Development of Font Selection Method for Text Content in Immersive Technologies

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Abstract

This article is devoted to the issues of the font selection method for immersive technologies. This technology has been widely adopted across various sectors of society. Given their novelty, these technologies have not yet been fully studied. Consequently, all processes and components involved in this technology require further refinement and enhancement. One crucial element that complements and enhances the use of immersive technologies is the font content. However, our literature review reveals that this aspect is relatively under-researched and warrants additional attention. To evaluate the fonts, the pairwise comparison method was used. The research proposed nine parameters for assessment: font contrast, font dynamics, font cost, font openness, font width, language, weight, emotionality, and size. In our opinion, this method is optimal for solving and calculating scenarios where parameters cannot be described by numerical values. The purpose of this study is to determine the important font characteristics prioritized by experts in the creation of products using immersive technologies. These characteristics will serve as evaluation factors for fonts in the design of publications utilizing data technologies. The work states that the main purpose of any text content is to convey a certain message. However, the study shows that the shape and color of the inscription also affect our perception. This makes it possible to claim that the way letters and words are composed and rhymed in a line are emotionally expressive, that is, they make their psychological and emotional influence. It should be noted that the proposed method of the font selection for the design of text content for publications created with the help of immersive technologies makes it possible to single out font parameters that affect legibility, design and style of text information. As a result of the conducted research, recommendations are provided regarding the selection of font design for text content.

Keywords

font, research methods, immersive technologies, font characteristics, influencing factors, text content, font design

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1. Introduction

Information has always been a powerful tool for attracting people's attention. Facts, figures and expert analysis are very persuasive when presenting certain information. Infographics are often used to optimize all this mass of data.

For high-quality publications, content, including text, should be presented as intuitively and clearly as possible. If it takes time to read the information presented, most readers will not even want to look at it.

As practice shows, the readability of the text depends mainly on the semantics of the text material, the legibility (clarity) of the font style and the successful or unsuccessful design of the text layout. Readers should be able to read the text with minimal effort, reinterpreting symbols into objects and processes.

In recent years, the rapid development of electronic technologies in the printing industry has led to a reduction in the production of printed products and a redistribution of costs due to the electronization of reproduction and distribution. All the above definitions describe the characteristics of the text for various types of publications, including those created with the help of immersive technologies.

The main rule when selecting a font is to ensure the readability of the text. The purpose of the text material is to recognize information with the help of visual organs. Therefore, no matter how impressive small or new artistic fonts look, it is better to abandon the use of such fonts in the design of publications, if the readability of the text is affected as a result. It is also important to study the factors that influence the font design of a particular publication.

The use and combination of fonts in traditional print publications are well-studied due to their millennia of use. In contrast, electronic publishing is relatively young, and the processes involved are not yet sufficiently explored. The application of fonts in electronic publications remains largely uncharted and requires additional research. Although there are numerous publications offering studies and recommendations on font usage and pairings in electronic formats, the majority focus mainly on advising which fonts to use.

2. Related works

Selecting a pair of fonts is an important step in design that has a significant impact on the overall appearance and perception of the text. In general, selecting a pair of fonts is a task that requires experimentation and consideration of various factors, as well as a personal sense of style and aesthetics of the project.

As for the analysis of literary sources devoted to this issue, one can say that they are quite limited and small in number.

From the information found, the following has been found out, so in their work [1] the authors stated that the vast majority use vector fonts in practice, which are essentially the main font format and play a significant role in modern mass media, their main characteristics and advantages. It is also noted that they can easily be converted to True Type fonts for practical use. The development of font libraries has gradually moved from manual to automatic creation, resulting in more efficient and richer fonts. Using modern technology remains a complex and ongoing challenge due to the variety of technologies, sequence lengths, and styles of vector fonts.

The authors of this study [2] conducted research on improving readability and comfort for people with low vision. In their study, the authors analyzed the influence of the font type on readability. As a result, a new typeface, Luciole, was proposed and created. As the results of using this font showed, about half of the participants with low vision subjectively preferred it when reading on paper and from the monitor screen.

In their work [3], the authors decided to study whether the readability of the font affects the detection of the illusion of Moses, the perception of information when the text is worded incorrectly. As the authors noted, they could find no evidence that font readability did not significantly affect error detection. For example, 43% of participants in the difficult-to-read condition reported finding inaccuracies in the text, while 37% of participants found errors in the easy-to-read condition.

Interesting studies were conducted by the authors in their work [4], which is based on studies of the use of a specialized reading program that allows one to easily change the font color, line spacing, line length, and other parameters. As the results of the study showed, the use of specialized readers can be helpful for some beginner readers, but for their widespread use in practice, they must pass certain checks.

The work of the authors [5] is devoted to the study of such a characteristic of the font as contrast. The authors faced the task of studying how high-contrast fonts affect the readability of the text. The results of this study showed that bold fonts with high stroke contrast should not be considered for designers where letter recognition is a priority.

Considering the popularity of electronic devices and their rapid development in recent years, the use of touch screens has become commonplace [6]. According to the authors' research, touch screen operation and interpretation differ between older and younger people. Both the visual design itself and the size of the proposed font are important. This research can be interesting in the development of interfaces for the elderly, which as a result, improves their autonomy.

The effectiveness of using text content in advertising is considered in works [7, 8]. Retailers are looking for effective ways to communicate advertising to increase store traffic and drive purchase. From the conducted study, the authors note that right slanted fonts, which involve forward movement in their design, can influence how consumers react to advertising. At the same time, they conduct studies of color contrast and font size on the text readability.

As for the use of text content in a virtual reality environment, the work of the authors [9] should be considered, who look into the influence of line length, number of lines, line spacing, and font size on text reading performance. From the obtained results, it should be noted that, as studies show, the line spacing has a significant effect on reading speed. Also, the interaction between the number of lines and the interline spacing has a significant effect on reading accuracy. Studies have indicated the use of a single interval, using which one can achieve more reading accuracy and increase its speed.

3. Methodology of application

In our opinion, the main stages of development of the method of font design selection precede the performance of the following tasks (Figure 1).

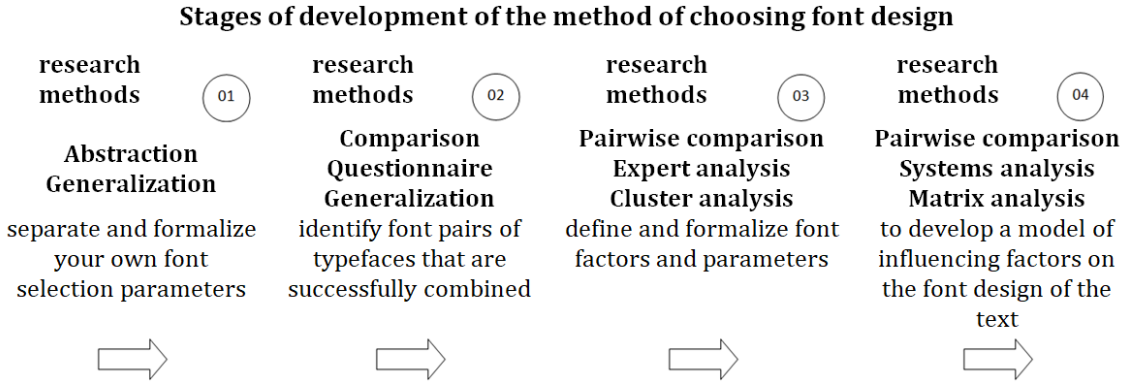

Figure 1: Stages of development of the method of the font design selection for text content.

Research methods

The method of abstraction is a methodology of scientific knowledge, which consists in mentally highlighting the significant, most essential features, relationships, aspects of the subject [10]. With its help, an ideal image of reality is formed.

The process of abstraction involves separating the essential from the non-essential. The researcher determines which characteristics of the object are important for understanding its nature and behavior, and which can be ignored, but abstracts from certain features of the object to focus on others.

The result of abstraction is abstractness – a concept that reflects the essential properties and regularities of an object, distracting from non-essential details.

Generalization is a method of scientific knowledge, with the help of which the common features and properties of a certain class of objects are fixed and the transition from singular to general, from less general to more general is carried out. The result of generalization is a concept that reflects the common properties and regularities of a class of objects .Abstraction is the basis for generalization, and generalization is impossible without abstraction.

Comparison method. This is a general scientific method of research, which consists in comparing two or more objects in order to identify their similarities and differences [11].

The comparison method includes the following stages:

- Definition of objects of comparison (the objects are defined that will be compared).
- Selection of comparison features (the features are defined by which objects will be compared).
- Data collection (collection and processing of data on objects of comparison according to selected characteristics).
- Data analysis (comparison of data about objects to determine their similarities and differences).

The results of the comparison are the identification of similarities and differences, that is, features that are common to the compared objects, and which are different.

The advantage of this methodology is:

- The ability to classify objects based on their similarities and differences.

- To identify essential characteristics of objects.
- To establish connections between objects.
- To formulate hypotheses and theories

The method of pairwise comparisons [12, 13]. It is a decision-making method used to rank alternatives. It consists in comparing each pair of alternatives and determining the best alternative in each pair.

Ranking allows one to assess the importance of different criteria or characteristics of alternatives. This helps to highlight the main factors and pay attention to them when making a decision. The ranking method provides an opportunity to take into account various aspects and constraints when making a decision. It can be adapted to a specific task and take into account the individual needs of users.

The ranking method is quite easy to use and clear [14, 15]. It does not require complex calculations or specialized knowledge, so it is available for use in different industries and for different users. This technique can be quite fast compared to other decision-making methods, such as analysis hierarchies or optimization methods [16]. It allows one to quickly identify and rank alternatives.

The process of pairwise comparison includes the following stages:

- Definition of alternatives (determine all possible alternatives that it will compare).
- Creation of a matrix of pairwise comparisons (development of a matrix in which each pair of alternatives is compared with each other).
- Comparison of alternatives (compare each pair of alternatives and determine the best alternative in each pair).
- Calculation of weighting factors (calculation of weighting factors for each alternative).
- Ranking of alternatives (ranking of alternatives according to their weighting coefficients).

Advantages of the method of pairwise comparisons:

- Easy to use.
- Does not require special knowledge.
- Allows taking into account all possible alternatives.

The concordance coefficient. It is a statistical measure used to measure the degree of agreement or perfect correlation between different data sources or respondents in the context of surveys, ratings, or rankings [17].

The concordance coefficient can take values from -1 to 1:

- The coefficient 1 indicates absolute agreement or perfect correlation between different data sources. All the data absolutely match.
- If the coefficient is 0, it indicates a complete lack of correlation or agreement between the data.
- If the coefficient is -1, it indicates an absolute opposite or antagonism between the data. The data are completely different.

$$K = \frac{12 \times S}{m^2(n^3 - n)}, \quad (1)$$

where K is the concordance coefficient;

$$S = \sum_{j=1}^{n} \left(\sum_{i=1}^{m} x_{ij} - \frac{1}{2} m(n+1)^2 \right), \quad (2)$$

where S is the average sum of ranks; m is a number of experts; n is a number of assessed factors.

4. Research results

4.1. Development of the method of font selection for text content

Free fonts from the Google font's library are taken for the study [18]. In order to highlight the font selection criteria, the method of abstraction and generalization is applied. In order to determine the superiority of one criterion over another, an expert survey of 50 third-year students of "Publishing and Printing" specialty is conducted.

The first stage of developing the method of font selection for text content includes determining the parameters that affect the text design and style. They will provide the opportunity for a designer to choose a design and, accordingly, decide on the font type for the design.

To assess fonts, a study is conducted and 9 parameters are proposed (A= $\overline{1,9}$), which determine the most common characteristics of font selection for various projects. All features can be combined into groups, including:

- Font contrast – G_1
- Font dynamics – G_2
- Font cost – G_3
- Font openness – G_4
- Font width – G_5
- Language – G_6
- Weight – G_7
- Emotionality – G_8
- Size – G_9

These characteristics will be used as font assessment factors for the design of infographics. As for fonts in general, their characteristics and division can be presented in the following diagram (Figure 2).

Using the method of pairwise comparisons, a pairwise comparison of factors is performed. This method helps to rank or select options based on their relative importance. First, let one create a list of all alternatives (font characteristics) that should be compared or ranked. For ease of use, the font characteristics factors are presented in Table 1.

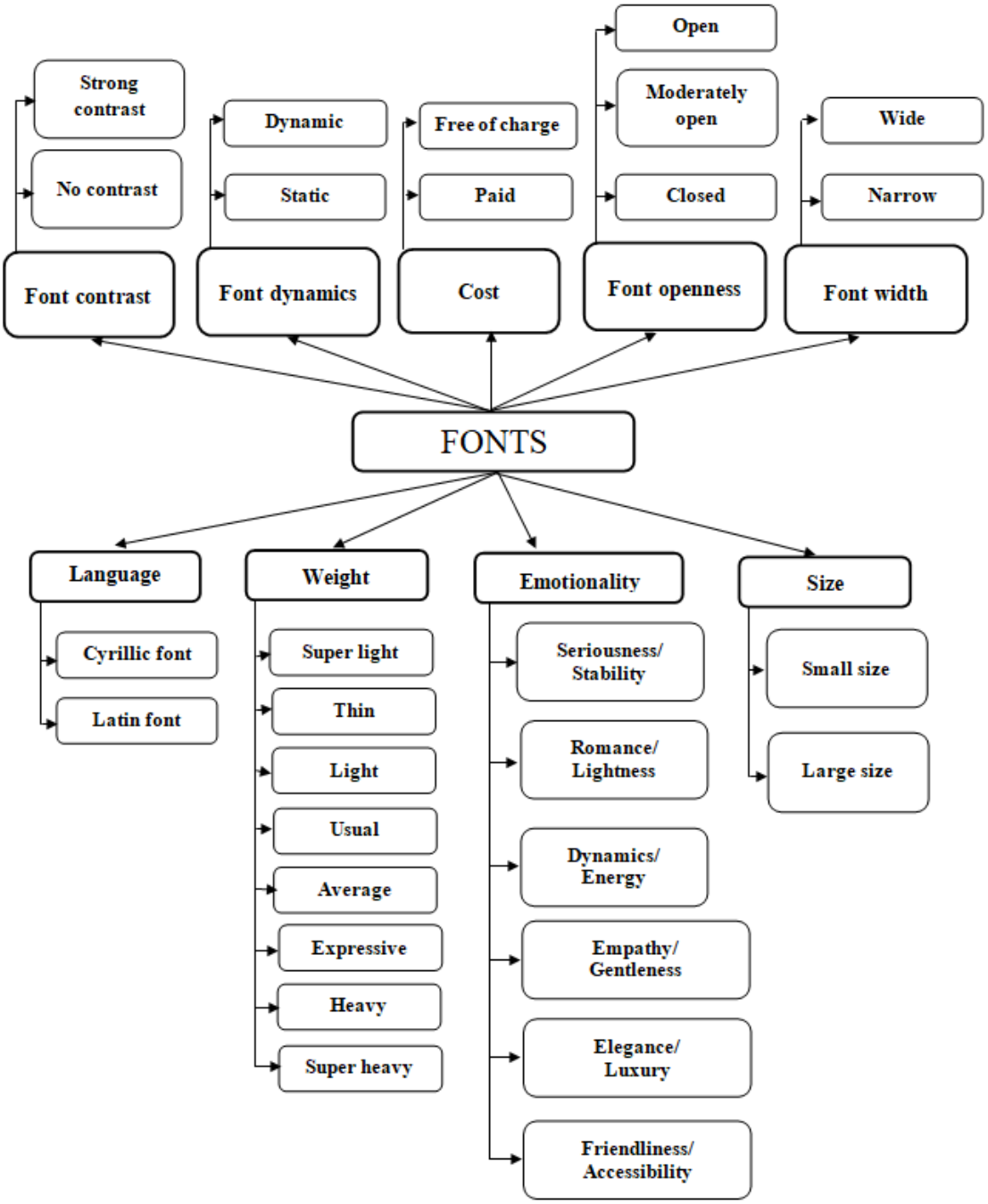

Figure 2: Scheme of font characteristics.

For each pair of alternatives, pairwise comparisons are conducted in terms of characteristics that are important for decision-making. Next, the importance or weight of each characteristic or criterion relative to the others is determined. For each alternative, total scores are calculated based on the results of pairwise comparisons and factor weights. Experts use a 9-point scale, in which 1 is the lowest score, and 9 is the highest score, respectively (Table 2).

Table 1
Font Characteristics Factors

Conventional designation	Value of the font characteristic	Explanation of the font
G1	Font contrast	No contrast/High contrast
G2	Font dynamics	Static/Dynamic
G3	Font cost	Paid/Free
G4	Font openness	Closed/Moderately closed/Open
G5	Font width	Narrow/Wide
G6	Language	Cyrillic/Latin
G7	Weight	Ultra light/Thin/Light/Normal/Medium/Expressive/Heavy/Extra heavy
G8	Emotionality	Seriousness/Romance/Dynamism/Empathy/Elegance/Friendliness
G9	Size	As in a sentence/handwritten

Table 2
Total Scores Based on the Results of Pairwise Comparisons and Factor Weights

Factors	Experts										Σ	Σ^2	Rank
	1	2	3	4	5	6	7	8	9	10			
G_1	7	8	7	6	6	7	7	5	6	7	66	4356	3
G_2	5	4	4	3	3	5	5	5	4	4	42	1764	5
G_3	6	5	5	4	5	6	6	6	6	5	54	2916	4
G_4	4	3	3	4	5	4	3	4	4	3	37	1369	6
G_5	1	2	1	1	3	1	1	1	2	1	14	196	9
G_6	3	2	3	4	1	2	2	1	3	1	22	484	8
G_7	8	7	6	8	8	7	7	9	8	8	76	5776	2
G_8	9	7	8	9	8	8	9	7	9	9	83	6889	1
G_9	4	3	3	2	3	4	3	3	4	3	32	1024	7
										Total	426	24774	

The concordance coefficient is used to determine the degree of agreement or consensus between experts.

The concordance coefficient is calculated according to Formulas 1, 2:

$$S = 24774 - \frac{426^2}{9} = 24774 - 20164 = 4610,$$

$$K = \frac{12 \times 4610}{10^2(9^3 - 9)} = \frac{55320}{72900} = 0{,}8.$$

The obtained value of the concordance coefficient indicates the proper consistency of expert assessments. The obtained ranks show the results of an expert assessment of font characteristics, which act as criteria for selecting the font design of the text:

Rank 1 - emotionality (G_8)
Rank 2 - weight (G_7)
Rank 3 - font contrast (G_1)
Rank 4 - font cost (G_3)
Rank 5 - font dynamics (G_2)
Rank 6 - font openness (G_4)
Rank 7 - size (G_9)
Rank 8 - language (G_6)
Rank 9 - font width (G_5)

On the basis of the calculated points, one can rank or select the alternatives according to their importance.

The method of pairwise comparisons helps to structure the decision-making process and makes it more objective, since it depends on the subjective assessments and weights given by each factor.

If the ranking method is used correctly, it can help avoid subjective biases and facilitate objective decision-making.

Table 3 shows the results of font assessments according to the factors of font characteristics.

A scale from 1 to 5 is used for ratings, where 1 is the lowest rating and 5 is the highest.

The obtained assessment results are presented in the form of a diagram (Figure 3).

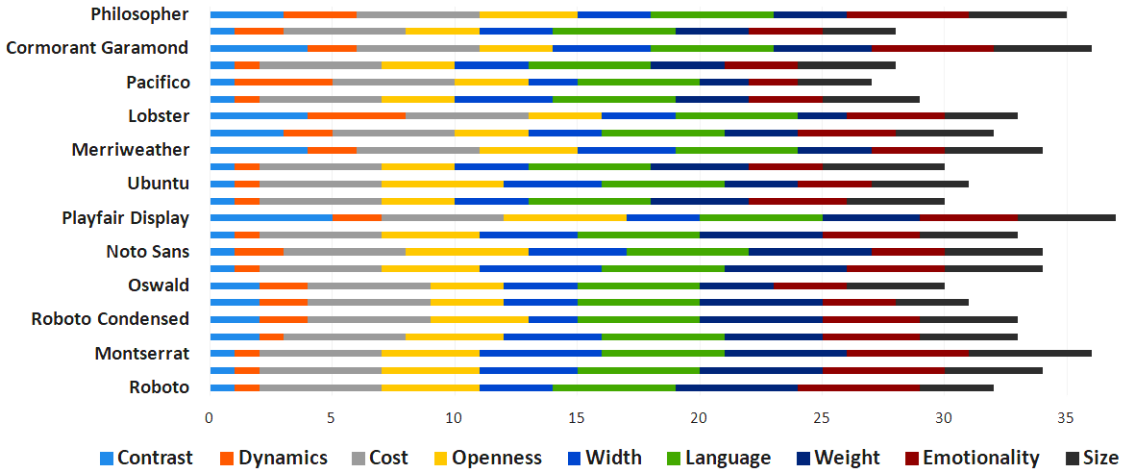

Figure 3: Visualization of font assessment results according to font characteristics factors.

Table 3
Font assessment results

	Contrast	Dynamics	Cost	Openness	Width	Language	Weight	Emotionality	Size
Roboto	1	1	5	4	3	5	5	5	3
OpenSans	1	1	5	4	4	5	5	5	4
Montserrat	1	1	5	4	5	5	5	5	5
Inter	2	1	5	4	4	5	4	4	4
RobotoCondensed	2	2	5	4	2	5	5	4	4
RobotoMono	2	2	5	3	3	5	5	3	3
Oswald	2	2	5	3	3	5	3	3	4
Raleway	1	1	5	4	5	5	5	4	4
NotoSans	1	2	5	5	4	5	5	3	4
NunitoSans	1	1	5	4	4	5	5	4	4
PlayfairDisplay	5	2	5	5	3	5	4	4	4
RobotoSlab	1	1	5	3	3	5	4	4	4
Ubuntu	1	1	5	5	4	5	3	3	4
Rubik	1	1	5	3	3	5	4	3	5
Merriweather	4	2	5	4	4	5	3	3	4
Lora	3	2	5	3	3	5	3	4	4
Lobster	4	4	5	3	3	5	2	4	3
Comfortaa	1	1	5	3	4	5	3	3	4
Pacifico	1	4	5	3	2	5	2	2	3
Manrope	1	1	5	3	3	5	3	3	4
CormorantGaramond	4	2	5	3	4	5	4	5	4
Amatic SC	1	2	5	3	3	5	3	3	3
Philosopher	3	3	5	4	3	5	3	5	4
Pacifico	1	4	5	3	2	5	2	2	3

The results of assessment of the studied typefaces show that the greatest inaccuracy is in determining the emotional component of fonts.

After all, the emotional component of font perception reflects what emotions, associations and moods the use of a certain font in the design of text or graphics evokes in people.

This component determines how readers react to the font on a psychological level.

Table 4 presents the results of expert assessment of fonts according to emotional characteristics.

The assessment is carried out according to the method used above.

Table 4
Results of expert assessment of fonts according to emotional characteristics

	Seriousness/Stability	Romance/Lightness	Dynamics/Energy	Empathy/Gentleness	Elegance/Luxury	Friendliness/Accessibility
Roboto	3	1	5	4	2	6
OpenSans	3	2	5	4	1	6
Montserrat	1	2	6	3	4	5
Inter	3	2	3	4	5	6
RobotoCondensed	6	1	4	3	2	5
RobotoMono	3	2	5	4	1	6
Oswald	4	2	6	3	1	5
Raleway	1	2	6	5	3	4
NotoSans	3	2	6	5	1	5
NunitoSans	4	1	5	3	2	6
PlayfairDisplay	2	4	3	6	5	1
RobotoSlab	2	1	6	3	4	5
Ubuntu	3	2	5	6	4	1
Rubik	3	1	5	6	2	4
Merriweather	4	1	5	6	2	3
Lora	3	2	5	6	4	1
Lobster	2	4	1	5	6	3
Comfortaa	3	2	1	6	4	5
Pacifico	2	4	5	3	1	6
Manrope	1	2	5	6	3	5
CormorantGaramond	3	4	5	6	2	1
Amatic SC	1	2	6	4	3	5
Philosopher	3	4	1	6	3	2
Roboto	3	1	5	4	2	6

The obtained assessment is presented in the form of a diagram (Figure 4).

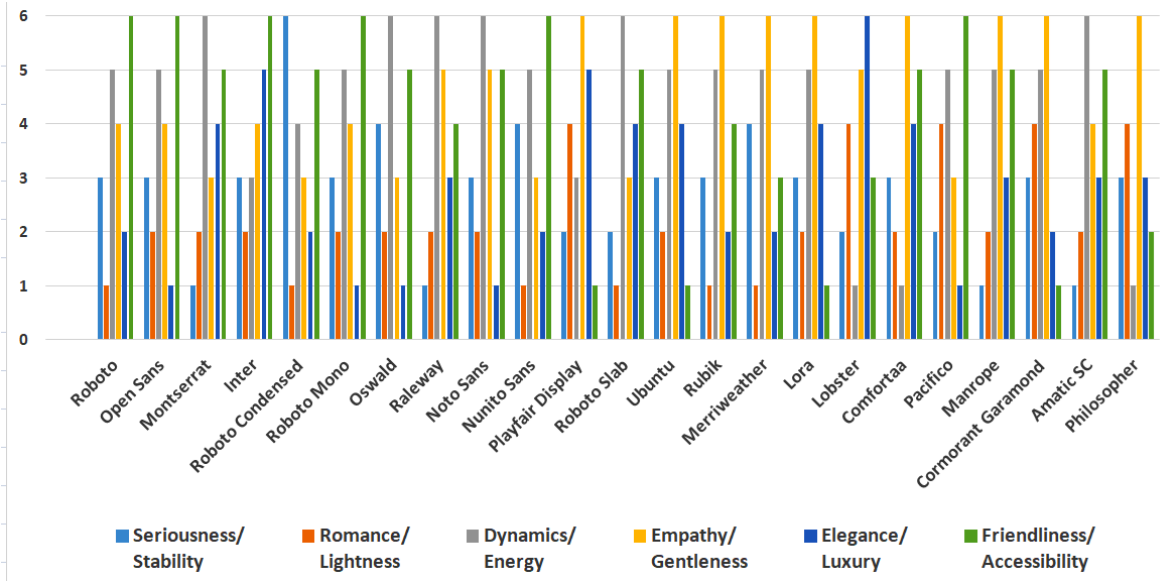

Figure 4: Visualization of font assessment results according to emotional font characteristics

4.2. Recommendations for using font pairs

Obtained results show the following groups of fonts according to the emotional component:

1. Typefaces such as RobotoCondensed, NunitoSans, Merriweather reflect seriousness and stability, features that make them perfect for projects where confidence, reliability and a professional look are important.

Class typefaces are endowed with characteristics associated with seriousness and stability:

- Straight lines. Fonts with straight lines and geometric shapes create an impression of rigor and stability.
- Serious design. Such typefaces have a clean and professional design without unnecessary details that create a feeling of reliability.
- Non-standard letters. They often have generic, traditional letterforms that give the impression of conservatism and reliability.
- Various styles and weights. The font weight can be changed, including Regular, Medium, Bold and others. This allows one to choose the appropriate style for different types of text and emphasize importance and stability.
- Classic look. Fonts with a classic look, such as TimesNewRoman or Garamond, can be associated with vintage elegance and seriousness.
- Normal proportion. Such fonts often have a balanced height and width of the letters, which emphasizes their serious character.

Arial, Helvetica, Baskerville, Palatino and other classic fonts can also be illustrative examples of fonts of this group. These fonts are perfect for documents, legal materials, scientific publications, and any area where confidence and professionalism are required.

2. Fonts that reflect romance and lightness have their own unique characteristics that make them perfect for projects where gentleness, elegance are important.

Here are some main features of typefaces that are associated with romance and lightness:

- Rounded shapes. Romantic fonts often have rounded curves and shapes that give them tenderness and softness.
- Smooth contours. They can have smooth, light contours that create an impression of lightness and grace.
- Italics. Italic fonts that lean forward can be associated with elegance and movement.
- Light weight. Usually, romantic fonts have a light weight, which adds lightness and visual appeal.
- Decorative details. Some fonts have decorative elements, such as delicate notches, ligatures, or calligraphic inversions, which enhance the effect of romance.
- Italic letters. Letters with writing curves can create an impression of feelings and add a romantic expression.

Examples of fonts that reflect romance and lightness can be Cormorant, Pacifico, GreatVibes, and other beautiful and elegant fonts. These fonts are perfect for wedding invitations, easy-to-read text, posters, and any project that needs a gentle expression.

3. Fonts that reflect dynamism and energy have certain characteristics that make them perfect for projects where it is necessary to impress the audience with dynamism, activity and liveliness.

Here are some key features of fonts that evoke associations with dynamism and energy:

- Geometric shapes. Dynamic fonts often have geometric shapes, such as sharp angles, different slants, and expressive outlines. It gives the impression of movement, energy.
- Thick lines. Font weight can be an important characteristic. Thick lines can give a font strength and stability.
- Bold contours. Fonts with bold outlines that stand out give expressiveness and liveliness to the text.
- Modern design. Many dynamic fonts have a modern look that reflects current trends and innovations.
- Non-standard forms. Some dynamic fonts have shapes that go beyond standard letters, giving the impression of creativity and energy.
- Modern elements. Fonts can contain elements that are reminiscent of modern technology, such as lines that are associated with networks or dynamic graphics.

Examples of fonts that reflect dynamism and energy can be Roboto, OpenSans, Montserrat, Raleway, Oswald, NotoSans, NunitoSans, RobotoSlab, Ubuntu, Rubik, Amatic SC, Futura, BebasNeue, Impact, as well as various variations of modern grotesque fonts. These fonts are suitable for promotional materials, sports brand logos, posters and any other projects where dynamism and energy are important.

4. Fonts that reflect empathy and gentleness have their own special characteristics that make them perfect for projects where it is important to evoke feelings of compassion, warmth and tenderness.

Here are some of the main characteristics of such fonts:

- Soft forms. Fonts that reflect gentleness often have soft and rounded shapes that resemble palms or hugs.
- Smooth lines. They can have smooth and gentle contours that create an impression of peace and harmony.
- Handwritten letters. Some of these fonts may have handwritten elements that add a personal and gentle touch.
- Light weight. These fonts are usually light in weight, creating an impression of weightlessness and empathy.
- Decorative phrases. Fonts can include decorative details, such as notches or phrases, which enhance the effect of gentleness.
- Modern design. Such fonts can have a modern and creative design.

Examples of fonts that reflect empathy and gentleness can be Raleway, NotoSans, Ubuntu, Rubik, Merriweather, Lora, Lobster, Comfortaa, Manrope, CormorantGaramond, DancingScript, Lato, Quicksand, and other fonts with a light and gentle appearance. These fonts are perfect for children's books, charity events, condolence letters, and any project where it is important to express warmth and compassion.

5. Fonts that reflect elegance and luxury have characteristics that make them perfect for projects where it is important to create an impression of luxury, and luxurious style.

Here are some of the main characteristics of such fonts:

- Sophisticated forms. These fonts often have elaborate and complex shapes with lots of detail and curved lines.
- Notches. Fonts with notches (short horizontal or vertical strokes protruding from the bottom of the letters) can give the effect of classic elegance.
- Decorative phrases. Some of these fonts have decorative elements and reverses that add a luxurious feel.
- Ligatures. Some fonts may include ligatures, that is, special combinations of letters that add an effect of sophistication and luxury.
- Italics. Italics can create an impression of grace and elegance.

Examples of fonts that reflect elegance and luxury can be Inter, Lobster, Bodoni, Didot, PlayfairDisplay, and other refined and luxurious fonts. These fonts are perfect for advertising, premium logos, and any project that emphasizes elegance and luxury.

6. Fonts that reflect friendliness and approachability have characteristics that make them perfect for projects where it is important to create the impression of a friendly style.

Here are some of the main features of such fonts:

- Simple forms. Fonts with simple, easy and clear forms create an impression of accessibility and friendliness.
- Sans serif fonts. Fonts without serifs (horizontal or vertical protrusions of letters) are often perceived as more friendly and modern.
- Full letters. These fonts can have full and round letters that enhance the impression of friendliness.
- Clarity and ease of reading [19]. Fonts should be easy to read and clear to ensure comfortable perception.
- Modern design. Some of these fonts can have a modern and creative design that combines friendliness and modernity.

Examples of fonts that reflect friendliness and accessibility can be Inter, RobotoMono, NunitoSans, OpenSans, Arial, Quicksand, and other fonts with a light and friendly appearance. These fonts are ideal for websites, blogs, social media, letters to consumers, and any project where it is important to express friendliness and accessibility.

5. Conclusions

Thus, the font is considered one of the most important, interesting and complex tools in the arsenal of designers for various types of text content, including for immersive technologies. The typeface requires taking into account the logic of its use, using a combination with other fonts on the page and emotional perception of the text material.

At first glance, it seems that the font should only capture the specified text content and convey its meaning. Of course, the main purpose of any inscription is to convey a certain message, but the shape and color of the inscription will also affect us. An inscription is a decorative construction in which geometric graphemes of letters alternate in a certain order. It follows from this that the way of drawing each letter, its "image", the way of composing and rhyming letters and words in a line are emotionally expressive, that is, they exert their psychological and emotional influence.

It can also be argued that every design element shapes the user experience. Typography is considered an important element because users spend most of their time reading text rather than viewing images or videos. All page design options are related to the layout. Content can have a psychological and emotional impact on readers. Text documents contain visual and verbal rhetoric. Verbal rhetoric refers to the actual presentation of text information that affects the reader's ability to understand and perceive the content. Visual rhetoric affects the visual elements and shapes the overall impression of the document. Visual elements in the text can activate semantic imagination – they form separate semantic connections between text blocks, explain the text content more broadly, or form the content independently of what is stated in the text.

Since the reader's emotional state is the result of the user's experience, the font perception also depends on the cognitive level. Fonts directly affect the appearance on the screen. Depending on the amount of text that is provided to the reader, it is necessary to select a font that will improve the positive atmosphere and perception of the content being read. The

designer's selection of inappropriate fonts can cause negative emotions and, as a result, a critical assessment of the interface of any resource.

This research represents an initial attempt to recommend font usage for publications created with immersive technologies and will require further validation and additional studies. We believe that publishers specializing in the creation of electronic publications using immersive technologies should also be involved in this research effort to ensure comprehensive and practical recommendations.

From the above, it can be concluded that the developed method of font selection for designing the text content of publications in immersive technologies makes it possible to single out the font parameters that affect the legibility, design and style of text information. Fonts are studied according to the criterion of the emotional component of the font perception, which reflects what emotions, associations and moods the use of a certain font in design evokes in people. This component determines how readers react to the font on an emotional level. Recommendations are provided for the selection of font design of text content in publications created with the help of immersive technologies.

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