

# Research on the Application of Dynamic Signs in the Exhibition Space in the Era of Digital Communication

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## Abstract

Signs have a long history, from early visual symbols to trademarks for commodities, to a well-established system of teaching sign design globally. Approximately in 2000, dynamic signs started to be employed and have occupied our vision and increased the dimensions of sign design in only a decade. In this article, we assess the historical growth of dynamic and static logos, analyze the distinctions between static and dynamic logos, and list the design approaches of dynamic logos, considering the design of logos in exhibition spaces as the object of research. At the same time, designers and designers are confronted with the dilemma of whether dynamic is inherently more relevant to the future than static. It should be mentioned that dynamic signs also have their limits, not all exhibition venues are suited for dynamic signs, and it remains to be seen if dynamic signs will continue to be modern and stylish, or whether they will once again be retro-flat and handcrafted.

**Keywords:** *Digital Communication, Dynamic Signs, Exhibition Space*

## 1. Introduction

With the rapid development of the global economy, the number of people who watch exhibitions, whether professional or entertainment, has increased significantly. At the same time, people also put forward higher requirements for the presentation of the exhibition and the visual system supporting the exhibition. As an essential visual concept presented by the exhibition, the logo has been integrated with the exhibition itself and has become an essential element to promote the exhibition's information. With the advent of the era of digital communication, not only the field of art and design has changed, but digital visual images also surround people's daily life and the surrounding environment. The early logo designs were two-dimensional and flat as the main design methods and forms of expression. The digital intervention has brought different content to communication forms and design methods. The emergence of dynamic signs has broadened people's horizons and brought about changes in people's viewing methods. The changes in the field and the driving of various digital technologies have led to the generation and development of dynamic signs. Relying on the physical exhibition space changes, it may even be a

virtual exhibition space. Under such a background, the form expansion of the logo and the design path of the dynamic logo is undoubtedly worthy of our in-depth study. Methods By analyzing the transition of graphics from static to dynamic, discussing the epochal nature of the transition is an inevitable trend in the development of graphic design<sup>[1]</sup>.

## 2. The Transition from Static to Dynamic Logos

While both Chinese and foreign logo design have a lengthy history, the creation of Chinese logos started with marks, which date all the way back to primordial symbols such as knotted ropes and early totemic symbols. Along with the Taotie and Kuilong symbols and inscriptions found on bronze containers used in Shang and Zhou ceremonies to represent power (Fig. 1). The mud seal from the Qin and Han dynasties and the 'He Yi' shovel excavated from the Han dynasty's iron smelting site of Gurong are shown in fig.2. During the Tang and Song dynasties, when China was at its political, economic, cultural, and artistic zenith, logos were ubiquitous, in which the 'Jinan Liu Family Kung Fu Needle Shop' (Fig. 2) in Shandong during the Song dynasty, which features

a white rabbit holding a needle in the center is believed to be China's first complete trademark mark. The registration of trade marks and the adoption of related trade mark legislation have emerged in contemporary China. Following the establishment of New China, period markers such as the perpetual bicycle and the butterfly cosmetic brand were visible.



**Figure 1:** Taotie motifs

Source: The author filmed (Non commercial)



**Figure 2:** Liu Family Fu Needle Shop, Jinan (copper plate)

Source: National Museum of China (Non commercial)

<http://www.chnmuseum.cn>

Early foreign signs may also be traced back to Paleolithic wall murals including early human graphic

symbols. Additionally, vessels bearing engraved symbols have been discovered in ancient Greek and Egyptian graves. On structures in Rome and Pompeii, stonemasons' emblems have been discovered: grape leaves, crescent wheels, and so on. In the 13th century, European trademarks were employed to ensure the quality of products and brands, and Britain also mandated the trademarking of all items throughout this era.

The modern system of brand design was developed in the 1960s in the United States and later developed into a theory of CI design in Japan in the late 1970s, emphasizing standard words, standard colors, and standardized unified communication. By the twenty-first century, the discipline had developed into a more systematic and mature discipline, with a relatively complete teaching system for static logo design in university art and design departments worldwide. The term "dynamic logo" is used in this study to refer to the static logo's inevitable transformation through time and with the growth of multimedia technologies.

In 2000, the Hanover Expo logo, dubbed the 'breathing logo,' ushered in a new era of dynamic signage<sup>[2]</sup>, and in 2010, a watershed moment in dynamic signage occurred with the redesign of Melbourne's city identity logo. The new Melbourne, Australia logo, which reflects the city's image as a diverse, inclusive, innovative, and liveable city, takes the initial M as its starting point and expands it with a variety of variants in different colors, lines, blocks, and dimensions that also represent the city's many facets such as 'flavour, exploration,' and 'innovation.' The logo also represents the diversity and pleasure of Melbourne's many characteristics, including 'flavor, adventure, excitement, and innovation'. The logo's versatility also reflects the city's energetic, trendy, and contemporary character, as well as the necessity to adapt to a changing world. Dynamic logos convert a single logo design into a collection of frames or a series of logos by including changeable features with animation media technologies such as flash<sup>[3]</sup>. The dynamic logo design departs from the conventional fixed color pattern and continuously changes the color pattern, including aspects of time and space. After ten years, the dynamic signage in Melbourne has continued to grow toward a more elegant, multimedia approach.

### 3. Static and dynamic sign application methods in exhibition spaces

**TABLE 1** Static and dynamic signage analysis chart

	Static logos	Dynamic logos
Time	Modern brand design was created in the United States in the 1960s and developed into CI design theory in Japan in the late 1970s.	The Hannover Expo 2000 logo, known as the "breathing logo", ushered in a new phase of dynamic signage.
Contents	Single main logo.	One main logo and several variants make it flexible and versatile to use.
Characterisation	Standard words, standard colours, standardised communication, emphasis on visual unity, highly distinctive visual overview, rational and standardised communication.	It is a dynamic form of digital information dissemination and media form provided to users through communication technology, network technology, computer, mobile phone, digital TV and other terminal display methods.
Dimension	Two-dimensional visuals	It is a composite sign that combines visual recognition, auditory perception and tactile sensation.
Display format and effectiveness	Repeated use of the logo on posters, brochures, invitations and booklets.	Through dynamic posters and dynamic pushing. Fashionable, versatile and fast delivery of information .
Audience perception	Traditional static visuals	The visual information is large, expanding the design thinking, stimulating the curiosity of consumers and increasing the visual spatial and temporal extension.
Suitable situation	Small, start-up brands	The core concept of the brand is clear and dynamic, but it is difficult to use a single concept to reflect the brand.

Static and dynamic logo for TATE MODERN, London, UK

For the new Tate Modern London in 2016, the Tate Modern's own design team with London design studio North updated the logo and brought more dynamics to it.

The original Tate Modern brand identity used a simple, dry, rounded feeling typeface that was widely recognized, and it was discovered through research that the 'Tate Pro' typeface, which retains the original Tate

Modern bespoke typeface, was a more inherited and orderly way of shaping the brand culture, but was intended to reshape it in a more rigorous manner of expression. Additionally, Jeremy Coysten, a partner at the design company, said that overturning the original designer's ideas is irresponsible and they simply need to enhance it to make the brand work better, which was the original intention of this design.

With this in mind, Tate Modern's new logo more closely resembles the manifestation of media

convergence, consisting of thick circles of varied sizes spelling out the word 'TATE'. With operation, the designers utilized varied degrees of ambiguity to fine-tune the logo; others say that the logo exists to aid in identification, and therefore, is creating a feeling of bewilderment the ideal decision? Don't forget that the Tate is a museum dedicated to contemporary art and pioneering events, the logo's blurring adds just the appropriate amount of haziness and mystery to create an atmosphere of discovery. What's remarkable is that the Tate's font is available in a variety of various colors and degrees of ambiguity, each designed for a specific purpose.

Rather than a logo, it resembles an abstracted and articulated modern artwork. Following this logo update, the new idea is more extensive in terms of print publishing, digital media, and operational sales.

Without a question, the gallery's new dynamic logo is more modern and elegant than the previous one, and it also has the benefit of being more transformational in terms of the pavilion's brand expansion. The logo's vagueness and haziness also correspond to the gallery's primary mission. It allows for many interpretations by different people.

## 4. Research on dynamic logo design methods

### 4.1. Filling type

The fixed part of letters or strokes in the logo is filled in with different image replacements to show different exhibition venues, different scenes of exhibitions and different exhibition works.

Clever combinations between letters to form a logo containing the same fillable space, filling it with multiple images that can represent the brand.

The selection of a series of visual symbols to form a series of visual formats to fill the logo letters within a defined range to form a series of changing images.

The overall recognition of the graphic is complete and clear, forming a holistic, logical and organised set of dynamic changing logos.

The Philadelphia Museum of Art has commissioned Corners Design Alliance to develop an avant-garde new logo. The designer used the A in Art as the visual focal point; with the A representing the many styles and collections that have grown into hundreds of expressions, the logo adapts to the various exhibits and collections, giving the brand image an unending feeling of fun. The designer feels that the museum's collection is one of the most comprehensive and perfect in the United States, and that its logo is a statement of openness and inclusion that may result in appreciation and acquisition.

Frank Gehry, who is also the museum's architect,

developed the distinctive letter "A" for the exhibition on the museum's expansion, and a subsequent exhibition details the design and construction of the addition. The illustrations are shown in a presentation. The Gehry, a deconstructionist expert, utilized his own line drawings to produce four fantastic letter 'A's that were used in the museum's emblem during this show.

The variant of the letter 'A' not only expands the choices, but also expresses the museum's width and depth, its architectural shape and aesthetic design.

### 4.2. Combinations of modules

The modular combination of visual components, or the modular unitary combination of modules, is based on the visual pattern of up, down, left, and right; the process of combination results in a sequence of irregular visual graphics with uniform qualities, which facilitates group identification. According to the concept and substance of the project, the modular visuals may be sewn together in a single presentation or grouped for recognition, and can generate a visually distinct memory in a moving state. Additionally, the text itself may be utilized as a module.

Visual design of psD (power station of Design)

The Museum of Contemporary Art Shanghai's psD logo was designed by a Japanese design team by rearranging the English alphabet's exterior arrangement left and right, with the vertical lines symbolizing the space's bounds facing outwards, suggesting arcs and fans that extend to the outside. Although the unfolding pattern is ordered, it is represented in a variety of forms and sizes, giving it a diversified and interesting look. Frequently reflected vertically in the arrangement of exhibition posters, it subverts the typical view of the modular assembly.

### 4.3. Variation in two dimensions

A return to the two dimensions of point, line, surface and text, graphics and color, emphasizing the two dimensions' purity and creative expression.

Typefaces

Point, line, and surface

Anthropomorphic graphic design

Casa da Música (Porto Concert Hall, Portugal)

The logo for Casa da Música extends the iconic architecture by illustrating the concert hall's many emotions via geometric forms and color changes. This technique is ideal for locations that have a variety of creative styles, such as theatres and galleries that feature a variety of artistic styles, training institutions that provide a variety of courses, or towns and regions that feature a variety of artistic styles. By relying on this dynamic aspect rather than a single intellectual

embodiment, these companies are also more suited to a dynamic identity.

#### 4.4. Multi-dimension

By using the link between letters and visuals, a scaled graphic picture may be created by intervening at one or more angles.

Using cutting, breaking, depth, and stretching to create a succession of three-dimensional visuals while keeping the integrity of the primary element's content.

Constructing a unit from letters or partials, rotating the angle to create a visual, or extending the angle to create a graphic. This necessitates the use of the Gestalt concept of closure, the active capacity of a picture to fill in the gaps on its own, so enabling it to be regarded as a full image.

The text and backdrop visuals are combined into a gradient, with the colors blending to provide the illusion of wider space.

The National Gallery of Prague (Národní galerie v Praze), abbreviated "NGP,"

The National Gallery in Prague updated its visual identity system in 2017. The previous design used serif letters and the lion from the national coat of arms, emphasizing to the public the gallery's long history and legitimacy. The new logo has a more dynamic, identifiable vibe, with the acronym 'NGP' created as three letters in a box, a sans serif font, and a black color application that is more suited to interspersing various material types such as photos, text, and video. The National Gallery in Prague's new visual identity is more appealing, modern, and expressive, increasing public knowledge of leadership in art institutions and piquing tourist interest. Along with the dynamic nature of the signs, the gallery contemplated incorporating the new logo into the visual extension of the installation and exhibition spaces. The front plaza signage and the museum's interior outdoor area have been expanded to provide a more open and engaging visual impression.

## 5. Conclusion

Historically, beginning with the World Expo, the concept of exhibition in the true sense of the word began to incorporate a visual design component, and the logo design examined in this paper serves as the exhibition's primary visual communication vehicle, a highly graphic distillation of the exhibition space and spirit<sup>[4]</sup>. In the static logo stage, the logo design contributes to the overall unification of the scenario in following designs such as the exhibition text design and layout design, and the logo design is reproduced statically in subsequent designs. At the dynamic logo stage, the logo's flexibility and variety are increased, and stricter obligations are placed on designers and exhibition places to carry forward the

dynamic logo's design meaning.

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