Typological Foundations of Objects/Subjects: Design-Graphic in Communication Space

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Abstract. Book art and publishing, visualisation of information in sign and paper products, the creation of analogue data storage devices, and overall digitalisation in production are the basis for developing the art and design culture of the social, visual, and informative communication environment of human activity. This research is based on the provisions of the post-nonclassical scholarly paradigm, the principles of determinism, conformity, and complementation, and the formation of typological foundations of objects/subjects of design-graphic in visual information environment. The study aims to determine the peculiarities in organisation and formation of typological classification of objects/subjects of design-graphic in the communication space. According to the results, the typological foundations of objects/subjects of a design-graphic and interdisciplinary approach and system analysis of objects/subjects of design-graphic have defined the tools to form a visual information environment, thereby ensuring its integrity, a connection between its elements, and substantiating it.

Keywords: typological foundations; objects / subjects of design-graphic; communication space; communication design.

INTRODUCTION

In Ukraine, the primary areas of art and design activity in the communication space of the formation of the visual information environment, objects/subjects of the print, and analogue and digital media environments are determined by book art and publishing, visualisation of information in sign (corporate identity) and paper products (posters, leaflets, advertising, exhibition materials), creation of analogue data carriers, and the objects of the digital production.

Industrial revolutions – their products and technological capabilities – the development of print, the introduction of analogue and electronic media (since the mid-twentieth century), digital media, and the global networks (since the 1980s) contributed to the emergence of new design activities and a commodity – the modern professional visual graphic design language. The visual language of communication design forms the medium of presenting an informative message.

The establishment of design objects' typology in the communication space of European design and the development of the project culture – in the context of socio-cultural transformations and innovative technologies – are inseparably linked with the search for modern visual means of communication, forms of communication, and information transfer.

MATERIALS AND METHODS

Scientific systematisation and classification of standard features in structural and functional characteristics of objects/subjects of design-graphic helped create such objects/subjects' typological classification.

Communication space is a natural socio-economic and continuous part of a social system with a set of diverse existential and partial local spaces. Such spaces include internal and external structural and functional interrelated components of procedural-subject forms of expression, visual communication, and connection and interaction [2].

Objects that are primarily intended to convey a visual message are instruments of communication design. In such cases, information is conveyed through visible text and/or images.

Communication design is the foundation of communication. A designer needs to identify and implement the visual settings for emphasising the visible text (content). The typological formation of design-graphic objects in the visual-informative communication environment depends on the direction of activity, functional and structural components of the environment, their interrelations, and interactions (Figure 1). Integrated environment design is essential in the organisation and typological formation of objects/subjects of a graphic design product.
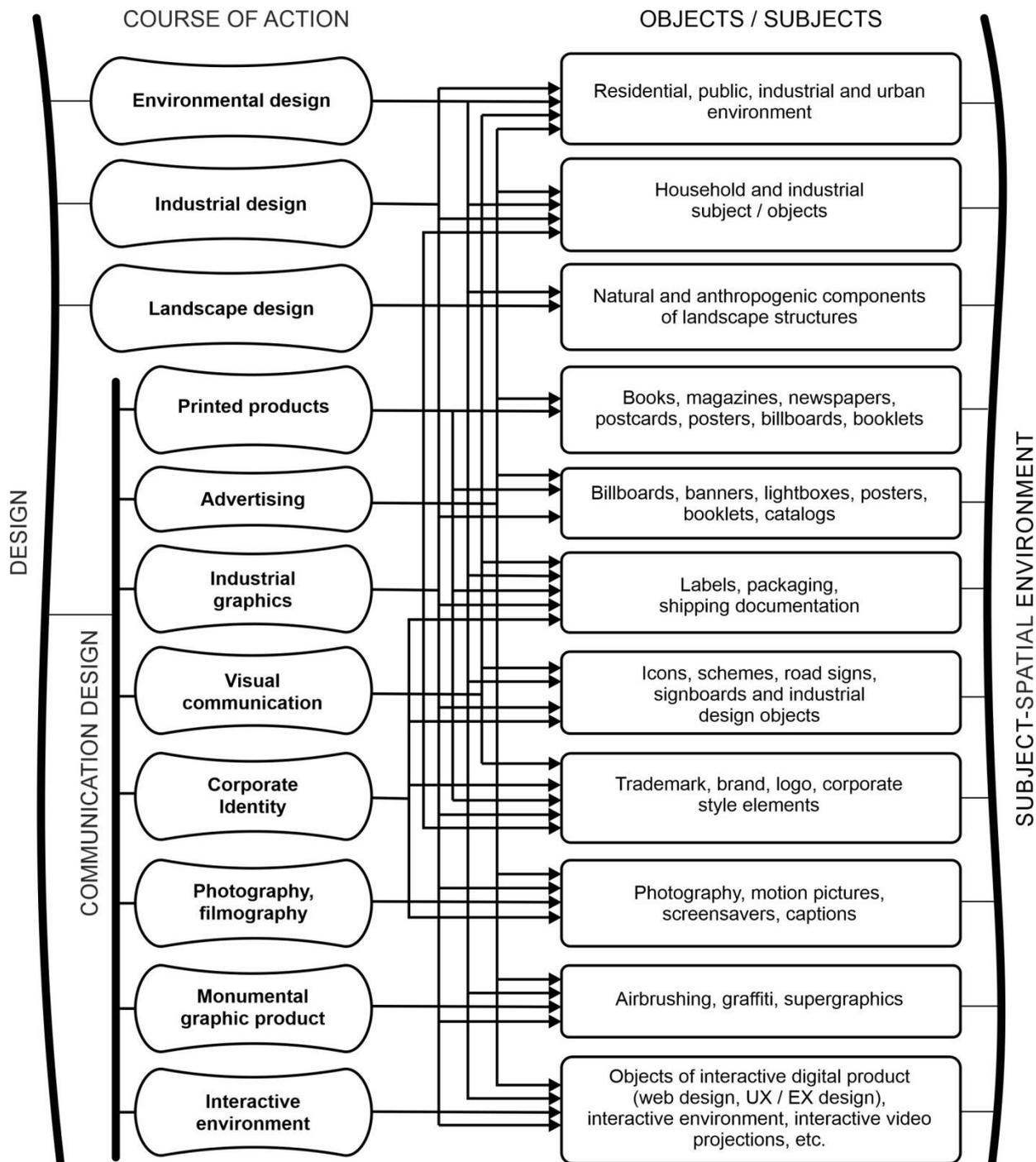

Figure 1 – The design structure of the objects/subjects of the visual information environment

Visual graphic text is any object that functions as a sign system and is perceived visually. Information about the source of the message can be conveyed by using a signature, a trademark, a logo, or the stylistics of the message inherent to the source. Visual communication creates texts that are easier to perceive and are more memorable. The relationship to the recipient of the message is represented by specific parameters, including a) the shape, plane, space, colour, and format of the message, b) using versatile visual means of accentuation, reproduction, and digital design, c) using unique advertising and printing materials, methods of decoration and d) using the latest technology.

Objects/subjects of design-graphic are visual forms of communication that help convey textual and/or illustrative information for transmitting and reading/deciphering a message. They are a part of a specific visual and informational communication space. The chief function of design objects is to enable communication between a person and the elements of useful content and structure of the communication space. Additionally, design can simplify and increase the comprehension speed and help the consumer avoid information overload. Further, it provides psychological comfort and allows for a quick search of the required data.

The typology of design activities and graphic design objects in the visual communication space reveals specific features of the visual graphic language used in the following: printing products, adverts and graphical book elements, posters, placards, branding, elements of outdoor advertising, photography and cinematography, and an interactive environment's design. Communicative design encompasses informational, advertising, and corporate areas of activity [9]. The products of communicative design in these domains include exhibitions, photography, objects of corporate identification, advertising, printing production, and objects of the digital space.

RESULTS AND DISCUSSION

The product of communication design is a visual message conveyed through print, analogue, and electronic data carriers. Artistic activities in the communication space include visualising information, visual communication between an object and a person, and integral interaction. Such activities entail the following: the design of printed products and electronic publications, advertising and book graphics, the creation of posters and placards, some elements of outdoor advertising and packaging, digital production, and an interactive environment.

The typology of design objects shows the communicative features of a printed, analogous, or electronic product and the creation of essential tools in forming a visual information environment.

The structure of the visual information environment serves as a basis for the typology of objects/subjects of graphic design in the communication space. The space-time continuum of the visual information environment with its interconnected structural and functional components, be it a human being, a community (the human activity), an object/subject, or the space (visual information environment). It accumulates the object and space environment and realises the factors of influence, which consider human nature, human activity, and its essence and interrelations with the environment (Figure 2).
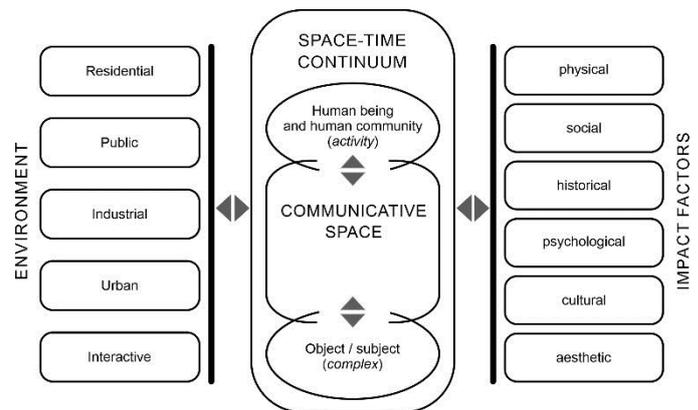

Figure 2 – The environmental structure and the influence factors in the communicative space in the context of action

The structure of the environment entails the following essential blocks: the social system environment, which implements functional, technological, informational, and communicative processes, and the influence factors in the context of action. Impact factors by the context of action include physical, social, historical, psychological, cultural, and aesthetic contexts. The physical context is related to the human body and environmental conditions (temperature, lighting, noise).

The social context reflects the socio-cultural situation in which the communication occurs [12].

This includes perceiving the same visual message may be different at a formal meeting compared with perceiving it privately, or while outside, at an exhibition or in a theatre. For example, advertising banners on the city streets and posters and placards are designed for situational familiarity with an event. At the same time, the identical advertisement for the periodical is intended for a private setting (message – recipient).

The historical context contains the territorial boundaries of the region and "links between the event participants that influence the understanding of the communicative situation" [12]. These modern features are manifested in the transformation of industrial paradigms into the new post-industrial changes in design values, globalisation and national-oriented processes, and cultural and civilisational landmarks for different spheres of life. The formation of a communicative message with a specific content may be continued without a direct reference to the event. This is because such a historical event becomes a constant at some point in time and is mentioned repeatedly.

The psychological context concerns the mood and feelings that a communicative product invokes in consumers [12]. The same messages can be perceived differently depending on an individual's psychological state (annoyance, euphoria, etc.).

The cultural context includes the aspects of beliefs, values, relationships, social hierarchy, religion, and chronology [10]. Communication primarily assumes that all participants in a group share the same beliefs, values, and norms that are typical for that social group. The cultural and ethnic diversity of the population of regions – where different geopolitical areas have been interconnected over many centuries – reveals diverse project and cultural contexts.

The aesthetic context is concerned with human feelings and emotions. Communication design reveals the issues of informational interactions between people based on visual and graphic elements that enable the participants to get ideas about objects, phenomena, and processes involved. This is called visual communication. All things of communication design have a communicative function. A common visual language unites them.

In communication design, the process, object/subject of communication, and the result of its visual perception form an aesthetic, emotional, and spatial environment. The primary function of objects/subjects of design-graphic is to provide communication between an individual and the elements of an informational communication environment. Communication is the visual exchange of information through signs, symbols, and images. The visible message transfers the information in the context essential for clearly understanding such information. The language of communication is symbolic by nature. Therefore, the sign is a unit of message transmission that carries a distinct function, independent of the message's form due to its graphical reproduction.

The concepts of thought, idea, and information form the semantic structure of a communication process. Sign systems (codes) create a common information space (infosphere) and belong to the category of formative means.

The communicative space of the visual information environment is created through communication design to provide visual communication, thereby forming the interrelation between the elements of object/subject content and the addressee [7].

In the second half of the nineteenth century, typography, photography, and filmography had become the primary means of communication. These domains reflected the life of society at that time and served as ways to visualise objects and subjects for their popularisation in press and advertising. The collage method involves a combination of photos, images, and text. Designers used it to create postcards, adverts, placards, playbills, shop windows, and signboards during that period.

Since the beginning of the twentieth century, artistic and project activity concerning the objects of design-graphic of the visual information environment is based on the synthesis of architecture, art, design, and innovative production technologies. The development of cinematography, theatre, and the cultural and entertainment industry was accompanied by printing products. Despite the low functional circulation and the one-off purpose of posters, tickets, paybills, and flyers, these incidental leaflets often became true works of graphic art. Advertising, book and magazine, applied and industrial graphics, photography and cinematography are prominent in newspapers, magazines, reference publications, posters, exhibitions, the objects of corporate identification, and visual communication. As

shown by newspapers and magazines, the press has become one of the most sought-after media, where graphic advertisements often successfully and initially complemented the verbal media. The most common are printed texts of short advertisements, tips on cooking for homemakers, traditional medicine recipes, etc.

During different periods of development in society, visual means of message creation through the design-graphic have changed consequential to historical and chronological periodisation. A common feature in the elements of visual communication was the use of ornamental details and the combination of serif (Antiqua), sans-serif (Grotesque), and display fonts. The concept of visual communication was created by representatives of two professional groups: artists and printers. Printers saw the benefit of using ornaments and combining different fonts, styles, and sizes. Artists saw print reproduction as a secondary element and paid more attention to ornaments and illustrations, even though, in many cases, the captions and images were well-integrated [4].

In Europe, the development of mechanical engineering in the second half of the nineteenth and first half of the twentieth centuries introduced new ideas and principles in designing periodicals related to the context of modern technological means. The invention of the printing press, phototyping, colour photography, linotype, and multicolour letterpress, along with the development of offset printing technology and photocomposition, has given the designers wider opportunities to create modes and elements of visual communication.

A striking example of the artistic and design facet of visual coherence are the advertisements in periodicals of the second half of the nineteenth and beginning of the twentieth centuries. Typical combinations of title and text fonts of different characters and sizes (serif, sans-serif, decorative fonts, and display typefaces) had a proportional ratio of sizes and precise symmetrical construction. The display typefaces and their combination with serif (Antiqua) and sans-serif (Grotesque) can be seen in books and magazines, posters, and securities.

The course of the twentieth century's historical, cultural, and artistic events expanded the range of visual communication object design tasks. The communicative functions of the visual information environment and objects of design-

graphic were not limited to highlighting the design subject/object. Instead, such functions generated the expected public reaction. Attention can be drawn with clarity of form and content (perception and understanding of individual elements, such as letters, numbers, icons, diagrams, signs, symbols) and the organisation of the sequence of perception, which is the hierarchy of complex structural information. The structuring of such data required a new approach, which determined the emergence of the latest element of communication design, infographics, which conveyed the idea of the message through typography, pictograms, illustrations, photographs, and colours.

The choice of visual message components largely shapes the semantics, enhances the message's meaning, and depends on its content. The visual organisation of the environment ensures the establishment of clear links of importance, inclusion, connection, and dependence while organising and forming a communication space, controlling the sequence of perception, and ensuring the reception of messages.

The communication environment is viewed through the prism of the technological environment. Historically, we can distinguish print, analogue, and digital environments [9]. They form the visual information environment structure of technological development and the means of communication (Figure 3).
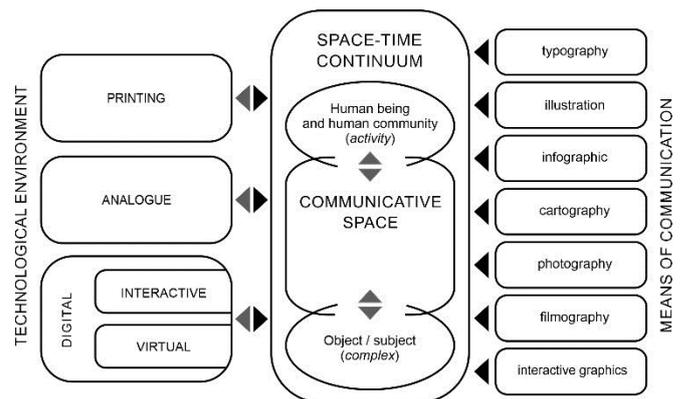

Figure 3 − The structure of the technological environment and means of communication in a communicative space

For full disclosure of the typology of objects/subjects of the communicative space, it is necessary to consider print, analogue, and digital environments and their content by function and purpose, the nature of the information, the spa-

tial and mobility aspects, and manufacturing technology, and means of communication.

According to the functional purpose, print production is divided into book, periodical, and display advertising production.

By purpose, printed products are divided into artistic, scientific, science fiction, and reference books; periodicals are categorised into general and specialised papers and magazines; advertising production includes mass production that is accessible to everyone (low quality and low cost) and elite publications (access closed or territorially limited, for instance, an exhibition or a museum) that have high design and artistic quality, are not widely distributed, or are pretty expensive.

By the nature of the information, books and periodicals are divided into general and specialised editions.

By the placement method in the environment and mobility, we distinguish stationary, mobile, proximate, and distant objects of design-graphic. They can be found in the interiors of public or residential buildings and urban or landscape spaces. The response to these objects depends on the design object's location and «visibility», i.e., the contrast.

According to manufacturing technology, the typology of design objects considers the duplication and reproduction process: letterpress, intaglio, lithography, chromolithography, molding, photo printing, film production, and digital technologies.

We also distinguish the typology of the objects of design-graphic according to the following additional features:

1) Form: sheet, brochure, code, corporate style elements, volumetric space structures.

2) Genre: documentary, advertising, artistic.

3) Iconic nature: text (book and magazine products), visual (posters, postcards), branded (corporate style, packaging, label), imaginative and emotional (photo, film production).

4) Means of formation: sign, symbol, colour, shape, movement.

The visual communication environment consists of static and dynamic objects/subjects. The objects of the print environment are static, while the things of analogue and digital media are active. Dynamics can be understood as a character-

istic of a particular data carrier. This division is based on the technological characteristics of displaying visual information. The existential environment of static and dynamic objects/subjects ensures interactions with them through common visual and communicative means.

The product of the analogue environment is not limited by space, unlike the printed medium, but by the time interval (playback time). Print and analogue environments form a traditional communication environment [9]. The print environment contains objects that can be reproduced with the help of printing technologies. The analogue environment surrounds a person and reflects the environment's electronic original [5, p. 17]. In this case, the analogue object is the object and subject form of any document that can be transferred through a physical data carrier [5, p. 26].

A communicative space is created by forming a substantive visual information environment – concerning the purpose and tasks – and making the functional, technological, aesthetic, and emotional foundations for the resolution of such tasks.

In the corporate sphere of communication design, the image of a product or company is created by projecting graphic elements of corporate identity. The marketing and product philosophy based on image and graphic style design is called a brand. A vivid example is the brand creation of Emil Rathenau's AEG electrotechnical concern in Germany (project created by Peter Berens) and Ivan Levynskyi in Galicia, an architectural and construction firm with numerous factories, warehouses, complexes of shops, and residential buildings (project created by Ivan Levynskyi). Products of these enterprises were distinguished by high technical and artistic quality, which was confirmed by top awards at international exhibitions, competitions, and fairs. A striking example of branding a product in the corporate sphere of the communicative design was the product images of the Baczewski vodka factory (J. A. Baczewski). Advertising in the press, outdoor advertising, posters and postcards with the logo and product image, branded packaging, and exhibitions have popularised this brand throughout Europe.

Furthermore, in Europe, collective corporate activity emerged in the form of industrial and creative associations: 1878 – The Land Commission for Industrial Affairs under the management of

W. Dzieduszycki (Austria-Hungary, Galicia); 1907 – Verkbund Art and Industrial Union (Germany); 1910 – «Zespół» art association (Austria-Hungary, Galicia); 1912 – The Society for the Improvement of the City of Lviv and Outskirts (Austria-Hungary, Galicia); 1929 – «Artes» association of artists (Galicia) and others.

The pinnacle of the grand pyramid of corporate identity is the trademark, as it is the most vital visual tool that forms the enterprise's image.

The personal brands of medieval craftsmen and artisans of manufactories were prototypes of the first trademarks. These were transformed into full-fledged elements of corporate identification because of the intensive development of industrial production in the nineteenth century.

By the middle of the nineteenth century, international industrial exhibitions – where manufacturers demonstrated achievements in all fields of activity – had become quite widespread. Trademarks performed the role of business cards. During this period, "the Paris Convention for the Protection of Industrial Property distinguished trademarks from the general concept of branding and recognised them as an exclusive right" [8].

In 1886, in the territory of Austria-Hungary, the government issued orders [3] restricting the use of exclusively emblematic and ornamental industrial marks for the identification of goods [13]. The law had requirements for the graphic and textual part of the signs, thereby stimulating the transformation of the visual culture of the industrial movement. Among the various types of industrial signage, verbal markings were the most popular and consisted of letters, words, sentences, surnames, names, or initials. The most common signs were the following: a) Proper names. These include *Siemens & Halske*, I. Levynskyi factory, J. A. Baczewski company, *The Tinned Food Factory of Zygmunt Rucker, Wicksell and Son, Petro Mikolasz and Company, Zeleniewski, Fitzner and Gapner, Sonya-Film* studio, etc.; b) initials and abbreviations, such as *GazZet* confectionery factory, *Maslosoyuz, Koopplast* enterprises; c) geographical names, for example, trademarks of Leopolis and Lviv glass, *Polonia* leather and shoes factory, *Bawar* beer enterprise, *Dnister Bank, Carpathia* insurance company; d) newly coined words, for example, *Branka* confectionary factory, *Arma* metal factory, *Urania* cinema and arbitrary names that render the image with an identity, such as those of *Contract* factory, *Aida* cigarette factory, *Atlas* printing house, electric enter-

prise *LUX*, which are not directly related to the product types [1].

Analysis of elements of sign and corporate visual identification provides an opportunity to trace the integration of applied and canvas graphics into industrial (corporate identity) graphics. Such aspects of individual enterprises of the early twentieth century contained some basic stylistic tendencies and peculiarities in their industrial signs' structure. This revealed the standard features in their graphic structure and connected to contemporary European art. Based on the above, we can argue that the existence of corporate identity is an exclusive design phenomenon in the communicative space. Further, we can determine the significant role of design-graphic in its formation and development.

Analysis of corporate identification objects of enterprises and organisations led to the creation of their typology, according to the following criteria:

1. By objects that are marked: we can distinguish company trademarks that give information about the manufacturer or seller of the goods, service marks, trademarks of wholesale or retail sellers of goods, assortment trademarks, and specific trademarks. These provide verbal information about the name of the product and its image.

2. By form of ownership: public, private, corporate. After analysing the graphic material explored in this research, it is necessary to note the clear advantage of corporate trademarks.

3. By designation: verbal, pictorial, volumetric and combined signs.

4. By the features of assembly: the corporate identity elements can be divided into typographically assembled, those produced with the assembled fonts, signs, rulers, ornamental pieces, and estampe, or those created with unique printing blocks and mixed elements.

In visualising industry subjects, the main typological groups entail corporate identification of the manufacturer/seller of products and corporate identity of the goods.

Corporate identification of manufacturer/seller is divided into the following sub-groups: advertising signs, inscriptions and announcements, the design of show windows and premises of shops, clothing and accessories, and commodity-accompanying documentation.

The typological group of the corporate product/service identification is divided into the following sub-groups: external packaging/information (pre-made packaging forms, special packaging paper, labels, tags, marks, checks, price lists); newspaper and magazine advertisements; trading hall design, showcases, sign street objects, parks, where the sale or advertising (exhibition) of goods or other services related to the circulation of goods is provided; accompanying promotional products (cards, promotional tickets, posters, flyers, etc.).

Typological variants of corporate identification as an artistic process can be represented through the following groups of trademarks:

1. The predominance of pictorial symbolic images (drawings and photographs).

2. Preference for font characters (typed, ornamental, typographic or hand-drawn).

3. Consisting exclusively of composite font elements (letters and setting rules).

4. Containing hand letters (display type) exclusively.

In the graphic art of the second half of the nineteenth and twentieth centuries, we consider the font an essential element of the typology of corporate style. By typographic nature, the font systems are divided into serifs (transitional serifs and modern serifs), sans-serifs, and display faces.

CONCLUSIONS

During social and cultural transformations of human society, widespread access to innovative technologies in design, and the development of project culture, the formation of the objects of design-graphic typology is connected with the search for updated communication methods in the print, analogue, and digital technological environment of the communication space.

Systematising and analysing the objects of design-graphic in the space-time continuum of the visual information environment formed the basis for their typologization by their general characteristics, structure, the context of action, mode of replication and reproduction, and communicative means. These processes allowed us to reconstruct the process of transformation of applied tradition to objects/subjects of communication design.

This study presented the typological foundations of objects/subjects of design-graphic in the communication space, which are a part of the general structure of theoretical and methodological foundations of creating an informational and visual communicative environment.

Geolocation Information

The Paper's study area includes the following regions: Galicia, which was a part of Austria (1772–1867), Austria-Hungary (1867–1918), and the Second Commonwealth of Poland (1918–1939), with the centre in Lviv.

Funding

REFERENCES

1. Borysenko, O. (2016). Typology and artistic-stylistic features of the corporate style elements of Lviv enterprises in the first third of the XX century. In K. Janczy, O. Lukovska, Nestorenko, T. (Eds.), *Contemporary Issues of Culture and Art* (pp. 75–87). Katowice: Wydawnictwo Wyższej Szkoły Technicznej.

2. Borysenko, O., & Mygal, S. (2021). Impact of socio-cultural transformation in the communicative design in Galicia. *Proceedings of CBU in Social Sciences, 2*, 57–65. doi: 10.12955/pss.v2.202

3. Berne Convention (International), 09.09.1886. Retrieved from https://www.wipo.int/edocs/pubdocs/en/copyright/877/wipo_pub_877.pdf

4. Frascara, J. (2004). *Communication design: principles, methods, and practice*. New York: Allworth Communications Inc.

5. Konyavskiy, V., & Gadasin, V. (2004). *Osnovy ponimaniya fenomena elektronnogo obmena informatsiey* [Fundamentals of understanding the phenomenon of electronic information exchange]. Minsk (in Russian)
    [Конявский, В., & Гадасин, В. (2004). *Основы понимания феномена электронного обмена информацией*. Минск].

6. Mygal, S., & Borysenko, O. (2019). Design of Galicia: formation, development, national component. *The European Journal of Humanities and Social Sciences, 2*, 20–23.

7. Mygal, S., & Borysenko, O. (2019). Komunikatyvnyi resurs v dyzaini [Communicative resource in design]. In *Innovatsiini kulturno-mystetski aspekty v suchasnii kartyni svitu* (pp. 367–369). Kherson: KhNTU (in Ukrainian)
    [Мигаль, С., & Борисенко, О. (2019). Комунікативний ресурс в дизайні. В *Інноваційні культурно-мистецькі аспекти в сучасній картині світу* (с. 367–369). Херсон: ХНТУ].

8. Paris Convention for the Protection of Industrial Property (League of Nations), 20.03.1883. Retrieved from http://zakon0.rada.gov.ua/laws/show/995_123 (in Ukrainian)
    [Паризька конвенція про охорону промислової власності (Ліга Націй), 20.03.1883. Актуально на 01.01.2022. URL: http://zakon0.rada.gov.ua/laws/show/995_123].

9. Poleukhin, A. (2009). Razvitie kommunikativnogo dizayna [Communication Design Development]. *Izvestiya Rossiyskogo gosudarstvennogo pedagogicheskogo universiteta imeni A. I. Gertsena, 115*, 289–299 (in Russian)
    [Полеухин, А. (2009). Развитие коммуникативного дизайна. *Известия Российского государственного университета имени А. И. Герцена, 115*, 289–299].

10. Samovar, L., Porter, R., & McDaniel, E. (2010). *Communication between Cultures* (7th ed.). Boston: Wadsworth Cengage Learning.

11. Spacey, J. (2017, September 7). *9 Types of Communication Design*. Retrieved from https://simplicable.com/new/communication-design

12. Verderber, R., & Verderber, K. (2003). *Psikhologiya obshcheniya* [Communicate!] (10th ed.). Saint-Petersburg: Praym-Evroznak (in Russian).

13. Zbiór ustaw i rozporządzeń administracyjnych w Królestwie Galicyi i Lodomeryi z Wielkiem Księstwem Krakowskiem obowiązujących z wyciągiem orzeczeń c. k. Trybunału administracyjnego. Podręcznik dla organów c. k. Władz rządowych i Władz autonomicznych. T. 6. - Wyd. 3, poprawione i pomnożone. Retrieved from https://www.sbc.org.pl/dlibra/publication/37849#structure