

Integrating Typography and Motion in Visual Communication

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Typography is a critical tool in visual communication, in part because it can evoke human emotion by combining form with narrative text. Human feelings may serve as the basis for the design of compelling images of a wide range of circumstances in our surroundings. Emotion has a powerful voice, and it can be used in a soul-stirring way to convey the unique qualities of each individual.

Over time, typography has gradually changed in response to major factors like individual differences, technological advancement, and cultural evolution. Motion is physiologically linked to our self-awareness, and, as such, is always inseparable from our daily experience. By its very nature, through such discernible attributes as direction and velocity, the mere presence of motion cannot help but call to mind such qualities as dynamism and energy. When combined through technological means, typography, motion and emotion retain many of their separate characteristics, while they also enable designers to make new, synergistic consequences.

In recent decades, technological innovation has greatly improved our potential for visual communication. In particular, digital technology has provided almost limitless opportunities for designers, artists and others to represent their concepts through expressive visual forms. One result of this is kinetic typography, the combination of typography and motion, or what is also sometimes called typographic animation. Unlike static, print-based forms, kinetic typography uses motion to convey gestures in ways that can function powerfully as visual images. As a medium, it is inherently interdisciplinary, in the sense that it can integrate technology, typography, motion, graphic design, music and literary narrative.

When we extend this marriage of typography and motion to graphic design education, it is essential that we teach our students the fundamentals of kinetic typography before expecting them to make innovative visual forms of concepts. These fundamentals could be grouped into four categories, with the overall purpose of focusing on the synergistic interaction of one component with another. All components interact with and support all others, in the process of arriving at a rich, expressive message on the stage (sometimes also known as ground or field of activity). Below is a list of the attributes of the four categories, each of which contributes to the use of kinetic typography for communication.

- Type & Expression of Ideas
 - 1) Typography
 - 2) Form
 - 3) Expressive Meaning
- Space
 - 1) Structure
 - 2) Frame
- Time
 - 1) Motion
 - 2) Sequence
- Supporting Elements
 - 1) Visual Punctuation
 - 2) Color
 - 3) Music

The following are further explanations of the function of each of these aspects:

Type & Expression of Ideas

1) Typography: Choice of font for expressive purposes

Typography has a central role in kinetic typography that is relevant to time. A full understanding of typographic applications will serve to direct the designer in choosing suitable a typeface with which to express and communicate a message. Each typeface has its own aesthetic, expressive qualities, as evidenced by visual attributes of its letterforms. It is important for students to know the basic classifications of typefaces, for the reason that each type category has distinct, functional qualities. Within any category, each typeface has its own individual identity because of different proportions and a variety of line weights, widths, directional slants and so on. These individual qualities clearly determine that each typeface demonstrates a different use and purpose for expression. A well-combined variety of typefaces bring variations of expression and harmony to the design. Awareness of these classifications is an essential tool in developing a designer's ability to select an appropriate typeface that enhances the expressive message in kinetic typography.

2) Form

The use of typography is the primary means of presenting ideas and messages for expressive communication in kinetic typography. In this case, typography has a dual role: to represent a concept, and to do so in a visual form. This interplay of meaning and form brings a balanced harmony into the stage both in terms of function and expression. Displaying type as a form provides a sense of a letterform's unique characteristics and abstract presentation. When a typeface is perceived as form, it no longer reads as a letter because it has been manipulated by distortion, texture, enlargement, and has been extruded into a space. Space becomes an active live stage and brings a new dimension to our visual environment. The following example demonstrates how a letterform can be altered through enlargement to the point that it becomes abstract and its details become magnified.

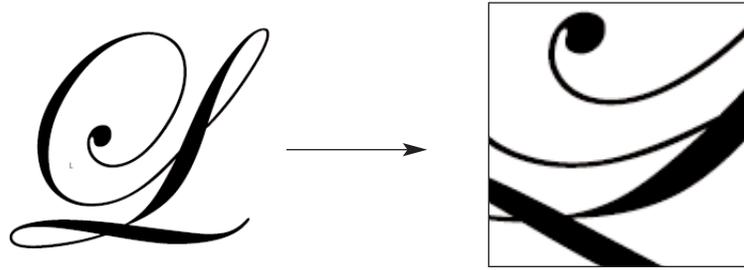


Figure 1. Details of Letter Form

3) Expressive Meaning

It is important to grasp the purpose of type itself. Its physical form has its own expressive personality as well as being able to interpret meaning and guide stories. The physical characteristics of type, such as light or bold, round or square, short or long, wide or narrow, slim or heavy, make their own personal impression. Some of them look beautiful, delightful, fresh, ugly, angry, formal, casual, loose or stiff. It is as though each typeface has its own purpose for existence. Type also serves to represent the expression of various actions. Letterforms can appear to walk, run, jump, hide, climb, dance, fly, stand, rise, hang, float, sink, or crash. They can be quiet or loud, surprised, or appear to be shouting or crying. Each typeface represents its own expressive meaning through its strong personality. Letters, separate from type, have meaning as soon as they are combined as words or sentences. Sometimes they are used subjectively, while at other times they support their neighboring letters. It is important to use an appropriate character to express the meaning of a concept, a meaning that is consistent with the typeface, its case, size, position, weight, color and space. Well-balanced and appropriate typefaces, narrative structure, and movement can reinforce the meaning in a kinetic typographical environment.

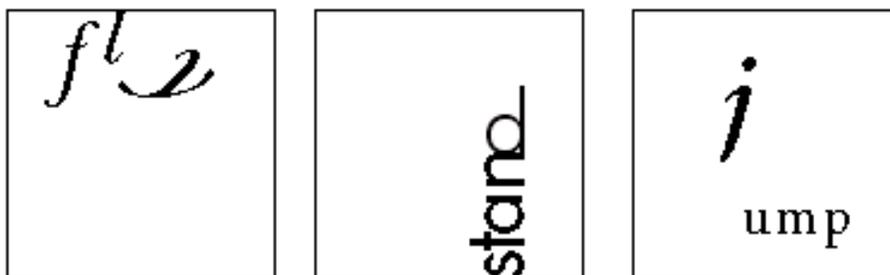


Figure 2. Expressive Meaning

Space

1) Structure

The space of a visual environment is limitless. Throughout space, we sense light, dark, direction, distance, balance and depth. Space appears to us as a physical reality, as a thing that exists separately from our own bodies. Space can be flat or deep, and can be viewed from a two-dimensional or three-dimensional perspective. To perceive a

visual object in two-dimensional space, a spatial structure must include such elements as points, lines, planes and volumes. These same components also occur in kinetic typographic forms in which the space is observed on a computer screen.

In a visual environment, the physical depth of dimension creates a three-dimensional space that depicts visual advance, recession, frontal view, and oblique view from any location. It creates position, direction and an interval spatial environment, which we see in a perspective viewpoint. Perspective is the use of lines and angles to create the illusion of three-dimensional objects within a two-dimensional framework. A perspective view has an X-axis, a Y-axis and a Z-axis, aspects that are also called horizontal, vertical, and spatial points, respectively. There are three main elements in a perspective view: the horizon line, the center of vision, and the vanishing point. In a time-based kinetic typography space, a two-dimensional object can demonstrate three-dimensional reality by mimicking reality's effects. The objects move from one position to another, implying the illusion of spatial and tactile vision. It represents depth in visual space.

2) Frame

In a time-based kinetic typography environment, frame refers to a screen, which is an active composition of space or ground that displays moving objects. The moving object consists of a sequence of individually produced, framed pictures. A number of different frames create the illusion of motion in our vision. Within a frame, the actual workspace for an object, referred to as the ground or stage, is compositionally active zone. The compositional design actually appears to move from the inactive outside of the frame. The objects are only displayed within a ground. The frame has a certain ratio based on its usage. The frame aspect ratio is a relationship between the width and the height of the frame, and is expressed as "x:y". There are three common aspect ratios: The traditional television screen is 1.33:1 or 4:3 which means that for every 4 units wide it is 3 units high ($4/3 = 1.33$); a high definition television screen or European wide screen standard is 1.78:1 or 16:9; and a cinematography screen is 1.85:1. Computer monitors usually use the aspect ratio 1.33:1.

Time

1) Motion

In kinetics, which represents dynamic movement, the viewer sees a spatial experience of visual communication through time. Using motion, objects appear or disappear into a space, which presents the appearance of rhythmic chronological time. The flow of movement, which consists of a mixture of passive and active rhythmic speeds, must keep a balance that coordinates the ultimate harmonies of time. Motion generates an emotional energy that prompts people to respond with a visual interconnection through a psychological reaction toward the movement. The intensity of motion affects ones mind through vision by intensifying the emotion.

To understand motion in kinetic typography, it is essential to understand the sequence of frames. There are two different kinds of frames: Key frames and in-between frames. Key frames occur at the beginning and end of a movement and register the changes in the sequence of a movement or a story. In-between frames occur

between the two key frames, and serve to support the main movement. Adjusting the number of in-between frames makes the object appear to move more slowly or more quickly.

The number of frames between two key frames can visually cause a variety of emotional reactions for the spectator because of the speed of the motion. A larger number of frames in each in-between frame sequence make the object appear to move quicker while fewer frames make the object appear to move slower. These fast and slow movements evoke different emotional feelings. Fast movement generates a more powerful impact and creates a greater intensity of such familiar feelings as surprise, anger, hate, obsession, dynamism, emulation, tension, terror or fright. Slow movement creates a sense of relaxation where the viewer feels peace, calm, serenity or joy. Adjusting the number of in-between frames dramatically affects the pace of the narrative while also creating an appropriate atmosphere.

In using key frames and in-between frames, an essential consideration is the speed (or the tempo) of motion, the adjustment of which is referred to as “easing” in motion-based media. Using easing, the motion of objects can have the appearance of moving naturally, much like the effect that gravity has on objects in the real world. The two primary methods of easing are “easing in” and “easing out”. Easing in makes the objects start slowly in the beginning and to speed up toward the end of a movement. Easing out makes the object start quickly in the beginning and to slow down toward the end of a movement. Positive and negative values are used to adjust the easing in and out. Easing in allows the situation to start quietly, peacefully, and calmly before accelerating its speed to enhance the visual rhythm and dynamism. Easing out begins with tension but gradually reduces the intensity. In either case, easing makes use of the tone of the motion and supports the sense of visual play.

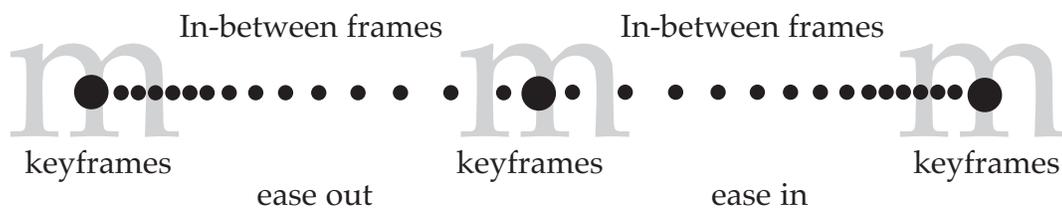


Figure 3. Easing In & Easing Out

2) Sequence

In time-based media, a sequence is made up of a continuous series of objects or scenes that are arranged in a linear structure and comprise a narrative unit that is ordered by time. Such sequences may of course also consist of sub-sequences that support a narrative story line. A linear sequence consists of one structural unit in a hierarchy. The structure is an arrangement of sequences that form a complex presentation. A linear sequence is all the events or elements that happen, following one after another, producing a logical timeline from beginning to end.

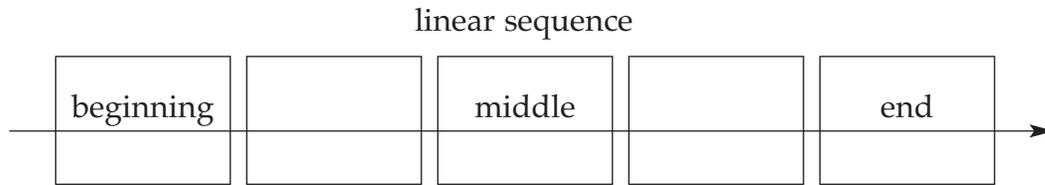


Figure 4. Structure

Supporting System

1) Visual punctuation

To improve the visualization and the function of a structure in kinetic typography, visual punctuation is often used as a way of blending objects. The resulting visual imagery can create a remarkable visual effect. The components of visual punctuation include such phenomena as lines, symbols, and shapes. Lines include horizontal, vertical, diagonal, and curved. Symbols may be alphabetic, iconic, numeric, or pictorial; and shape categories include geometric and organic. Using visual punctuation creates a focal point, emphasizes hierarchical interpretations, directs the viewer's attention, creates playful rhythmic patterns, produces dynamic movements, stimulates optical energy, and generates surprising forms. The combination of these various components is an all-important key in stimulating visual expression and presenting visual harmony.

Visual punctuation within a composition also affects our emotions. Organic shapes, lines, and symbols create beautiful, joyful, delightful, playful and harmonious feelings that portray a positive outlook. In contrast, harsh lines and large sharp shapes create negative feelings such as irritation, frustration, grumpiness, rage, anger or even disgust. Circular lines or shapes can develop emotions of caring or tenderness. Triangular shapes can represent achievement, desire, bitterness, or suffering. The alphabetic symbols, such as question marks or exclamation marks, can evoke excitement, thrill, hope, worry, and even apprehension. The mix of visual punctuations can be used to powerfully describe various feelings and to evoke multiple levels of emotions in a composition.

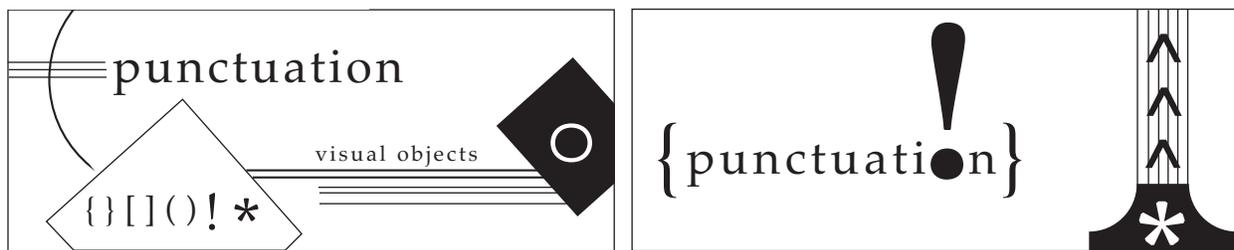


Figure 5. Visual Punctuation

2) Color

Color affects human behavior and emotion. Although each color provokes a specific individual response, these effects may vary because of the diversity of cultures. For example, in Eastern cultures, white is the color of mourning, while, on the contrary, in Western cultures, white represents purity, innocence and peace, while black represents mourning, death and evil. Red is a symbol of celebration and good luck in China, while in India it represents purity. In Eastern cultures, yellow means sacred and imperial, while in the West it is associated with joy and happiness. When we experience color, our sensory energies are stimulated. Colors convey connotations of spatial reality and direction, and of movement, height, length, width and weight. Color can trigger emotions in which we experience joy, sadness, happiness, anger, fear, surprise, love and passion. Through our encounters with colors, we may experience memories of spring, summer, fall, and winter. Merely to encounter light prompts us to open our vision, through which we observe color in visible space.

3) Music

Music can have a profound effect on human emotions and psychology. It is a powerful means by which to evoke human expression. People experience emotional responses through music, whether consciously or subconsciously, and, as a result, may begin to feel calm, soothed, excited or intense. Music makes a connection with our soul and our lives become enriched through music. People react differently to the same music based on their background and personal experiences. Music influences different cultural backgrounds in the generation of different musical genres. Music interacts with film, animation, multimedia and digital media to produce distinctive styles of visual art. Music is a time-based media, as is motion, and shares many of the qualities of motion. Among the elements of music are melody, harmony, rhythm, tone, form, pitch, intensity, and duration. These closely resemble the elements of motion. In kinetic typography, music is interwoven with compositional form, color and motion to contribute to the emotional impact, bring harmony, and enhance the dynamic visual appeal of the message.

Graphic Design Course

In using typography and motion in the context of a graphic design course, one of the major purposes is to arrive at evocative metaphors of human experience. During the course, the emotive basis of personal experience is discussed and analyzed at length, as a way of enriching a range of designs. A main ingredient of the course is a double-layered method of learning both digital technology and concept development at the same time.

In the first part of the course, students are asked to represent a highly imaginative dream house of the future. By this assignment, students become conversant with basic technological skills and thereby gain the confidence to move on to the more conceptual stages of kinetic typography.

In a second phase, students explore the potential of expressive word play in combination with motion, which begins with their having chosen two words based on a personal experience. Concept development is especially critical here, because it

provides the basis for designing images that use kinetic typography to convey human emotions. The addition of sounds is also a powerful way to enhance the impact of the emotive metaphor.

Third, students are asked to use emotion-based kinetic typography in a problem in which they make use of three aspects of a methodology in the development of their concept. These are: (a) a strong analysis of emotion is essential in conceptualizing the essence of the design. It grasps the significance of the emotion in terms of its physiological and psychological effects, (b) the creation of a narrative, and (c) a preparative or preproduction process that takes place in advance of constructing the animated design on the computer. This process both simplifies and accelerates the complicated stages in the use of time-based media as an effective visual communication tool. It relies on handwritten memos, preparatory sketches, and text-based summaries that explore the possibilities of a particular concept. In this preproduction process, a series of different stages have proven especially reliable in developing visual inventions: (1) Mind maps, (2) rough sketches, (3) text-based storyboards, and (4) refined sketches. The goal of this particular phase is to convey the essence of the emotion in a poignant and powerfully memorable way, and to demonstrate how text and image can combine to convey a concept in a time-based medium.

In the fourth and final phase of the course, students are asked to develop a “film teaser” for a hypothetical DVD feature. Using typography as the main element, the students are required to create an emotional aura, while concurrently focusing on the narrative theme of the feature. The sound component follows the typographic rhythms, their harmony, contrast and tonal details. This composition of sounds enhances the overall impact of the visual metaphor.

This method of teaching kinetic typography is both creative and systematic, and provides the students with a better understanding of typography and concept development. In addition, it can communicate more vividly than do static forms alone, by making simultaneous use of the dual functions of typography, as both text and visual form. The deliberate combination of time, motion and typography can acquaint students with the ways and means of using forms (shapes, colors, proportions, and so on) to represent emotional sensibilities, rhythmic visual expression, and dramatic gesture. Using kinetic typography, students can create a result that is richer and far more engaging than the inert flatness that is found in traditional, more restrictive approaches to typographic design.

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