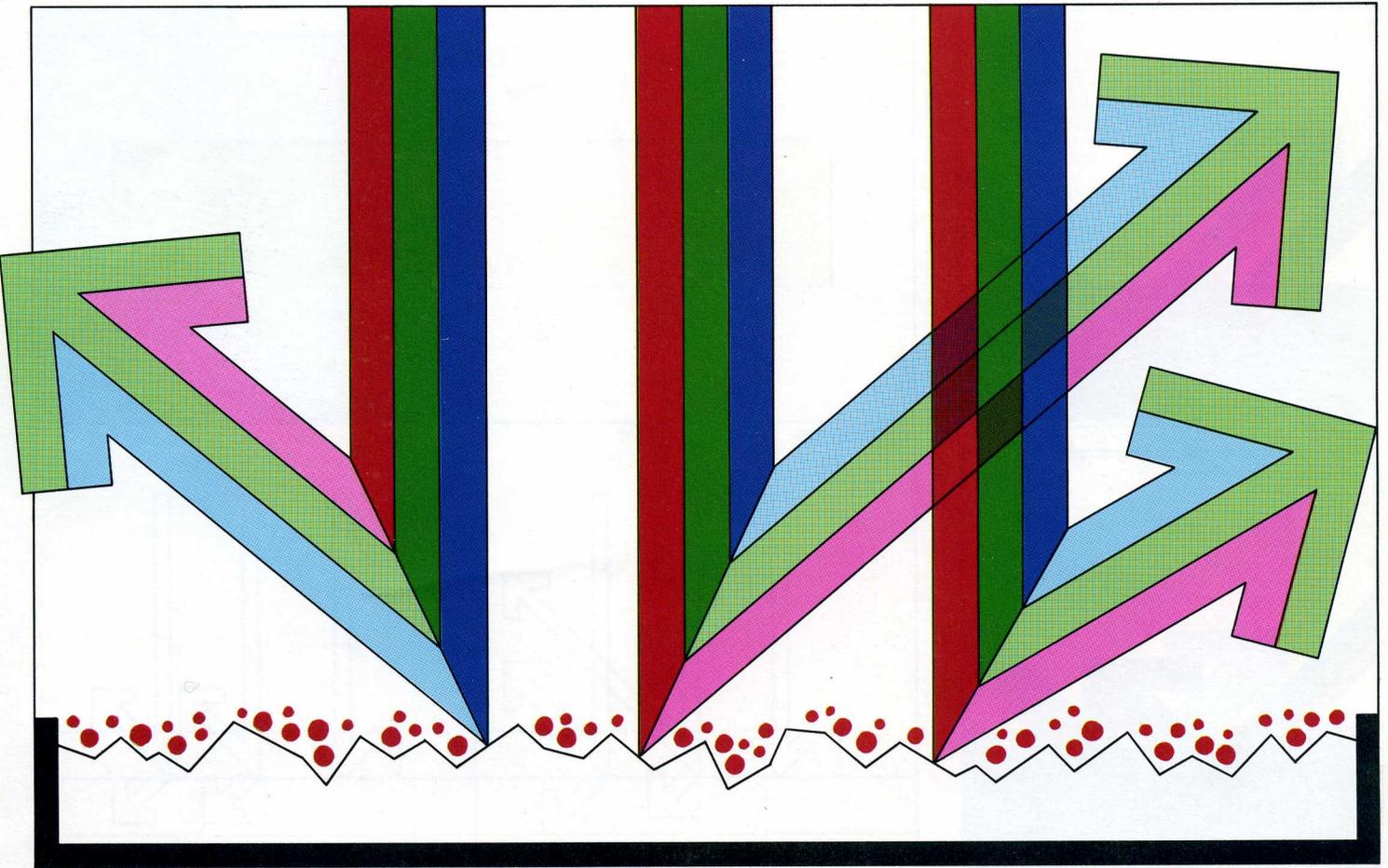


FIGURE 20



THE CHARACTERISTICS
AND ABSORPTIVITY OF
THE PAPER SURFACE.

Besides whiteness and brightness, the degree of smoothness of the printing surface influences the appearance of ink placed on it.

A rough fibrous paper surface is composed of a multitude of non-uniform reflecting surfaces. When light strikes them, they scatter it randomly and, thus, adulterate the print with white light.

A black solid or halftone for example, is grayed because of this addition of uncontrolled and unwanted white light. A colored solid or halftone is not only grayed but also tends to change its hue.

Smooth coated surfaces with fibers buried under layers of pigment minimize light interference by allowing uniform directional reflection of light.

As a rough surface contributes to color degradation, so does an excessively absorbent- or "open"-surface. An open surface may absorb the ink vehicle and pigment, but leave dull pigment particles on the surface. (Figure 20)

A surface with good ink holdup—a "tight" surface—retains both vehicle and pigment on the surface with the pigment "buried" in the glossy vehicle.