THE VIBRATORY EFFECT OF TEXTURE

Black and white combined in a certain way over areas can create the uncomfortable sensation produced by figure 1. This visual effect constitutes a remarkable selective possibility when it is properly utilized.

When does it occur?

Figure 2 on the page opposite combines variations of texture and value. It is repeated for the purposes of highlighting the phenomenon (i.e., the six lines at the bottom are simply the inverse of the six lines at the top).

From left to right is the value variation; from top (or from bottom) toward the center is the texture variation.

The vibratory effect appears in the central region and consequently involves values bordering on 50% and constituent sizes of more than 1 mm. This “vibration” seems to result from the collusión of a physiological effect—the creation of a certain resonance at the retinal level—and a psychological effect—the hesitation between “figure and ground.” In a given graphic representation this corresponds to an immediate ambiguity concerning the implantation: Is it an area, line, or point sign?

It is the designer’s duty to make the most of this variation, to obtain the resonance without provoking an uncomfortable sensation, to flirt with ambiguity without succumbing to it.
The Vibratory Effect in Linear Representation
This effect is easy to obtain (see figure 2B, C, and D), and it determines the selectivity of texture in linear representation. (The value variation runs from figure 1 to 3, and the texture variation from A to E.)

The Vibratory Effect in Point Representation
Providing the signs are large enough (larger than 2 mm, approximately), this vibratory effect can be produced in two ways:
(1) by a variation in internal complexity within a given shape, as in figures 4 or 5.

But among all the possibilities for construction of figure 5, what sizes of the white ring yield the best vibratory effect?

The table in figure 7 combines variations in the arrangement of the ring (from left to right) and variations in value (from top to bottom). A cyclical construction (figure 8) emphasizes the power of this effect, which dominates the value variation. This construction confirms that it is in values of 50% to 60% and around the designs marked by a cross in figure 8 that the effect is at a maximum.

(2) by a variation in the external complexity of a sign, that is, by contrasting the circle, the cross, and the dash (figure 6). In terms of perceptual effect, this variation approaches that of texture. It tends to create, within the limits of the sign, a zone of vibratory confusion and ambiguity. Owing to this effect, the circle, the cross, and the dash are the three shapes which, within certain limits, allow for a selective perception. However, these three signs are not visually ordered.