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Proposal I

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A VOICE THROUGH TYPE

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INTRODUCTION

Chapter

»I have no doubt at all that a family mannerism can be traced in these two specimens of writing. [...] There were twenty-three other deductions which would be of more interest to experts than to you. They all tended to deepen the impression upon my mind that the Cunninghams, father and son, had written this letter.« [→1←]

In this and several other cases Arthur Conan Doyle's character Sherlock Holmes was able to deduce characteristics of people just by the shape of their handwriting. Handwriting is something very personal that incorporates personal abilities, preferences, and behavioral traces. With the industrialization and the digitization of typography a lot of these characteristics are gone. One would think that such changes would allow for only a handful of typefaces, as the whole premise of standardization is to reduce the amount of individual influence on a process—making the actors in the process interchangeable. But quite to the contrary: There are thousands of (digital) typefaces available and new ones are published every day. That implies that there are many different situations that call for different fonts. It also implies that an individual touch prevailed through digitization. Fonts are a form of digitized and standardized handwriting, provided by type designers who in the process offer up something of their style of (digital) writing, including their own preferences and artistic quirks.

A chosen font can influence the viewers perception of text. [→2←] There are established tropes and associations with particular typographic styles that are perceivable by laymen—even if just on a subconscious level. The perceived font association can enhance or even undermine the meaning of the written word. This often gets talked about in the context of typography as ambience or

for logo type, that communicates an impression of a brand. Less explored are the possibilities of typography as a voice for direct

speech. The applicable fields would be various forms of dialogue-based text. For example subtitles, dialogue systems in video games, lyric poetry, or dialogue in prose. Using typography to give written dialogue an individual voice is in a sense a form of reverse-engineering of one of the goals of typography, namely making text standardized and free of the individuality of hand-written text has.

The goal of this paper is to make particular fonts ascribable to a (fictional) characters voice, a few parameters need to be established. These parameters will help to determine if a font fits or even emphasizes the characteristics of a speaker. First, I will review a number of type classification systems. These will then be analyzed with regard to how their characteristics can be interpreted as representations of personal attributes. Additionally, a framework that helps categorize the speakers personal character is necessary. As a proof of concept these heuristics then will get tested and evaluated. The goal of this paper is not to establish a rigid step-by-step system, but to outline a process that is repeatable and applicable.

A B C D

1→Apex__2→Upper Lobe__3→Lower Lobe__4→Waist__5→Beak__6→Bowl

I J K L M

10→Stem__11→Leg__12→Serif__13→Diagonal

R S T U V

17→Spine__18→Beak__19→Arm

a b c d e

20→Shoulder__6→Bowl__21→Terminal__22→Ascender__23→Eye

m n o p q

14→Counter__28→Descender

w x y z

31→Tail__32→Inktrap

↖ Redaction Regular

E F G H

__7→Arm(s)__8→Throat__9→Crossbar

N O P Q

14→Counter__15→Lobe__16→Tail

W X Y Z

20→Vertex__21→Crotch

f g h i j k l

24→hook__25→Ear__26→Dot__27→Flag

r s t u v

29→Ball Terminal__30→Stroke

APERTURE

The aperture is the partially enclosed, somewhat rounded negative space in some characters such as n, C, S, the lower part of e, or the upper part of a double-storey a.

APEX→1

The point at the top of a character such as the uppercase A where the left and right strokes meet is the apex. The apex may be a sharp point, blunt, or rounded and is an identifying feature for some typefaces.

ARM→7

The arm of a letter is the horizontal stroke on some characters that does not connect to a stroke or stem at one or both ends. The top of the capital T and the horizontal strokes of the F and E are examples of arms. Additionally, the diagonal upward stroke on a K is its arm.

ASCENDER

An upward vertical stroke found on the part of lowercase letters that extends above the typeface's x-height.

AXIS

An imaginary line drawn from top to bottom of a glyph bisecting the upper and lower strokes is the axis.

BALL TERMINAL

A ball terminal is a design feature of a typeface or glyph where the end of a stroke takes a roughly circular shape, as opposed to a serif or a square end.

BEAK→5

A beak is a type of decorative stroke at the end of the arm of a letter, connected to the arm by the terminal. Similar to a spur or serif, it is usually more pronounced.

BOWL→6

The curved part of the character that encloses the circular or curved parts (counter) of some letters such as d, b, o, D, and B is the bowl. Some sources call any parts of a letter enclosing a space a bowl, including both parts of a double-storey g and the straight stem on a D or B. The curved strokes of a C are sometimes also referred to as bowls although they aren't closed.

CAP-HEIGHT

The height of uppercase letters reach. Usually based on the reach of the uppercase H.

CHARACTER

The basic unit of written language; can be a letter, a number, a punctuation mark or another symbol.

COUNTER→14

The enclosed or partially enclosed circular or curved negative space (white space) of some letters such as d, o, and s is the counter. The term counter may sometimes be used to refer only to closed space, while partially enclosed spaces in m, n, or h are the aperture.

CROSSBAR→9

The (usually) horizontal stroke across the middle of uppercase A and H is a crossbar (or bar). The horizontal or sloping stroke enclosing the bottom of the eye of an e is also a bar.

CROTCH→21

An acute, inside angle where two strokes meet.

DESCENDER

The portion of some lowercase letters, such as g and y, that extends or descends below the baseline is the descender. In some fonts the uppercase alphabet can feature descenders in the J.

DIACRITIC

Diacriticals are the accent marks used on some characters to denote a specific pronunciation.

DIAGONAL→13

An angled stroke.

EAR

A small stroke extending from the upper-right side of the bowl of lowercase g; also appears in the angled or curved lowercase r.

EYE

Much like a counter, the eye refers specifically to the enclosed space in a lowercase 'e'.

FONT

A collection of glyphs; the font is the delivery mechanism, represented by a digital file or a set of metal pieces, for a typeface.

FOUNDRY

A company that designs, manufactures and/or distributes fonts

GLYPH

The graphical representation of a character. A font can contain several glyphs for each letter—a lowercase >x< and a small cap >A<, for example—and can also have alternate forms, such as a single- and double-storey >x< or an >x< with a shwash tail. That way a single character can be represented by different glyphs.

HAIRLINE

A thin stroke usually common to serif typefaces.

INK TRAP

Ink traps originate as a feature of typefaces designed for printing in small sizes. At an ink trap, the corners or details are removed from the letterforms. They usually appear at the junction of two strokes.

ITALICS

While roman typefaces are upright, italic typefaces slant to the right. But rather than being just a slanted or tilted version of the roman face, a true or pure italic font is drawn from scratch and has unique features not found in the roman face.

LEG→11

The lower, down sloping stroke of the K and k is called a leg. The same stroke on R as well as the tail of a Q is sometimes also called a leg.

LIGATURE

Two or more letters combined into one character make a ligature. In typography some ligatures represent specific sounds or words such as the Æ or æ diphthong ligature. Other ligatures are primarily to make type more attractive on the page such as the fl and fi ligatures. In most cases, a ligature is only available in extended characters sets or special expert sets of fonts.

LINK

A stroke that connects the top and bottom bowls of lowercase double-storey g's.

LOBE, UPPER / LOWER→2,3

A rounded projecting stroke attached to the main structure of a letter. The upper lobe referring to the counter of the P, R and B; while the lower lobe refers to the lower bowl of the B.

LOBE→15

A rounded projecting stroke attached to the main structure of a letter.

LOWERCASE

The little letters or non-capital letters of the alphabet.

OLD-STYLE FIGURES

Numbers with varying heights, some aligning to the baseline and some below. Sometimes also referred to as mediaeval or lowercase numbers.

SERIF→12

A serif is the little extra stroke found at the end of main vertical and horizontal strokes of some letterforms. A typeface that has serifs is called a serif typeface (or serifed typeface). A typeface without serifs is called sans-serif, from the French sans, meaning »without«. Serifs fall into various groups and can be generally described as hairline (hair), square (slab), or wedge and are either bracketed or unbracketed.

SHOULDER

The curve at the beginning of a leg of a character, such as in an m or n.

SPINE→17

Curving stroke in S and s, as well as in some 8's. The spine may be almost vertical or mostly horizontal, depending on the typeface.

STEM→10

The stem is the main, usually vertical stroke of a letterform.

STROKE

An essential line or structural element of a glyph; the term derives from the stroke of a pen.

STROKE CONTRAST

The weight difference between light and heavy strokes

STYLE

A stylistic member (e. g. bold, italic, condensed) of a typeface family, typically represented by a separate font.

TAIL→16

The descending, often decorative stroke on the letter Q or the descending, often curved diagonal stroke on K or R is the tail. The descender on g, j, p, q, and y are also called tails.

TERMINAL

A curve at the end of a stroke that doesn't include a serif. Typical in serif t, c, e but can also be added at the end of n, a, or l. Sometimes the terminal can be the connecting tissue for a ball terminal or a beak (a, c, f, s, S, C).

THROAT / BRACKET→8

The transition connecting stroke and serif. Also called bracket.

TYPEFACE

The design of a set of characters; in simple terms, the typeface is what you see and the font is what you use. Font and typeface are often used interchangeably—though they are technically distinct from one another.

UPPERCASE

The capital letters of the alphabet.

VERTEX→20

The lower point in v, w, V, W where two diagonal lines meet.

WAIST→4

Tapering between two intersecting bowls as seen in 3, 8 and B.

WEIGHT

The thickness of a stroke; in type design, the geometry of a line (or shape) is usually described using the terminology of weight.

X-HEIGHT

The height of lowercase letters reach based on height of lowercase x; does not include ascenders or descenders.

CLASSIFICATION MODELS

01

Chapter

With the sheer endless amount of typefaces to choose from, picking the right one for a character's voice seems to be down to pure luck. However, most typefaces have a concept and distinct characteristics that can be helpful in making a decision for or against a typeface. Also, since writings as cultural conventions depend on recognizability, typefaces always revert to pre-established shapes. [→4←] Knowing these typographic tropes helps narrowing down the suitable typefaces for a specific case. Since the beginning of the industrial age typeface variety and availability increased which in turn harbored the need to create systems to make the range of fonts manageable. With the amount of typefaces already available and considering the fast growing market of new type designs, classification systems need to adjust and expand accordingly. As the early classifications have not been expanded upon beyond a certain point in time, they are limited in how well they portray characteristics of more recent fonts. Later systems allowed to categorize shape characteristics, as well as the construction method of the glyphs. But these will lead to overlaps in the categorization as they are not complex enough. [→5←] In order to pick a system that can help in assigning voice characteristics to a speaker I will look at a number of system. For the very specific need of this project, a number of models can already be excluded. These models are the classification model by Francis Thi- baudeau, the model by Maximilian Vox, the DIN 16518, Joep Pohlen's model, as well as the classification model by Karen Cheng. The reason to exclude them from this paper, is that they catalogue typefaces mainly by their historic context and lack categories for expressiveness.

CLASSIFICATION-MATRIX BY

HANS PETER WILLBERG

Hans Peter Willberg oriented his classification model along a two-axis matrix. It was published in his book ›Wegweiser Schrift‹ in 2001. The first axis is based on the form features of established families:

- / ANTIQUA (SERIF)
- / ANTIQUA-VARIANTEN (SERIF-ALTERNATES LIKE THE
ROITS SEMI-SERIF OR FIARE FONT STYLES)
- / GROTESK (SANS SERIF)
- / EGYPTENNE (SLAB SERIF)
- / SCHREIBSCHRIFTEN (SCRIPT)
- / FREMDE SCHRIFTEN (NON-LATIN)

The second axis is based on style characteristics:

- / DYNAMIC
- / STATIC
- / GEOMETRIC
- / DECORATIVE
- / PROVOKING

Along those two axis he then sorts exemplary typefaces. What makes this model interesting, is the interpretation he adds to the style features. He argues that the form of a letter has a major impact on how we perceive typefaces—more so than the learned associations we have with certain fonts. [→6←] Willberg ascribes the following meaning to his five styles: [→7←]

- / DYNAMIC

// The letters have a horizontal alignment that leads to a good flow while reading. The shapes can be traced back to broad-nib pen writing. Because of the perceived movement he calls them ›wanderer‹—they walk towards a collective goal and every letter contributes to that goal.

- / STATIC

// The letters have an emphasize on the vertical shapes. Each form is closed and rooted in itself, but the proportions related to that of the other letters. He associates those letter shapes with ›soldiers‹. They represent a well-

ordered regiment in which each ›soldier‹ finds solitude in being part of the larger unit.

/ GEOMETRIC

// The letters are based on geometric constructions. Willberg calls them ›robots‹, because each letter abides by the programming of the construction rules.

/ DECORATIVE

// The shapes are derived from various stylistic approaches. The decorative letters he calls ›artists‹ or ›dandies‹ as they want to draw attention and want to be seen as beautiful.

/ PROVOKING

// The shapes can be derived from various stylistic approaches, but contrary to the decorative fonts the stylistics are meant to provoke and disturb. That doesn't necessarily mean they are all distorted, some of the typefaces he lists simply follow uncommon construction principle that might cause discomfort because of the technical nature. He calls these fonts ›non-conformists‹ or ›freaks‹.

This approach is indeed very interesting for assigning typography to specific voices. As an added bonus the model can help when combining typefaces. Fonts that are based on the same form principle shouldn't be combined. The same style is acceptable, but combinations that don't share style and form are to be preferred. Yet, the model still might be a tad bit too broad-stroked to figure out specifics for various complex characters. Still, the alignment is a rather helpful guideline to get started. It can also be a good model for small projects with very clear-cut characters that need to be contrasted. As it stands, it is unlikely to accommodate every font that got released in recent years, but the model helps in narrowing down a selection.

↓ Wanderer / Grotesque (MetaPro Book)

We are wandering towards the same goal.

01

↓ Soldiers / Grotesque (Neue Haas Grotesk Text Roman 55)

We soldiers keep marching on.

↓ Robots / Grotesque (Aqua Grotesque)

Beep. beep. We are the robots.

↓ Dandies / Antiqua (Elyaris)

Will you look at me?—I'm so fancy.

↓ Freaks / Antiqua (Serifabe Regular_ALT)

You're standing in my path. Go away!

CLASSIFICATION MODEL BY INDRA KUPFERSCHMID

In Indra Kupferschmidt's 2012 blog post »Type classifications are useful, but the common ones are not«—which, by the way, is an awesome title for a classification model—categorizes fonts by their underlying construction. [→8←] The model is based on Gerrit Noordzij's letter theories, and tries to catalogue typefaces in a more intuitive way than historic style periods. The core of this model is separation into letter shapes derived from different writing tools. The tools are the angled broad-nib pen (dynamic form principle), the pointed pen (rational form principle), and the speedball pen (geometric form principle). The shapes derived from these tools build the skeleton of the typeface. The various contrasts and stylistic features like serifs are the proverbial flesh around the skeleton. As a final layer details like like serif forms, low-res, outlines, etc. are added. This last layer is considered the skin of a typeface. It can also be understood as a tag cloud, and is thus extendable in scope. Along those three layers Kupferschmidt is then able to catalogue a large variety of typefaces.

```

/ SKELETON
    // dynamic
    // rational
    // geometric

/ FLESH
    // sans
    // serif
    // script
    // contrasted
    // linear

/ SKIN
    // tags referring to specifics in the design, like
    // the shape of serifs, features like ink traps or
    // any number of perceivable feature
  
```

Kupferschmidt sees the main advantage of this system in that it relates first and foremost to construction of the letters instead of form features that are derived from historic developments. Her goal was making type classification more accessible to students or less initiated designers. But she also points out that the three descriptors are not without flaw in this regard either. Dynamic, rational, and geometric also require explanations and some training in learning

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how the different tools shape the letters.

Nevertheless, this approach has some merit when trying to assign typefaces to voices. The way they are built from the core to the outer details helps when looking for correspondence in the speaker's character. For example if the character is methodical a font with a ›rational‹ based »skeleton« could be fitting. If they express a wide range of emotions, ›contrasted‹ as a »flesh«-layer might fit. The three layers are open to interpretation. While this is in and of itself a plus, the »skeleton« and »flesh« layers are a bit too open in the regard. The tag system could alleviate these shortcomings to hint at quirks and characteristics of the speaker, but since it is meant to be user-built there are no fixed categories to work with. Coming up with own categories can be time-intensive, and is also limited by ones own imagination. A pre-existing model helps users to make new associations, that they would not think of on their own accord.

The skeleton can be perceived best in how the ›e‹ is constructed: Open—dynamic →1; closed—rational →2; circular—geometric →3.

dynamic {skeleton} + serif & contrasted {flesh}
↓ (Freight Text Pro Regular)



rational {skeleton} + sserif & contrasted {flesh}
↓ (Abril Fatface Regular)



geometric {skeleton} + serif & contrasted {flesh}
↓ (Geotica Three Regular)



dynamic {skeleton} + sans & linear {flesh}
↓ (Meta Pro Book)



01

rational {skeleton} + sans & linear {flesh}
↓ (Neue Haas Grotesk Text Roman 55)



geometric {skeleton} + sans & linear {flesh}
↓ (Gimpel Regular)



CLASSIFICATION MODEL BY WOLFGANG BEINERT

Wolfgang Beinert published his classification model on typolexikon.de in 2001 and updated it in the subsequent years. [→9←] It was created as a matrix that helps to sort and maintain font libraries on personal computers, and as a study tool to learn about various typefaces and their classification. [→10←] The two goals are also reflected in the categories: They are in part educational (in regards to the historic categorization), as well as pragmatic (in regards to the categories that sort fonts by their use-case). Matrix might be a not-so-fitting name for this system as it does not align to several axis but is instead rather linear. The model is based on a folder structure with a set of top folders that harbor a subset of folders. [→11←]

/ ANTIQUA

- // Klassizistische Antiqua
 - /// Renaissance-Antiqua
 - /// Französische Renaissance-Antiqua
- // Venezianische Renaissance-Antiqua
- // Vorklassizistische Antiqua

/ EGYPTIENNE

- // Clarendon
- // Egyptienne
- // Egyptienne Varianten
- // Italienne
- // Schreibmaschine
- // Zeitungsegyptienne

/ GROTESK

- // Ältere Grotesk
- // Amerikanische Grotesk
- // Jüngere Grotesk
- // Konstruierte Grotesk

/ ZIERSCHRIFTEN (DECORATIVE FONTS)

- // Decorative
 - /// Decorative Hybride
 - /// Decorative Sans Serif
 - /// Decorative Serif
 - /// Decorative Slab Serif

/ DISPLAY

- // Display Art Deco
- // Display Blur
- // Display College
- // Display Freestyle
- // Display Gravur (Engravur)
- // Display Handprinted
- // Display Inline und Outline
- // Display Jugendstil
- // Display Kartenschrift
- // Display Klassizismus
- // Display Military
- // Display Multicolor
- // Display Neon
- // Display Nichtrömisch
- // Display Raster und Pixel
- // Display Reklameschriften
- // Display Schablone (Stencil)
- // Display Science Fiction
- // Display Vintage

/ SCRIPT

- // Script Airbrush
- // Script Bleisatz
- // Script Anglaise
- // Script Cursiv Rundschrift
- // Script Englische Schreibschrift
- // Script Kartenschrift
- // Script Korrespondenzschrift
- // Script Kurrentschrift
- // Script Mediaeval Schreibschrift
- // Script Reklameschrift
- // Script Rundschrift
- // Script Schönschrift
- // Script Verzierte Rundschrift
- // Script Freestyle & Fantasy
- // Script Handgezeichnete Drucktypen & Indie
(Handcrafted)
- // Script Handschriften

- // Script Blockbuchstaben
- // Script Cursiva
- // Script Faksimile
- // Script Gotisch
- // Script Schulschrift
- // Script Kalligraphie
- // Script Federn
- // Script Bundzugfeder
- // Script Glasfeder
- // Script Pfannenfeder
- // Script Plakatfeder
- // Script Schnurzugfeder
- // Script Schreibfeder
- // Script Spitzfeder
- // Script Zeichenfeder
- // Script Griffel
- // Script Pinsel
- // Script Malerpinsel
- // Script Schreibpinsel
- // Script Schreibrohr
- // Script Kalamoi
- // Script Rohrfeder
- // Script Stifte
- // Script Bleistift
- // Script Buntstift
- // Script Filzstift
- // Script Kohlestift
- // Script Kreide
- // Script Kugelschreiber
- // Script Marker

/ SCREEN FONTS

- // App Font
- // App Font Sans Serif
- // App Font Serif
- // App Font Slab Serif
- // Pixel Font
- // Pixel Font Screen
- // Pixel Font Motion

- // System Font
- // System Font Button/Pictogram
- // System Font Sans Serif
- // System Font Serif
- // System Font Slab Serif
- // Web Font
- // Web Font Button/Pictogram
- // Web Font Display
- // Web Font Sans Serif
- // Web Font Serif
- // Web Font Slab Serif

/ CORPORATE FONTS

- // DIN-, ISO- und OCR-Schriften
- // Expertensätze
- // Haus- und Unternehmensschriften
- // Monospaced Fonts/Digits
- // Schriftsppen

/ BLACKLETTER

- // Bastarda (Hybride)
- // Fraktur
- // Fraktur Varianten (Hybride)
- // Klassizitische Fraktur
- // Reform Fraktur
- // Renaissance Fraktur
- // Vorklassizistische Fraktur (Barock Fraktur)
- // Rotunda
- // Schwabacher
- // Textura

/ NON-LATIN SCRIPT

- // Arabisch
- // Asiatisch
- // Griechisch
- // Hebräisch
- // Kyrrilisch
- // Sonstige

/ SYMBOL FONTS

- // Abbrviaturen
- // Astronomische Zeichen

- // Aufzählungszeichen
- // Botanische Zeichen
- // Chemische Zeichen
- // Codezeichen
- // Elektronische und Regelungstechnische
Zeichen
- // Exponentenzeichen
- // Fahrplanzeichen
- // Genealogische Zeichen
- // Geometrische Zeichen
- // IT- und Datenverarbeitungszeichen
- // Kartographische Zeichen
- // Kalenderzeichen
- // Konsultationzeichen
- // Leerraumzeichen
- // Mathematische Zeichen
- // Metallografische Zeichen
- // Meteorologische Zeichen
- // Metrische Zeichen
- // Musikalische Notationszeichen
- // Optische Zeichen
- // Pfeilzeichen
- // Postalische Zeichen
- // Religiöse Zeichen
- // Scherenzeichen
- // Spielezeichen
- // Stahlprofilzeichen
- // Sternzeichen
- // Strichzeichen horizontal
- // Strichzeichen vertikal
- // Währungszeichen
- // Web Piktogramme

for a character you can call on knowledge acquired while sorting, to figure out what features you are looking for. Though some of the categories don't help in this regard. Especially the categories ›screen fonts‹ and ›corporate fonts‹ are of lesser value as they don't help exceed the expressive quality of a font. Another downside of Beinert's model is the lack of descriptive features for his categories. Those are meant to be searched on ones own accord.

The model is as comprehensive as it is one-directional. The main benefit of the model is learning to categorize fonts. It bears a certain resemblance to shape sorting games. Beinert's classification model has a very educational approach, that translates acquired typeface knowledge into faster accessibility of the corresponding fonts. For this research the educational nature does have some merit, as when you are looking for a fitting font

CLASSIFICATION MODEL BY LILO SCHÄFER

The model was developed as part of the master thesis »Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften« by Lilo Schäfer in 2019. The goal of this classification model was to set a framework in order to train a neuronal network that would help designers to catalogue the font collections on their computer. She analyzed the existing and before mentioned classification models, as well as tag-based systems of digital type foundries for their usability for said context and modified them accordingly. The model is on the one hand complex enough to accommodate for the variety of fonts out there, and on the other hand still reduced enough to stay manageable. The model is based on four search criteria that help narrow down the selection of fonts. The first category filters for the broad distinctions for fonts:

- / SERIF
- / SANS
- / SLAB SERIF
- / SCRIPT
- / BLACKLETTER

The second category allows for filtering based on form principle. Since not all form principles are reflected in every main category the possibility to select the form principle is limited accordingly. She uses the German terms which I will follow in the instances where she didn't offer a translation, as some of the classification terminology between English, French, and German can be confusing at times:

- / HUMANISTISCHES FORMPRINZIP [OLD-STYLE] (SERIF; SANS; SLAB SERIF)
 - // based on broad-nib pen writing used in sloped writing angle; reduced stroke contrast →0; ascenders extend past the cap-height; axis of the circular shapes is angled →1 and angled bar of the e →2 (mainly serifs)
 - // Serif: asymmetric serifs →3
 - // Sans: the e's terminal right instead of back to the crossbar (open letterform) →4
 - // Slab: heavy, angled serifs, that are optically of the same weight as the bar →5
- / TRANSITIONAL-FORMPRINZIP [TRANSITIONAL] (SERIF)
 - // transitional typefaces that feature characteristics of both broad-nib writing as

well as constructed letterforms; increased stroke contrast →6; axis of the circular shapes is either angled or almost vertical →7; symmetrical serifs; various terminal shapes →8; e-stroke can be angled or straight →9

- / KLASSIZISTISCHES FORMPRINZIP [MODERN] (SERIF; SLAB SERIF)
 - // constructed letterforms; strong stroke contrast →10; vertical axis →11; horizontal e-bar →12
 - // Serif: symmetrical serifs, straight serifs →13, unbracketed serifs; ear featured in g and r →14 ball terminals
 - // Slab: open e terminal; ball terminals
- / GROTESKES FORMPRINZIP (SANS)
 - // constructed letterforms; weak stroke contrast →15; ascenders level with the cap-height; symmetry; e-terminal faces bar (closed shape) →16; straight e bar; single-storey g →17
- / AMERIKANISCHES FORMPRINZIP [AMERICAN FORM PRINCIPLE, GOTHIC SANS] (SANS)
 - // constructed letterforms; vertical axis; visible stroke contrast →18; straight e-bar; large counters →19; large x-height →20; overall vertical impression; square-shaped uppercase letters →21; double-storey g →22; often angled counter openings →23
- / GEOMETRISCHES FORMPRINZIP (SANS; SLAB SERIF)
 - // based on geometric forms →24; vertical axis; stroke thickness is optically adjusted; strong symmetry
 - // Sans: single-story a and g →25; narrow R
 - // Slab: heavy, unbracketed, square serifs

As a last filter-category she introduces a number of detail characteristics that hint on the overall impression of the font or specific features of a typeface (think of tags):

- / AMORPHOUS
- / ASYMMETRICAL
- / THREE-DIMENSIONAL
- / DYNAMIC
- / MONOSPACED
- / ANGULAR
- / BOLD
- / CONTINUOUS
- / GEOMETRICAL
- / FIARED
- / CALIGRAPHIC
- / CONSTRUCTED
- / CONTRASTY
- / OUTLINED
- / LIGHT
- / MODULAR
- / OPEN
- / ROUND
- / STENCILED
- / CONDENSED
- / POINTED
- / STATIC
- / BLUNT
- / SYMMETRICAL
- / DENSED
- / FLOURISH
- / EXTENDED
- / DESTROYED

The model strikes a good balance between complexity, adaptability, and usability. One of the font categories missing are pixel fonts, that are very prevalent in subtitles and text boxes in video games. I would add them under the characteristics filter. For the purpose of this research especially the tag section is useful. When Schäfer decided on the categories her guidelines were: no emotions, no stereotypes, no synonyms. This leaves the adjectives open to interpretation. The term »extended« for example could then be interpreted as someone talking in a dragging voice, or as someone who is taking a stance with what they say.

Handgloves

↑ Humanist Sans (MetaPro Book)

Handballgloves

↑ Humanist Serif (Vendetta OT Medium)

Handgloves

↑ Humanist Slab Serif (Adelle Regular)

Handgloves

↑ Transitional Serif (Archive Roman)

Handgloves

↑ Modern Serif (Bauer Bodoni Std1 Roman)

Handgloves

↑ Grotesque Sans (Neue Haas Grotesk Text Pro 55 Roman)

Handgloves

↑ American Sans (Degular Regular)

Handgloves

↑ Geometric Sans (League Spartan Regular)

CLASSIFICATION MODEL BY TYPE CAMPUS

Type campus's model was published in 2022 as a look book for the type foundry Zetafonts. The model tries to catalogue very recent type design trends (mainly regarding display fonts) into a matrix. The underlying thesis for the model is that clear distinction markers for design trends like in the jetset or post-modern era are becoming less helpful in order to grasp the visual trends in typography nowadays. [→12←] Instead there is a multitude of visual languages at play that stand in opposition or just in plain coexistence to each other. What has been perceived as transitional phase has become the new normal. As such type campus argues from a comfortable standpoint as they only claim to have a model that might fit for a few years, before it will become obsolete or needs to be updated. The various trends are sorted along a four axis matrix based on behavioral drives on how to approach change. [→13←] Those drives are labeled: active | passive and dream | reality. Aligned along those axis are five design trend parent categories with the corresponding child trends.

/ DIGITAL ECSTASY [DREAM + ACTIVE]

- // Melting Spaces
swirly, distorted shapes
- // Hyper Meme
the inclusion of memes and kitsch into the shapes, often in the form of icons that can serve as ornamentals or substitute letters
- // Bezier Organic
exaggerated, overgrown forms and proportions that call back to organic forms
- // Languid Serif
hybrids of »old-fashioned« serif fonts, calligraphic excess and detailed flowing or distorted hairlines; often come with elaborated uppercase ligatures

/ ARTIFICIAL NOSTALGIA [DREAM + PASSIVE]

- // Positive Shapes
harking back to the expressive acid type of the seventies, but with contemporary normalized and digitized shapes
- // Stranger Types
harks back to type trends of the eighties, with 3D outlines, bold poster lettering or pixel fonts

← Positive Shapes
(Euphoria)



← Stranger Types
(Terminal Grotesque Open)



← Bezier Organic
(Golia Golia Display)



← Languid Serif
(Elyaris Regal)



- // Magic Moments
 - harking back to hand-lettered advertisement typefaces
- // Expressive Lettering
 - mostly custom fonts for a single design, the hand drawn fonts imply a third dimension — leaving the two-dimensional space

/ BOLD PURPOSE [REALTY + ACTIVE]

- // Alive Letters
 - refers less to a certain type of font and more to letters leaving the two dimensional frame and reaching into the depth axis
- // Active Type
 - typefaces created with loud poster designs in mind; often condensed and bold
- // All Type Inclusive
 - multi-language fonts or fonts taking for sensibilities of non-latin script and incorporating it into the latin alphabet

/ HARDCORE NORMCORE [REALTY + PASSIVE]

- // Swiss Grunge
 - mainly grotesque or gothic style fonts with a playful twist
- // Easy Blanding
 - sans serif fonts that don't draw attention to themselves, thus making them well usable in corporate contexts; often with geometric sensibilities

/ SWAP CULTURE [OVERIAP AT THE CENTER]

- // Electric Revival
 - reinterpretation of advertisement typefaces often with an emphasize on the horizontal lines
- // Fake Past
 - based on prior design aesthetics, but with contemporary functionality sensibilities
- // Wedge Power
 - wedge-shaped serif fonts

← Swiss Grunge
(Fritzi Sans Regular)

← Easy Blanding
(Klarheit Grotesk Book)

Aae

Aae

← Magic Moments
(Lamina Regular)

← Active Type
(Nein Black)

Aae

Aae

// Variable Identity
fonts that mix unexpected letter shapes and
don't follow just one construction principle
(for example mixing serif and sans serif in
one font)

Though the model doesn't accommodate for the established fonts and also doesn't give too much information that can be translated into direct voice characteristics, it expands the horizon for possible font choices. The underlying schematic of how to approach change can be a usable metric when picking a font that corresponds to a characters personal affinity.

Each of the presented models answers the question of font classification under a different premise. Considering these different premises, helps in picking a fitting model. But the models have value beyond that. Mixing the different approaches expands the typographic »vocabulary« necessary when ascribing type to a voice. For the following chapters I will mainly refer to Lilo Schäfer's model when classifying typefaces. The other models still influence my decisions and form my understanding of type categories.

Aaæ

← Electric Revival
(OHNO Blazeface)

Aaæ

← Wedge Power
(Begnard regular)

Aaæ

← Variable Identity
(BookNooks Regular)

READABILITY AND EXPRESSIVENESS

19

Chapter

As use cases for dialogue that gets »voiced« through typography I think of three scenarios:

- / DIALOGUE OR INTERVIEW SITUATIONS IN PRINTED MEDIA
- / DIALOGUE AS SUBTITLES
- / AND DIALOGUE SYSTEMS IN INTERACTIVE MEDIA

Some dialogues go on for extended periods of time, and thus demand the attention of a reader (or viewer) for this period. This means considerations for readability need to be taken into account.

One of the most common definitions for readability in the context of typography refers to the conditions that make reading easier or harder. [→14←] Although there are also other definitions and distinctions between readability and legibility. Richardson's 2022 published research opts for legible and legibility instead. [→15←] Legibility regarding typography in most cases refers to how decipherable a letterform is. Richardson follows Noam Chomsky's reasoning that readable in common use (at least in the 1970s) refers to how enjoyable a text is to read. I decide against this particular use, as in an international context and among typographers the distinction of legible (German: Leserlich) for recognizable shapes and readable (German: Lesbar) for supporting reading-flow are more established.

In Richardson's 2022 meta-study on advantages between sans and serif typefaces he was able to show that there are no perceivable advantages for one over the other. This goes for the usage in the context of print (where serif faces are said to be better suited [→16←]) as well as for on-screen usage (wherein sans faces are supposed to perform better [→17←]). Rather than serifs spacing and x-height seem to have the highest influence over how fast text can be taken in. Higher x-heights in general seem to be favorable for readability. That being said, most reviewed studies were conducted amongst English-speaking audiences, which means that for some scripts that rely heavily on diacritics comparably smaller x-heights might still have their merits. But a general trend towards larger x-heights can be perceived over the years, even with fonts like Garamond that is rooted in french script. The research performed on readers with reading disabilities was also quite revealing, as they confirmed what some typographers were saying for quite some time: More important than the font is the context.

39 Even with the font Sylexiad—a font developed for and with dyslexic readers—no significant differences were perceivable.

[→18←] The factors that on the other hand elevated all the compared fonts to better readability were a wider spacing and pronounced bowls and counters. The latter could also be achieved by increasing the font height in general. These research results have quite positive connotations for accessibility options in digital publications. Often those options would just change an expressive font for something like Verdana (as recommended by DIN). But as the research has shown the main contributing factors are the font size, x-height, and spacing. With this knowledge in mind a better option could be to adjust those parameters instead of blanding the stylistic integrity of a chosen font.

A factor that does influences readability is the willingness of the reader to engage with the font or the text. This for example was noticeable in grading of students manuscripts. Those tended to be better graded when they matched the personal preference of the grading professor. [→19←] [→20←] If the expected typeface is not used, or it is not to the readers liking, a form of defiant attitude can manifest. As readers personal preferences are difficult to predict they should not be considered as a deciding factor for or against a typeface. Expectancy on the other hand can be taken into consideration. There are expected typographic tropes for certain mediums. These can be used to evoke the association with such a medium. Setting text in four to eight columns in justified text with large serif headlines that cover around half of the columns will probably remind the reader of a news paper, and thus read the text as such. A contributing factor for the willingness to engage with a text is also its context. Such reading contexts could be: [→21←]

- / LINEAR READING (NOVEL)
- / READING FOR GATHERING INFORMATION (NEWSPAPER)
- / COMPLEX READING (ACADEMIC TEXTS)
- / CONSULTING READING (LEXICON)
- / SELECTED READING (SCHOOL BOOK)
- / READING BY SENSICAL UNITS (FOR READING BEGINNERS)
- / ACTIVATING TEXT (MAGAZINE)
- / VOICED TEXT (TYPOGRAPHY EMPHASIZING THE CONTENT)

For consulting reading the readers can be expected to be more willing to engage with the text because of their motivation to learn or confirm something. For that reason lexicon articles can be printed in smaller font sizes. The same doesn't apply for linear reading where readers don't want to focus on what is written, but what is coming to life inside their heads while reading. Here the text needs to be as reading flow-inducing as possible. Activating text in magazines tries to catch the readers attention in headlines or pull-quotes in order to get them to read the full article. Voiced text can even discard some of the rules for legibility as the context will make clear what the text is supposed to mean.

As is always the case with expectations, there is a fine balance between meeting and subverting them. If every expectation is met the text might not stand out and will be soon forgotten. But if the expectations are under-minded too much the reader might turn away from the text or just memorizes their anger instead of the actual content of the text. On the other end of the spectrum readers sometimes don't apply much meaning to the fonts at all—even if they were set as large headlines. Jeanne-Louis Moys was able to show in her survey that far more important were how the text was spaced, what weight was applied, or if the text was set in cursive font. [→22←] The Amsterdam-based graphic design studio ›Experimental Jetset‹ for example is set on testing the boundaries of ›Helvetica‹ as a font. They achieved to create a remarkable variety of visual voices with just this static grotesque font. [→23←] How the layout accommodates for a font plays a significant role in the perceived ›voice‹ of text. If layout, content, context, and font come together the impression can be stunning. Still, there is no fixed set of rules one can follow to achieve these results—they are often enough situational.

Typefaces exist in a weird space where they sometimes don't matter at all and at other times they can change the meaning and tone of written language. The recent research can be read as an encouragement to be more experimental with typography,

as it seems readers have a high tolerance towards different fonts. So, not always hitting the right ›voice‹ with a typeface won't be immediately sanctioned by an audience. But if a typographic experiment lands in that sweet spot, where it connects content and expression of text, it can be quite magical.

CHARACTER TRAITS

OSB

Chapter

In order to test out if and to what degree typefaces can be used to »voice« dialogue, a corresponding set of character attributes need to be established—a classification for personality traits so to speak.

BIG FIVE

Probably the most common personality classification is the »Big Five« or »five-factor model«. It models personalities as a spider diagram with five axis. The axis are as follows:

- / OPENNESS
- / CONSCIENTIOUSNESS
- / EXTROVERSION
- / AGREEABLENESS
- / NEUROTICISM

Each of the five factors has a high and a low axis with corresponding traits:

- / OPENNESS

HIGH	LOW
// Open-minded	// Enjoying structure
// Unfocused	// Being dogmatic
// Abstract thinker	// Resisting new ideas
// Unpredictable	// Avoiding risk
- / CONSCIENTIOUSNESS

HIGH	LOW
// High achieving	// Spontaneous
// Perfectionistic	// Irresponsible
// Ambitious	// Undependable
// Dutiful	// Tardy
// Organized	// Messy
// Dependable	
// Self-Disciplined	
// Stubborn	
- / EXTROVERSION

HIGH	LOW
// Talkative	// Quiet
// Gregarious	// Reticent
// Assertive	// Solitary
// Sociable	// Reserved
// Domineering	// Reflective
// Attention-seeking	// Aloof

/ AGREEABLENESS

- | HIGH | LOW |
|------------------|------------------|
| // Even-tempered | // Antagonistic |
| // Cooperative | // Untrustworthy |
| // Compassionate | // Uncooperative |
| // Empathetic | // Ill-tempered |
| // Generous | // Argumentative |

/ NEUROTICISM

- | HIGH | LOW |
|----------------|---------------|
| // Sensitivity | // Confidence |
| // Nervousness | // Security |
| // Moodiness | // Stable |
| // Unstable | // Dull |
| // Insecure | // Uninspired |
| // Excitable | |

The personalities get assigned through a series of questions that ask how much a participant agrees with the statement. The questions could look like this:

/ MAKE FRIENDS EASILY

- // Very inaccurate
- // Moderately inaccurate
- // Neither accurate nor inaccurate
- // Moderately accurate
- // Very accurate

At the end of the test there will be a matrix that displays how a participant scored on the spectrum of each trait, and what their dominant trait is. Personally, the model always struck me as too rigid and too vague at the same time. Too rigid, because the questions have an absolute connotation. »Do you make friends easily?« invokes the follow-up questions: »In what situations?«, »With people that share a common interest or social circle?« This results in set-in-stone character descriptions that neither allow for situational deviance nor personal development. On the other hand the questions are also worded quite vaguely, and thus allow for a wide range of interpretations: People simply have varying experiences and meanings ascribed to the words used in the »Big Five« test. What meaning »making friends« have will be interpreted wildly different. What one participant describes as friends another one will consider acquaintances. The test basically asks a limited range of questions that are bound to be answered subjectively. Therefore the results hold only limited objective meaning for characterization. The test is still very popular in psychological research, as

there is validity and repeatability to the system—even though the test can be considered more quantitative than qualitative in nature. The ›Big Five‹ assessment has also been criticized for the naming of their five types. Especially the neurotic type time and time again has been admonished. But all five names tend towards either a positive or negative bias, and therefore fail to create a neutral outcome for the participants. If this is done in a group, one part of the group will come out as quite happy how open they are as another part of the group will be disappointed as they now are labeled as neurotic—a word first and foremost associated with illness [→24←]. Another point of criticism is that any attempt to expand the model have been undercut. Instead propositions for additional descriptions are subsumed under the five umbrella categories.

With all that in mind, the model is still a good starting point to categorize personality tendencies. The types are easy to understand and allow for a quick assessment of a character. Additionally each type comes with a subset of descriptions that can be translated into typographic features later down the line.

ENNEAGRAM

Another—even more debated—model is the enneagram. It defines nine personality types that are interconnected. The nine main types are:

- / REFORMER
- / HELPER
- / ACHIEVER
- / INDIVIDUALIST
- / INVESTIGATOR
- / LOYALIST
- / ENTHUSIAST
- / CHALLENGER
- / PEACEMAKER

Instead of strict character traits the model asks for the underlying motivation of a person. There is no self-assessment test. Instead one reads up the various behaviors and underlying motivations and finds themselves reflected in them or not. [→25←] As such the test is not useable for second-person assessment or academic purposes, as the motivation can't be measured meaningfully in an objective way. The system still can be of benefit for personal self-reflection or for character writing. The reason for this is the complexity of the enneagram.

Each type has a defined fear and desire. Resulting out of those, each type has common situational patterns that they resort to in

moments of stress or security. Reformers for example are driven by the desire to do things in the best possible way. This can relate to their own behavior or to situations, in which they try to build towards an ideal outcome. Implicit here is a direction this type strives for (hence the name reformer). In situations of stress they focus on the short-comings of everything, becoming highly critical, and falling into melancholy. In situations where they feel secure they can be accepting of the status quo, have a strong sense of right and wrong, be very fair, and be good teachers. Additionally there are subtypes that further elaborate on typical motivation-driven behavior, and observations how different types interact with each other. All that allows for not only a better understanding of oneself, but also gives a perspective on how to develop those patterns in positive way, as well as guidance on how to evade negative patterns. The nine types with their accompanying basic drive are:

- / REFORMER (GOODNESS, BALANCE)
- / HELPER (TO FEEL LOVED)
- / ACHIEVER (TO FEEL VALUABLE)
- / INDIVIDUALIST (TO BE UNIQUELY THEMSELVES)
- / OBSERVER (UNDERSTANDING)
- / LOYALIST (TO HAVE SUPPORT AND GUIDANCE)
- / ENTHUSIAST (TO BE SATISFIED AND CONTENT)
- / CHALLENGER (TO GAIN INFLUENCE AND BE SELF-SUFFICIENT)
- / PEACEMAKER (WHOLENESS)

Elaborating on every type in detail would be too much in context of this thesis. Also as stated before, the model lacks a scientific metric for falsification or confirmation. The basis for this model—a person's driving motivation—is difficult to pin down by a set of questions. People don't find out about ›their number‹ by answering a number of questions, but by reading about situational patterns and finding themselves within them. This is also why the enneagram is not meant to be used to assess other people—a set of actions can look similar from the outside, but the underlying motivation might be completely different. Instead the enneagram can be used to better understand oneself and ones interaction with others. For character writing and characterization of fictional characters it can be a useful tool also, as it already provides complex behavior patterns, a causality how characters might react in certain situations or in relation to other enneagram types, as well as a perspective how a character might develop for the better or worse.

CHARACTERIZATION LISTS

Often when discussing a character adjectives will be used. Especially for characters that are not yet (or will never be) very complex, adjectives are thrown around in order to get a grasp of what this character is supposed to be like or represent. As the goal for this research is to give the spoken words of a character a visual representation via typography, having words at ones disposal for translation (from character to letter) is vital. As with the models before, the goal is not to have an all encompassing model, that does the work for the designer, but to find ways to conceptualize a character, and from this abstraction form a visual equivalent through typography. There are dozens of possible lists out there for character attributes—ranging from lexicon entries to websites that list attributes for writers [→26←]. Many of those lists range up to or above 1.000 words. A list as long as 800 words is hard to read through and might be too unstructured. Hence I decided to pick a listing that is a bit more feasible and pre-structured. [→27←]

/ VALUES, MORALS, AND BELIEFS CHARACTER TRAITS

// Honest	// Brave
// Compassionate	// Leader
// Courageous	// Unselfish
// Loyal	// Hard-working
// Independent	// Selfish
// Responsible	// Considerate
// Self-confident	// Humble

/ PHYSICAL AND EMOTIONAL CHARACTER TRAITS

// Poor	// Rich
// Strong	// Tall
// Dark	// Light
// Handsome	// Pretty
// Ugly	// Messy
// Gentle	// Wild
// Joyful	// Busy
// Patriotic	// Neat
// Popular	// Successful
// Short	// Prim
// Proper	// Dainty
// Able	// Fighter

// Tireless	// Plain
// Expert	// Imaginative
// Conceited	// Mischievous

/ PERSONALITY CHARACTER TRAITS

// Demanding	// Thoughtful
// Keen	// Happy
// Disagreeable	// Simple
// Fancy	// Plain
// Excited	// Studious
// Inventive	// Creative
// Thrilling	// Intelligent
// Proud	// Fun-loving
// Daring	// Bright
// Serious	// Funny
// Humorous	// Sad
// Lazy	// Dreamer
// Helpful	

This list is by no means comprehensive, but can be seen as a good starting point. The list approach has the downside that the attributes are quite random and there is no underlying principle which attributes are combinable or make sense in context of the character at hand. This approach should therefore be treated as a form of extending vocabulary or as a means to prototype, when there is not much set in stone yet, regarding the character.

The three different approaches all have their drawbacks and benefits. It makes sense to consult the various characterization models at different times or for different projects. If the project asks for prototyping or a rough sketch the characterization lists are a good source. If The characters are not too complex or already established the >Big Five< model is very

suitable. If a character or small set of characters is yet to be developed the enneagram model is helpful, as it can provide deeper interpretations than just the perceivable actions. A bossy character for example could be motivated to reach for power because they want to protect their in-group. This could then be added as a feature for the typographic representation, adding a softness to the bold appearance, for example by mixing a font with hard edges on the outside and round shapes on the inside.

The next challenge is to translate these attributes into typographic features. There have already been numerous attempts at assigning typographic shapes to a mood or character. The problem is, that these are never objective because they are based on association; and associations are different from individual to individual.

SPIKEY MEANS
ANGRY

04

Chapter

I'm neither the first nor will I be the last person trying to assign characteristics to fonts. While assigning a typeface to a character has not been done to death, the considerations on what characteristic could be ascribed to what font overlap with prior attempts. In this thesis I'm less trying to establish an applicable model, but more to outline a thought process, or establish a sort of vocabulary to pick from when attempting to connect fonts to characters.

I'm operating under the assumption that these connections can be made somewhat arbitrarily. Arbitrary in this case doesn't mean random. But, what associations a person has with a specific typeface can be wildly different and are often based on personal history. While a blackletter font can look edgy to one person to someone else it might look traditionalistic. One person might find ›Helvetica‹ timeless, someone else might find it overstayed its welcome. A font that looks exciting to one viewer, someone else might find pretentious. While there is a certain degree of randomness regarding some associations, letter shapes relate back to a common learned visual language. Since serif typefaces have a longer history than grotesque faces they are perceived as older—vis-versa grotesque faces are perceived as more contemporary. Part of the shared visual language is also the context in which fonts are used. We saw a lot of lightweight humanist typefaces in the context of apple advertisement in recent years. This resulted in this particular form-principle and weight to be associated with luxury and technology. The usage of blackletter fonts for nazi-propaganda in Germany led to a reluctance to use this style of typeface for many decades (at least in Germany). The usage of transitional serif typefaces in the yellow ›Reclam‹ books also influence the perception of these fonts, as many German readers get in contact with these books during their school days. ›Reclam‹ publishes a lot of ›classical‹ literature, this in turn can lead to readers having trouble finding these fonts fitting for contemporary texts.

While these learned contextualizations can have a strong impact on how open readers are to the re-contextualization of fonts, it doesn't mean their associations are set in stone. For one, it is possible to play with expectations. Also, one learned association can of course be overwritten by another association.



Additionally while fonts can create an atmosphere that is perceivable even to the untrained reader, many readers won't notice

typographic nuances. Which again liberates designers to be free to play around with typography—at least to a certain degree.

When associating fonts with characteristics apart from the ›established‹ context, useful reference to draw from are kinetics and haptics. A letter with spiky features will probably evoke the haptic feedback of touching a spiky object. On the opposite site, a font with very round features will cause associations with smooth and round surfaces just by proximity. A light typeface can be perceived as flimsy or as filigreed. Bold letters can be associated with weight. A font with a wide letterform can be perceived as steady and immovable. Oblique weights imply a form of movement.

Still, there is even room to move away from all these learned interpretations. Design is often a very subjective matter. A designer offers their personal history, likes, and interpretation to an audience so that they can latch on to it and find themselves in the design—or they can also reject the designer's interpretation. This is by no means an uncontested belief, as designers still try to retain an air of achievable objectivity in communication. But humans are blackboxes that no one has control over how they process an intended message. With that being said, humanity has developed communication tropes which increase the probability that communication succeeds. In turn this means, that while there is freedom to reject norms, with it also comes an increased risk of being misunderstood. The new interpretations might need some time to establish or they are bound to a certain context that needs to be known in order to be understood (like memes). For a commercial product the option to be misunderstood is of course more costly. In order to minimize this possibility the ascribed typographic hypothesis can be tested during development phase with small test groups. If the context the feature is referring to isn't known by the audience, with enough financial backing there is a decent chance to get them used to the association just by sheer repetition. Another approach is to connect the typographic association to a story. Typical examples for that are commentaries or documentaries that accompany the production or release of a product.

There are also some type foundries and designers that successfully connected their typefaces to a narrative in order to market to an audience.

VOICING TEXT

05

Chapter

When assigning a typeface to a character for written dialogue it first has to be made clear what is getting voiced. The typography could be seen as a visual representation of the character's personality or the special typography is only applied to the speaker's name—as a sort of logo. The latter would allow for more extreme font choices regarding readability, because the bulk of the text would still be set in a standard typeface. Another approach is to typographically represent features of a character's voice.

The last approach could work insofar a very complex variable font is accessible. Even though a speaker often has a recognizable voice, what is getting represented by the typography is probably the volume and timbre of the voice, maybe the intent. Those are somewhat interchangeable and not tied to one character. A speaker can modulate their voice, imitate someone else, be angry, speak with an air of wisdom, be seductive, lie, be funny, or a wide range of other emotions. These nuances of the change in voice could be represented via letter transforms. The most obvious transform would be font size to signal the volume. Confidence could be displayed through font weight, anger or confusion through distortion. In a story with only one speaker this approach might work. For a multi-member cast it would probably become overwhelming. The fonts through their constant change would become harder to relate to a specific character. There are also implications on the readability. A canon that relates voice-specifics to typographic features would need to be established and consistently applied, so that an audience could relate to it. Filip Despotovic tested this approach in his 2020 BA thesis ›Subtype‹. [→28←] His variable font allowed to react to intonations of a given speaker and added a pair of parentheses that were able to imply the quality of noises (for example sharp or warped). The font itself was a sans serif based on the humanist form principle. Displaying voice characteristics through type would probably work better in conjunction with the two other approaches. Additionally to the pure letter shapes voice, timbre, and intention could also be emphasized through layout: Positioning text close to frame borders to show intimacy or intimidation, font size to imply volume and spacing for intonation and stressed words.

The other two approaches are similar in essence. Just applying

the characterization to the speaker's name allows for more extreme font choices though. If a typeface is supposed to characterize all of the speaker's words the font choice would need to be more subtle as to maintain a good reading flow. In both cases a typographic equivalent or representation of specific character traits needs to be found. This is where the character trait systems established in the third chapter can be of use. One of the systems or a combination thereof would provide the adjectives and descriptions, that will form the basis on which the typographic representations can be built upon.

For that exploration not being solely speculative, a few concrete example characters are needed. For argument's sake I want to employ a mix of voiced and un-voiced characters. That way I hope to be able to test how well the typography performs in creating a voice or emphasize an existing one. The characters I decided to use for this test are:

- / HATSUNE MIKU
- / MAE BOROWSKI
- / THE ANALYST
- / WAYMOND WANG

HATSUNE MIKU (VOCALOID)

Hatsune Miku is a fictional character that was created for the software synthesizer ›Vocaloid‹ in 2007. The software is able to not only interpret notes with different pitch and velocity but also with vocals—hence the name. The sound is based on the voice actress Saki Fujita's voice. The resulting sound is a very distinct robotic and high-pitched voice, fitting for idol pop music. The software found a wide-spread following—which can in large parts be attributed to the iconic character design by Kei Garō. The concept for the character was that of a singer-diva android in a future where all songs are lost and need to be reinterpreted. As the character started to gain a life of its own through a large fan community and motion-captured live concerts with her as a hologram, the character is a bit more of a Japanese idol than a diva.

Miku was imagined as an android—a machine built in the image of humans. Considering this, references to the digital would be out of place, as she is meant to exist in the physical world of the future. Future references in typography can be tricky, as established references tend to look dated (think of ›Eurostyle‹). A more promising direction is to adopt the aspect of Miku's diva-ness. Here the reference to the modernist form principle seems

fitting, as it is often used in the context of high fashion and eccentricity. Typefaces in the modernist style emphasize verticality, and feature constructed shapes, as well as extreme stroke contrasts. The construction background of modernist typefaces relates to Miku being artificially made. Another approach to show this artificiality would be through a geometric typeface. Willberg referenced them as »the robots«. Her being an android would fit in this regard. But androids are meant to be modeled so closely in the image of humans, that they can be mistaken for one. When thinking of robots as stiff machines, geometric wouldn't fit with the diva-aspect of her. Of course a point could be made, that the geometric shapes refer to the meticulousness of the android. Still, Miku has a certain personality ascribed to her, so a geometric design might look too bland. Instead mixing aspects of the humanist form principle with the modernist form principle seems more fitting, as Miku is a machine that is constructed with the aim of imitating a human songstress. The font would probably fall under transitional form principle, but in this case the way we got there is more important. The font will then feature high stroke contrasts, bracketed serifs, prominent ball terminals, and angled counters. As a neat feature the counters will face towards the right instead of left, indicating a departure from tradition and implying forward movement.

Hatsune Miku

»If we could put into words every second someone lives on,
we feel ourselves live on like scattering words about.«



»If we could put into words every
second someone lives on,
we feel ourselves live on like
scattering words about.«

—Hatsune Miku

THE ANALYST (MATRIX RESURRECTIONS)

The Analyst is a character in the movie ›Matrix Resurrections‹. He is a program that controls the virtual simulation, call the Matrix, where humans are trapped in. In the movie he manifests as therapist of the protagonist Neo.

As a base system to decide on character traits I'm going to use the ›Big Five‹. The Analyst is in essence a program. This means he would score low on openness because of the programmings predetermination. He would score high in the conscientiousness field. On the extroversion sector it wouldn't peak but there is a certain drama and drive to perform in front of people, so a medium-high score would be appropriate. The Analyst is certainly not very agreeable as he thinks himself in the right. Consequently he would score low here. For neuroticism he would probably score on the lower end as he is quite sure of himself. The traits corresponding with these axis distributions would be:

- / BEING DOGMATIC
- / RESISTING NEW IDEAS
- / STUBBORN
- / AMBITIOUS
- / PERFECTONISTIC
- / DOMINEERING
- / UNCOOPERATIVE

Translating these adjectives in to typographic features, I would opt for either a grotesque sans or a geometric sans. The grotesque sans would fit well with the uncooperative nature due to the closed counters. It would also fit with the dogmatic-ness of the Analyst. The geometric features could represent the perfectionist drive in him; but it would also fit with him being a program that was constructed. A mixture of those two form principles is also possible. A hint of pixel aesthetic could also fit. Maybe as a feature showing the cracks in his perfect imitation of a human. When opting for a low x-height the dominance could be shown within the typeface. But this could also result in a more torn and feeble image, so I think a medium to high x-height might work better, to show the overall dominance.

The Analyst

»Did you know hope and despair are nearly identical in code?«

© The Matrix Resurrections

»Did you know hope and despair
are nearly identical
in code?«

—The Analyst

MAE BOROWSKI (NIGHT IN THE WOODS)

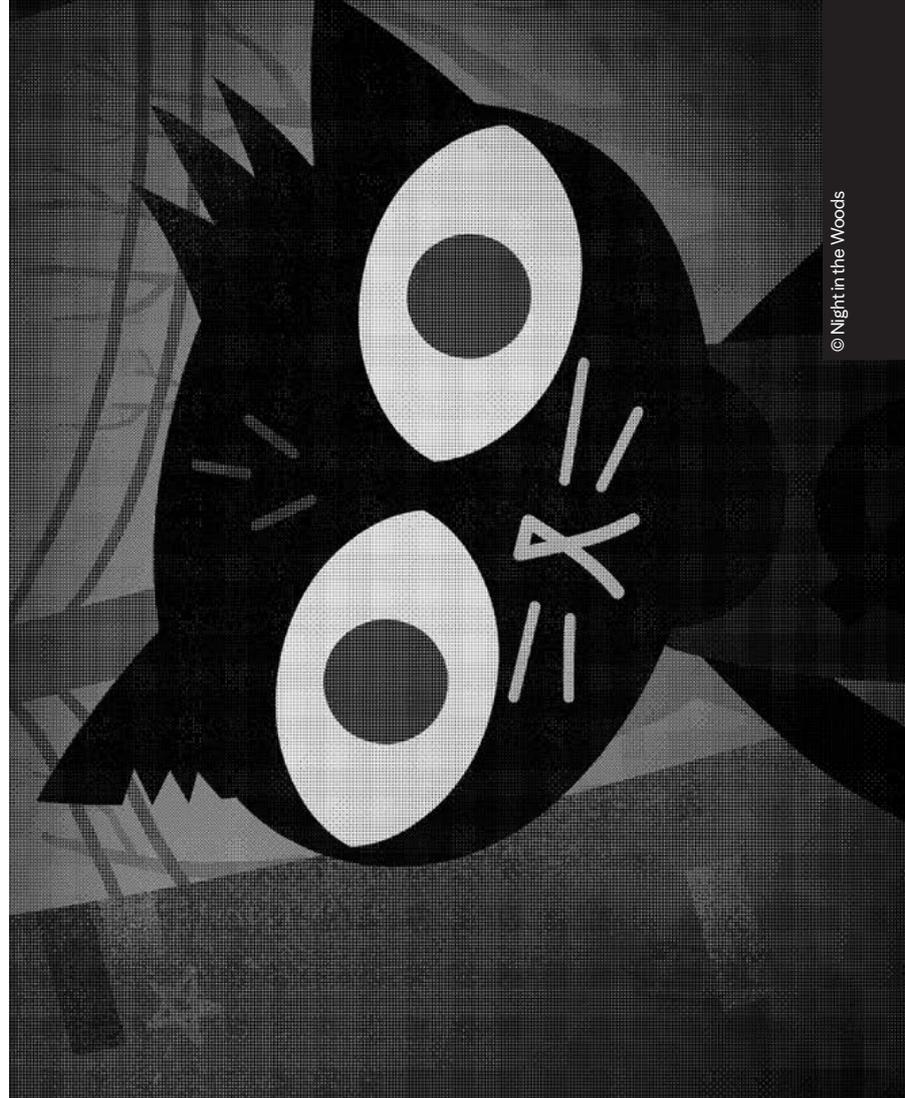
Mae Borowski is another fictional character. She is an anthropomorphic cat and the protagonist of the video game ›Night in the Woods‹. In the game she get's back to her small hometown after dropping out from college, because of mental health issues. The player follows her coming to grasps with her feelings of failure and finding a place in this place that she is familiar with, but that is also in decline.

In order to fit her character to a typeface it is opportune to use the Enneagram as a model. The type capturing Mae's motivation in the game best is the enneagram type four: The Individualist. ›The Enneagram Institute‹ describes this type as follows: ›Fours are self-aware, sensitive, and reserved. They are emotionally honest, creative, and personal, but can also be moody and self-conscious. Withholding themselves from others due to feeling vulnerable and defective, they can also feel disdainful and exempt from ordinary ways of living. They typically have problems with melancholy, self-indulgence, and self-pity. At their Best: inspired and highly creative [...]‹ [→29←] Some additional adjectives given are:

- / SENSITIVE
- / INTROSPECTIVE
- / EXPRESSIVE
- / DRAMATIC
- / SELF-ABSORBED
- / TEMPERAMENTAL

These descriptors tie back well how Mae behaves within the game—jumping from introspection to dramatic outbursts, struggling with the fear of not being able to self-actualize.

Characteristics of a typeface that would fit Mae according to the Type Four description, should feature a fair amount of contrast to show the expressiveness and mood swings. This could then be enhanced through a number of special letters or ligatures that are surprising. When thinking of a general form principle an American sans or transitional serif could fit, as the grotesque, geometric, and humanist form principle are too balanced. A modernist serif or slab would sport a high contrast, but probably look too elegant to fit with the punkish attitude of Mae.



»I just had an epiphany. There is
nothing to stop me from making
cake mix and eating it all instead
of making a cake.«

—Mae Borowski

WAYMOND WANG (EVERYTHING EVERYWHERE ALL AT ONCE)

Waymond Wang is the husband of Evelyn Wang in the 2022 movie ›Everything, Everywhere, All at once‹. The film revolves around the Wang family coming to terms with their situation and life choices in the face of a multiverse in which they could have been many different people.

The character is portrayed with a very high and soft voice. He has a bit of a childlike demeanor and is not taken very seriously by the rest of the cast — especially during the first half of the movie. Over the course of the movie it is revealed that his softness and compassion ultimately are what the powers that can overcome the sense of meaninglessness when having access to every reality.

In order to outline the character of Waymond I will use the »character traits« system introduced earlier. Here, a number of descriptors that seem fitting will be picked and translated into typographic representations. I decided to focus on these attributes:

- / HONEST
- / COMPASSIONATE
- / LOYAL
- / GENTLE
- / SIMPLE

The simple nature should be represented in relatively simple letter shapes. This would mean using the single-story ›a‹ and ›g‹. The gentleness could be represented soft edges and round shapes. In order to show the compassion of Waymond letters with open counters would be preferable. A quirk of Waymond in the movie is his love and usage of googly eyes. These eyes would immediately tie back to him, so including them into the counters of the ›o‹ are a neat feature. In a typographic representation of the whole movie it would also be a fitting idea to include the eyes into the typefaces of the other characters as they start to embrace Waymond's kindness.

Waymond Wang

» The only thing I do know is that we have to be kind. Please, be kind. Especially when we don't know what's going on.«

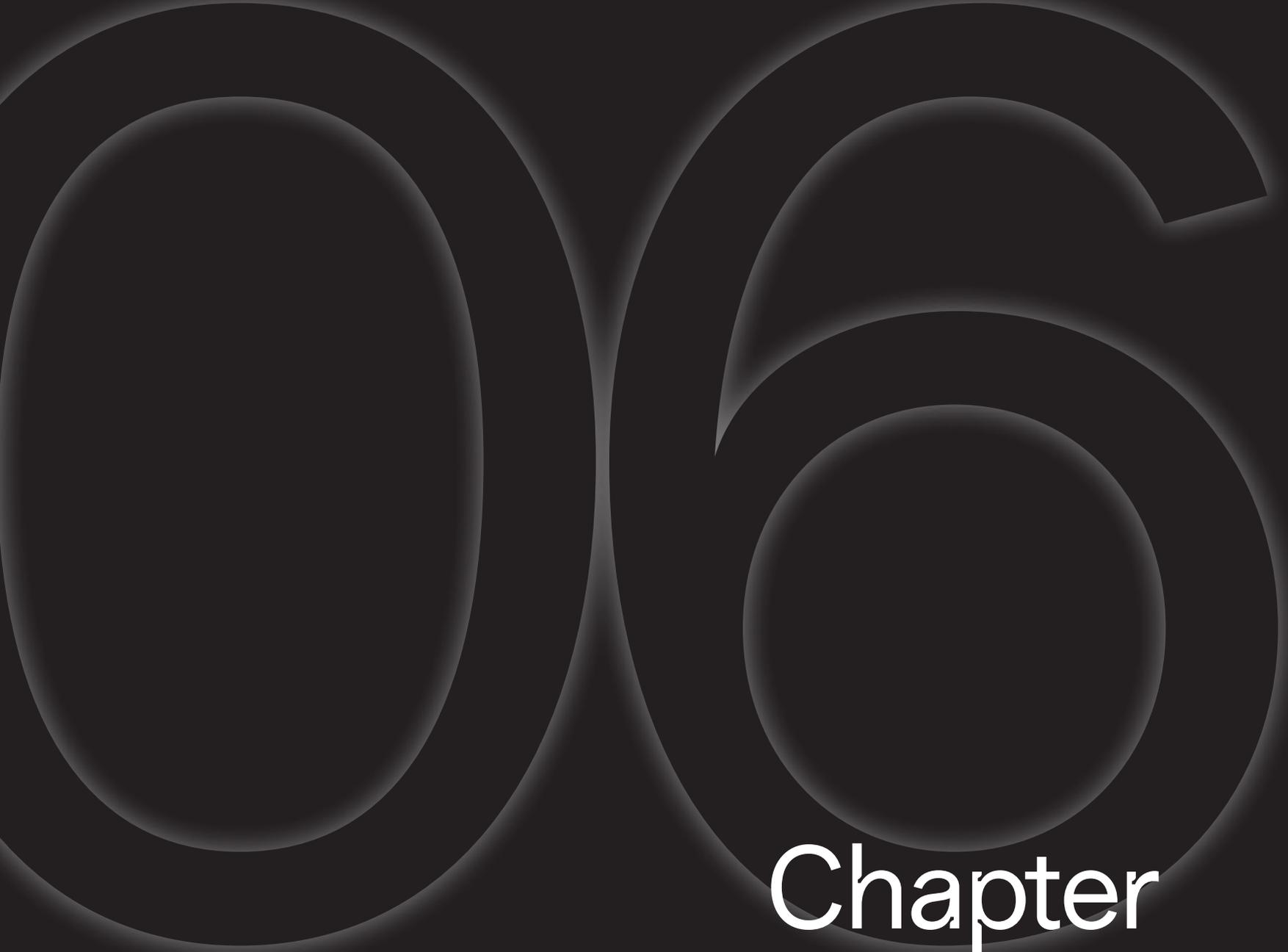


© Everything Everywhere All at Once

» The only thing I do know is that we have to be kind. Please, be kind. Especially when we don't know what's going on.«

—Waymond Wang

CONCLUSION



Chapter

My goal with this proposal was to outline a process on how to tie typographic features to a character. In the small test run I did, I was able to confirm this approach to work. Having a though process instead of a clear system in which »character trait A« always get's represented by »typographic feature B«, proved—at least to my mind—to be very effective. It provides enough of a system to not become overwhelmed by choice, while still coming up with consistent results. It is also open enough to allow for creativity and mix-and-match solutions.

When going through the various classification systems (fonts as well as character traits) and learning how they look at similar phenomena but classify them differently, helped me to understand the systems better. Having them side by side also allows to jump between them. If one systems reaches a point where it is too limited, borrowing from another system might just do the trick. This way, there's no need for a behemoth of a system that encompasses everything. In the test run with the four characters I came to fitting solutions relatively quick. It worked equally well with all the three character trait systems. For the font assignment I found myself resorting mainly to Lilo Schäfer's model. If I wanted to select fonts with a designated contemporary outcome in mind, I would include the type campus model as well. The other three approaches helped me apply and understanding Lilo Schäfer's classification system better. Through her model I was able to see the distinguishing features, but for example Hans Peter Wilberg's model helped me interpret what these features mean in regard to the impression they give.

I hope that this paper can encourage designers to use typography to not only »color« the overall impression of a text, but also use it to give more character to the speakers within a narrative.

ENDNOTES

- [→1←] Arthur Conan Doyle. (1911). The Reigate Squires.
- [→2←] Even though the degree to which a font choice changes the viewers perception of text is limited and in many cases more related to the presentation of the font (i. e. font size, weight, or effects), as was shown in Jeanne-Louis Moys's »Typographic Voice: Researching Readers' interpretations«. For reference see chapter 02.
- [→3←] The definitions are taken from Lilo Schäfer's »Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften« and typedecon.com
- [→4←] Beinert, 2020, Urheberrecht für Schriften und Mythos Schriftsoftware.
- [→5←] Schäfer, 2019, Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften, p. 15.
- [→6←] Wilber, 2001, Wegweiser Schrift, p. 10.
- [→7←] Wilber, 2001, Wegweiser Schrif, p. 49.
- [→8←] Kupferschmidt, 2012, Type classifications are useful, but the common ones are not.
- [→9←] Beinert, 2020, Schriftklassifikation Matrix Beinert.
- [→10←] Beinert, 2020, Schriftklassifikation Matrix Beinert.
- [→11←] I used the German terms Beinert introduced as with type classification terms as there is agreement across language boarders how to translate them.
- [→12←] type campus, 2022, The 2022 Type Trends Lookbook, p. 50.
- [→13←] type campus, 2022, The 2022 Type Trends Lookbook, p. 56.
- [→14←] Filek, 2013, Read/ability, p. 62.
- [→15←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 11
- [→16←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 75
- [→17←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 95
- [→18←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 73
- [→19←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 76
- [→20←] It is also perceivable in margin text wherein readers find additional information. Readers that engage with margins tend to want to know more about the topic and are thus more willing to read the text (consultation text). This allows for the usage of smaller font sizes in these instances.
- [→21←] Filek, 2013, Read/ability, p. 53.
- [→22←] Moys, 2011, Typographic Voice, pp. 14–15.
- [→23←] Experimental Jetset. <https://www.jetset.nl/preview> (accessed Mai 2015).
- [→24←] Although the word has been abandoned for clinical use.
- [→25←] There have been attempts to develop a test by Don Richard Riso and Russ Hudson —the Riso–Hudson Enneagram Type Indicator (RHETI). Those attempts seem to have a certain validity, but are not a wide-spread standard for interacting with the enneagram.
- [→26←] Functioning as a thesaurus.
- [→27←] Teacher Vision, Character Traits List & Examples.
- [→28←] Despotovic, 2020, Subtype.
- [→29←] The Enneagram Institute. Enneagram Type Four.

SOURCES

- Filip Despotovic
- Hans Peter Wilber
- Indra Kupferschmidt
- Jan Filek
- Jeanne-Louis Moys
- John T. E. Richardson
- Lilo Schäfer
- The Enneagram Institute
- type campus
- Wolfgang Beinert
- Wolfgang Beinert
- (2020). Subtype. Visual Communication ZHdK. <https://visualcommunication.zhdk.ch/diplom-2020/subtype/> (accessed June 2022).
- (2001). Wegweiser Schrift: Erste Hilfe für den Umgang mit Schriften; was passt – was wirkt – was stört. (2012, March 31). Type classifications are useful, but the common ones are not [Blog Post]. Retrieved from <https://kupferschrift.de/cms/2012/03/on-classifications> (accessed Mai 2022).
- (2013). Read/ability. Typografie und Lesbarkeit. Niggli.
- (2011). Typographic Voice: Researching Readers' interpretations. In: Technical paper 6, Simplification Centre. simplificationcentre.org.uk/ressources/technical-papers (accessed April 2022).
- (2022). The Legibility of Serif and Sans Serif Typefaces. Reading from Paper and Reading from Screens. Springer.
- (2019). Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften. 4 – The Individualist. Enneagram Type Four. <https://www.enneagraminstitute.com/type-4> (accessed June 2022).
- (2022). The 2022 Type Trends Lookbook.
- (2020, April 10). Urheberrecht für Schriften und Mythos Schriftsoftware. Typolexikon. <https://www.typolexikon.de/schriftlizenzen/> (accessed April 2022).
- (2020, February 01). Schriftklassifikation Matrix Beinert. Typolexikon. <https://www.typolexikon.de/schriftklassifikation-matrix-beinert/> (accessed Mai 2022).

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A very special thank you to Lilo Schäfer for giving me access to her master thesis. Through her excellent work I finally learned to classify typefaces.

Another thank you goes to the team of zetafonts that sent me their fantastic research on contemporary typefaces directly, when I had problems with the download tool.

A big Thanks goes to Anne for encouraging me throughout the writing process.

Thanks also to Prof. Gais for supervising my proposal.

FONTS

Typefaces used as examples are labeled in place.
The remaining fonts were created David Wiesner.

Aa Fritz Sans

Aa Fritz Serif

AA Gala Custom

The character fonts in chapter 05 are custom-made for the occasion.

LAYERS OF TEXT

4 INTRODUCTION

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32 TECHNICAL LIMITATIONS

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» NOTHING IS
GOING TO SAVE
US FOREVER, BUT
A LOT OF THINGS
CAN SAVE US
TODAY. «

— MAE BOROWSKI

INTRODUCTION

Chapter

Even though voice acting has taken a prevalent role in video games, there is still a significant number of games that rely on text to tell their stories. Even games that opt to voicing their characters often mirror the spoken dialogue through text as a support or accessibility feature. So typography is certainly a needed feature in games.

Ample reason to look into how dialogue is shown in video games through the use of typography. The goal of my proposal is give an overview on how to adjust typography, what options for dialogues already exist, and into which directions dialogue type could expand.

Judging dialogue typography in regards to style contains certainly an element of subjectivity. Of course there is a point to be made on how well a chosen font and style fit the occasion. But ultimately personal preferences make it difficult to come to an objective conclusion. This doesn't mean that there are no aspects of typography that can be judged with some objectivity. As text is meant to be read, judging a dialogue design by how well it is readable seem to be fair. Therefore in the first chapter of this proposal I will cover the various parameters that influence the readability of a text. Typography in games is confronted with limitations imposed the game engines. In the second chapter I will elaborate on these limitations and how typography get's rendered on screen. The third chapter is dedicated to analyzing the various styles in which dialogue gets displayed in video games. As an

inspirational outlook the fourth chapter revolves around how typography is used in other mediums than video games, in order to broaden the horizon of what is possible with text as as a mode of expression.

READABILITY

READABILITY

READABILITY

READABILITY

Chapter

Maybe the most important demand dialogue elements in games need to fulfill is readability. If the player is not able to read the text during the timeframe the spoken dialogue is performed a subtitle becomes useless. Similarly, if the text for written dialogue is too difficult to read for long periods of time it might turn players away from interacting with a games characters and story. Luckily, text can be optimized so it accommodates for prolonged reading sessions and even readers with reading disabilities.

When discussing the typographic quality of a text two terms are common. Those two terms are legibility and readability. Legibility refers to how easy it is to decipher the single glyphs of a typeface. Since this only becomes a problem with fonts that have a very experimental design principle or with letters that can be confused for each other [→1←], legibility is largely a none-issue as professionally designed fonts account for these cases. Readability refers to how easy it is to read a text, or to stay in a reading flow. It should be mentioned that there is also a different wording convention. John T. E. Richardson follows Noam Chomsky's proposition of using legible and legibility instead, as the word readability in common use refers to how pleasant a text is to read, based on the writing. [→2←] »This is a very readable book,« would then refer to the content of the book instead of the typography. Though this statement is true, amongst typographers and designers readability and legibility are the established terms. Additionally the two terms work well in a translation context to the German language—which is my language background. [→3←] Anne

Rose König offers a definition for readability (Lesbarkeit) that takes into account the multitude and interplay of factors that contribute to a reading experience. To her, readability describes the overlap of perceived object and the surrounding circumstances. The object encompasses the text (writing style, structure, orthography) and the typographic factors (font, spacing, font size, line height, text alignment, page layout, background material). The surrounding circumstances are defined as the culture (assessment of fonts, typographic habits, orthography), reading environment (place, surroundings, reading position), and the reader (visual acuity, reading experience, motivation, knowledge of the language, intellectual capacities, intended reading approach). [→4←] In her definition typography is only a partial contributor to readability. For this paper's purpose that would mean an asterisk: When talking about readability from the perspective of a graphic designer there would be the contextual focus on the factors graphic design can influence. This doesn't mean the other factors can be ignored. But it allows to narrow down a set of contributing factors for the sake of the discussion. This is why, in this essay the terms legibility and readability will be used.

For legibility the deciding aspects are decided during the creation process of the font. There is not much that can be in that regard in hindsight. If letters are difficult to interpret or easy to confuse, no font size, or font color, or line height can change that. Therefore considerations on legibility only play a role when picking a typeface. Factors of good readability in contrast are a lot harder to define. Reading depends on an intricate interplay of various factors like the reading conditions, the sort of text in question, the typographic treatment of the text, and last but not least the reader's own ability or willingness to engage with the text. For these reasons recommendations on how to optimize typography have to be taken with a grain of salt. That doesn't mean that these recommendations are worthless or that typography is an arcane art that is not accessible to the uninitiated. But, the assessment of the quality of typography requires a certain training and experience—not from the perspective of the end-user (they are able to say if they felt the text was readable) but from the perspective of someone who adjusts and fixes a text, so it becomes readable.

What parameters does a designer have at their disposal in order to optimize readability? There are:

- / font choice
- / font size
- / line height
- / spacing adjustments
- / letter transform (uppercase, slanted, italic, small caps)
- / font color
- / text background
- / font weight
- / text hierarchy (paragraphs, bullet points, headlines, highlights, indentations)
- / line length
- / text environment (is something blocking the view, is there enough light)

What is and what is not a fitting choice also depends on the type of text one is dealing with. The most common reading contexts are: [→5←]

- / linear reading (novel)
- / reading for gathering information (newspaper)
- / complex reading (academic texts)
- / consulting reading (lexicon)
- / selected reading (school book)
- / reading by sensical units (for reading beginners)
- / activating text (magazine)
- / voiced text (typography emphasizing the content)

Since dialogue is in many cases not presented as large screen-filling headlines and in many cases involves a lot of words over the course of a game, they can be considered as »linear reading« or in some cases »activating text«. This consideration narrows down a lot of choices on what typographic treatment is suitable.

FONT CHOICE

Font choice is always a topic that allows for a lot of debate. Not only because of personal preference, but also because some font types are disregarded in terms of readability. For a time serif fonts were said to be the only viable option for reading long texts on paper. For screens on the other hand it had to be a sans serif font. Both claims proved to be false, as proven in John Richardson's 2022 meta study on legibility differences between serif and sans serif typefaces [→6←]

A font choice that is quite popular in games—especially in indie and retro games—are monospaced fonts. The main reason why those fonts are associated with games are the nostalgic memories of the limitations of old hard- and software. In the early days it simply wasn't feasible to add kerning information to a typeface in a video game. Monospace fonts deliver an acceptable result of consistent readability for that time, and were already available as the basis of programming environments. But nowadays the kerning information can be extracted from fonts when creating the font atlas (Albeit the font needs an obsolete standard to work within game engines). While monospaced fonts are of high value to programmers, that depend on the font creating a pattern along a vertical grid in order to understand code hierarchy, for reading situations like a dialogue these rules don't apply. [→7←] The eye reads in saccades—eye jumps—in which it recognizes letter clusters. [→8←] The recognition is based on learned letter combinations. Letters like »i« or »k« take up only half the size of an »n« in a proportional spaced typeface, hence allowing the eye to recognize more letters during one jump. For monospaced fonts every letter takes the same amount of space. This results in a slower reading speed that becomes more detrimental in longer reading sessions. For writing on the other hand monospaced fonts seem to have a benefit, as each letter gets more attention. [→9←]

While the serifs are no determining factor for the readability Richardson's research was able to show that the x-height does have a strong influence on how easy a font is to read. The x-height describes the vertical distance between the baseline of the letters to the upper edge of the lowercase x. The x-height stands in correlation to the cap-height which describe the vertical distance between the font's baseline and the upper reaches of the uppercase H. Most fonts sport a x-height of about 60–75 % of the cap-height. During the last century more and more fonts were developed that had a higher x-height. This phenomenon can also be seen with some older typefaces like Garamond, where digitized updates of the typeface saw

a steady increase in x-height compared to their progenitor. What x-height works well depends also on the language context it is used for. The font design software ›Glyphs‹ proposes 71–72 % for the x-height when you open a new file. [→10←] The German language features a lot of uppercase letters, therefore it is important that the x-height is not too high, as not to confuse uppercase and lowercase letters. For languages like French that have a lot of diacritics a lower x-height is favorable, as it allows more space for the accents, hence making them more distinguishable. For English text on the other hand a higher x-height is opportune, because of the lack of uppercase letters in a sentence (in most cases they only appear in the beginning of a sentence). Still, the x-height shouldn't be too large as to lead to confusion between letters like ›n‹ and ›h‹. A study at the HTW Berlin was able to show that when fonts with different x-height were scaled to the same cap-height the ones with higher x-height exceeded regarding readability. On the other hand the same study was able to show that scaled to the same x-height the fonts with the lower x-height exceeded. The reason for this was also that the font had to be increased in size, to fit with the lower x-height font. [→11←] This matches up with the research Richardson did. In studies on dyslexic readers a similar correlation between x-height and larger font sizes could be seen. [→12←]

FONT SIZE

Probably the highest impact on text perception and readability comes from font size. What sizes are appropriate depends on the use-case and the distance of the reader to the text. Since this paper's focus is on dialogue systems we're dealing mostly with linear reading. Additionally I will focus on four scenarios that are first and foremost defined by the piece of hardware in use. Those four scenarios are:

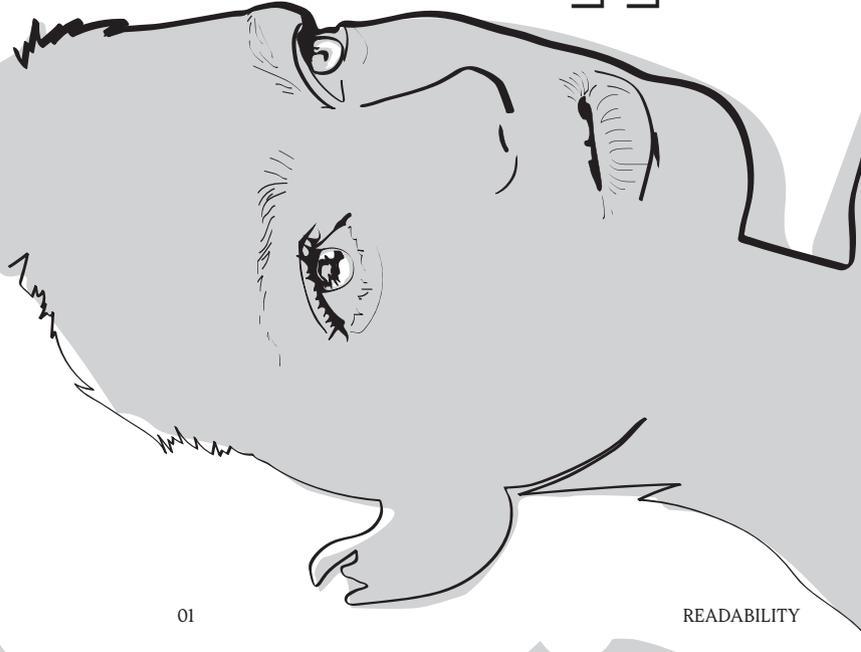
- / handheld gaming (Switch, Steam Deck, mobile devices)
small screen and close viewing distance (40–50 cm)
- / console gaming (x-box, playstation, docked switch)
large screen and large viewing distance (3–4 m)
- / desktop gaming (PC, Mac, Linux)
medium-sized screen and medium viewing distance (1–1.5 m)
- / laptop gaming (PC, Mac, Linux)
medium-small screen and medium-close viewing distance (0.5–1 m)

Which font size is adequate depends on the viewing distance and the chosen font. The optical size of a font can vary drastically based on the x-height and letter width. Two fonts with the same font size can look widely different in scale. Recommendations therefore have to be taken with a grain of salt. If a font size is fitting for the occasion needs to be decided for each case individually.

The website leserlich.info recommends for an x-height of 65 % a font size of 12pt or 16 px for reading text when reading on a desktop computer { 0 1 } , and 10 pt or 13 px when reading on a tablet. [→13←] Those values are meant for texts that are several paragraphs long. For use-cases like subtitles the values should be higher, as the readers eye has to find the text. This isn't that much of an issue when reading chunks of paragraphs, because the readers eye doesn't jump constantly between image and subtitle. This recommendation can be seen as a starting point or reference. It is somewhat imprecise because of screen scaling. The higher the screen's resolution the smaller the font will appear. With tablets these problems aren't as present, because they are mostly set to a standard resolution. [→14←] The BBC picked a different approach for said problem. Instead of recommending specific font sizes they opted to recommend font sizes proportional to the screen size. The maximum value for the line height should be 8 % of the screen height. [→15←] As a reference I will use the the 1440p or QHD resolution of 2560 × 1440 px. According to the



Just because that online test said that your best chance at being happy is a situation where everyone already has a crush on you, it doesn't mean you can't be a different body to you. It just doesn't mean you can't be in your room and all for that to happen. That's how horrible are most things. And if they do happen in the middle of a movie, that's just how terrible they don't have to be.



Like we were stuck together in Girl Scouts?
Like ... uh ... is this just ... what's the word?

BBC's recommendation the appropriate maximum line height would then be 86 pt or 115 px [0 2] . [→16←] Taking a standard line-height of 120 % of the font size, this would translate into 72 pt or 95 px font size. Those values are considered the maximum sizes for subtitles. Depending on the device one is reading the subtitles on, the BBC recommends multipliers to scale down the typography. The given values refer to landscape aligned displays:

- / 50–55 mm (smartphones) × 1
- / 68 mm (smartphones) × 0.67
- / 87 mm (tablet) × 0.8
- / 148 mm (tablet) × 0.67
- / 187–300 mm (laptop and desktop) × 0.6
- / 398–523 mm (TV) × 0.67

The somewhat uneven increments are a result of the interplay of screen size and expected viewing distance. For subtitles on computer screens this would result in a recommended font size of 38 pt or 50 px.

These values can be seen as estimates and starting points for the topic of dialogue systems. While some dialogue in games is depicted as subtitles, not every game relies on this mode. Games that depict dialogue as running text in a fixed position like ›Fallout‹ or ›Disco Elysium‹ can opt for smaller font sizes—closer to what was proposed by leserlich.info—at least when scaled accordingly.

LINE HEIGHT

The line height describes the distance from one baseline in a line of text to the next line that follows. It can be described as a percentage or a multitude of the font size. The line height helps the reader's eye to find the beginning of the following line. Is it too narrow, the eye might accidentally »jumps« a line too far. Is the line height too large the text can fall apart because each line looks disjointed from the next. The tipping points for an appropriate line height depends on the font's x-height, the font size, the viewing distance, and the line length. For the context of books a font with a size of 10 pt and a line length of 60 letters for example could be set with 12.5 pt line height. The same font could then be optimized to a line height of 14 pt when the line length is 90 pt. [→17←] Studies also imply that opting for higher values than the default 120 % is to be preferred. [→18←] This of course depends on the x-height of the font. A font with a low x-height like ›Garamond‹ doesn't need that much space. When setting typography in larger font sizes it is also advisable to reduce the line height (sometimes even to a degree that is lower than the font size) because the space between the lines otherwise can lead to the words looking disjointed. As a rule of thumb it can be said that, the larger the font size the smaller the line height.

LETTER SPACING

Most professional fonts can be used without adjustments to the spacing—given they are used in the intended context. When a text get’s scaled, the spacing will scale in the same proportions. When scaling up this often results in the letters optically drifting apart from each other. As a countermeasure the spacing can be reduced. Accordingly, small font sizes can make the letters look like they stick together. Here an increase in spacing would do the trick to get them back to a comfortable reading state. As is so often the case, clear breaking points can’t be given, as a comfortable spacing depends on the specifics of a given font, and the readers distance to the screen. leserlich.info additionally proposes to add 2 % increased letter spacing when using bright text on a dark background. [→19←]

Sometimes the letter spacing is also used as a stylistic feature. With letter spacings ranging between 100–300 % of the original spacing these can function to draw attention or emphasize words similar to a bold font. The ›Vaporware‹ and ›a e s t h e t i c‹ movement used this effect a lot. So much so, that can be seen as an immediate signifier for the genre.

LETTER TRANSFORM

Under the umbrella of ›letter transforms‹ fall adjustments like all-caps, small-caps, and exclusive lowercase. It could be argued that italic, slanted, or bold could also be seen as part of the letter transform. While slanting a letter adjusts the letter at hand directly, italic and bold technically refer to a different font file (or combination of interpolated font axis in variable fonts). In most cases the letter transform is used to emphasize a word in a sentence. When used on whole paragraphs they often result in lower readability.

The uppercase feature for example turns every lowercase letter into its uppercase counterpart. Research has shown that there isn’t a significant difference between uppercase and mixed-case text in shorter passages. However, for longer passages the reading speed slows down significantly. [→20←] The small caps feature is a tricky one, as it basically switches the lowercase letters for their uppercase counterparts, and scales them down to the x-height. The scaling-down unfortunately doesn’t accommodate for the need of stroke weight adjustments. For this reason this feature can often look jarring, because the uppercase letters stick out like an initial. Some fonts provide an option for a true small-caps alphabet. The problem is that those letters can’t be accessed in games for the most part, because of the lack of OpenType support in game engines. The only way to access this feature would be by using a font that swaps the lowercase letters for small-caps.

Slanting a font will tilt the letters either left or right. This normally doesn’t result in natural looking letters. It is visible that the letters were forced into this position. When used as a stylistic feature it can look appropriate. But as ›fake-italics‹ they look bad. Italic text circumvents these problems, as every glyph is adjusted by hand in the process of creating the font. It still is not recommended to use italics over extended periods of time. A few surveys have shown a slight increase in reading speed when using the oblique version of the ›Futura‹ compared to the upright version. However the opposite was true for the ›Bodoni‹. [→21←] Neither the ›Futura‹ nor the ›Bodoni‹ are fonts that could be considered good fonts for large amounts of text, so the research here has to be taken with a grain of salt. Other studies were able to show that reading-speed decreased over time when italic fonts were used. [→22←] Italic letters often stick together, as they were designed initially to safe space. Used for whole paragraphs the eye will ›jump‹ over some letter combinations and has to backtrack, 01

which results in a slower reading speed. As a small countermeasure the spacing can be increased. This adjustment still doesn't circumvent the disadvantages of italics in large text portions. Italics have been used several times in games to signal inner monologue or stage directions. Considering that italic writing is something that readers are not used to, this choice seems strange. Instead of invoking introspection, these fonts create a sense of estrangement due to the unfamiliarity.

FONT COLOR AND BACKGROUND

What font color is appropriate depends mainly on the color of the background. A black font color is perfect ... when the background is white. Would the background also be black the text would become invisible. Therefore it makes sense to look at these two factors in conjunction. For reading a strong contrast is preferable. Black text on a white background is the ideal situation. [→23←] The reverse of this contrast is harder to read and needs some additional typographic adjustments for compensation (namely increasing font weight and letter spacing). On screen the bright white and intense black sometimes are perceived as being too strong in contrast. In such cases using a dark and a bright grey can alleviate the problem.

For text on screens the W3C Web Content Accessibility Guidelines recommend a contrast value of 7 : 1 for reading text and 4.5 : 1 for headlines. [→24←] The contrast ration gets calculated as:

$$/ (L_1 + 0.05) / (L_2 + 0.05)$$

»L« stands for relative luminance and gets calculated through a formula that is based on the red, green, and blue values of a color:

$$/ L = 0.2126 \times R + 0.7152 \times G + 0.0722 \times B$$

leserlich.info offers a convenient tool that helps calculating the contrast ratio [→25←].

Additionally to the color contrast leserlich.info and W3C recommend avoiding gradients, red-green contrasts, and using running text over images. For gradients the problem mainly stems from having to balance three (or more) different colors. If the contrast for the text color and the background colors is high enough, gradients shouldn't be too much of an issue. It is however important, that the contrasts between text and background are high enough. The red-green contrast has two caveats: The first being that the two colors can be hard to read as they are complementary colors. The second one being, that there is a specific disability that lets some people see both colors as different shades of the same color. Since about 10 % of the Northern European population suffer from color blindness, it is worth considering in ones designs.

The combination of text on images is a problem in the context of game dialogues, since games primarily work with images—moving images in addition. Moving images are especially tricky, as it is almost impossible to keep a good contrast on all the letters at all the time. Well-made image compositions employ a mix of dark and bright colors. This is an issue especially with small font sizes or typefaces with a high stroke contrast.

Various approaches have been tested over the years to circumvent this issue. One standard for a long time was to use yellow colored font with a black drop shadow or outline. Pure yellow isn't that common a color in reality, and therefore doesn't appear that often as a screen filling color. A modification of this style is to use white text and give it a drop shadow. The idea behind this approach is to have the white color do the heavy lifting for most of the situations, and when the background gets too bright the drop shadow contours the white text and keeps it decipherable. Another approach is to set the text in white and place it inside a small black frame. This frame sometimes is half transparent as to not be too intrusive. In games these frames often are employed as text boxes. All dialogue text is then placed inside such a box. These boxes often get stylized in a way that fits the aesthetic of the game. The box-model brings its own caveat as it always takes away space and essentially splits the screen in half. When the text is placed on the top or bottom of the screen, a black to transparent gradient is also an opportune solution to guaranty readability. The issue here being that the text sits in a somewhat uncomfortable position. Considering that most subtitles live in that position, it's an acceptable solution though.

FONT WEIGHT

Font weight has to be considered under two premisses:

- / monochrome bright background
- / multi-colored background or image

Most research focuses on reading on paper. For this context a white background is to be expected. The research that has been done on font weight in this conditions show no clear preference for a certain weight. This does also has to do with there not being an industry standard on font weights—neither regarding the naming conventions nor the corresponding vertical weights. When looking at a selection of sans serif typefaces in their default weight, we can find the following values for the stem sickness of the uppercase ›H‹:

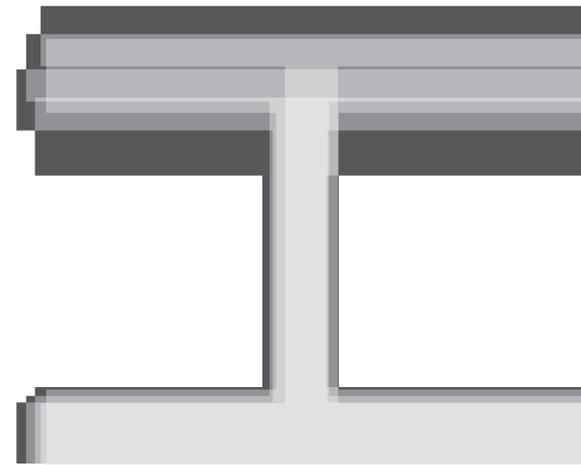
- / Grotesque form principle { 0 3 }
 - // Suisse Sans Regular (95 units)
 - // ABC Arizona Sans Regular (96 units)
 - // Helvetica LT Std Roman (97 units)
 - // Neutral Bp Regular (98 units)
 - // Universe LT Std Regular (100 units)
 - // f Grotesk Book (102 units)
- / Humanist form principle { 0 4 }
 - // Gill Sans MT Pro Book (75 units)
 - // DIN Pro Regular (76 units)
 - // Fritzi Sans Regular (84 units)
 - // Thesis Sans Regular (92 units)
 - // Meta Pro Book (95 units)

For the selected fonts of the grotesque form principle the values are pretty close. But for the humanist form principle the range of stem-thicknesses is pretty wide. Between the ›Gill Sans MT Pro Regular‹ and the ›Meta Pro Book‹ is a difference of 20 units. This means a whole weight difference, as the weight following the regular one—the ›Gill Sans MT Pro Medium‹—already sports a stem-thickness of 98 units. But also comparing the grotesque and the humanist fonts already shows a stark difference in stem-thickness. All of this goes to show that straight recommendations, on what font weight is appropriate can only be seen as such: Recommendations.

For the reading condition of text on a bright background, in book sizes of around 10 to 12 pt font size, the consensus is that font weights within in the »medium« range work best. In one particular cases light versions were also considered. The study used ›Bodoni‹ and ›Futura‹ and the light version only performed better for the ›Bodoni‹. [→26←]
01 READABILITY

My (educated) guess for the reasons behind this is, that the ›Bodoni‹ is a font with a very high stroke contrast, and in the light weight not only the stroke thickness gets reduced, but the contrast as well. Because the horizontal lines can only be reduced so much before becoming intangible, they don't get adjusted in the same proportion as for the jump from regular to semibold. This results in an overall lower contrast for the light weight that is preferable in long-reading formats. This goes to show that light weights can be fitting for long form texts, but it highly depends on the font in question. As soon as the the letters start to optically flicker, they have to be considered to be too thin. [→27←]

For the second scenario, where text is used with non-white backgrounds, different rules for the font weight apply. Text on dark or colored background benefits from larger letterforms in general. This goes doubly so when there are patterns or images in said background. More pronounced letters help to distinguish the text from the background. The way to achieve this optical distinction, is by increasing the font size and the font weight. In the before-mentioned weight tests on ›Futura‹ and ›Bodoni‹ there was a noticeable decrease in readability from semibold to bold. Typographers confirmed this observation from their own experience: Bold font weights should be used sparingly, as they are tiring to read for longer periods. Semibold weights can be applied for longer periods as they often fit in the niche of not clustering the inner shapes of the letters too much, while still providing a higher contrast to the background they are used on.



[0 4]
Humansit form principle (range 75–95 units)



[0 3]
Grotesque form principle (range 95–105 units)

LINE LENGTH

The line length refers to how many letters fit into a line before a new line starts. Around 60 letters is often recommended, and can be seen as a median. [→28←] This value has to be understood in the context of linear reading situations, where several paragraphs are displayed in a »book font size«. If the font size is increased the line length needs to be decreased accordingly. The reason being that the line length should fit into a comfortable range wherein the head doesn't have to move while reading. But the line shouldn't be too short so the eyes get strained because they have to move down more often while not making full use of the eyes field of view. For linear reading in the context of games a line length of 45–60 letters seems appropriate. The longer line lengths are reserved for academic reading—which is not the context of video games. For dialogue that is closer in style to subtitles, the BBC recommends to not exceed 68 % of the screen width for 16:9 resolutions { 0 5 } and 90 % for 4:3 resolutions. [→29←] The amount of letters that fit into that space are determined by the chosen font, font size, and letter spacing. If the calculated values from earlier are applied this would result a line length of 60 letters. This value seemed too long in the tests I did in front of my screen (27" with a view distance of roughly 1 meter). I would therefore opt for something closer to the monospaced recommendations the BBC gives: 40 letters per line { 0 6 }. In regards to website-usage there could be an argument made for longer lines, as screens are aligned mostly horizontal. Readers are therefore more tolerant to longer lines as it means having to scroll less. These considerations might apply to text logs; for dialogue they seem unfit.

Like we were stuck together in Girl Scouts? Like ... uh ... is this just ... what's the word?

↖ { 0 5 }
2560 x 1440 px
72/86.4 pt, 68 % of screen width

↓ { 0 6 }
2560 x 1440 px
72/86.4 pt, 40 letters per line

Like we were stuck together in Girl Scouts? Like ... uh ... is this just ... what's the word?

TECHNICAL LIMITATIONS

Chapter

Working with typography in games is a mixed bag. On the one hand game engines are decades behind in some regards of font support. In regards to stylization and animation on the other hand, games have a lot to show for. In order to understand why that is, it's necessary to understand how typography get's displayed in games.



{ 07 }
static text
Trüberbrook



{ 08 }
dynamic text
Final Precipice
Rise of the Tomb Raider

In general there are two methods to bring letters into a video game. The first one is to create the text outside of the engine. I would consider this static text compared to dynamic text that can be changed inside the engine. Static text is still employed in games and can be often found in text logs or collectible letters { 0 7 } . [→30←] For those CHAPTER

the text, plus the background the text is displayed on, will be created in another graphic program like photoshop. The exported image of said text then gets imported into the engine and will be displayed as any other texture. Another instance where static text is often used are title cards and logos. The text is then exported as a *.png file with transparency so that it can be arranged freely in context of the game.

For the display of dynamic typography a sort of material with a font atlas as a texture needs to be created. This process can be done in engine. The process in Unity through Text Mesh Pro allows for more settings when creating the atlas, which in turn also allows for more mistakes for beginners. In Unreal Engine 4 and 5 this process is a bit more streamlined. Users only have to drag select the font and it the atlas will be built. When creating the atlas, all the necessary glyphs need to be fit onto a square. This causes problems for alphabets with a large glyph set like Korean or Japanese. For these cases the font atlas needs be updated on the go, meaning the glyphs needed for a given word will be added on the texture, and removed when it's not needed any longer. With this atlas and material created it is now possible to display text in the chosen font { 0 8 } .

When importing a regular font it is often noticeable that certain letter combinations have an odd spacing. Typical contenders for this are pairs like »AV« or »TA«. If this problem exists, can easily be tested with the word »AVATAR«. Each letter has a defined space towards the left and right. Typically the letters are adjusted so they work well between several »H«'s and »O«'s for the uppercase, and »n«'s and »o«'s for the lowercase alphabet. But some letter combinations don't look right with just this setup. These need to be adjusted manually for each combination. This process is called kerning, and these kerning pairs are defined within the font file. For some reason neither engine can read the kerning pairs that come with modern font files. This results in an uneven text image, because some letters will create an optical hole because of their side bearings. The only way to access the kerned values, is to write the kerning table in an old standard. Most fonts don't include this because the standard is obsolete. In the type design application »Glyphs« the feature can not be selected by default. It is still possible to export a font with this kerning table, but the command »Write Kern Table« needs to be typed by hand—an information that is not widely accessible and requires an extensive research. If one is not in the business of creating their own fonts, they will probably not come across this solution that is nestled inside the depths of font de-02 TECHNICAL LIMITATIONS

signers forums. If one is in the possession of a type design application this feature can also be added to an existing font—though this can be seen as infringing on the EULA of most fonts. Otherwise the only possibility is to ask the font provider if they can included this feature.

Contemporary fonts not only come with information on kerning pairs they often also offer a wide range of additional features accessible through OpenType. The OpenType font format was first released in 1996 and allows font information to be stored in a more dynamic way. Next to the technical improvements it also allows a variety of letters and letter combinations to be replaced. Ligatures are one of these use cases. A very common ligature is the combination of »fi« that through open type gets combined into a new glyph that saves space and prevents overlap of the i-dot and the f-bow. Other OpenType features are small caps, old-style numbers, language adjustments (like the Turkish i, or for the Polish diacritics), and alternate letterforms. Unfortunately—at least to my knowledge—non of these features can be accessed by current game engines.

Another feature currently not accessible in game engines are variable fonts. This font format brings a noticeable decrease in file size, as only one file is needed to display a near infinite number of font weights. Variable typefaces allow to interpolate along pre-defined axis, so that a seamless transition from light to bold, regular to slanted, and even sans to serif is possible. More on the possibilities of this feature in chapter 04.

Styling text properly in games is often also an issue. Styling here meaning to be able to structure text with paragraph and character features. Unreal Engine only as a very limited capacity to style a block of text. Unity has a somewhat solid basis through Text Mesh Pro, because it allows users to use text mark-up as known from websites. Where both engines seem to put a lot of emphasis on is to be able to display textures, colors and gradients on the typography—which somehow tells a lot about their view on type.

Apart from these technical limitations games often showcase an insulting lack of basic typographic knowledge or care. It is common to find the inch symbol used for quotation marks, hyphens for various dashes, triple dots for ellipses, or just plain double spaces that weren't weeded out during the editing process. This goes for independent titles as well as large budget games. It is truly a shame considering that so much of what players interact with in games, is text-based.

All in all, the limitations in game engines are at times frustrating. The message seems to be that typography should take a backseat to the art and programming (though I know that artists and programmers also have their fair share of complaints on issues that have remained unfixed). This state of affairs is all the more baffling considering that all of the before-mentioned features are accessible for internet browsers—through WebGL even in 3D.

LAYERS OF TEXT

OVER

Chapter

Video games fill a pretty unique space in regards to how they display dialogue. Compared to books they are dealing with a dynamic environment, and the text most of the time takes a backseat to the visuals. Compared to movies they have to accommodate for player interaction—meaning they don't always have control over the framing of text in the context to the background.

In order to figure out how video games deal with these obstacles I looked into 121 games that were published within roughly a decade (2010–2022). I looked at a mix of games from independent to big budget titles. The list of games is not only comprised of role playing or adventure titles, but basically any title that includes a typographic representation of dialogue. [→31←] My focus was less on choice systems but more on how dialogue text is placed and designed. A lot of the games also had voice acting, but as long there was also a visual representation of the words I included it. As a database I mostly referred to the Game UI Database website, [→32←] and added a few titles of my own collection that I found interesting. This means my sample has an element of randomness to it. There are titles that are not included because I didn't have access to the game or there were no screenshots to the game provided on Game UI Database. This can be seen as a factor tilting the statistic for some of the games feature subtitles, but only as an accessibility feature that is not active by default. Also, the games picked feature English language support. Which in turn means that games that don't have English support aren't featured here. Still, the sample counts as a seizable representation of typographic dialogue displays of video games from the last decade.

In order to compare the game's approaches to dialogue display, I subdivided their dialogue systems into four categories:

- / Textbox { 0 9 }
- / Subtitle { 1 0 }
- / Speech bubble { 1 1 }
- / Text log { 1 2 }

Textboxes appear in a fixed position and the text of every speaker is displayed in the same box. The text is separated by a form of frame or border from the background. Subtitles mostly also appear in the same spot, but they don't sport a stylized frame. A black backdrop behind the text would still fit within subtitle category. Speech bubbles are defined by their relative position to the speaker. They mostly appear over the speakers head. Text logs share similarities with textbooks in that they appear in a fixed position and often are framed. But instead of only showing what is being said in the moment, they also display prior messages. Some of the games featured more than one form of text display. Considering this, the distribution looks like this:

- / Textbox (47)
- / Subtitle (41)
- / Speech bubble (33)
- / Text log (6)
- / Other (2)

Textboxes take a small lead in the sample size. A possible reason for this preference could be that text boxes solve the main problem of readability issues regarding the clash of text and (moving) background. The textbook also allows the developers to add some visual flavor to the written message. Almost as popular are subtitles. Their popularity can probably be traced back to the abundance of voice acting in games nowadays, that make written representation of speech less important—or at least shift the meaning of text to a support role. Subtitles additionally leave more screen space for character animation and acting. Significantly less utilized are speech bubbles. While they offer a good spatial representation of who's speaking they also bring with it problems as soon as several speakers are active that also move. In these situations developers have to accommodate for possible overlap of speech bubbles while at the same time keeping the speakers in frame. The least utilized form in the sample I looked at are text logs. They appeared in narrative or role-play driven games that often processed large amounts of text.

In my anecdotal comparisons (outside of this paper) for the use of typefaces between video games and graphic design magazines I noticed almost no overlap in style and trends. To get an idea of what kind of fonts could be seen in video games decided to catalogue 03



MAE

Do you think we'd be friends if we weren't, like, stuck together in the same town?



MAE

Like we were stuck together in Girl Scouts? Like... uh... is this just... what's the word?

BEA
Proximity?



{ 11 }
Speech bubble

MAE
Yeah.



{ 12 }
Textlog

MAE

Do you think we'd be friends if we weren't, like, stuck together in the same town?

MAE

Like we were stuck together in Girl Scouts? Like ... uh ... is this just ... what's the word?

BEA

Proximity?

MAE

Yeah.

BEA

I don't know. I honestly don't. My entire life feels like running after something that keeps moving away into the distance, while I stay in the same place ... and I guess proximity counts for a lot right now.

the fonts as well. I used Lilo Schäfer's classification system. [→33←]

The system is explained in more detail in this proposals accompanying topic »A Voice through Type«. In short the model subdivides serif, sans serif, slab, script, and blackletter. The serif, sans, and slab typefaces then get subdivide again by their underlying form principle:

- / Humanist form principle
- / Transitional form principle
- / Modern form principle
- / Geometric form principle
- / Grotesque form principle
- / American form principle

To further differentiate the fonts the model offers to add a selection of tags. I used the tags sparingly in my sample, and also extended Schäfer's set with the categories »antiqua variant« and »pixel«. The tag system I will leave out for this discussion, as the other categories are more significant for a comparison. For some of the fonts the applied categories might be up for debate, as depending on what features one focuses on, different decisions are possible. The most difficult in this regard are the four different sans form principles. For the script fonts I decided to apply this to fonts that would would in other systems probably fall under the category of hand drawn. I also catalogued some hand drawn fonts under humanist form principle, because they retained the defining elements of this construction method and didn't have letter variations. So basically a humanist sans font with some added hand-drawn features.

The distribution of the fonts in my sample looked as follows:

- / Humanist sans (54)
- / Geometric Sans (21)
- / Grotesque Sans (19)
- / Transitional Serif (15)
- / American Sans (8)
- / Humanist slab (4)
- / Script (2, but 17 sans typefaces with a script tag)
- / Humanist serif (1)

I was surprised to see such an overwhelming use of humanist sans typefaces. The reasons for this are probably the open counters that make distinguishing letter forms easier, the relatively low stroke contrasts, and last but not least, the still widespread misbelieve that ›Verdana« —also a font of the humanist form principle— is the default best solution for text on screen. This results in an often sanitary text image.

Considering the 17 entries that bear the script tag, which implies a child-like, playful demeanor it is no wonder that the games industry

54 Human

21 Geometric sa

19 Grotesque sans

15 Transitional serif

4 Humanist slab

2 Script

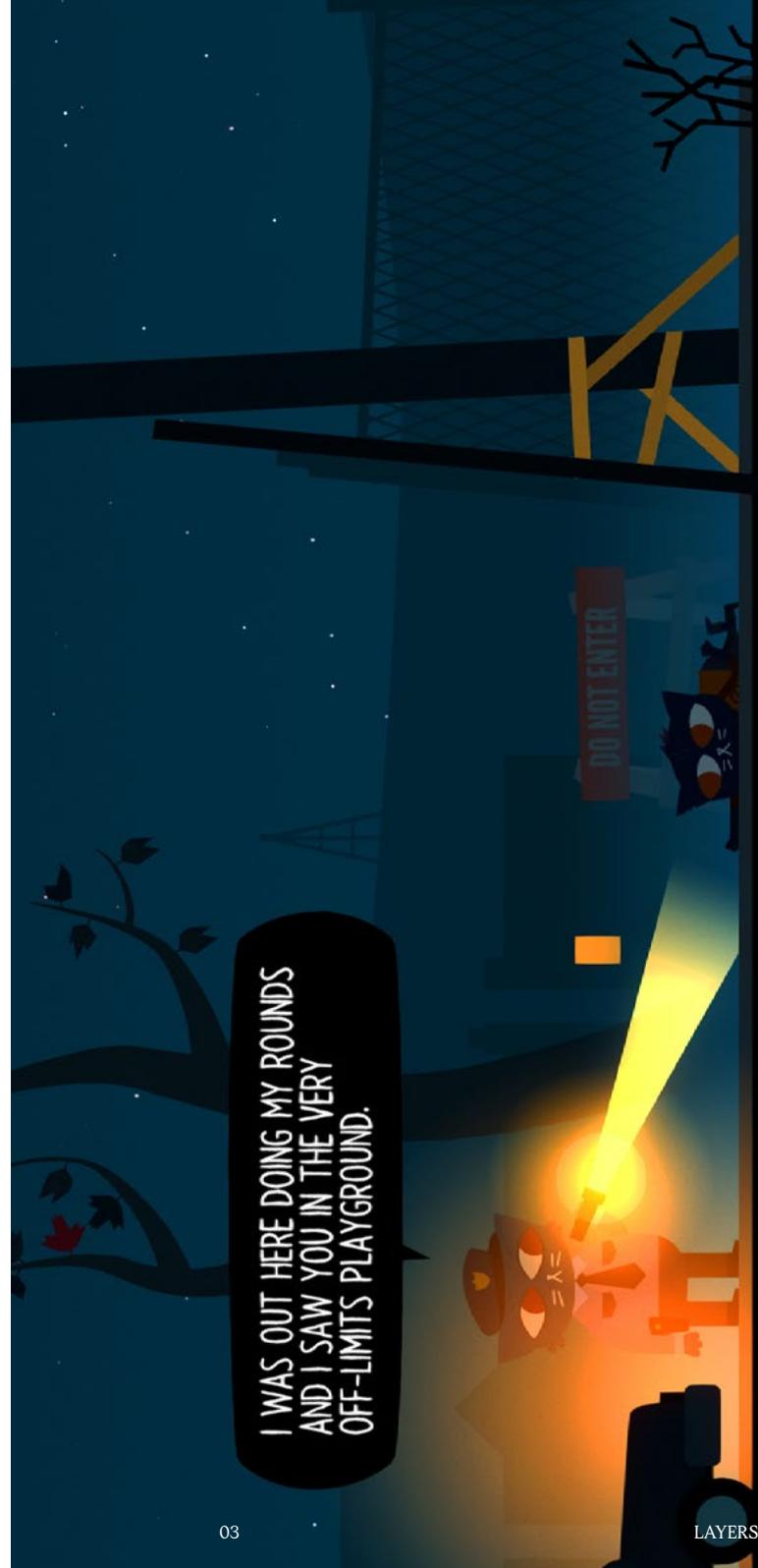
1 Humanist serif

doesn't get recognized by their graphic design peers. Somewhat interesting among these humanist fonts were the antiqua variants, that combine the varying stroke contrast of humanist serif faces but omit the serifs. Humanist sans seem to be to video games what grotesque sans was for the design scene during International Jetset era: A safe default that lacks character. But what this research also shows, is that a large variety of typefaces can work in games. Especially with the widespread availability of HD-monitors rendering limitations of the past—especially for serifs—are gone. Though some games during the PS1 era already proved that serifs are a legitimate choice—even with the junky screen resolutions of that time.

Before I move on to look at typographic advances made in other media, I want to highlight a few examples that I found interesting personally. This selection neither means not selected works are inferior, nor does it mean the examples picked are stellar and flawless. I picked them solely because their approaches stood out to me and bring something interesting regarding dialogue text to the table.

SPOTLIGHT I: NIGHT IN THE WOODS

Night in the Woods uses an uppercase only humanist sans typeface for its speech bubbles. The letters appear with a slight wobble transform at all times. This creates a dynamic feeling representative of spoken words. It also helps to differentiate the spoken text from the static written text in the background and menus. In some instances this transform gets increased and an additional position transform makes the letters seem to shake. The instances where this intense effect is used, showed anger or screaming. Since it compromises readability this effect is used only sparingly—which enhances the effectiveness of it, during the few moments it is used.



SPOTLIGHT II: SABLE

Sable's dialogue system does something interesting in regards to speaker distinction. All the text is displayed in the same text box. When the player speaks to an NPC their text is displayed in a geometric sans typeface. There are also quotation marks and names to indicate the speaker. Whenever the player replies as Sable—the protagonist—there is a descriptive text of what the protagonist does, from the protagonist's perspective. You never read direct speech from Sable. In these instances the font changes to transitional serif typeface, to highlight the speaker and the introspection. I picked this example because the font choices are interesting, sporting some really nice letters not common for font picks in video games, but more savvy to graphic design trends. With that being said the text placement isn't ideal. The lines are too long and the text takes too much of the screen, while being in a sub-par position. Interacting with other characters in the game also creates a form of disconnect with the rest of the game. Most of the time you are roaming around freely. A major appeal of the game is that you can get to every point you see on your screen. But, as soon as you start a conversation you are locked in place, and forced to look at a the bottom of your screen instead of the horizon.

I tell her that's why I'm so eager to make it. To choose well and quickly, so that I don't go too far down the wrong path.

JADI

"You know you have nothing to worry about, don't you, Sable?"

SPOTLIGHT III: REDTAPE

Redtape is a very short game where you try to get some documents approved in the bureaucracy that is literally hell. As soon as you interact with the NPCs the font appears in relatively large size in the middle of your screen. It is very raw and fits with the aesthetic of the game. I wanted to highlight this dialogue display, as it keeps your eyes on the person you are interacting with instead of dragging you to the bottom of the screen. Additionally the font choice is great as well: A transitional serif typeface in a bold weight with a lot of character. Of course it also has to be mentioned that the font is at times hard to read in front of the pixelated graphics.

Carl

I don't think so, that floor has been ironically
in maintenance for ages

The cat often dropped by to scavenge. He made a lot of noise when he thought I was holding out on him. But right now, the place was clean empty - no food anywhere. I had to prove it to him.

SPOTLIGHT IV: A CASE OF DISTRUST

Dialogue in games often feels disjointed from the imagery and the characters on screen. A Case of Distrust solves this issue in an interesting way. For one it doubles down on its detective theme, and the typewriter documentation often associated with that theme. Apart from this narrative consonance it also solves the problem of the disjointed game objects and text. The text is always placed center-stage without distracting from the illustrations. The paragraphs come with indents—a layout feature rarely seen in video games. I think the screen layout is best described as an illustrated novel. Something that has been attempted before visually, but I haven't seen executed this well in regards to the page layout and inclusion of text.

MEANWHILE
ELSEWHERE

04

Chapter

Strangely enough the video game sector often seems detached from what is going on in other fields of visual design. This doesn't mean there is no overlap at all. There are graphic designers contributing logo designs like Cory Schmitz, but for the most part it seems the graphic design sphere and the video game sphere operate separately. During my own studies I noticed the difficulty applying graphic design trends to video games. It seemed almost too foreign, as there was no examples or references that I knew of. It would be interesting to back this up with more than anecdotal evidence and look into the reasons, why there is so little overlap. Even now, where more graphic designers use ›Blender‹ to build psychedelic 3D spaces, the visual language is wildly different to what is happening in video games. The examples that I'm going to introduce in this chapter are by no means comprehensive. They can be considered inspirations; a few examples that do something interesting with typography, that could be worth exploring and transporting into video games.

CALCULATED FONT SIZE

Some websites calculate the font size based on the size of the browser window. There are certain break points applied where the font size gets increased or decreased to adjust the typography to the layout. While UI scaling is a common feature in games, the fonts just get scaled as well. Depending on the referenced default size, with small or large screens the font size is likely to be disproportionate at the outer extremes. For the large screens some console players find themselves playing on, fonts should be scaled down a bit, because the eye isn't able to cover the full screen size. For smaller screens, like some laptops or handheld consoles, a smaller font size is better suited. This feature becomes more and more necessary with devices that are built to be used in handheld and screen mode like the ›Nintendo Switch‹ or the ›Steam Deck‹.

3D—TYPE

Typography that is placed in the three-dimensional space is not a completely new feature in games. It can be seen from time to time, like in ›Shadow of the Tomb Raider‹ { 13 } where climbing instructions



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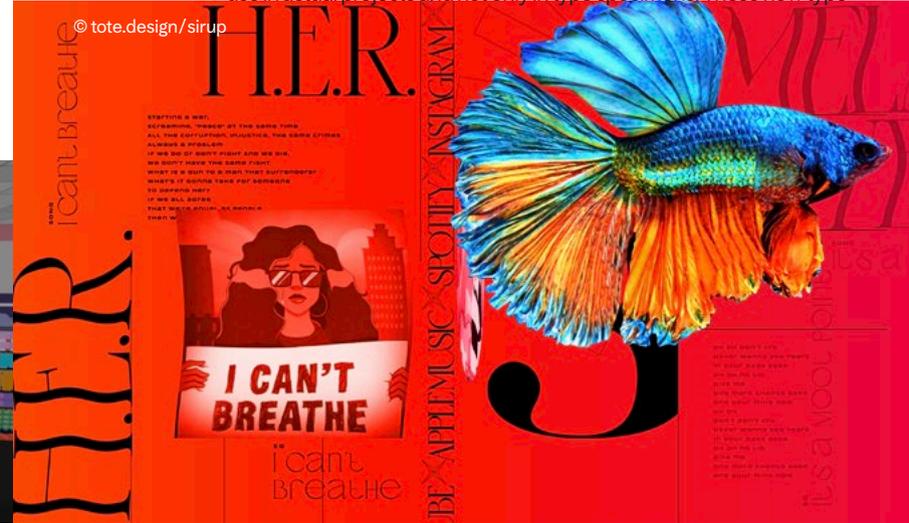
↑ ↓ { 1 5 }
bill wurtz. (2022). at the corner store
[Video].



where placed on the wall the players were supposed to interact with. Or the demon world speaking to the protagonist in *DmC: Devil May Cry*. But overall it is sparsely utilized to show dialogue or thoughts. In Bill Wurtz's recent videos he incorporated 3D environments, created in Unity. As his works are basically lyric videos for his songs, therefore he incorporates typography a lot. The video »at the corner store« for example places the lyrics on the signs, the floor, as non-diegetic text, or like dominos along the shelves of this grocery store. The typography switches effortlessly between these different display types. This way the lyrics in one moment are a comment on the store, and in the next they are a direct interaction of the store with the lyrics. Even though this approach probably won't work for a typical RPG, it might be a good fit for comedic scripted dialogue. Imagine asking a character in game for directions and the displayed words guide you to your destination.

CONTEMPORARY TYPEFACES

Type design at the moment is bursting with creativity. There are so many wild typefaces that get created and used in commercial contexts. It is very refreshing seeing all these expressive shapes put to use in actual projects and not only in type specimens. These new type



faces can be seen in magazines, poster advertisement, websites, and even movies. They unfortunately rarely make their way into video games. Assumed reasons for this could be the longer production cycles, that allow for less adaption to emerging trends, and the self-referential game industry, not being aware of what is going on in other graphic disciplines.

VARIABLE FONTS

The variable font format was introduced in 2016 and allows a single font file to interpolate between a number of parameters, like font weight, slant, or even serif and sans serif features. Basically everything in between two or more extremes can be interpolated and displayed—not only static but also dynamic. More and more websites include variable fonts for hover features, so that when hovering over a link, the text for example changes from normal to bold. It doesn't look like the font get's switched out, but rather like



↑ { 1 6 } Variable font used to scale the menu from light condensed to bold extended when hovering. © dilligner.tv



the font is growing in weight. There are of course a lot more variations possible than just weight changes. With the introduction of colored fonts it is even possible to include complex illustrations into a font file that can be animated [1 7] . Variable fonts are used more and more prominently in web design, but due to a lack of technical support they are simply omitted from video games. What has been done on some websites would very well fit for UI design in games. But there are also possibilities to make dialogue more expressive, allowing to show more subtleties in displayed text.

↓ { 1 7 } Animated initial. © typearture.com



From the rooftops it was possible to overview the construction of the cathedral, as from ground level, the vast latticework of wooden beams surrounding it blocked out any view of the stone walls behind them. But from here, up high, it was finally possible to see the grandeur of what was being built, and it was clear how far the construction had progressed.

Next to the cathedral, a vast spire was built, adorned with intricate gargoyles, sculpted by an army of stonemasons. Eventually, a large wooden crane would slowly lift the spire to its place, placed on top of the highest tower.

[Back to the Variable Color Font Initials overview](#)



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[Back to the Variable Color Font Initials overview](#)

THE FINAL LAYER

05

Chapter

As mentioned before typography sits in a strange place regarding video games. The use of type shaders and creative backgrounds in games is often astonishing (there is a lot of creativity displayed regarding the styling of text boxes). Also the typography used in title cards is getting a lot more expressively lately. But for dialogue there is often a tendency to fall back to safe and tried designs. Within these visual tropes there is a certain amount of variation, but rarely a game developer leaves these bounds. In comparison with other mediums it becomes clear, that these boundaries are self-imposed or due to a lack of exchange. As written dialogue will continue to play a large role in video games, it is worth investing into appealing text, as well as exploring how to use this text as a more expressive medium.

ENDNOTES

- [→1←] Think of the uppercase »l« and the lowercase »l« for example.
- [→2←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 11.
- [→3←] Legibility translates to »Leserlichkeit« and readability translates to »Lesbarkeit«.
- [→4←] Aufgelistet wie in: Jan Filek, 2013, Read/ability, p.22. Original Quelle Anne Rose König, Lesbarkeit als Leitprinzip der Buchtypographie.
- [→5←] Jan Filek, 2013, Read/ability, p. 53.
- [→6←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 130.
- [→7←] Laurel Strom. Proportional Vs. Monospace Fonts. techwalla.com
- [→8←] Jan Filek, 2013, Read/ability, p. 22.
- [→9←] Oliver Reichenstein discussed this phenomenon in the formfunk podcast in regards to his writing application »iA Writer«.
- [→10←] The software is developed in Austria, so a slight bias towards German might be seen here.
- [→11←] Jan Filek, 2013, Read/ability, p. 101.
- [→12←] Richardson, 2022, The Legibility of Serif and Sans Serif Typefaces, p. 73
- [→13←] leserlich. Schriftgrößenrechner.
- [→14←] Even though the resolution on mobile devices can be changed as part of the accessibility features, it is not as common to do so.
- [→15←] BBC, 2021, Subtitle Guidelines.
- [→16←] Calculated with the everything fonts »Font Unit converter«. Everything Fonts. Font Unit Converter. <https://everythingfonts.com/font/tools/units/converter> (accessed Mai 2022).
- [→17←] Jan Filek, 2013, Read/ability, p. 115.
- [→18←] Jan Filek, 2013, Read/ability, p. 117.
- [→19←] leserlich. Zeichenabstand.
- [→20←] Jan Filek, 2013, Read/ability, p. 148.
- [→21←] Jan Filek, 2013, Read/ability, p. 164.
- [→22←] Jan Filek, 2013, Read/ability, p. 167.
- [→23←] leserlich. Kontrast und Farbe.
- [→24←] W3C, 2018, Web Content Accessibility Guidelines (WCAG) 2.1.
- [→25←] leserlich. Kontrast und Farbe.
- [→26←] Jan Filek, 2013, Read/ability, p. 134.
- [→27←] Jan Filek, 2013, Read/ability, p. 134).
- [→28←] Jan Filek, 2013, Read/ability, p. 110–111.
- [→29←] BBC, 2021, Subtitle Guidelines.
- [→30←] »Trüberbook« is an example that does this really well. The letters and articles displayed with static text make use of all the typographic fine-tunings possible outside of the engine.
- [→31←] A full list of all the titles and categories is provided in the appendix.
- [→32←] Game UI Database.
- [→33←] Lilo Schäfer, 2019, Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften.
- [→34←] Bill Wurtz. (2022, April 20). at the corner store [Video]. Youtube. https://youtu.be/O_wzpkwIM2A (accessed June 2022).

SOURCE? — IT WAS REVEALED TO ME IN A DREAM

- BBC (2021, September). Subtitle Guidelines. <https://bbc.github.io/subtitle-guidelines/#Typography> (accessed Mai 2022)
- Bill Wurtz (2022, April 20). at the corner store [Video]. Youtube. https://youtu.be/O_wzpkwIM2A (accessed June 2022).
- Everything Fonts. Font Unit Converter. <https://everythingfonts.com/font/tools/units/converter> (accessed Mai 2022).
- Game UI Database <https://wwwgameuidatabase.com> (accessed Mai 2022).
- Jan Filek (2013). Read/ability. Typografie und Lesbarkeit. Niggli. (p.101).
- John T. E. Richardson (2022). The Legibility of Serif and Sans Serif Typefaces. Reading from Paper and Reading from Screens. Springer.
- Laurel Strom. Proportional Vs. Monospace Fonts. Techwalla. <https://www.techwalla.com/articles/proportional-vs-monospace-fonts> (accessed Mai 2022).
- leserlich. Kontrast und Farbe. <https://www.leserlich.info/kapitel/farben.php> (accessed Mai 2022).
- Contrast calculator. <https://www.leserlich.info/werkzeuge/kontrastrechner/index-en.php> (Accessed Mai 2022)
- Schriftgrößenrechner. <https://www.leserlich.info/werkzeuge/schriftgroessenrechner/index.php> (accessed Mai 2022).
- Lilo Schäfer (2019). Das Trainieren eines künstlichen neuronalen Netzes zur Erkennung und Klassifizierung von Schriften.
- Matthias Gieselmann (Host). (2015, November 23). Oliver Reichenstein – Der Aufräumer (No. 6) [Audio podcast episode] In: formfunk Kommunikationsdesign Podcast. <https://formfunk-podcast.de/interviews/oliver-reichenstein> (accessed Mai 2022).
- W3C (2018, June 05). Web Content Accessibility Guidelines (WCAG) 2.1. <https://www.w3.org/TR/WCAG21> (accessed Mai 2022).

Example Dialogue taken from »Night in the Woods«.

FONTS

Typefaces used as examples are labeled in place. The remaining fonts where created David Wiesner.



Fritzi Sans

Fritzi Serif

Gemüseecken

APPENDIX

Chapter



A Case of Distrust | 2018 | Text Box | Humanist Slab | Regular | Monospaced



A short Hike | 2019 | Speechbubble | Grotesque Sans | Semibold | Pixel



Animal Crossing | 2020 | Text Box | Humanist Sans | Semibold |



Arknights | 2020 | Text Box | Grotesque Sans | Regular | Condensed



Ashen | 2018 | Text Box, Subtitle | Geometric Sans | Regular |



Assassins Creed: Valhalla | 2020 | Subtitle | Humanist Sans, Transitional Serif | Semibold, Regular | Condensed



Astral Chain | 2019 | Text Box | Geometric Sans | Regular |



Batman: Arkham Night | 2015 | Subtitle | Humanist Sans | Semibold | Condensed



Atelier Reza: Ever Darkness & the Secret Hideout | 2019 | Subtitle, Text Box, Speechbubble | Humanist Sans | Regular |



Battletoads | 2020 | Speechbubble | Script | Regular |



Backbone | 2021 | Speechbubble, Textlog | Geometric Sans | Regular |



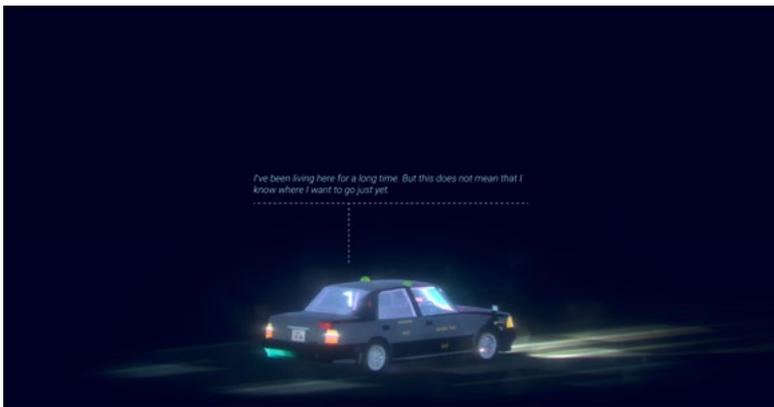
Bayonetta 2 | 2014 | Subtitle | Humanist Sans | Regular | Script, Round



Bioshock Infinite | 2013 | Subtitle | Grotesque Sans | Semibold | Condensed



Blacksad: Under the Skin | 2019 | Speechbubble | Humanist Sans | Bold, Regular | Condensed, Script



Bird of Passage | 2019 | Speechbubble | Humanist Sans | Regular | Oblique



Bloodstained: Ritual of the Night | 2019 | Text Box | Grotesque Sans | Regular



Black Book | 2021 | Subtitle | Transitional Serif | Regular



Borderlands 2 | 2012 | Subtitle | Geometric Sans | Semibold | Monospaced, Blunt



Bowser's Fury | 2021 | Text Box | Humanist Sans | Regular |



Catherine | 2012 | Subtitle | Grotesque Sans | Regular |



Captain Tsubasa: Rise of New Champions | 2020 | Text Box | Grotesque Sans | Regular |



Celeste | 2018 | Text Box | Geometric Sans | Semibold |



Carto | 2020 | Speechbubble | Humanist Sans | Semibold | Round |



Child of Light | 2014 | Speechbubble, Text Box | Geometric Sans | Regular |



Death Stranding | 2019 | Subtitle | Humanist Sans | Regular |



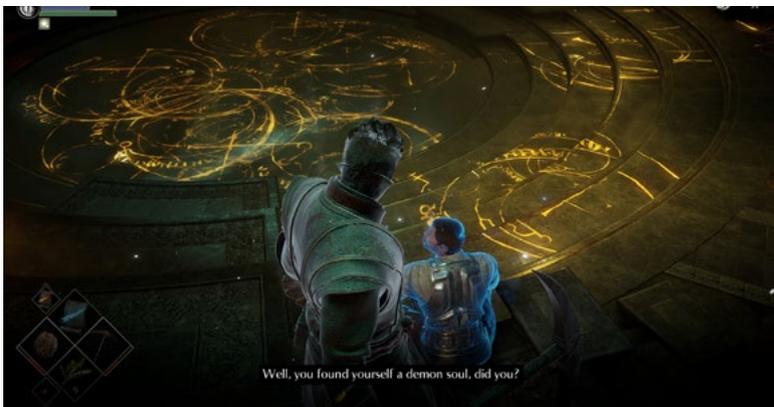
Desolatum | 2022 | Speechbubble | Geometric Sans | Semibold |



Death's Door | 2021 | Speechbubble | Humanist Sans | Regular | Condensed, geometric



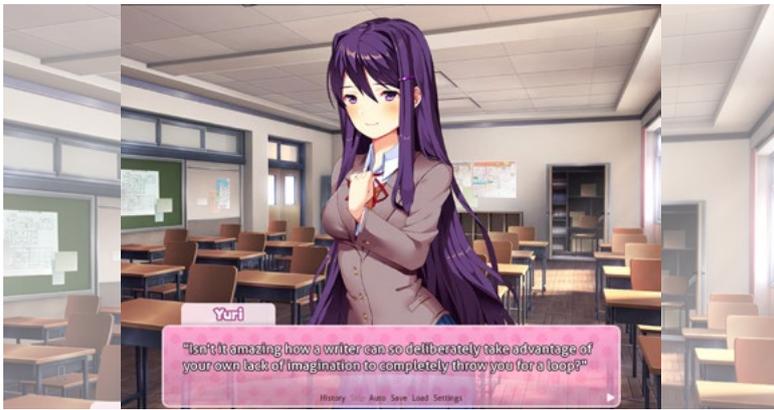
Disaster Report 4: Summer Memories | 2019 | Text Box | Grotesque Sans | Regular |



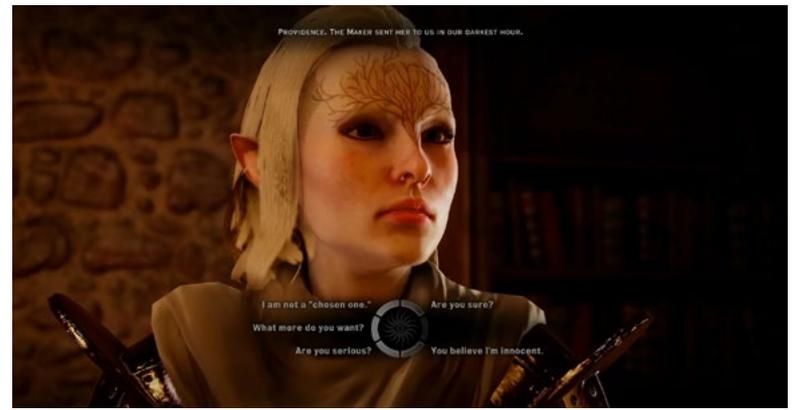
Demon Souls (2020) | 2020 | Subtitle | Humanist Sans | Regular | Contrasted, Antiqua Variant



Disco Elysium | 2019 | Textlog | Transitional Serif | Regular |



Doki Doki Literature Club | 2017 | Text Box | Humanist Sans | Semibold



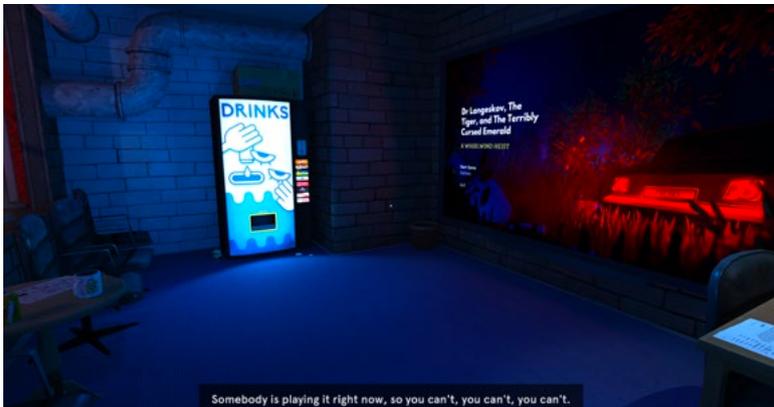
Dragon Age Inquisition | 2014 | Subtitle | Grotesque Sans | Semibold



Don't Starve | 2013 | Subtitle | American Sans | Regular | Condensed, Script



Dragon Ball Z: Kakarot | 2020 | Text Box | Humanist Sans | Semibold



Dr. Langeskov, The Tiger [...] | 2015 | Subtitle | American Sans | Semibold



Dread Nautical | 2019 | Text Box | Grotesque Sans | Semibold | Condensed



Eldenring | 2022 | Subtitle | Transitional Serif | Regular |



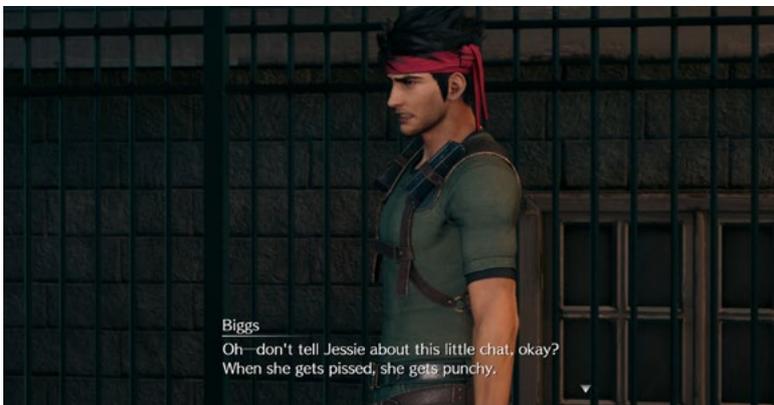
Final Fantasy XV - Pocket Edition | 2018 | Speechbubble | Grotesque Sans | Regular | Blunt



Fantasian | 2021 | Speechbubble | Humanist Sans | Regular |



Firewatch | 2016 | Subtitle | Geometric Sans | Regular |



Final Fantasy VII - Remake | 2020 | Subtitle | American Sans | Regular |



Frog Detective 2 | 2019 | Text Box | Humanist Sans | Regular | Script



Genshin Impact | 2020 | Text Box | Humanist Sans | Semibold | Contrasted, Antiqua Variant



Gravity Rush 2 | 2017 | Subtitle, Speechbubble | Humanist Sans | Regular



Going Under | 2020 | Speechbubble | Humanist Sans | Regular | Round, Constructed



Greedfall | 2019 | Subtitle | Geometric Sans | Regular | Round



Granblue Fantasy Versus | 2020 | Text Box | Transitional Serif | Regular | Contrasted



Hades | 2020 | Text Box | American Sans | Semibold | Contrasted



Halo 4 | 2012 | Subtitle | Grotesque Sans | Regular |



Hyrule Warriors: Age of Calamity | 2020 | Text Box | Humanist Sans | Semibold | Oblique



Hollow Knight | 2017 | Text Box | Transitional Serif | Regular | Contrasted



Iris and the Giant | 2020 | Text Box | Geometric Sans | Regular |



How we know we were alive | 2020 | Speechbubble | Geometric Sans | Regular | Pixel



Irori | 2020 | Speechbubble | Humanist Sans | Regular | Script, Geometric



Kentucky Road Zero | 2013 | Speechbubble | Grotesque Sans | Regular | Monospaced



Kona | 2016 | Subtitle | Humanist Sans | Regular |



Kingdom Hearts III | 2019 | Subtitle | Geometric Sans | Regular | Script, Round



Legend of Zelda Skyward Sword HD | 2021 | Text Box | Transitional Serif | Semibold |



Kirby and the Forgotten Land | 2022 | Text Box | Humanist Sans | Semibold |



Lieve Oma | 2017 | Speechbubble | Grotesque Sans | Regular |



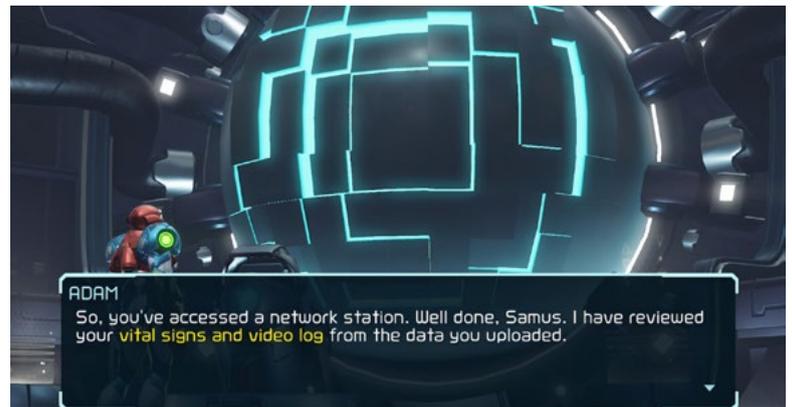
Life is Strange | 2015 | Subtitle | Script | Regular |



Metro Exodus | 2019 | Subtitle | Grotesque Sans | Regular | Contrasted



Life is Strange 2 | 2018 | Subtitle, Textlog | Grotesque Sans | Regular | Script



Metroid Dread | 2020 | Text Box | Humanist Sans | Regular | Constructed, Blunt



Mad Max | 2015 | Subtitle | Humanist Sans | Regular |



Mirror's Edge: Catalyst | 2016 | Subtitle | Humanist Sans | Regular |



Monkey Island 2: LeChuck's Revenge SE | 2010 | Subtitle | Transitional Serif | Regular



Mutazione | 2019 | Textlog | Geometric Sans | Regular



Moonglow Bay | 2021 | Text Box | Humanist Sans | Regular | Marker Script



Neo Cab | 2019 | Speechbubble | Humanist Sans | Regular | Condensed



Moonlighter | 2018 | Speechbubble | Geometric Sans | Regular | Monospaced, Pixel



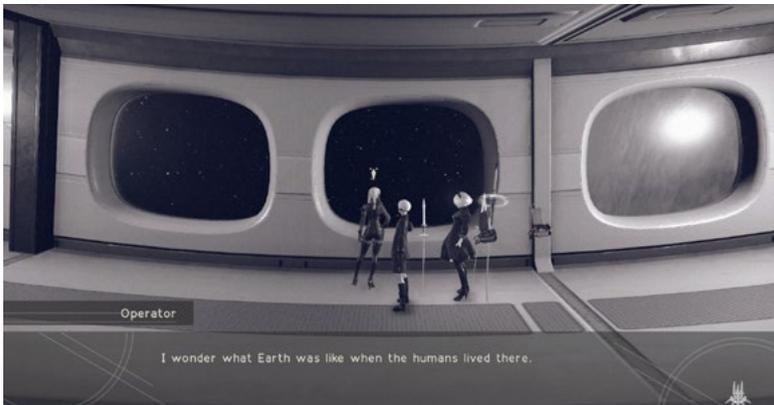
Neo: The World Ends with You | 2021 | Speechbubble | Grotesque Sans | Semibold | Blunt



Ni no Kuni: Wrath of the White Witch | 2013 | Text Box | Humanist Slab | Regular | Geometric



Ni Nu Kuni II: Revenant Kingdom | 2018 | Text Box | Humanist Slab | Semibold | Round



Nier Automata | 2017 | Text Box | Humanist Sans | Regular | Monospaced, Round



Nier Reincarnation | 2021 | Text Box | Humanist Sans | Regular



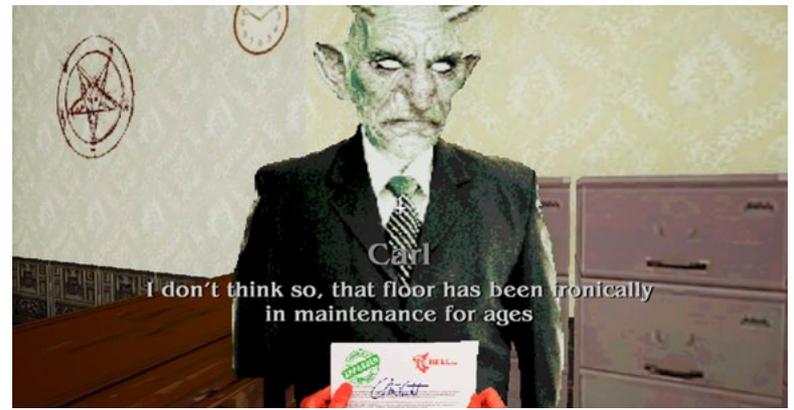
Nier Replicant | 2021 | Text Box | Transitional Serif | Semibold | Contrasted



Night in the Woods | 2017 | Speechbubble | Humanist Sans | Regular | Condensed, Transformed



Persona 5: Strikers | 2020 | Speechbubble | Humanist Sans | Semibold | Antiqua Variant



Redtape | 2021 | Subtitle | Transitional Serif | Bold |



Persona 5 | 2016 | Text Box | Humanist Sans | Semibold | Antiqua, Contrasted



Resident Evil 7 | 2017 | Subtitle | Humanist Sans | Regular |



Pokémon: Sword and Shield | 2019 | Text Box

Geometric Sans | Regular



River City Girls | 2019 | Text Box | Humanist Sans | Semibold | Script, Round



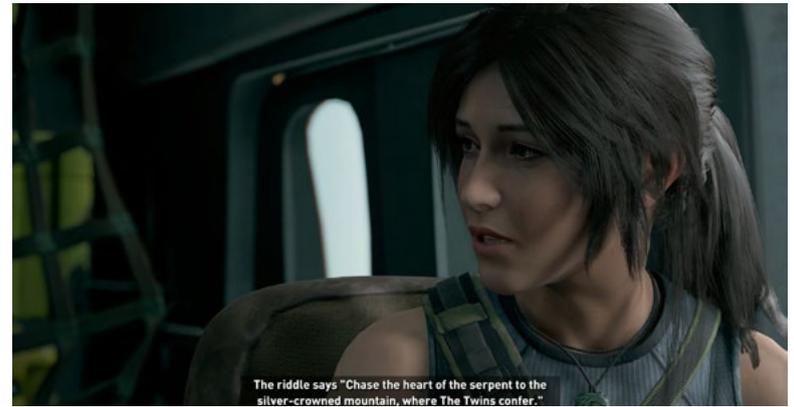
Röki | 2020 | Text Box | Humanist Sans | Regular | Round, Dynamic



Sable | 2021 | Text Box | Geometric Sans / Transitional Serif | Semibold, Regular



Sekiro: Shadows Die Twice | 2019 | Subtitle | Humanist Serif | Regular



Shadow of the Tomb Raider | 2018 | Subtitle | Humanist Sans | Semibold



Sigma Theory: Global Cold War | 2019 | Textlog | Geometric Sans | Regular



Smile for me | 2019 | Text Box, Subtitle | Humanist Sans | Regular | Monospaced, Angular, Condensed, Script



Super Mario Odyssey | 2017 | Speechbubble | Humanist Sans | Semibold |



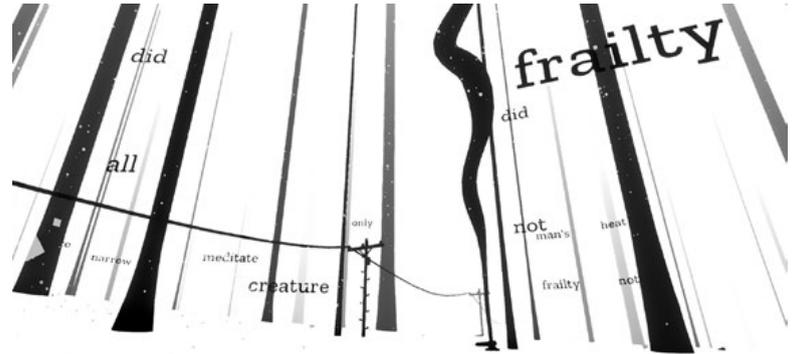
Tales of Arise | 2021 | Text Box | Humanist Sans | Semibold |



The Evil Within 2 | 2017 | Subtitle | Grotesque Sans | Regular |



The Great Ace Attorney Chronicles | 2021 | Text Box | Transitional Serif, Humanist Sans | Regular | Contrasted



The Imagined Leviathan: Prologue | 2020 | Humanist Slab | Regular | Geometric



The Last Campfire | 2020 | Speechbubble | Transitional Serif | Regular |



The Legend of Zelda: Breath of the Wild | 2017 | Text Box | Humanist Sans | Semibold | Oblique



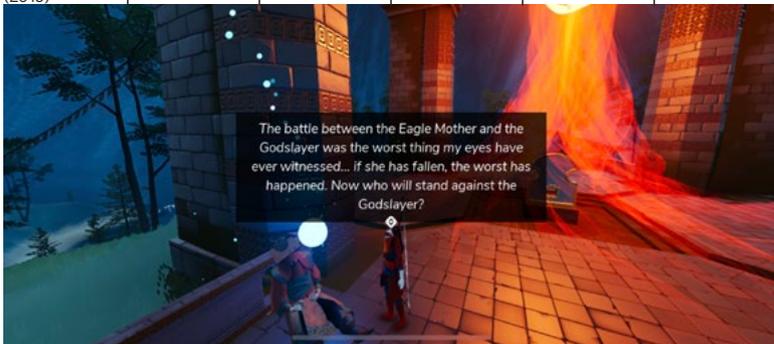
The Witcher 3: Wild Hunt | 2015 | Subtitle | Humanist Sans | Regular | Condensed



The Legend of Zelda: Links Awakening (2019) | 2019 | Text Box | Humanist Sans | Regular, Oblique



Towaga: Among Shadows | 2019 | Text Box | Humanist Sans | Regular | Condensed, Destroyed, Script



The Pathless | 2020 | Speechbubble | Humanist Sans | Regular | Oblique



Trüberbrook | 2019 | Subtitle | American Sans | Semibold



Unbeatable | 2021 | Speechbubble | Grotesque Sans | Semibold | Condensed, geometric



Weird West | 2022 | Textlog | Humanist Sans | Semibold |



Vambrace: Cold Soul | 2019 | Text Box | Humanist Sans | Regular | Destroyed, Script



Wheels of Aurelia | 2016 | Speechbubble | Geometric Sans | Semibold |



Void Bastards | 2019 | Speechbubble | Geometric Sans | Regular | Script



World End Syndrome | 2018 | Text Box | Humanist Sans | Regular | Antiqua Variant



Xenoblade
Chronicles –
Definitive Edition

2020

Speechbubble

American Sans

Regular

Geometric,
Round