

# Research on the formal language of ink painting graphics

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**Abstract:** Modern design and art are inseparably integrated, and the core of commercial design requires the support of artistic and humanistic elements. As an integral part of Chinese culture, ink painting presents a key research question: how to inherit and leverage the characteristics of its formal language. The primary focus of this paper is to explore how, in terms of graphic form, one can both creatively express the spirit of Chinese artistic culture and philosophical thought, and simultaneously adhere to the principles of international visual language.

**Keywords:** Ink Painting, Graphic Form, Formal Language

## 1. Introduction

We aim to utilize the theories of modern formal aesthetics, adopting a contemporary expression of traditional painting vocabulary that reflects the spirit of Chinese art as the mode of expression for ink painting language. This approach is chosen for its rich implications and possibilities. This paper will subsequently extend from the basis of the pictorial image and conveyed spirit, expanding the expression of artworks into diverse areas such as product design, public art spaces, and daily life.

The fundamental elements of ink graphics consist of points, lines, and planes. Their expressive power, formed by these morphological elements, conveys personal emotions. The differing sizes of points, lengths and thicknesses of lines, and widths of planes generate distinct visual-psychological effects.

## 2. Point

Within ink graphics, the point is the smallest constitutive unit for conveying information. In its visual function, its form not only indicates a visual position but also possesses the potential for expansion, diffusion, or contraction, acting upon the surrounding two-dimensional space. In traditional Chinese ink painting, numerous stylized methods for depicting points have developed. The aggregation, density, and variation in size of these points play a significant role in the visual impact of an ink painting (Figure 1).

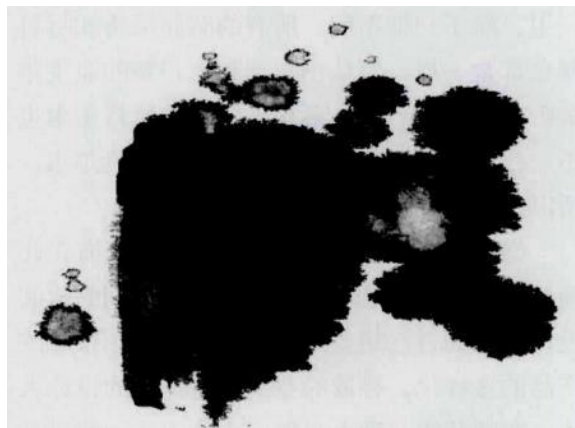


Figure 1

In geometry, a point has a position, indicating the intersection of two lines. It is a "negative point," "intangible point," or a "psychological point" perceived by humans—without size, length, or thickness. To represent it visually, a certain form or body is necessary. Psychologically, the size of a point in ink painting is relative; compared to the background, the point is small if the background is large, and vice versa. When two points appear in a composition, they create a psychological effect. A special relationship forms between them, and changes in their distance, size, and density directly determine the composition's mental state and character. In such compositions, the laws of formal beauty should be reflected, considering both the positive forms and the relationships formed by the negative spaces. Additionally, points in ink painting produce a visual effect entirely different from geometric points. Geometric points are more mechanical, regular, and have clear boundaries, whereas ink points are more random, irregular, and exhibit greater freedom and variation due to the bleeding and diffusion at their edges. The resulting tension and expressiveness, to some extent, surpass that of geometric points, which is one of the reasons why ink graphics possess greater charm (Figure 2).

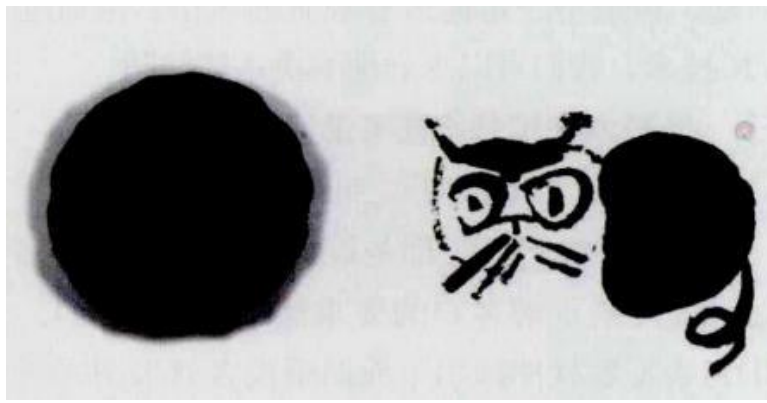


Figure 2

### 3. Line

In the context of traditional ink painting forms, there exist various styles of line drawing that express different shapes. In geometry, a line is the trajectory of a moving point; it possesses position, length, and direction, serving as the edge or turn of a plane. It is perceived psychologically as a "negative line" or "intangible line." The accumulation of points' movement creates a line, and changes in the direction of this accumulation result in lines of different forms. When using a brush, variations in the line and fluctuations in brush pressure cause the language of the line to exhibit vastly different rhythmic characteristics. Any curve composition exists within a corresponding relational framework. For an actual curve, it can more succinctly express factors of direction and proportion, as well as relationships of rhythm and cadence. When handling a subtle curve shape, to better imprint its characteristics in the mind, we often analyze its position within a horizontal and vertical grid. This method is useful; combining various straight and curved line symbols allows for the examination and expression of the energy between them.

Due to their compositional function, the forms of ink lines manifest various relationships such as horizontal, vertical, diagonal, and perpendicular intersections. These relationships generate different forces, and the variations in the size, density, and rhythm of these forces support the composition. The interplay between the language constituted by the lines and the overall compositional relationships of the image combines to present a mental state. For example: horizontal lines convey calmness and stability; diagonal lines suggest dynamism and can be unsettling; vertical lines impart a sense of solemnity, steadiness, and composure; curves possess expressive qualities of softness, pliability, and flexibility... The primary morphological elements of a single ink line mainly include the following:

#### 3.1. Thickness and thinness

Refers to the variation where one part of a line is thick and another part is thin.

### 3.2. Curvature and straightness

Refers to the variation where one segment of a line is straight and another is curved.

### 3.3. Angularity and roundness

Refers to changes in the edges of a line, either angular or rounded.

### 3.4. Darkness and lightness

Refers to changes in the darkness or lightness of a line.

### 3.5. Dryness and moistness

Refers to the "flying white" textural variation formed when the brush holds very little moisture.

### 3.6. Substantiality and emptiness

Refers to changes in the clarity or blurriness of a line's outer contour.

These elements are also interconnected. Training in these lines and the study of their forms can be achieved through the practice of calligraphy. Calligraphy from different historical periods in tradition embodies distinct forms and mental states. Inheriting and developing traditional calligraphy is one of the core contents of research on ink graphic forms. Within a composition, these ink forms can be controlled to establish different proportional relationships, and the principle of "five shades of ink" can be utilized in terms of black, white, lightness, and heaviness to distinguish hierarchical relationships. Similar to calligraphy, when making marks on paper with a brush, particular attention must be paid to the variation in brushwork. In expression, the specific elements of each brushstroke will exhibit contrast and variation, enhancing visual aesthetics (Figure 3).



Figure 3

## 4. Plane

In ink graphics, a plane refers to the infinite widening and expansion of a line while its length remains constant. The plane holds a significant position within the morphology of ink graphics; it is an important component of the form, figure, and overall composition of an ink graphic. Different planar shapes in ink forms possess various characteristics and temperaments. These forms with different temperaments are influenced and constrained by factors such as proportional relationships, relationships of lightness and heaviness, area contrast, and variations in substantiality and emptiness, producing a variety of visual effects. If the contrast relationships are well-balanced, the result can be a very harmonious composition or possess strong visual impact (Figure 4).

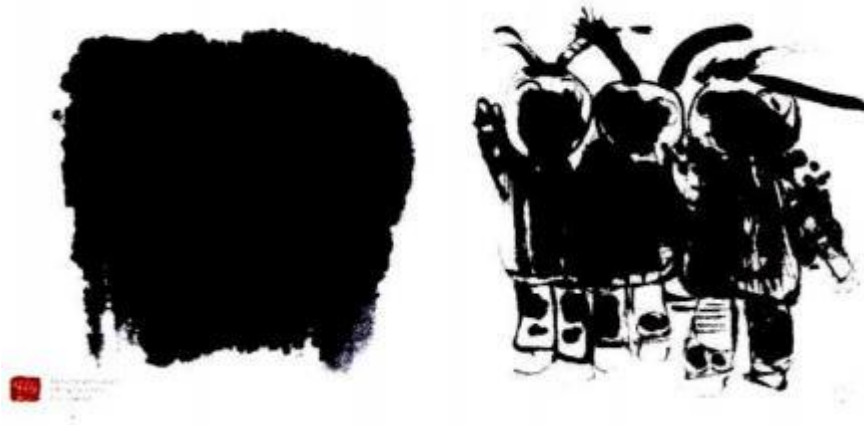


Figure 4

### 5. Formal compositional factors affecting the morphology of ink graphics

The expressive power formed by the combination of various ink morphology elements conveys personal emotions. Differences in the size of points, the length and thickness of lines, and the width of planes result in different effects of visual language. Comparing the boundaries of geometric points in the previous Figures 1-2 with those of ink graphic points, it is evident that the points, lines, and planes in ink possess characteristics of tension. In a black background, geometric points exhibit an expansive quality, and ink points share this characteristic, often with even stronger tension. On a white background, geometric points tend to contract, yet black ink points on a white ground in ink graphics can give a sense of expansion, which is due to the spreading effect of water.

The morphology of ink graphics possesses a unique formal aesthetic. Beyond their representational function, the elements of ink themselves carry an independent psychological aesthetic appeal. That is, a good ink graphic work must not only have excellent representational relationships but also possess a reasonable compositional relationship between points, lines, and planes, as well as abstract beauty. A successful ink graphic work perfectly integrates these two aspects. In practice, these two aspects also mutually promote and enhance each other. For example, while practicing line drawing to improve representational skills, one should pay attention to summarizing and refining beautiful line styles. Conversely, in copying and analyzing line-drawing works, one becomes familiar with and masters different line-drawing styles and applies them to graphic design. In this section, we will focus on analyzing the aesthetic factors of points, lines, and planes from the perspective of abstract psychological aesthetics, and these aesthetic factors are, of course, inseparable from the various contrasting elements of the artistic language of lines.

Firstly, from the perspective of overall visual-psychological perception, there are major contrasting relationships between substantiality/emptiness and tension/relaxation. Secondly, regarding the lines of the ink graphic morphology themselves, their external forms exhibit various contrasts and variations in thickness/thinness, length, angularity/roundness, and curvature/straightness. In terms of brushwork, there are characteristics such as center-tip, side-bristle, reverse-tip, and lifting/pressing techniques. Changes in the speed and pressure (lifting/pressing) of the brush result in different textural qualities of lines and planes, such as smoothness and moisture, dry strength and aged austerity, slick fluency, or arduous, halting, swift, and deliberate variations. In terms of ink variation, there are changes in dryness/wetness and darkness/lightness. These variations collectively constitute the substantiality/emptiness changes of lines, and these factors have a clear relationship with the changes in substantiality/emptiness. Generally, if one set of lines in a painting is very dense while others are sparse, that dense set will feel very "substantial"; however, if the central set of lines is sparse and the surroundings are dense, the sparse part may conversely feel "substantial." In the design of ink graphic morphology, these contrasting compositional factors should

be arranged and adjusted according to the different specific objective subjects at hand, to compose artistic works rich in pictorial sense and structural quality.

### 5.1. Length and shortness

The factor of length and shortness is one of the most fundamental elements in the principles of formal beauty for ink graphic morphology. The lengths of points, lines, and planes are orderly and follow discernible patterns. This proportionality can be adjusted and varied according to specific circumstances, using either the golden ratio or traditional Chinese proportional relationships, such as 3:7, 4:6, 2:8, etc., to arrange the composition. These proportional relationships essentially refer to the ratios between points, lines, and planes.

### 5.2. Thickness and thinness

Regarding the use of lines, attention should be paid to the combination of contrast and unity in their thickness. A composition should emphasize contrast in thickness. For example, in figure ink graphics, the brushwork for elements like hair, beard, and clothing or accessories will differ. Generally, hair and beard lines tend to be finer, while clothing lines are relatively thicker. Of course, modern ink expression sometimes reverses this convention, using thick lines for hair/beard and thin, delicate lines for clothing. This depends on the theme and content; the key is that the two parts have distinction. Proportion should also be considered in expressing thickness. Before drawing a graphic, one should have a general idea of how thick the thickest line will be and how thin the thinnest line will be. Within a single line, overly dramatic changes in thickness should be avoided. For instance, lines depicting facial features should have very subtle variations in thickness. Variation within a group of lines should also not be excessive, avoiding a pattern of one line suddenly being thick and the next very thin. Significant changes in thickness primarily occur between larger groups of lines, with different thicknesses applied according to varying textures, spatial sensations, and sense of weight (Figure 5).

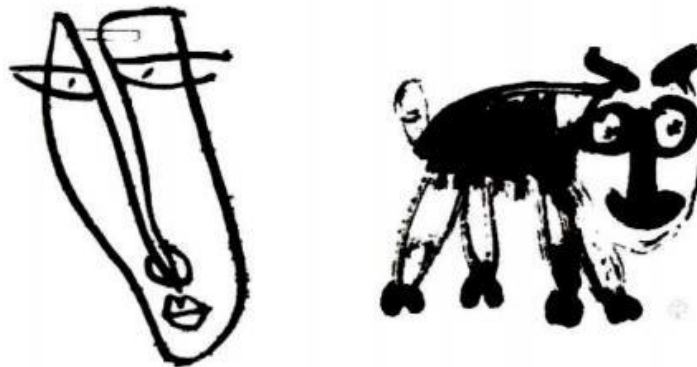


Figure 5

### 5.3. Angularity, roundness, curvature, and straightness

Angularity/Roundness and Curvature/Straightness are variations in the morphology of ink graphics. These variations influence psychological perception. In tradition, the "Iron-wire Drawing" style primarily uses straight lines with angular turns, creating a hard, stiff quality, whereas the "Flowing Clouds and Water" style predominantly employs round and curved lines. In practical application, if only a single type of line is used, the composition lacks contrast, appears monotonous, and naturally loses much interest. Due to the unique characteristics of the Chinese brush, the combination of angular and rounded, as well as curved and straight lines, is the most commonly used line-drawing technique. The combination of angularity and roundness within a single line incorporates changes between hardness and softness, making it suitable for depicting the structure of figures (combining bone and flesh) and clothing folds that alternate between taut and loose. Given the calligraphic nature of the Chinese brush, i.e., the characteristic of calligraphic brushwork, it requires lines to be both disciplined and free; it is impossible for them to be as rigid as if drawn

with a ruler and compass. Therefore, the fluidity and naturalness born from the act of writing with the brush result in spontaneous variations of angularity, roundness, curvature, and straightness.

#### 5.4. Density and sparseness relationships

The relationship between density and sparseness is crucial for ink graphics; it is also a fundamental contrasting element for organizing a composition. The ancient saying, "Sparse enough for a horse to gallop through, dense enough to keep out the wind," emphasizes the importance of variation in density. The density-sparseness relationship refers to the arrangement of distances between elements like points, lines, and planes. In a painting, the contrast in areas formed by the varying distances between lines, and between points, creates rhythm and a sense of tempo. The distances between these elements should be neither too uniform nor excessively contrasting. Within the composition, the relationships between them should be reasonably arranged, with attention paid to refinement and selection, so that the image is rich in variation on a harmonious basis, generating a sense of pleasure in the viewer.

Different objects are depicted using points, lines, and planes with varying degrees of density. For instance, in representational graphics depicting people, hair and beard are dense areas. Patterns on clothing can also be intensified, forming dense-sparse contrasts between large groups of lines. This method is frequently used in line drawing (*bai miao*) (Figure 6).



Figure 6

#### 6. Directionality of lines in ink graphics

The directionality of ink graphics, that is, the orientation of forms, is also a very important factor affecting psychology. Horizontal, vertical, and diagonal orientations, as well as rotating lines, all convey different visual feelings. Horizontal lines and planes impart a sense of calm and stability, vertical lines and planes evoke a feeling of loftiness and solemnity, while diagonal lines/planes and rotating lines/planes convey sensations of turbulence, intensity, unease, and mystery. The orientation of points, lines, and planes not only affects the morphology of ink graphics but is also a crucial element in picture composition. The convergence and divergence of lines are also variations in line morphology; converging lines feel "substantial," while diverging lines feel "empty."

#### 7. Conclusion

The compositional relationships of ink graphic forms possess a special formal aesthetic, which bears the unique imprint of Chinese culture. The cultural symbols of ink painting include realistic representation but also encompass the spirit of freehand brushwork (*xieyi*). Simultaneously, ink itself possesses independent aesthetic appeal. In a good ink graphic work, the spirit of freehand brushwork is indispensable. However, freehand expression and realism are not contradictory; on the contrary, realism can also fully convey the spiritual direction of "intent" (*yi*). Moreover, starting from the form of the lines themselves, these calligraphic lines carrying special cultural imprints also possess their own beauty and embody the spiritual essence of "intent." These aspects are also fully manifested in calligraphy. Only if all compositional

principles, the combination of points, lines, and planes, the main content of the graphic, and other aspects are perfectly integrated, can an ink graphic work be considered successful. In practice, these aspects also mutually promote and enhance each other.

Within China's vast cultural system, ink art stands as a unique school, possessing a complex and rich history of development, and it continues to evolve, change, and develop. By connecting with and inheriting tradition, we can, in the integration with modern culture, create highly characteristic artistic and design works that contain elements of heritage while meeting the tastes of modern life. All of this requires continuous experimentation and repeated verification based on both traditional and modern theory, developing tradition through understanding and practical creation. This is the attitude modern artists should hold, and it is also a sense of mission that each of us artists and designers should possess. Only in this way can we, through the diversity of art and design, promote dialogue and interaction between Eastern and Western cultures.