Rochefort

(1673-17?)(Fig. 6) was also an engraver at the Academy of sciences. He took over engraving for the commission from Simonneau before moving to Portugal in 1728.¹⁵ He created many engravings and his plates allow us to compare his work with Simonneau's earlier plates to show the evolution of the typeface.

Philippe Grandjean

(1666 - May 6, 1714) was the first punchcutter for Romain du Roi. He worked closely with the Commission to approve the status of his work. Many changes and adjustments were made even times requiring Grandjean to destroy his punches in matrices and start over. ¹⁶ He never

- 13 TUGboat Volume 20, 1999 pg. 10
- 14 Dates from Peoplepill
- 15 Bibliothèque Nationale de France, Pierre de Rochefort
- 16 NY Times, Types With Plenty of Character by David W. Dunlap, 2011

Table 4. The *romain du roi*: puncheutters and dates
This table is intended as an outline of the making of the different sizes of the *romain du roi*

1	2	3	4	5	6	7	8	9
1	4.25	4.2	4.1	4 (4.25)	Perle	Luce	1737-9	1740
2	5	4.9	5.3	5 (5.3)	Sédanoise	Alexandre	1726-8	1728 ^b
3	6	6.0	6.25	6 (6.4)	Nompareille	Grandjean	1709-10	
4	7	6.9	7.45	7 (7.45)	Mignonne	Grandjean	1707-8	
5		8.5	8.2	8 (8.5)	Petit Texte	Grandjean	1706-7	1707
51/2		9.6	9.3	9 (9.6)	Petit Romain Alexandre	Alexandre		
6	10	10.0	10.5	10 (10.6)	Petit Romain Grandjean	Grandjean	1705-6	1705
$6\frac{1}{2}$		10.6	11.4	11 (11.7)	Cicero Alexandre	Alexandre	1712-16	
7	12	12.0	12.45	12 (12.8)	Cicero Grandjean	Grandjean	1699-1703	
71/2		12.8	13.6	13 (13.8)	St Augustin de l'Académie	Grandjean	1712	
8	14	13.8	14.6	14 (14.9)	St Augustin Tournefort	Grandjean	1700-2	
$8\frac{1}{2}$		15.2	15.7	15 (15.7)	Gros Romain	Alexandred	1729	
9	17	16.7	16.75	16 (17.0)	Gros Romain	Grandjean	1696-1701	1699
91/2		18.6	18.9	18 (19.15)	Petit Parangon	Alexandre		
10	20	19.6	20.7	20 (21.3)	Petit Parangon	Grandjean	1701-2	
11	24	23.9	25.3	24 (25.5)	Gros Parangon	Grandjean	1704	1704
12	28	27.3	30.8	28 (29.8)	Petit Canon	Grandjean	1704-5	
13	34	33.7	33.9	32 (34.0)	Gros Canon	Grandjean	1705-6	
14	40	38.9	41.2	38 (40.4)	Double Canon	Grandjean	1710-11	
15	48	48.5	49.5	48 (51.1)	Triple Canon	Grandjean ^e		
16	56	55.8	57.6	56 (59.6)	Quadruple Canon	Luce	c. 1745 ^f	

FIGURE 7 Chart from J. Mosley, French academicians and modern typography... Typography papers, 2 (1997)

Source: Riccardo Olocco

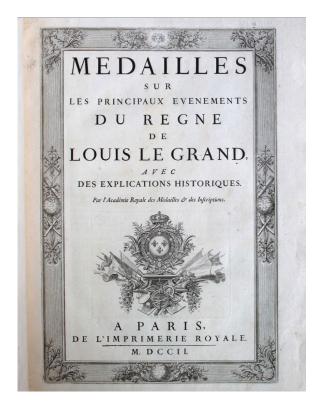


FIGURE 8 Médailles sur les principaux événements du règne de Louis le Grand avec des explications historiques avec des explications historiques Printed in 1702

Source: Riccardo Olocco

fully copied the committees drawings, taking subtle interpretation he is credited to softening the look of the typeface and increasing its beauty by adding a human touch.¹⁷ After Grandjean's death, the remainder of the sizes being cut first by his pupil and assistant Jean Alexandre and then by Alexandre's son-in-law, Louis Luce.¹⁸

l'Académie Royale des Médailles & des Inscriptions

In 1702, the first book using Romain du Roi was printed by l'Imprimerie Royale. The magnificent book was titled "Médailles sur les principaux événements du règne de Louis le Grand avec des explications historiques avec des explications historiques" was gifted to the King by l'Académie Royale des Médailles & des Inscriptions. This book displayed a catalogue of commemorative medals struck during the reign of Louis XIV.

The importance of a book such as this which was said to have cost 400 livres.²² The estimates of copies sold ranges from 200 to 500. It was the first publication of Claude Gros de Boze²³, who was just 22 at the time.²⁰

"Each text page contained, besides letterpress, at least three separate copper plates: an engraved border, separate engravings on the obverse and reverse of a particular metal, and engraved vignettes used when necessary to fill space. To print the letterpress a new printing press was designed for the purpose, one that would apply a smooth and even pressure to the type without any lateral movement."

(Jeremy Norman's History of Information)

(Fig. 9) This book showed off Romain du Roi as the first "transitional" typeface and solidified its importance as reserved for official government use. The other importance of this book, and using Romain du Roi, was the part of the monarchy establishing importance in the public communities. Books such as these were often written with language that favoured the

- 17 Contemporary Processes of Text Typeface Design by Michael Harkins, 2020
- $18\ Revival\ Type$: Digital Type
faces Inspired by the Past by Paul Shaw, 2017 pg 85
- 19 Translation: Medals on the main events of the reign of Louis the Great with historical explanations with historical explanations
- 20 Translation: Royal Academy of Medals & Inscriptions
- 21 Jeremy Norman's History of Information, Romain du Roi, the First "Digital" Type Font
- 22 The livre was the French currency at the time. 1 livre was equal to 1 pound of silver at the time
- 23 Claude Gros de Boze (28 January 1680 10 September 1753) French scholar and numismatist.

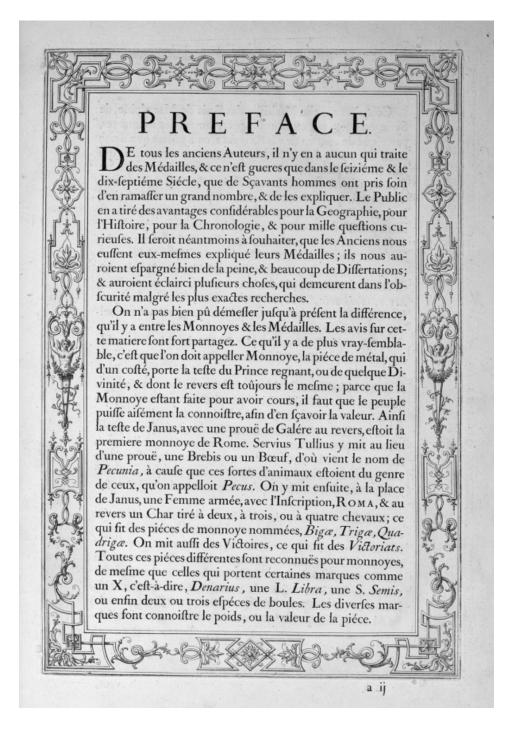


FIGURE 9 First page of the preface of Académie Royale des Médailles & des Inscriptions, Médailles sur les principaux événements du règne de Louis le Grand (Paris: Imprimerie royale, 1702). Rare Book Division, Department of Rare Books and Special Collections, Princeton University Library.

Source: The Classical Program of the Medallic Series of Louis XIV by Alan M. Stahl

King, someone could argue it was elite propaganda.²⁰ In the preface of the book, Grandjean was named, however that text was removed. "The suppression of the preface insured the only one name remains prominent: that of the king himself." (James Mosley)²⁴

Completion of Romain du Roi

Romain du Roi was completed in 1745 with 21 different sizes of roman and italic letters and 20 bodies of roman and italic initials.²⁵ Created over 52 years with the help of at least 8 people, it was a masterpiece. It was the first "transitional" typeface, characterized by flat serifs with nearly nonexistent brackets, a greater emphasis on vertical lines and a higher contrast between thick and thin strokes.

In the creation process they created what we now know as italics. Before this. Italic type was not just a slanted version of an existing type family, it was completely different typeface. So the committee chose to pair Roman and italic versions of the same typeface creating what we now know and use today.

Modern Day Implications

The effects from Romain du Roi, still ripple in our lives as type designers today. The Bignon Commission were ahead of their time and it shows:

"The researchers who lived 300 years ago we're unquestionably geniuses:

- They invented the notion of the "vectorial font" by defining characters in terms of outlines with approximation by arcs of a circle (interpolation by arcs of a circle was still used by Bitstream just ten years ago, before Bézier splines). Characters had already been drawn with a ruler and compass since the 15th century by such people as the Italian Félice Feliciano and later Albrecht Dürer and Tory (Morison [13] published a study on the subject). The innovation came from the use of a fine grid (roughly equivalent to a resolution of 2300 dpi).
- They invented the concept of the bitmap.

24 The New York Times, Types With Plenty of Character by David W. Dunlap, 2011

25 Revival Type: Digital Typefaces Inspired by the Past by Paul Shaw, 2017 pg 85

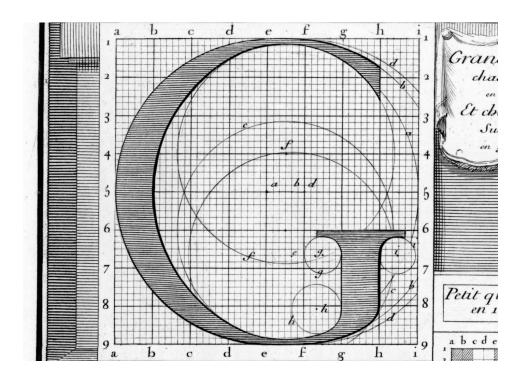


FIGURE 10 Construction of the letter G (1704)

Source: Riccardo Olocco

- They invented the notion of the "slanted" character (the Romain du roi has no italic form; instead, the characters are slanted geometrically by deforming their axes) (Fig. 10)
- They connected these glyphic specifications with a number of tables or commentaries which are the equivalent of today's AFMs (FM as in Font Metrics), and even hints!

The Romain du roi typeface includes all the features of today's digital typefaces— but it is three hundred years old!" (TUGboat, 1999, pg 10)

The lasting legacy of this influential type has been a great one. It influenced type founders not only in France but across Europe and was extensively copied and very slightly altered so as to not risk 'royal displeasure'. A legend that surrounds this typeface is that King Louis XIV refused the request from the king of Sweden for the first set of the punches.²⁶

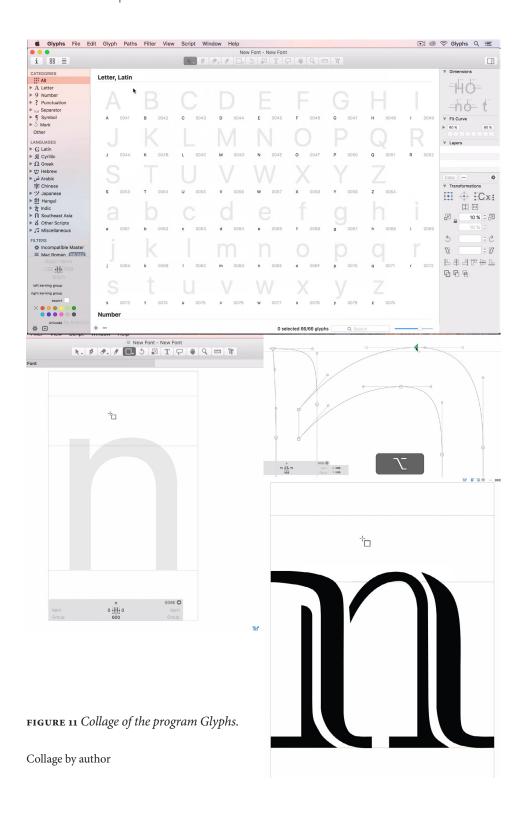
With transitional typefaces modernizing oldstyle, this lead way to the era of modern type styles such as the work of Didot in France and Bodoni in Italy.²⁷

"Romain du Roi influenced Pierre-Simon Fournier le jeune (1712 –1768) who's Romans, first shown in a 1742 specimen, broke from the still prevalent Garamont types to follow the shift toward greater stroke contrast and thinner, sharper serifs." (Paul Shaw, 1999 pg 84)

Type Creation Process

There are many ways to design a typeface in modern days, there's no right or wrong way and living in a world where there are so many. Some people prefer to work with hand tools, and some prefer to only use a computer and a variety of applications. Looking at the modern app Glyphs©²⁸, it has a user friendly interface that does the grid work for you. Having prior knowledge of design and using the Adobe© software, using Glyphs© is quite easy.

26 Encyclopædia Britannica, *Romain du Roi* by The Editors of Encyclopaedia Britannica 27 *Revival Type: Digital Typefaces Inspired by the Past* by Paul Shaw, 2017 pg 84 28 Software application available for download online and paid by licensing contracts



Designing a letter starts off with drawing out your glyph (letter), once done then adjust the spacing and the kerning and your glyph is complete. (Figs.)

"The difference in time between doing the job then and doing it now is not so great.... If we want to make a complete typeface: all the necessary characters, a matching italic, small caps, one or perhaps two further weights, and for all these characters to be able to work at all sizes. Then we may need another year or perhaps two. In the 16th century, something comparable, without the variations of weight, might take a year and a half.... Design time is not where the changes have occurred."

(Smeijers, 1996, pg 162)

Where type designers have grown the most sense the times of Romain du Roi, has to be in the skill, knowledge and experience area²⁹, we are now the drafter, the engraver, the punchcutter and the printer in one. So the time that it takes for us to do all of this work ourselves would be similar to that of the older process of handing things off and going back and forth until we have the result we desired.

Conclusions

The impact that Romain du Roi would have may not have been known to the Brignon commission but it's clear to us now, it was a massive one. At the time, it was a typeface that was sought after and revered in part because of the use of mathematics. Since absolute perfection was not a possibility then Grandjean took liberties making it softer and so much more human. Designing Romain du Roi would be easier today, creating it and executing it with our computer software, and not relying on a punchcutter's accuracy. Romain du Roi was the "word of the King", and that legacy has lived on today in transitional and modern typefaces today. The past is full of struggles that we take for granted today, so learning these innovations helps us have more appreciation for the things such as grids, bitmaps, and typefaces that we know and use today.

Bibliography

"Claude Gros De Boze." Academia-Française.fr, 2009, web.archive.org/web/20090216162416/www.academie-française.fr/immortels/base/academiciens/fiche.asp?param=153.

DUIGNAN, BRIAN. "Enlightenment." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 31 Dec. 2019, www.britannica.com/event/Enlightenment-European-history.

DUNLAP, DAVID W. "*Types With Plenty of Character.*" The New York Times, The New York Times, 24 Dec. 2011, www.nytimes.com/2011/12/24/arts/design/printing-for-kingdom-empire-republic-review.html?_r=2.

THE EDITORS OF ENCYCLOPAEDIA BRITANNICA. "Philippe Grandjean." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 4 May 2020, www.britannica.com/biography/Philippe-Grandjean.

THE EDITORS OF ENCYCLOPAEDIA BRITANNICA. "Romain Du Roi." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 20 July 1998, www.britannica.com/topic/Romain-du-Roi.

"Etic 'Non-Expert' Account of Process and Type Design." Contemporary Processes of Text Typeface Design, by MICHAEL HARKINS, Routledge, 2020.

ERLANGER, PHILIPPE. "Louis XIV." Encyclopædia Britannica, Encyclopædia Britannica, Inc., 20 Apr. 2020, www.britannica.com/biography/Louis-XIV-king-of-France.

"French Livre." Wikipedia, Wikimedia Foundation, 27 June 2020, en.wikipedia.org/wiki/French_livre.

[GLYPHS] Glyphs app. Version 2. Glyphs copyright 2020, accessed 20th June, 2020. https://glyphsapp.com/

HART, DANA. "*Firmin-Didot: A French Legacy*." Metmuseum.org, 10 June 2015, www.metmuseum.org/blogs/in-circulation/2015/firmin-didot.

"Imprimerie Nationale." Wikipedia, Wikimedia Foundation, 4 Jan. 2020, en.wikipedia.org/wiki/Imprimerie_nationale.

"JEAN-PAUL BIGNON." Encounters with the Orient, www.kent.ac.uk/ewto/projects/anthology/jean-paul-bignon.html.

MACMILLAN, DAVID M, & ROLLANDE KRANDALL. "The Académie Royale (1690s)." General Literature on Making Printing Matrices and Types: Académie Royale Des Sciences / Jaugeon (1690s), 2017, circuitous-root.com/artifice/letters/press/typemaking/literature/general/jaugeon/index.html.

MEIER, ERIC PAUL. From Paper to Copper: The Engraver's Process. YouTube, 2009, www.youtube.com/watch?v=fQvghHs15hA&feature=youtu.be.

"17th And 18th Century Writing Masters." The History and Technique of Lettering, by **ALEXANDER NESBITT,** Dover Publications, 1957, pp. 133–134.

NORMAN, JEREMY. "Romain Du Roi, the First 'Digital' Type Font." Romain Du Roi, the First "Digital" Type Font: History of Information, www.historyofinformation.com/detail.php?id=4822.

OLOCCO, RICCARDO. "Romain Du Roi. The Surviving Plates." Http:// Www.riccardolocco.com/, 2013.

Presentation from MA Typeface Design 2013–14 Seminar

PEOPLEPILL. "Charles Louis Simonneau: French Copperplate Engraver (Born: 1645 - Died: 1728)." PeoplePill, peoplepill.com/people/charles-louis-simonneau/.

"*Practical Letters.*" *Typography: a Very Short Introduction*, by **PAUL LUNA**, Oxford University Press, 2018, pp. 20–26.

"Punchcutting in the Digital Age." Counterpunch Making Type in the Sixteenth Century, Designing Typefaces Now, by **FRED SMEIJERS**, Hyphen Press, 2011, p. 162.

"The Reform of 1699." Science and Social Status: the Members of the Academie Des Sciences, 1666-1750, by **DAVID J. STURDY**, Boydell Press, 1995, p. 301.

SHAW, PAUL, & JONATHAN HOEFLER. Revival Type: Digital Typefaces Inspired by the Past. Yale University Press, 2017. pg. 84-85

TEX USERS GROUP. "Father Truchet, the Typeographic Point, the Romain Du Roi and Tilings." TUGboat, 1999.

UNKNOWN. "*The Romain Du Roi*." My Fonts.com. https://origin.myfonts.com/s/aw/original/46/o/23804.pdf//origin.myfonts.com/s/aw/original/46/o/23804.pdf

VARRY, DOMINIQUE. "*Le Romain Du Roi*." Bulletin Des Bibliotheques De France, 1 Jan. 2003, bbf.enssib.fr/consulter/bbf-2003-02-0118-007.

VILLARS, LOUIS HECTOR DUC DE. "Pierre De Rochefort (1673?-17..) - Auteur - Ressources De La Bibliothèque Nationale De France." Data.bnf.fr, data.bnf.fr/fr/14959903/pierre_de_rochefort/.

Figures

FIGURE 2 De la Roue, Lucretia Cath., and Edelinck. *Jean-Paul Bignon*. 1700, en.wikipedia.org/wiki/Jean-Paul_Bignon#/media/File:1700_Jean_Paul_Bignon.png. Accessed 15 June 2020.

FIGURE 6 De Rochefort, Pierre. "The <a> and of the Romain Du Roi, Showing the Bitmap of Truchet Points Used in Their Construction." Wikipedia, en.wikipedia.org/wiki/Bignon_Commission#/media/File:Romain_du_Roi.jpg.

FIGURE 3 Jaugeon, Jacques. Description and Perfection of the Arts and Crafts, the Arts of Building Characters, Engraving Hallmarks, Melting Letters, Printing Letters and Binding Books, by Monsieur JAUGEON, from the Académie Roale [Sic, for Royale] of Sciences. 1704. Shelfmark: French 9158. Publication Date: 1701-1800. 1704, www.galleyrack.com/images/artifice/letters/press/typemaking/literature/general/jaugeon/jaugeon-ms-francais-9157-fin606.pdf.

FIGURE 5, 7, 8, 10 Olocco, Riccardo. "Romain Du Roi. The Surviving Plates." Http://Www.riccardolocco.com/, 2013. Presentation from MA Typeface Design 2013–14 Seminar

FIGURE 4 "Portrait Du Frère Sébastien Truchet En 1703, ." La France Pottoresque, 1703, www.france-pittoresque.com/spip.php?article2431.

FIGURE 1 Rigaud, Hyacinthe. "Portrait of Louis XIV." Encyclopedia Britannica, 1701, cdn.britannica.com/93/193793-050-09340A1D/Portrait-Louis-XIV-oil-canvas-Hyacinthe-Rigaud.jpg.

FIGURE 9 Alan M. Stahl, Princeton University Library, 2015, "First page of the preface of Académie Royale des Médailles & des Inscriptions, Médailles sur les principaux événements du règne de Louis le Grand (Paris: Imprimerie royale, 1702).

https://www.jstor.org/stable/10.25290/prinunivlibrchro.76.1-2.0267