TEXTURE

Extract adapted from *Principles of Two-Dimensional Design* by Wucius Wong (1972)

Texture

Texture is one visual element which has unique aspects that are essential in certain design situations and should not be overlooked. Texture refers to the surface characteristics of a shape. Every shape has a surface and every surface must have certain characteristics, which may be described as smooth or rough, plain or decorated, matt or glossy, soft or hard. Although we generally regard a flat painted surface as containing no texture at all, actually the flatness of the paint is a kind of texture, and there is also the texture of the material on which the shape is created.

Nature contains a wealth of textures. For instance, each kind of stone or wood possesses a distinct texture which an architect or an interior designer may choose for specific purposes. The piece of stone or wood may also be finished in a multiple of ways for diverse textural effects.

Texture may be classified into two important categories: visual texture and tactile texture. Appropriate texture adds richness to a design.

Visual texture

Visual texture is strictly two-dimensional. As the term implied, it is the kind of texture that is seen by the eye, although it also may evoke tactile sensations. Three kinds of visual textures can be distinguished:

1. **Decorative texture**: This decorates a surface, and remains subordinate to shape. In other words, the texture itself is only an addition which can be removed without much affecting the shapes and their interrelationships in the design. It can be hand-drawn or obtained by special devices and can be rigidly regular or irregular, but it generally maintains a certain degree of uniformity (Fig. 1).
2. **Spontaneous texture**: This does not decorate a surface but is part of the process of visual creation. Shape andtexture cannot be separated, because the marks of texture on a surface are the shapes at the same time. Hand-drawn and accidental forms frequently contain spontaneous texture (Fig. 2).

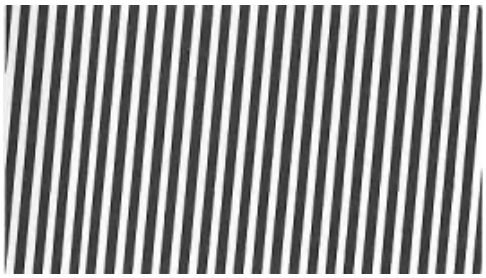

Fig. 1: Visual texture: decorative texture.

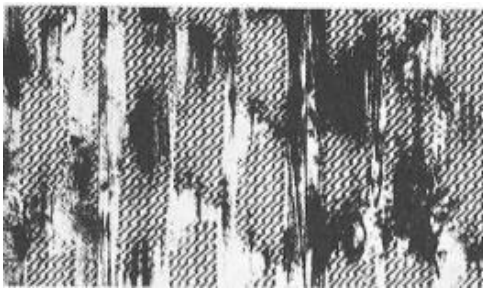

Fig. 2: Visual texture: spontaneous texture.

3. **Mechanical texture**: This does not refer to texture obtained with the aid of mechanical drawing instruments, such as the ruler or compasses. It refers to texture obtained by special mechanical means, and as a result, the texture is not necessarily subordinate to shape. A typical example of this kind of texture is the photographic grain or screen pattern we often find in printing. Mechanical texture can also be found in designs created by typography, and in computer graphics (Figs. 3 and 4).

Fig. 3: Visual texture: mechanical texture.

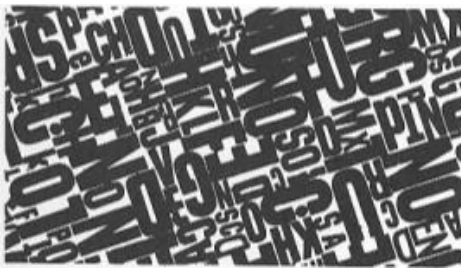

Fig. 4: Visual texture: mechanical texture.

The making of visual texture

Visual texture can be produced in various ways. Some common techniques are suggested as follows:

(a) **Drawing, painting**: These are the simplest methods or producing visual texture. Minute drawn or painted patterns can be constructed of densely gathered, tiny unit forms in rigid or loose structures for the surface decoration of any form. Spontaneous texture can be obtained with freely hand-drawn lines or brush-strokes (Fig. 5).

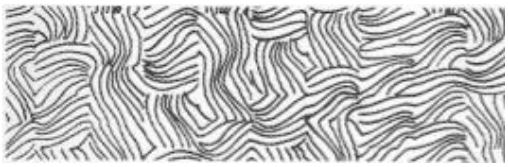

Fig. 5: Visual texture: drawing.

(b) **Printing, transferring, rubbing**: A carved pattern or a rough surface can be inked and printed on another surface to create a visual texture which may be decorative or spontaneous depending on how the technique is handled. Hand-painted images on one surface can be transferred to another surface when the paint is still wet. Rubbing with pencil or any suitable medium on soft and thin paper over a rough surface also produces textural effects (Fig. 6).

Fig. 6: Visual texture: rubbing.

(c) **Spraying, spilling, pouring**: Liquid paint diluted or evaporated to any desired consistency, may be sprayed, spilled, or poured onto a surface. Spontaneous texture is often obtained, but carefully controlled sparying can produce decorative texture as well (Fig. 7).

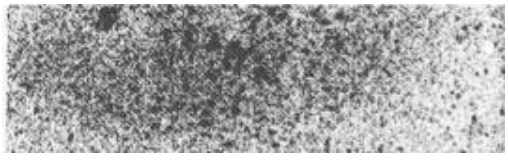

Fig. 7: Visual texture: spraying.

(d) **Staining, dyeing**: An absorbent surface may be stained or dyed to obtain a kind of visual texture (Fig. 8).

(e) **Smoking, burning**: A surface can be smoked over a flame to obtain a kind of texture. Sometimes burnt marks

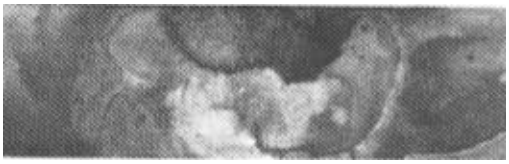

Fig. 8: Visual texture: staining.

may also be utilized (Fig. 9).

(f) **Scratching, scraping**: A painted or inked surface can be scratched or scraped with some kind of hard or sharp tool to gain in texture (Fig. 10).

(g) **Photographic processes**: Special darkroom techniques, which can be performed with digital programs, can add interesting texture to photographic images (Fig. 11).

Fig. 9: Visual texture: burning.

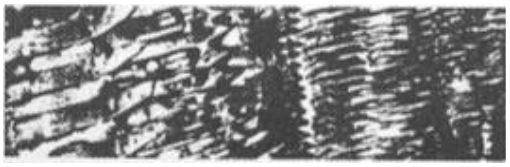

Fig. 10: Visual texture: scratching.

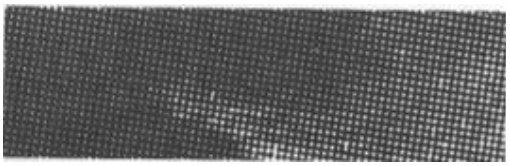

Fig. 11: Visual texture: photographic processes.

Collage

A direct way of using visual texture in a design is collage, which is a process of pasting, glueing, or fixing pieces of paper, fabric, or other flat materials onto a surface. Such materials may fall into three main groups according to whether images are present or important. The term "image" here refers to any printed, photographic, painted, or intentional or accidental forms or marks on the surface of the materials.

1. **Materials without images**: These materials are evenly colored or of uniform texture. The shapes of the cut or torn pieces are the only shapes to appear in the design. Examples of such materials are paper or fabric with solid color or minute patterns which spread rather regularly all over the surface, printed sheets of crowded, small type, selected areas from photographs or surfaces containing spontaneous texture with all contrasts minimized (Fig. 12).
2. **Materials with images**: These materials, such as paper or fabric printed with uneven patters or treated with spontaneous texture, photographs with strong tonal or color contrasts, printed sheets of large type or large and small type, etc., contain images of considerable prominence. Such images are used abstractly in the collage, regardless of any representational or literal content. They are seen as forms which are as important as, and sometimes even more important than, the shapes of the cut or torn materials (Figs. 13).
3. **Materials with essential images**: Images on the materials are essential when they have a definite representational content or when the images have to maintain their identity and are not to be destroyed during the process of the collage. In this case they are more important than the cut or torn shapes of the materials, and the collage is thus of a different nature. Materials with representational significance are commonly photographs which can be dissected

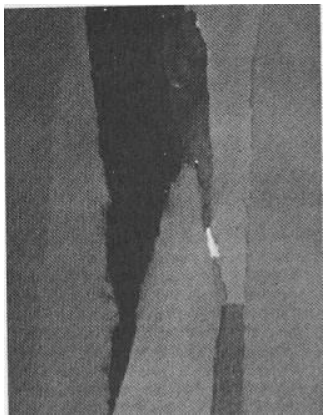

Fig. 12: Collage without images.

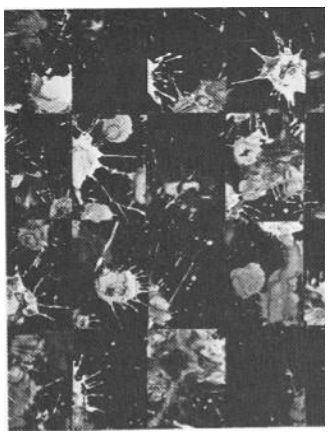

Fig. 13: Collage with images.

and rearranged or combined with other photographs for dramatic purposes or special effects. Materials with abstract images can be dissected and rearranged in the same way, resulting in transformations or distortions without making the original images unrecognizable (Fig. 14).

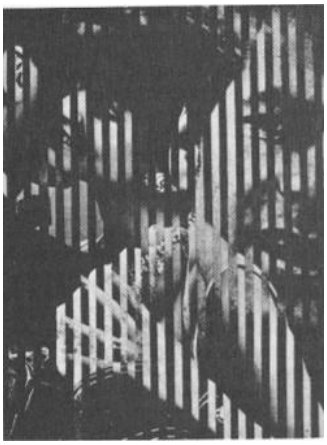

Fig. 14: Collage with essential images.

Tactile texture

Tactile texture is a kind of texture that is not only visible to the eye but can be felt with the hand. Tactile texture rises above the surface of a two-dimensional design and approaches a three-dimensional relief. Nevertheless, all kinds of tactile texture can be transformed into visual texture by the photographic process.

Broadly speaking, tactile texture exists in all types of surfaces because we can feel them. This means all kinds of paper, however smooth, and all kinds of paint and ink, however flat, have their specific surface characteristics which can be discerned by the sense of touch. In two-dimensional design, we can say that a blank area or solidly printed or painted area contains no visual texture, but there is always the tactile texture of the paper and the ink or paint.

To narrow down its scope, we can limit our discussion to the kinds of tactile texture specially created by the designer for the purpose. This means the materials have been specially shaped or arranged, or combined with other materials, to form a composition, or the materials have undergone special treatment, resulting in new textural sensations. Thus we can have three distinct kinds of tactile texture:

1. **Available natural texture**: The natural texture of the materials is maintained. The materials, which may be paper, fabric, branches, leaves, send strings, etc., are cut, torn, or used as they are, and pasted, glued, or fixed onto a surface. No effort is made to hide the identity on the materials.
2. **Modified natural texture**: The materials are modified to that they are not the same as usual. For instance, paper is not pasted flat but creased or crumpled, or it can be stippled (drawn or painted with spots), scratched, embossed (marked in relief) (Fig. 15). A piece of sheet metal can be folded, hammered, or drilled with tiny holes. A piece of wood can be carved (cut in relief). The materials are slightly transformed, but not beyond recognition.
3. **Organized texture**: The materials, usually in small bits, chips, or strips are organizes into a pattern which forms a new surface. The textural units may be used as they are or modified, but they must be small or cut into small pieces. Examples of these are seeds, grains of sand, chips or wood, leaves cut into very narrow strips, paper twisted into tiny balls, pins, beads, buttons, strings or threads to be woven, etc. The materials may

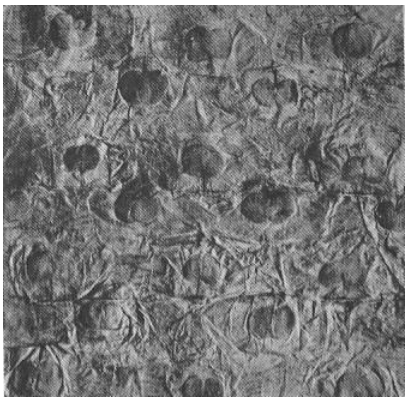

Fig. 15: Tactile texture: modified paper.

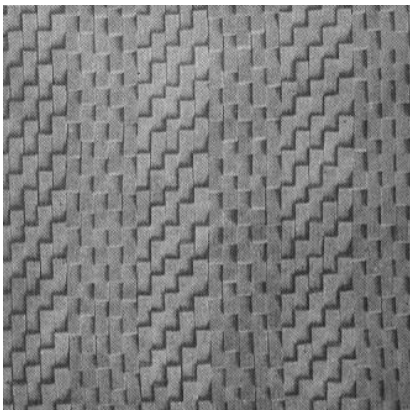

Fig. 16: Tactile texture: organized texture.

sometimes be identifiable, but the new surface sensation is much more dominant (Fig. 16).

Light and color in tactile texture

The play of light upon a tactile texture may be very interesting. Certain materials may reflect or refract light, with fascinating results. The tactile quality of rough surfaces is usually emphasized by strong side-lighting.

Some designs may have been conceived with light modulation as an essential element. In this case, the textural units are usually long and thin, projecting from the surface of the support material, so that shadows are rather linear, forming intricate patterns.

However, it should be pointed out that both light and shadow are visual, not tactile, because they have nothing to do with the sense of touch. Programmed lighting and changing relationships of the light source and the design can produce kinetic light patterns, but still the effect is a pure visual sensation.

Color can also play an interesting role in tactile texture. The natural color of the materials can be maintained, but a coat of color can create a different feeling, at least making the materials less immediately recognizable, giving them less of an available natural texture but more of a modified natural texture. Diverse materials on a surface can resemble each other if they are all coated with the same color.

When there is more than one color on a surface, the colors will form a pattern which is visual. Sometimes the visual pattern can dominate over the sensation provoked by the tactile texture.

Examples of texture with printed type

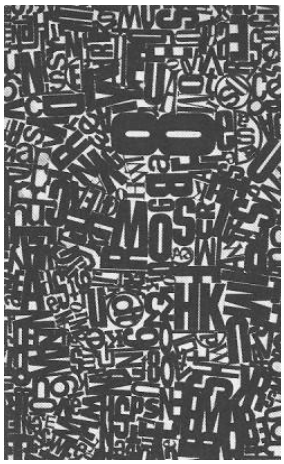

Fig. 17: Texture with printed type.

Fig. 18: Gradational texture with printed type.

Figs. 17-19 all show the use of printed type to form textural patterns. Single characters of large type or lines of small type from printedmatter have been specially cut an arranged so that blank spaces are eliminated as far as possible.

Type of the same size and weight can be grouped to form a uniform texture, while a gradational texture can be created with type of varying size and weight.

Some of the examples were done by gathering and arranging type to form a uniform or gradational texture on a thin sheet of paper. This was later cut into pieces for final organization into a structured pattern.

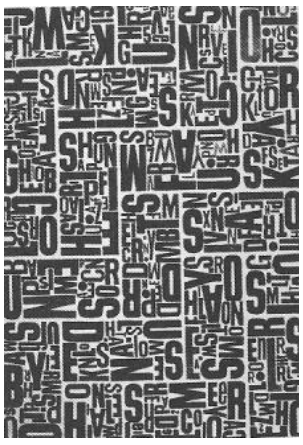

Fig. 19: Texture with printed type organized in a final pattern.