

# *Research on dynamic page layout design in the visual field of flexible communication—on screen media*

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**Keywords:** dynamic page layout design, communication, new media

**Abstract:** With the advent of screen media age and the intervention of electronic technology, people's lives are surrounded by images. The modern society immersed in the image world has put forward new requirements for page layout, that the page layout is different from what it was before. Based on the popularization of screen media in the current era, this paper analyzes the language features and advantages of dynamic page layout design in the new media era, and holds that it can attract people's attention through dynamic effects, imperceptibly in the completion of information transmission, improvement of the traditional page layout in the transmission of blunt passive effect.

## **1. Introduction**

Every time the science and technology changes will bring the impact to the current mainstream visual expression form. Throughout the history of graphic design, two technological innovations have injected new vitality into graphic design: one is Gutenberg's improvement of printing technology, the other is the computer technology in the field of graphic design in the 1990s. Two computer technologies emerged in the 1990s: the post script, a word processing software system developed in Adobe, and the Pagemaker program developed by Adobe.<sup>[1]</sup> among them, the latter can help designers for typesetting, and even can add lace to the page, with the basic functions of modern typesetting tools. These two technologies set off the upsurge of graphic design at that time, gave it more imagination space and performance possibility, greatly changed the original appearance of graphic design.

When new things are emerging, there is always opposition. For example, when computer technology first entered the field of graphic design, many people raised objections on the grounds that the technology is not yet perfect, and still insist on manual design. But the tide of technology is irreversible, the modernist design represented by the Bauhaus School of design is often criticized by later generations for its lack of humanity and indifference, it was a groundbreaking victory.

## **2. From paper media to screen media: the change of front-end**

The great tide of technological progress makes more and more electronic media appear in people's vision, mainly in the transformation of the front end of human access to information: the use of mobile phones, computers, tablets and other on-screen media tools. This has led to a decentralisation of access to information, from the official mainstream media to many to many. Once the point-to-

multipoint linear mode of communication was broken, as long as the public with the help of screen media and the Internet can not go out to know the world. Woodblock printing helped spread the spread of books, from newspapers to today's H5, and changed the way people received and processed information these examples all prove that science and technology and media affect people's way of knowing the world, the pattern.

The information communication in the screen media era needs to be interactive, effective and extensive, and the page layout as a means of information layout needs to be re-examined under the requirements of the new era. In the traditional sense, the page layout is to arrange and organize the image, character, color and other elements within the limited two-dimensional space, and to render the designer's own aesthetic consciousness, the information will be the fastest, intuitive effect of the transfer to the viewer mind, and achieve the viewer and the designer of the ultimate effect of empathy. But as far as the audience is concerned, it's hard to digest a lot of information in just a few seconds. Compared with the traditional static page layout, dynamic page layout design benefits from the addition of dynamic effects, in addition to being able to split information according to the importance of the audience in order to soften the communication process, and has tremendous advantages of its own.

### 3. The language characteristic analysis of dynamic page layout design

#### 3.1 Metaphor and communication: visual elements

Compared with the static page layout, the dynamic page layout design still retains the three elements of graphics, color and text in the visual elements, and its metaphorical function always exists, the choice and use of every visual element hides the symbolic meaning behind it. At the same time, with the introduction of the concept of time and motion, the elements in the dynamic page layout seem to be infused with life by technology, becoming a harmonious and lively whole, adding a sense of atmosphere to the picture.



Figure 1: Dynamic process of main visual poster for the “Practices and possibilities of Asian design institutions” series of forums

Source: [https://www.sohu.com/a/209529043\\_718127](https://www.sohu.com/a/209529043_718127)

For example, on the occasion of the ninth anniversary of the Hua·Museum of Fine Arts, the main visual poster of the forum series “The practices and possibilities of Asian design institutions”, in the graphic elements part, use double quotation marks and the lower right-hand corner of the “Explosion effect” graphic elements to create a “Communication” context. At the same time, particle texture is

added to the bottom image, and the blending of the border colors is intended to convey the spark between the different ideas. At the same time in the main visual pattern part of the use of software photoshop “Blank layer” effect, to convey the Asian design institutions practice the infinite possibilities of future development. (Figure 1)

### 3.2 Background and field: time

The introduction of the concept of time sets up the background and field of the story for dynamic page layout design: it is time that carries the movement of graphic elements. At the same time, the introduction of the concept of time from the following two aspects enrich the artistic charms of dynamic page layout design: First, it makes the dynamic page layout design similar to the film and television short film, but because its information carrying capacity is not as big as the film and television short film, so it has a great difference with the film and television short film, thus creating its own unique artistic effect; Second, the timeline endows multiple ways of expression for information transmission: 1. It can break the "linear" characteristic of conventional time, making time a recurring concept, and making the energy of the picture continue and convey, thus deepening the impression of the audience; 2. A certain period of time in the picture can be magnified, repeated or even recalled, and it can be highlighted as a representative moment, so as to open up the hierarchical relationship of the picture and form a sense of sensory rhythm in the process of information transmission.

### 3.3 Visual flavoring: exercise

The motion that humans feel is relative to the stillness. Designer Edgar Rubim has done an interesting visual experiment: using the “graphic and bottom relationship” depicting a cup and two faces isomorphic shape, if people first notice the cup, it means that the white cup has been taken as a “Picture”, the initiative of the black face as a “Bottom”, and vice versa. And static page layout “Figure” and “Bottom” can only rely on the viewer to distinguish themselves, in dynamic page layout design, relative to the static “Bottom”, screen elements can be broken through, deformation, displacement and other movement effects to enrich their own artistic language.



Figure 2: 2019 London School of communication undergraduate exhibition visual identity design dynamic process

Photograph: <https://www.carlosromo.co.uk/>

Designers John Philip Sage and Carlos Romo-melgar chose fluid-like material shapes based on the visual identity design from the 2019 graduate exhibition at the London School of Communication, it implies that students are about to face the transition from the academic environment to the real

society. The flow of the liquid does not obscure the main text message, but as the liquid moves over most of the text, it is surprising to see that some of the original text messages have changed subtly. (Figure 2)

For example, the 2020 Nanjing University of the Arts fashion design graduation poster, the overall movement of the use of “Key frame” display, the quick “Strobe” effect makes the viewer look dizzying, as the graduation project gives the feeling of visual feast. The choice of distinctive style of clothing, color purity contrast, resulting in eye-catching visual effect. (Figure 3) simple and powerful text interspersed in costume photography, creating a visual sense of rhythm. In the end, the text effect from far forward presents the information of the exhibition as a whole on a black background, which is further impressed by the repeated stroboscopic emphasis. (Figure 4)



Figure 3: The dynamic process of the 2020 Nanjing University of the Arts graduation poster

Photograph: <https://www.bilibili.com/read/cv6316034/>



Figure 4: A dynamic process of the text section of the Nanjing University of the Arts 2020 graduation poster

Photograph: <https://www.bilibili.com/read/cv6316034/>

## 4. The strategic advantage of dynamic page layout design

### 4.1 Get attention quickly

Rudolf Arnheim, an American aesthete and psychologist, argues in his book art and visual perception that movement is the most noticeable phenomenon. Because movement often represents a change in the environment, change can be a sign of danger. But the human must pursue the benefit

avoids the harm, will instinctively pay attention to “The animal”, adapts the change, makes the response. <sup>[2]</sup> The cognitive level of human goes from “Attention” to “Memory” and then to “Thinking”. The finiteness of “Attention”, as the most basic level, determines that human can not pay attention to all the things in the environment at the same time. And if you need to pay attention to something for a long time, it requires the control of human will and energy to achieve, so “Attention” has directivity and concentration. And “Memory” is the premise of “Thinking”, even if the shortest “Instantaneous memory” can only preserve 0.25 ~ 2 seconds, <sup>[2]</sup> but the dynamic page layout design stimulates the audience’s eyeball with its novel visual experience, full of unknown dynamic effect, this kind of stimulation becomes the “Instantaneous memory” of the viewer. If it can trigger the instantaneous thinking of the viewer, it will lay an effective foundation for the effective transmission of the following information and the successful realization of the emotional resonance.

## 4.2 Enhance the visual narrative

Information explosion in today’s society, the text narrative is too monotonous, the time has come to read the picture. With the popularization of new media, the audience’s pursuit of the novelty and interest of visual information is increasing day by day, which requires the page layout to be adjusted.

Michelle, an American expert in image theory, divides the narrative into three elements of time, space and plot, while the concept of “Time” introduced in dynamic page layout design makes up for the lack of plot in static page layout. <sup>[3]</sup> Within a certain time frame, a story with a plot is more deeply rooted and has a better narrative effect. For example, the “Emoji”, which has the function of making up for the attitude of the words, can replace the words to convey the emotion, and even can play the role of replacing the words in everyday people’s chatting scenes.

Because of technical problems, static page layout is only to arrange the elements in two-dimensional space, and then print out the finished product and place it under a fixed space-time environment waiting for people to read, passive understanding of information. Today, dynamic page layout allows designers to filter out important information first, then use software technology to distort, scatter, and exaggerate and other means of consistent dynamic, through the screen media to the information presented to the viewer. First, in this process, the clear visual process allows to shorten the time it takes for readers to buffer information, information transfer more efficient; second, in the performance of means, designers can enhance the visual impression and enhance the information content through the key description of a certain part. Thanks to the advantages of screen media, the information radiation range of dynamic page layout design has been significantly expanded.

## 4.3 Trigger emotional empathy

“AIDMA’s law,” from advertising expert E. S. Lewis in 1898, the process is “Attention -- interest -- desire -- memory -- action”, or AIDMA. This formula summarizes the process by which a consumer moves from the mental state to the physical state before purchasing a product. The material society is gradually rich, the consumer has the initiative to select for the colorful commodity information, the present design product already not only lies in the realization use function, people begin to pay more and more attention to the cultural connotation, the symbolic meaning behind the product, in order to achieve spiritual identity and worship. Donald Norman, an American cognitive psychologist, divides design into three levels: instinct, behavior and reflection, and argues that human emotions are not only logical and rational, but also connected to human behavior and feelings. <sup>[5]</sup> One of the main characteristics of screen media is interactivity: human-computer interaction, human action triggers the response of the screen media, and the screen media gives people feedback, even through a small symbol or even a change in color, can let the consumer feel in front of the screen media is to have the temperature, but not cold. The concept of “Time” introduced in dynamic page layout design also

enables the designer to clearly explain the picture information and give the viewer time to reflect fully, which can effectively trigger emotional resonance. In addition, another element is added to the original visual image elements, namely, auditory information, which not only plays a role in prompting the connotation of the picture, but also the participation of multiple senses can arouse the perception of the viewer at a deeper level, so that the audience to receive information channel is no longer just a simple picture.

#### 4.4 Conform to the trend of science and technology

AI is able to quickly capture patterns and methods of manufacturing design and learn from them,<sup>[6]</sup> becoming an indispensable assistant in human life and production. The use of artificial intelligence today is not only limited to the manufacturing industry, but also involved in the human aesthetic significance of design activities. During the eleven shopping festival in 2016, the design artificial intelligence “Lu Ban” developed by Ali captured 1.7 billion designs during the “Double 11” period, resulting in a significant increase in design efficiency, it also makes designers think about whether they will be replaced in the future. It can be seen that the sweep of technology in the field of design brings not only changes in visual form, but also changes in thinking. New media will certainly give energy to design, the public’s understanding of design should not be limited to the past, should change with the times.

As for the screen media, which is closely related to people’s daily life, its popularization breaks the limitation of space and field of design, and inculcates the consciousness of “Design” into the public mind, forming the upsurge of “Design for all”. For example, the “Retouching formula” function in the Meitu show app, the ready-made combination of various colors and text allows users to select the desired format according to their mood, one-click to generate a photo with texture; “Video editing” function in automatic music, card points and other special effects so that users can easily produce a short video with audio-visual rhythm of the United States features. These acts of self-determination and spontaneity put a strong personal stamp on the finished product. New technologies have revolutionized the way information is disseminated, as well as ideas. As a means of organizing information, dynamic page layout design will one day become widespread.

#### 5. Conclusion

Page layout design always acts as a medium in people’s life and optimizes the communication between the audience and the information sender. The modern science and technology is affecting the design product’s appearance, the design product in turn is Shaping People’s life, lacks the time characteristic design product will be gradually substituted. The support of technology makes the implementation of dynamic layout easier. For viewers, the function of dynamic layout design lies in: making the whole process of information transmission give people a flexible, rather than rigid psychological feeling; The meaning of "movement" lies in the use of human visual physiological characteristics to attract attention and lay a foundation for the later reception and understanding of picture information. All the elements in dynamic page layout design need to be a harmonious whole, to complete the flexible communication of information in the process of moving, and to give people aesthetic enjoyment.

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