

The Status of Classical Typeface Classifications in Desktop Publishing and Beyond

Klasik Yazı Karakteri Sınıflandırmalarının Masaüstü Yayıncılık ve Sonrasındaki Durumu

Asst. Prof. Dr. Anıl Sarıkavak

Trabzon Üniversitesi, Güzel Sanatlar ve Tasarım Fakültesi, Resim Bölümü, Akçaabat.

anilsarikavak@gmail.com

ORCID Id: 0000-0002-9270-2223

The abstract of this article was presented and expanded at the International Fine Arts and Printing Conference (IFPSC) held in Spain on 15-16 February 2024.

Abstract

With Desktop Publishing, which started in 1985, the use of digital fonts became widespread. The operating systems of computers developed with new versions every year are enriched by new font designs added to the Fonts Folder. On the one hand, the old digitized fonts of the past and on the other hand, new generation digital fonts lead to both the inadequacy of old font classification definitions and different and fundamental new classification approaches. In order to understand the past and present, these developments that have emerged over the last 30-40 years should be considered and evaluated as a subject of research and analysis in themselves. The aim of this article, which is based on literature review as a qualitative research method, is to examine the classical typeface classifications developed according to metal typography before desktop publishing, to determine the new concepts that have emerged in the context of the use of digital fonts with desktop publishing technology, and to compare the old and new approaches and discuss the change is to define.

Keywords: Typography, Typeface, Type Classification, Desktop Publishing, Font.

DOI: 10.7176/RHSS/14-5-01

Publication date: June 30th 2024

1. Introduction

In the fourteen hundred and fifties, Johannes Gutenberg developed metal letter casting and discovered the printing technique with movable type. Over more than five hundred years, hundreds of type foundries were established around the world. On the one hand, they reproduce punch cuts of important masters, and on the other hand, they shape various typefaces of their period. With the new technical applications developed in the nineteenth century, the processes of cutting, casting and duplicating type became increasingly easier. Due to the increasing demand from printing houses, the kind of types have now increased considerably (Image 1).

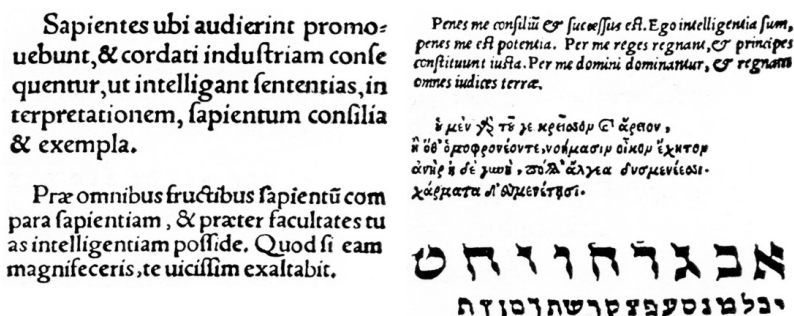


Image 1. An example of typesetting prepared by Johann Petri of Nuremberg in 1525. It is probably the first example of a “type specimen.” Source: Carter, Harry. (1969). *A View of Early Typography*. (pp. 165). London: Hyphen Press.

However, this situation leads to the need to identify typefaces more easily and quickly in typesetting workshops. In fact, since the sixteenth century, foundries have prepared typesetting sample sheets (other words; type specimens) or charts, but these have become insufficient over time (Images 2, 3, 4). With the spread of rational secular sciences in the seventeenth century and the influence of developments such as enlightenment philosophy and encyclopedism in the eighteenth century, fonts began to be classified. In this process, the fonts in the typesetting catalogs are defined under different names by the type foundries.

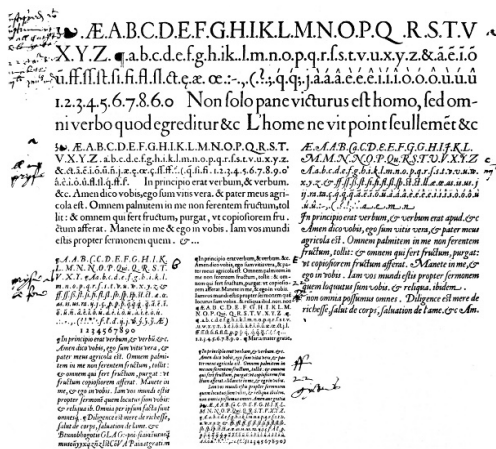


Image 2. An example of typesetting, attributed to François Guyot of Antwerp, printed between approximately 1565-8. Source: Carter, Harry. (1969). *A View of Early Typography*. (pp. 159). London: Hyphen Press.

For this reason, it was inevitable that typesetting catalogs were prepared and reproduced by printing houses in the nineteenth and twentieth centuries. At the end of the nineteenth century and the beginning of the twentieth century, the need for a generally valid classification of typefaces emerged. As a result, the famous French typographer and teacher Maximilien Vox proposed his own classification of type in nineteen fiftyfour. From the nineteen fifties to today, there have been dizzying developments in type and setting technology. In the desktop publishing environment of the nineteen eighties and the digital environment of the post-two thousands, needs, production and consumption methods, with understanding and approaches have changed a lot.

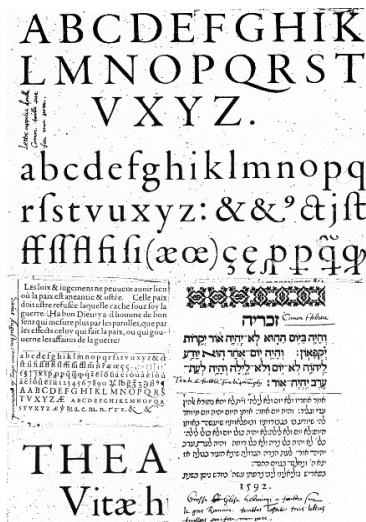


Image 3. An example of typesetting prepared by Guillaume I Le Be in 1592 and sent to Jean Moretus by his son. Source: Carter, Harry. (1969). *A View of Early Typography*. (pp. 161). London: Hyphen Press.

Within the framework of the requirements of those days, there are hundreds, even thousands of digital fonts available on computers. Moreover, as time goes by, one may encounter tens of thousands or hundreds of thousands of fonts that can be accessed in any way on the internet. Is the nineteen fifties Vox Classification still sufficient to categorize all this? Or is a different approach necessary on this issue? Here, this paper focuses on the development and change of the scientific identification effort that emerged in the transformation of typefaces developed over almost five hundred eighty years.



Image 4. An example of typesetting prepared by Conrad Berner, a type foundryman from Frankfurt am Main, in 1592. Source: Carter, Harry. (1969). *A View of Early Typography*. (pp. 160). London: Hyphen Press.

Moreover, it emphasizes the importance of examining terminological phenomena such as “classification and nomenclature” in the literature (Image 5). Because the main reason for the need for font classification since its emergence is that it offers functional, practical and economic benefits. Nowadays, researching or examining fonts causes a great waste of labor and time. For this reason, a font classification organized according to personal, functional, commercial or institutional needs can also offer some methods and tools for effectively using the fonts available on computers.



Image 5. XVIII. In the second half of the 19th century, Caslon Old Style, a type of English Old Style, was widely used in all Colonial regions. The type specimen page, which was first printed in 1734 by William Caslon, who designed the type, was reproduced in 1923. Source: Jong, Cees W. De., (Editor), vd. (2009). *Type, A Visual History of Typefaces & Graphic Styles; Volume 1, 1628 – 1900.* (pp. 6). Köln: Taschen GmbH.

2. Literature Researches

In our age, font classification involves development and change parallel to the transformations in design and art. Therefore, a new classification may be needed today, or it may not exist anymore. In order to reach some results, publications containing the categorization or classification of classical types, typefaces or fonts were scanned. The way these publications addressed the subject, their definitions or classification methods were examined. However, it is not possible to give all of them in this presentation. For this reason, the imprint and contents of the scanned publications will be included in the article that will be published later.

As a result of the investigations, it has been understood that the historical turning points of type classification systems are fundamentally dependent on the innovative technical or technological applications that emerged in type making or typesetting methods. Each new technique or technology has encouraged new typeface designs and their type production. In order to use the fonts that have increased over time for practical purposes, it was necessary to sample and catalog the typefaces (Image 6).

Another reality is that the type production method developed by Gutenberg remained essentially unchanged until the hot type casting systems developed in the last quarter of the nineteenth century.

Classification and Nomenclature of Basic Letter Forms

MAIN GROUPS					
I. Letters of Latin Origin	}	A. Roman Letters			
II. Letters of Non-Latin Origin		B. Blackletters Greek, Semitic, Arabic, Chinese, etc.			

LETTERS OF LATIN ORIGIN						
Roman	With varying thick and thin strokes	Slanted stress	<i>Venetian</i>	see page 76	1470 –1500*	
			<i>Oldstyle with Italic</i>	eMgmem	1495 –1757	
		Intermediate vertical stress	<i>Transitional with Italic</i>	eMgm eMgm	1757 –1790	
	Straight vertical stress	<i>Modern with Italic</i>	eMgmem		1790*–1900*	
	With strokes of equal strength	Without serifs	<i>Sans serif</i> <i>Sans serif Italic</i>	eMgm		since 1832
With serifs		<i>Egyptian</i>	eMgm eMgm		since 1815*	
Blackletter	Tops of inm are broken; curves as in Carolingian Minuscule with tendency of breaking but without sharp points	<i>Rotunda</i>	} Gothic Period	emoꝛðav		since 1486
				emoꝛðav		since 1455
	Almost all strokes of lower case letters are broken	<i>Pointed blackletter</i>	emoꝛðav		since 1470*	
			emoꝛðav		since 1515*	
Both sides of oꝛðav are rounded, sharp points; characteristic g is crossed at right		<i>Schwabacher</i>	emoꝛðav		since 1515*	
oꝛðav are half round and half broken		<i>Fraktur</i>	emoꝛðav		since 1515*	

*approximately

Image 6. Classification and Nomenclature of Basic Letter Forms. “Treasury of Alphabets and Lettering” a handbook of type and lettering by Jan Tschichold with examples from the past and present, 150 complete alphabets with 64 pages of text and explanation, introduction by Ben Rosen. Source: Tschichold, Jan. (1992). Treasury of Alphabets & Lettering. (pp. 28). New York: W. W. Norton & Company.

In fact, phototypesetting and photocomposing systems have been in service and use for at least thirty-four years, starting from the nineteen-fifties. In the nineteen-eighty-fives, personal computers became more effective thanks to desktop publishing, and the internet enabled the development of another communication medium. All these technical and technological developments have determined the classification systems of typefaces or fonts in a dynamic mutual interaction. It is no longer necessary to look at the developments before nineteen hundred and fifty, but after the publication of the Vox Classification. Because Maxmillien Vox's classification enabled a five-hundred years old tradition to be defined and categorized on a scientific basis (Lawson, 1971, pp. 35-37). Whether at least as comprehensive as Vox's or as comprehensive as the German Standards Institute's, ultimately they all offer a differently sensitive reflection of a scientific view of the past.

Digital change, which is now at the doorstep, has the potential to overturn all the facts of the past. A radical new process begins with desktop publishing. Typefaces of the past are digitized. In the past, printing processes included typing, typesetting, proofing, printing, photomechanics, assembly, etc. it was carried out in printing offices or printing houses. Thanks to new technological equipment developed as input, editing and output devices, almost all operations begin to be carried out step by step with personal computers in a small office.

In the Vox Classification, the nomenclatures are as follows: Humanes, Garaldes, Réales, Didones, Incises, Linéales, Méchanes, Scriptes and Manuaries (Lawson, 1971, pp. 35-37). In similar classifications, it is seen that the fonts of the past and their industrial reproductions are basically classified under basic categories such as Old Style, Transitional, Modern Style, Square Serif, Sans Serif, Script, Broken Types, Incised, Wood Type, Ornamental and Display Letters, etc. The “Sans Serif” category, which became widespread in the 20th century, can also be defined as “Grotesque” or “Linear” in the same system.

In nineteen eighty-five, fonts were installed in the cartridges of low resolution printers and were in limited numbers. Another decade later, personal computers' operating systems now enable real-time operations on the screen. This development leads to more advanced and competent results in typographic arrangements (Image 7). Between Nineteen Eighty-Five and Nineteen Ninety-Five, international typography periodicals such as Emigre and Fuse distribute next-generation digital fonts. These help designers develop innovative typographic styles.

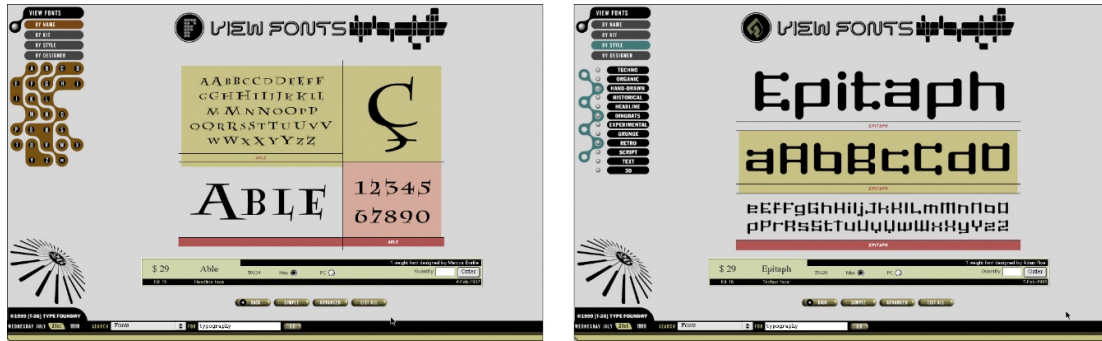


Image 7. The opening of the Internet to the whole world in 1992 and the user-friendly feature of web browsers in 1995 led to the rapid establishment of websites and the virtual sale and distribution of digital fonts. Source: T-29 Type Foundry web site.

Fuse, under the editorship and publishing responsibility of Neville Brody and Jon Wozencroft, leads to the emergence of new Postmodern trends more clearly, especially with conceptual and experimental digital font development projects. Moreover, these fonts are not capable of being placed in any of the classification categories of the past mentioned previously. On the contrary, they are on the way to create a separate category as new digital fonts with different features within themselves (Image 8).

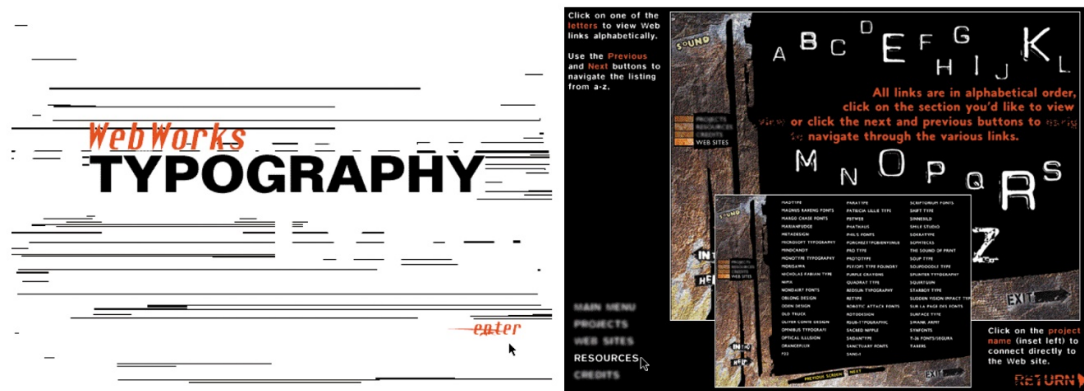


Image 8. Examples of digital typography projects included in the interactive CD presented with the Web Works Typography book. Source: Mills, Jason., Donnelly, Daniel. (1998). *Webworks Typography*. Hamburg: Gingko Press

An important and noteworthy study on typeface classification was carried out by Catherine Dixon in 1995. Dixon begins work on a cataloging program for a photographic lettering archive. The new descriptive framework proposed by him for typefaces consists of three basic explanation components: 1- Sources, 2- Formal attributes and 3- Patterns. The purpose of the framework is to provide a reference system in which typefaces can be examined individually and a description appropriate to the needs of each can be created (Kate and Busic-Snyder, 2005, pp. 176). The idea here is to reach an expansive explanation that does not focus on an inflexible structure that forces typefaces to fall into a category visually or conceptually (Image: 9).

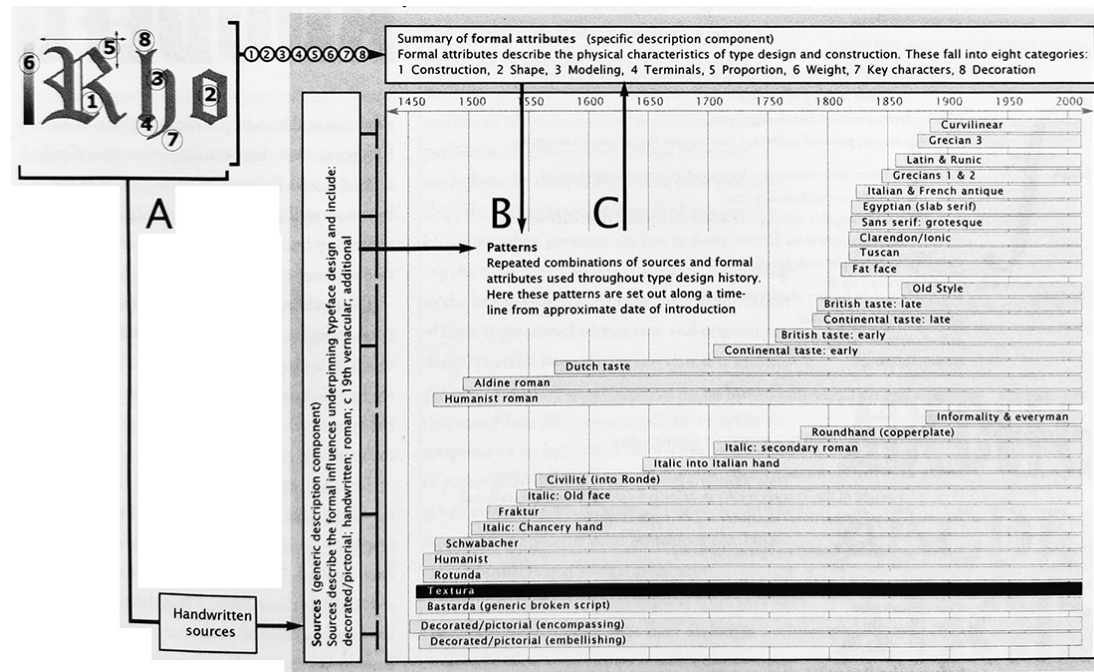


Image 9. A visual diagram presenting Catherine Dixon's three-legged type classification system with its subidentifiers and components. Source: Clair, Kate., Busic-Snyder, Cynthia. (2005). *A Typographic Workbook; A Primer to History, Techniques and Artistry*. (pp. 177). New Jersey/Canada: John Wiley & Sons, Inc.

Considering these events, especially after two thousand, articles have been written evaluating digital fonts in terms of their sources of inspiration, design and production methods, and conceptual approaches. According to the explanation made on the subject in this article, digital fonts in terms of technical process and design understanding; It can be categorized under the following headings: 1- Modified, 2- Layered, 3- Hybrid, 4- Mixed, 5- Manuplated, 6- Analogical, 7- Smart, 8- Random Access, 9- Flipper and 10- Individual Script (Sarkavak, 2006, pp. 33-53).

New generation fonts can no longer be classified under the classical headings in the Vox Classification, but under the heading of “Digital Fonts,” other than the digitized fonts of the past, as produced with the possibilities of the digital environment. It is also possible to classify digital fonts in terms of conceptual, technical, formation and formatting features on the basis of design methods. In short, the digital typography process, which started with desktop publishing, offers brand new visual editing opportunities. Instead of paper, screens are now the primary surfaces.

New media tools and environments have become widespread after 2000. Digital screens exist not only on desktop computers, but also on mobile devices in every moment of daily life, such as tablets, smartphones or outdoor LED screens, megaboards and v-board screens (Image 10). For example, as websites became more popular in the 2000s, pixel-based fonts called Web Fonts came into use. On the other hand, diversified, flexible and responsive design possibilities have been developed in order to create web pages compatible with the diversifying formats of new media.

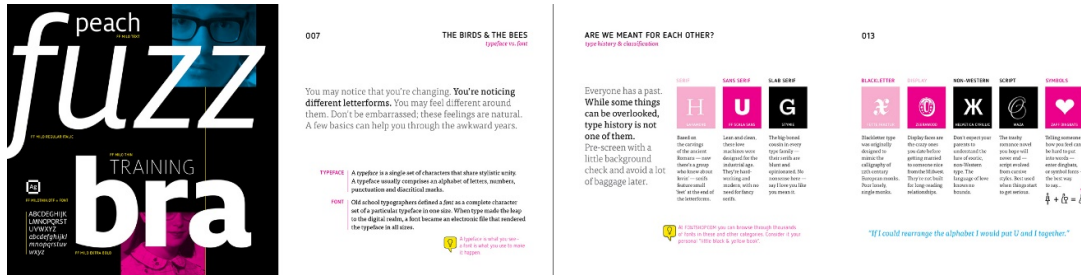


Image 10. In the post-2000 period, digital fonts have increased so much that today’s font foundries (even though the products they produce are now digital, most font manufacturers still use this old term - which actually means “foundry” - in their corporate name) publish digital publications about the fonts they produce. It offers different category definitions in its documents according to both information and application features and types. These classifications vary from manufacturer to manufacturer, and new definitions are created with various approaches. Source: A FontShop 2010 publishing “fsfinalbook” (pp. 12-13).

Digital fonts have been developed for different purposes to be applied not only on screen but also outdoors. Moreover, publications that include or offer them are, in a sense, already putting forward new font category suggestions with their own content sections or titles (Image 11). When these publications are examined, it can be observed that typefaces are grouped under different sections or headings. In order to examine and observe the accuracy or reality of the claims expressed in our article, data from the literature review must be presented at this point. In the following text, some selected publications regarding the developments of the desktop publishing period and beyond are examined.

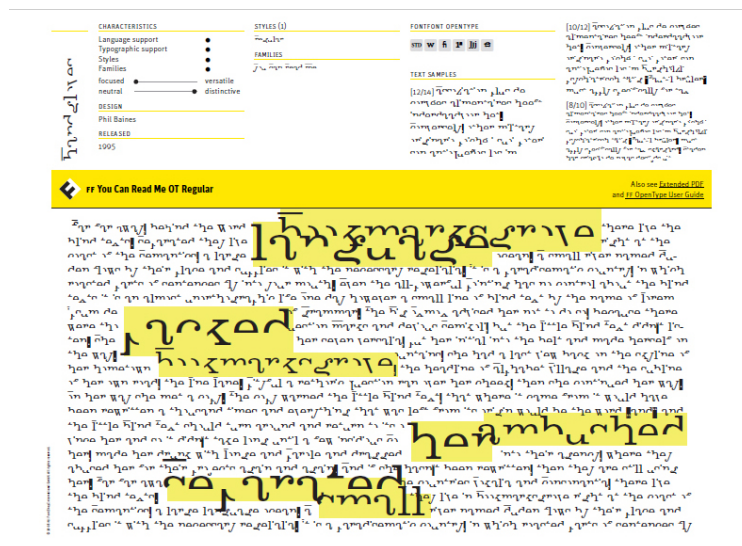


Image 11. With a design approach that includes a reading experience on the screen, the You Can Read Me font was designed by Phil Baines for the FUSE periodical in 1991. For example, under which classification would it be more accurate to define this design produced and distributed by the FontFont digital font company? It is known that it is in the category of “graphic” fonts. Source: A FontShop 2010 published file.

3. Book Review

Apart from the Vox Classification, which became a general rule in previous decades, there have been various publications presenting new generation fonts developed in the digital environment, especially since the 1990s. These publications begin to group new generation fonts under different headings, based on their various common

features, instead of classical classification concepts. In this part of the article, a few books that offer these new definitions and contents are reviewed below.

A publication that defines digital fonts with a different approach is the book “Type in the Digital Age: Faces on the Edge” by Steven Heller and Anne Fink, published in 1997 (Image 12-A). The chapter titles in the book are: Rebirths & Revivals: Encore for nostalgic and passe faces, Greeking Roman: Classical faces and contempo scrawls, Digital Carvings: New design for new media, Off the Wall: The weirdest of the weird, Optical Delusions: Type that shakes, rattles, and rolls, Lots O’ Laffs: Digital dingbats, fleurons, and jewels, Foundries on the Edge: The new typographers (Heller and Fink, 1997, pp. xi).



Image 12. (From Left to right) A) Heller, Steven., Fink, Anne. (1997). *Type in the Digital Age: Faces on the Edge*. New York: Van Nostrand Reinhold. B) Drate, Spencer., Salavetz, Jutka. (1999). *Extreme Fonts: Digital Faces of the Future*. Hong Kong: Madison Square Press. C) Gale, Nathan. (2002). *Type 1: Digital Typeface Design*. Hong Kong: Univers Publishing. D) Klanten, R. (Editor) & Others. (2004). *Type One: Discipline & Progress in Typography*. Berlin: Die Gestalten Verlag., and E) Gordon, Bob., and others. (2009). *1000 Fonts: An Illustrated Guide to Finding the Right Typeface*. PRoC: Chronicle Books, Ivy Press.

After a Foreword in Spencer Drate and Jutka Salavetz's book “Extreme Fonts: Digital Faces of the Future” published in 1999, the designers' works are included under their own names (Image 12-B). However, the statement made in Foreword is remarkable. Accordingly, the aim of those who prepared the book for publication is not to argue about these types. “This ain’t no type polemic. And it ain’t about pretty faces no more.” According to them, the typefaces presented or not presented in the book have been “twisted, pulled, kicked,

degraded, abused, dissolved, punched, whacked, puked, shat and regenerated” in recent years. Therefore, “Where is the integrity in that?” (Drate and Salavetz, 1999, pp. 7).

The headings in the Table of Contents of Nathan Gale's book “Type 1: Digital Typeface Design” published in 2002 suggest a new categorization of the digital typeface examples presented in the book (Image 12-C). Gale classifies these designs as Text, Graphic, Calligraphic, Dirty, Stencil, Line, Modular and Bitmapped, and he proposes a new classification based on the design elements or strategies of digital fonts (Gale, 2002, pp. 4). Some of the designs he presents in his book can be categorized in the Vox Classification, but others cannot be grouped under any of the headings that existed in previous publications.

There are now new categories in the book “Type One: Discipline & Progress in Typography,” published by Die Gestalten Verlag in 2004 under the editorship of R. Klanten et al (Image 12-D). The book includes selected digital font examples under the headings Display, Text, Revival, Method, Grid and Haptics. What is interesting is that in the book “How Can I Develop a Good Text Font?” the classical doctrine (general principles of typeface design) is included under the title, which is both ironic and creates a paradox (Klanten, 2004, pp. 3).

As the last example of the literature review (for this paper), the illustrated guide to finding the right font called “1000 Fonts: An Illustrated Guide to Finding the Right Typeface” published by Bob Gordon et al (Image 12-E). in 2009 was examined. On the “Contents” page of the publication, the 1000 font samples presented in the book are categorized under the headings of Serif, Sans Serif, *Display*, *Script*, Billboard and Poster, *Monospaced*, Screen and Web, Inline and Stencil, Ornamental, Symbols and Dingbats, Fun and Illustrative is being reclassified (Gordon et al., 2009, pp. 5).

OpenType Variable Fonts were announced in 2016, and a font technology that was not actually new and remained dormant in the past due to lack of common ground was revived in the context of developments and collaborations in recent years (Image 13). Variable fonts, the first examples of which have been released since 2018, for example, cannot be included in any typeface or font category. Variable fonts were examined in the study titled “New Generation Variable Font Design and an Application in Visual Communication Design.” completed by Anil Sarıkavak at Hacettepe University, Institute of Fine Arts in 2023. They are only in the subheadings under their main title – as we defined in our doctoral thesis; It can be classified as “General,” “Special” and “Subjective” (Sarıkavak, 2023).

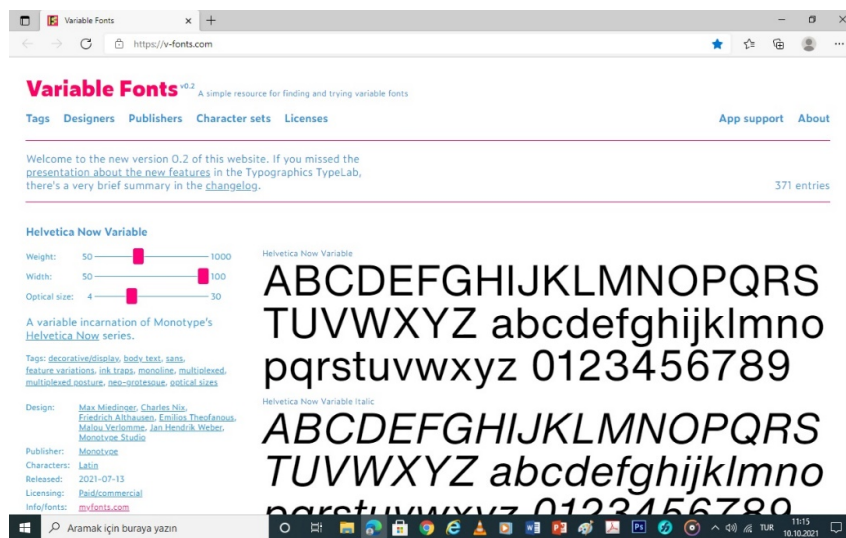


Image 13. Screenshot of the Helvetica Now Variable font offered for sale on the Variable Fonts (<https://v-fonts.com>) website. Source: [Variable Fonts \(v-fonts.com\)](https://v-fonts.com) Access Date: 10.10.2021.

4. Findings and Conclusion

In the light of all these literature readings, reviews and observations, our conclusions are as follows:

- Vox Classification, announced in 1956, is based on a generalization revealed as a result of a scientific evaluation of the geometric and structural features of typefaces in historical continuity in a world belonging to the Gutenberg Galaxy.
- A new era has begun with desktop publishing. The fonts available on computers at that time were initially defined as the main categories: Serif, Sans Serif, and Monospaced or Typewriter fonts. In addition, Display, Symbol or Dingbats fonts for different purposes are also categorized (Image 14).

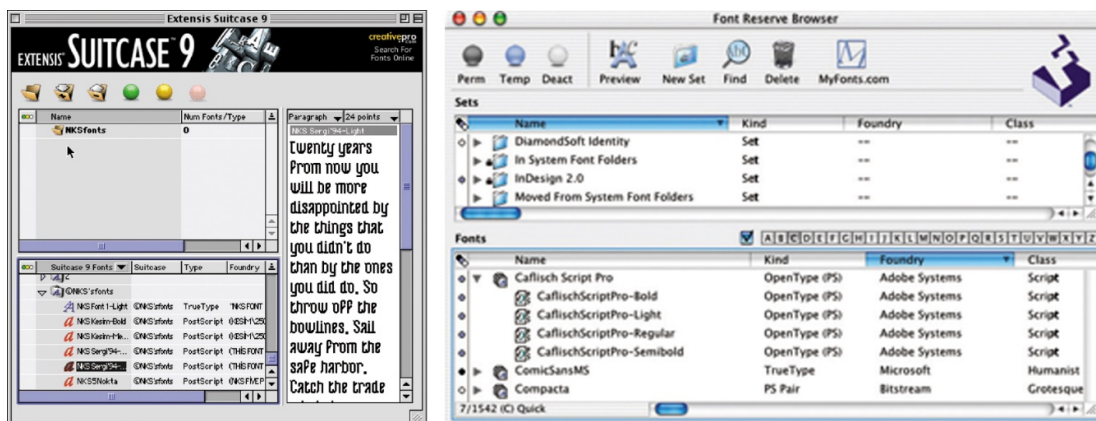


Image 14. Screen shot of version 9 of Extensis Suitcase, one of the third-party font management programs developed between 1995 and 2015 to effectively and functionally use thousands of fonts available on desktop computers, on a Power Macintosh in the early 2000s. Source: Personal archive.

- Soon, the Internet, which started in 1992, transformed computers from being just an editing environment into a communication and sharing environment step by step. This development has increased the importance of screen sharing instead of paper, thus creating an intense need for screen fonts for websites.
- While old fonts have been digitized for use in computers, on the other hand, new generation digital fonts have been produced based entirely on the capabilities and possibilities of the digital environment. Quality conceptual and experimental digital font production has been encouraged by various international periodicals.
- According to the results of the literature review, there is no common definition yet for the naming and classification of these new generation digital fonts. This situation is neither good nor bad. This problem thus formed the subject of this paper.
- However, it is no longer possible to define these new generation fonts with the old Vox Classification (Image 15). The problem in this regard perhaps lies in the classification approach. Obviously, a new perspective is needed from now on.

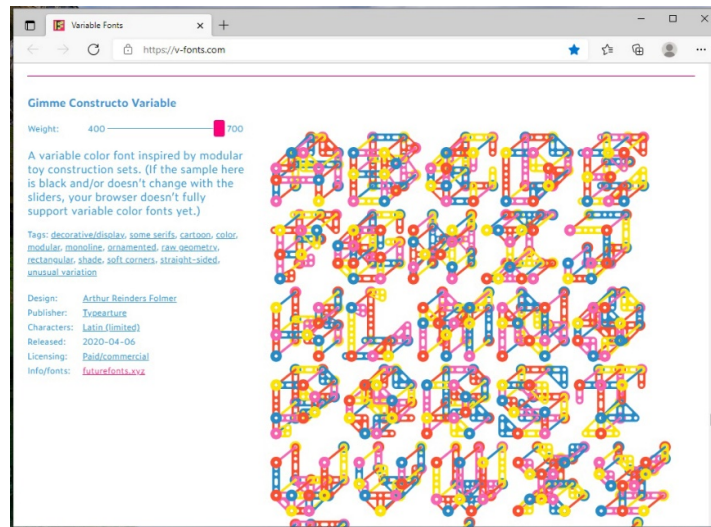


Image 15. Gimme Constructo Variable. It is one of the interesting variable fonts. This font offers both a colorful and three-dimensional effect (Sarikavak, 2023, pp. 47). Source: [Variable Fonts \(v-fonts.com\)](https://v-fonts.com) Access Date: 10.10.2021.

- For example, the “Periodic Table of Typefaces” (Image 16-A) panel developed by Camdon Wilde in 2009 or the “FontFont Map Design Punchcut” (Image 16-B) diagram produced by FontShop International in 2011 or similar information visualizations (in other words, infographics) are a tool for the search for new definitions or classifications that we consider as topics/problems and it can be a guide.
- Finally, more comprehensive scientific investigations and evaluations are needed on this subject. We plan to address these and similar problems and solution suggestions in our next work.

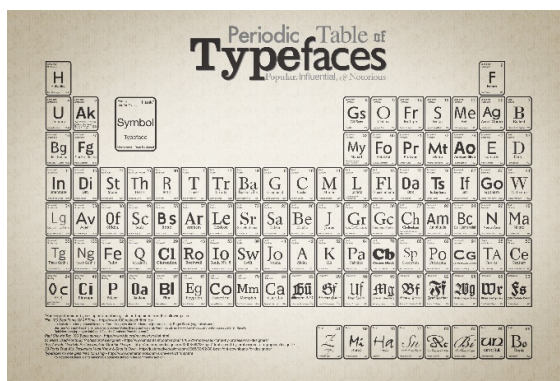


Image 16. (From left to right) A) Periodic Table of Fonts designed by Camdon Wilde in 2009 (Source: Wilde, C. (2009). *Periodic Table of Typefaces; Popular, Influential & Notorious*) and B) FontFont Knuckle Cutting Positioning Design published by FontShop Int. in 2011 (Source: FontShop International (2011). *FontFont Map Design Punchcut*).

Bibliography

- Carter, Harry. (1969). *A View of Early Typography*. London: Hyphen Press.
- Clair, Kate., Busic-Snyder, Cynthia. (2005). *A Typographic Workbook; A Primer to History, Techniques and Artistry*. (Second Edition). New Jersey/Canada: John Wiley & Sons, Inc.

Drate, Spencer., Salavetz, Jutka. (1999). *Extreme Fonts: Digital Faces of the Future*. Hong Kong: Madison Square Press.

FontShop (2010). *Fsfinalbook*.

FontShop International (2011). *FontFont Map Design Punchcut*.

Gale, Nathan. (2002). *Type 1: Digital Typeface Design*. Hong Kong: Univers Publishing.

Gordon, Bob., and others. (2009). *1000 Fonts: An Illustrated Guide to Finding the Right Typeface*. PRoC: Chronicle Books, Ivy Press.

Heller, Steven., Fink, Anne. (1997). *Type in the Digital Age: Faces on the Edge*. New York: Van Nostrand Reinhold.

Jong, Cees W. De., (Editor), vd. (2009). *Type, A Visual History of Typefaces & Graphic Styles; Volume 1, 1628 – 1900*. Köln: Taschen GmbH.

Klanten, R. (Editor) & Others. (2004). *Type One: Discipline & Progress in Typography*. Berlin: Die Gestalten Verlag.

Lawson, A. (1971) *Printing Types; An Introduction*. Boston: Beacon Press.

Mills, Jason., Donnelly, Daniel. (1998). *Webworks Typography*. Hamburg: Gingko Press.

Sarıkavak, Anıl. (2023). *New Generation Variable Font Design and An Application in Visual Communication Design*. Ankara: Hacettepe University, Institute of Fine Arts, Unpublished Proficiency in Art Thesis.

Sarıkavak, N. K. (2006). *Developments and Basic Methods in Digital Type Design*. Art Writings, No: 14, Bahar. Ankara: Hacettepe University, Faculty of Fine Arts Journal.

Tschichold, Jan. (1992). *Treasury of Alphabets & Lettering*. New York: W. W. Norton & Company.

T-29 Type Foundry web site.

[Variable Fonts \(v-fonts.com\)](http://Variable Fonts (v-fonts.com))

Wilde, C. (2009). *Periodic Table of Typefaces; Popular, Influential & Notorious*.

Images Sources

Image 1. Carter, Harry. (1969). *A View of Early Typography*. (p. 165). London: Hyphen Press.

Image 2. Carter, Harry. (1969). *A View of Early Typography*. (p. 159). London: Hyphen Press.

Image 3. Carter, Harry. (1969). *A View of Early Typography*. (p. 161). London: Hyphen Press.

Image 4. Carter, Harry. (1969). *A View of Early Typography*. (p. 160). London: Hyphen Press.

Image 5. Jong, Cees W. De., (Editor), vd. (2009). *Type, A Visual History of Typefaces & Graphic Styles; Volume 1, 1628 – 1900*. (p. 6). Köln: Taschen GmbH.

Image 6. Tschichold, Jan. (1992). *Treasury of Alphabets & Lettering*. (p. 28). New York: W. W. Norton & Company.

Image 7. T-29 Type Foundry web site.

Image 8. Mills, Jason., Donnelly, Daniel. (1998). *Webworks Typography*. Hamburg: Gingko Press.

Image 9. Clair, Kate., Busic-Snyder, Cynthia. (2005). *A Typographic Workbook; A Primer to History, Techniques and Artistry*. (Second Edition). New Jersey/Canada: John Wiley & Sons, Inc.

Image 10. A FontShop 2010 publishing “fsfinalbook” (p. 12-13).

Image 11. A FontShop 2010 publishing file.

Image 12. (Soldan sağa, yukarıdan aşağıya) A) Heller, Steven., Fink, Anne. (1997). *Type in the Digital Age: Faces on the Edge*. New York: Van Nostrand Reinhold. B) Drate, Spencer., Salavetz, Jutka. (1999). *Extreme Fonts: Digital Faces of the Future*. Hong Kong: Madison Square Press. C) Gale, Nathan. (2002). *Type 1: Digital Typeface Design*. Hong Kong: Univers Publishing. D) Klanten, R. (Editor) & Others. (2004). *Type One: Discipline & Progress in Typography*. Berlin: Die Gestalten Verlag., ve E) Gordon, Bob., and others. (2009). *1000 Fonts: An Illustrated Guide to Finding the Right Typeface*. PRoC: Chronicle Books, Ivy Press.

Image 13. [Variable Fonts \(v-fonts.com\)](http://Variable Fonts (v-fonts.com)) Access Date: 10.10.2021.

Image 14. Kişisel arşiv.

Image 15. [Variable Fonts \(v-fonts.com\)](http://v-fonts.com) Access Date: 10.10.2021.

Image 16. A) Wilde, C. (2009). *Periodic Table of Typefaces; Popular, Influential & Notorious*, B) FontShop International (2011). *FontFont Map Design Punchcut*.