

3. Letter Spacing

Letter spacing is the white space between the letters of a word. These spaces have the same characteristics as the space enclosed by letter structures; they are two-dimensional white shapes that must be measured by area or "volume." Since each white space generally has its own unique shape, this area or "volume" can only be measured by visual judgment. Basically, "good" spacing means that all spaces between the letters of a word are equal in area. In a well-spaced word, therefore, some letters will, by linear measurement, be closer together than others, proving that linear distances play no part in the spacing of letters.

Spacing by linear measurement

HAIL

HAIL

Spacing by area or "volume" judgment

Good spacing, however, is more than just equal areas of white space between letters. A word is not a group of individual letters; it is a complex figure that is perceived in its entirety as a "pic-

ture." Therefore, in achieving a good word "picture" or pattern, it is necessary to acknowledge all elements of design simultaneously. Letter spacing must be regarded as a problem that is very much related to letter structures and their enclosed white spaces. If the only consideration in letter spacing were that all spaces between letters be equal in area, then "tight" spacing and "open" spacing would make equally effective word patterns. But this is not the case. Words that have too little space between letters are illegible as well as uneven in pattern, and words that have too much space between letters are not perceived as words at all, but just a series of individual letters. Therefore, since the effectiveness of word patterns depends on spacing that is neither "too tight" nor "too open," it follows that "just right" spacing involves something more than just equalizing white space between letters.

million

Too tight

m i l l i o n

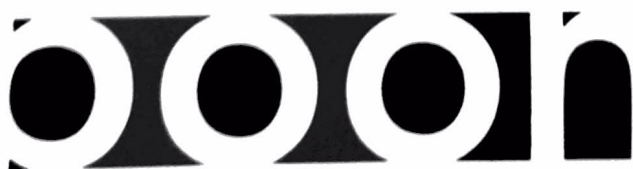
Too open

million

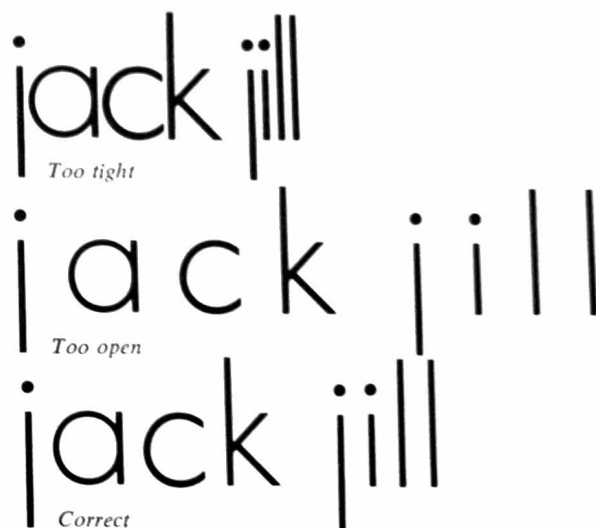
Correct

Considering the enclosed white shapes

Words are composed of three design elements: letter structures, white shapes enclosed by letter structures, and white shapes between letter structures. If a word is regarded as a single unit, however, and not a grouping of smaller units (letters), then the design elements can be reduced to two: black and white or figure and ground. The black—or figural element—would be the letter structures, and the white—or ground element—would be the white shapes within and between figures. A good word pattern, then, would be one in which figural shapes were evenly distributed on a white ground; that is, the space between letters would have to equal the space enclosed by letters. The primary reason for this is that many letters, such as *i*, *j*, *l*, *r*, and *t*, do not have inner white spaces. Therefore, if the spaces between letters were smaller



Even distribution of spatial shapes



than the spaces enclosed by letters, single-stemmed letters would create a darker pattern than space-enclosing letters. Conversely, if letter spaces exceeded enclosed spaces in size, single-stemmed letters would create a lighter pattern than space-enclosing letters. A secondary reason for the equalization of inner and outer space is that letters such as *r*, *v*, *w*, and *y* cannot be fitted closely. With tight spacing, these letters would disrupt the pattern by admitting large areas of space into the words.

livern livern

Uneven pattern

Even pattern

Considering adjacent letter structures

Making white shapes between letters equal in area to white shapes enclosed by letters acknowledges only the spatial elements of the design. Just as letter proportioning is influenced by both the black and white elements of design, so letter spacing is influenced by adjacent letter structures. While equal inner and outer spaces would probably work well for letters of normal proportion and weight, an adjustment in letter spacing has to be made to take into account the wideness or narrowness and the heaviness or lightness of letterforms. This has nothing to do with the evenness or unevenness of pattern; it is a matter of spatial tensions. Light or open letterforms have weak attraction for each other, therefore they must be spaced closer together to create a word pattern with good "cohesiveness." Heavy or condensed letterforms, on the other hand, having very strong attractions, must be spaced more openly in order to maintain a good "tension" in spatial relationships.

non



Open spacing for heavy or condensed letters

non



Tight spacing for light or extended letters

As spatial tension is an important factor in the organization of physical elements, so it is in the organization of two-dimensional design elements. Its operation in lettering, however, is restricted by the more important consideration of an "even pattern." That is, while very heavy letters could afford to be quite far apart in regards to spatial tension, the amount of space between letters would be much greater than the amount of space inside letters, thus disrupting the word pattern. Therefore, the "rule of thumb" for spacing is that the space between letters should equal the space enclosed by letters, with a slight adjustment one way or another to achieve the best spatial tension.

Because spatial tension is secondary to an even pattern in lettering, it is difficult to perceive the interaction of attraction and inertia forces. These forces are much easier to perceive in other relationships, particularly when the relationship is a dominant/subordinate one, such as the earth and moon, or the lower case *i* and its dot. This is because the larger shape represents attraction, whereas the smaller one represents inertia. If the spatial tension between the *i* and its dot is imagined as a rubber band connecting the two shapes, then too much space between the shapes would cause the rubber band to break, thus allowing the dot to appear to float up and away. Too little space between the shapes, on the other hand, would make the dot appear to be descending because of the slack in the rubber band. A rubber band that is either broken or slack is inactive; only when it is "tensed" will it operate as an active element in the relationship of the *i* and its dot. The exact amount of tension is a sensitive judgment, but anyone with a well-developed perceptual ability can "hear" the right "twang."



Too close

Too far

Correct

Considering letter “mass”

It should be understood that the “mass” or weight of a letter has nothing to do with its size. Letterforms are composed of two elements, the black of their structures and the white of their enclosed spaces. Therefore, each letterform has a certain percentage of black and a certain percentage of white, which, when “visually mixed,” produces a gray value that is the weight of that letter. Letters of equal width and height can vary greatly in weight. Also, letters that are actually printed in

abcdef

Futura Light

abcdef

Futura Medium

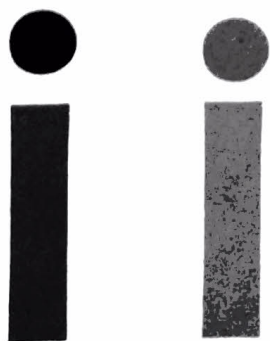
abcdef

Futura Demibold

abcdef

Futura Bold

gray or in color have less weight than the same letters in black. Since original lettering is almost always done in black and white, the letterer must adjust spatial relationships to allow for weight changes that will occur if the lettering is to be printed in gray or in color. An example of this can be seen in the lower case *i*. The dot over a gray *i* needs to be closer than the dot over a black *i*.



Considering legibility

The term “good” as applied to letter spacing in this chapter—as well as to letter structures and proportioning in other chapters—refers to legibility. “Good” spacing, for example, means that each letter of a word can be quickly and easily perceived, and that all letters operate together as a quickly and easily perceived word unit or composition. But while legibility must be the standard in the study of lettering, it is not always of first importance in application. A heavy display face might work better as a poster design element than a lighter, more legible face, and a distinctive design is more important than legibility in a company’s logo. The importance of legi-

SAAB

bility, in fact, can usually be presumed to be directly proportional to the length of the copy. A one- or two-word caption can afford to be more “designy” than legible, whereas a type used in book printing must, above all, be legible. This is why Old Style types are generally preferred for books. Not only are their thick-and-thin shapes and relatively large enclosed white spaces easier to perceive in small sizes, but their serifs allow them to be spaced more openly, which makes individual letter shapes more discernible. Such open spacing is possible because the serifs serve to tie the letters together into cohesive patterns. (Sans Serif words, relying solely on spatial tensions for cohesiveness, must have closer letter spacing.)

horizon
horizon

Considering the layout

Whenever large lettering is used as a major design element, as in packaging graphics, the word or caption must usually fit a very specific area. That is, both the height and the width of the lettering must meet exact measurements. If the letterer attempts to meet these measurements just by increasing or decreasing the space between letters, not only will the "word picture" be damaged, but the word or caption will have more or less weight than originally planned for. Lettering can be increased or decreased in width only by adjusting all three design elements simultaneously. If the letterer's first pencil sketch is too narrow, for example, he must enlarge both enclosed spaces and letter spaces so that they continue to be equal in area, and he must add enough weight to letter structures so that the black/white ratio, or weight, of the word or caption remains the same as that shown on the designer's layout or comp. This "juggling" of lettering elements is one of the most important aspects of hand lettering, and, in fact, is the biggest advantage that hand lettering has over type and photo lettering. Type cannot be reportioned at all, and the optical reportioning that is possible in photo lettering is limited in both scope and subtlety.



Word doesn't fit area.



Word made to fit area by adjusting spacing only (incorrect).



Word made to fit area by adjusting all lettering elements equally (correct).

Awkward letter combinations

There are many letter combinations, particularly in capitals, that make proper spacing impossible. One solution to this problem would be to space all letters equally wide, but such wide spacing throughout a word generally destroys the cohesiveness of the word pattern. Unfortunately, there are no perfect solutions to the problem. Using the *LA* combination as an example, the horizontal stroke of the *L* can be shortened slightly, and the *A* can be brought closer to the *L* by shortening its left serif if it is a serifed style, or by making its left stroke slightly more perpendicular if it is a Sans Serif style. These adjustments, however, cannot be so severe that they damage the structural integrity of the letters. It becomes a choice, finally, between too much letter space or lopsided and mis-proportioned letters. Professional letterers generally feel that too much space between two letters of a word is less objectionable than too much space between all letters of that word, and also less objectionable than obviously distorted letter structures.

LARK

LA combination causes uneven spacing.

LARK

Uneven spacing corrected by spacing all letters equally open (wrong).

LARK

Uneven spacing largely corrected by adjusting LA structures (right).

Word spacing

Word spacing is the white space between the words of a caption or body of copy. A basic rule of thumb for word spacing is that its area should be as large as the *O* of the letter style being used. This means that letter styles affect word spacing as well as letter spacing. Condensed word patterns would have condensed word spacing, and expanded word patterns would have expanded word spacing. But while this is an expedient and reasonably successful rule to follow for large bodies of copy, it does not take into account the subtle semantic implications that are so desirable in captions and headlines. If lettering is thought of as visual speech, then word spacing would be the time between spoken words (cadence). Tight word spacing creates a slurred, colloquial effect, and open word spacing creates a ponderous, formal effect. Semantic adjustments, of course, should not be so severe that they damage the design integrity of the caption. Like spatial tensions, they should be regarded as secondary to the larger problem of creating good, or easily perceived, lettering patterns.

Tight word spacing

Normal word spacing

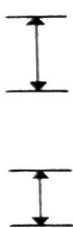
Open word spacing

Line spacing

Line spacing is the white space between lines of lettering. In small body copy types, line spacing is adjusted by mechanical measurement. If more space is desired between lines, strips of metal called leads (ledds) or slugs are inserted. Leads vary in thickness from 1 to 6 points, and slugs from 6 to 18 points. The major consideration in body copy line spacing is that long lines need more "leading" than short ones. This is because the eyes cannot easily go back and pick up the next line in a wide body of copy unless there is adequate space separating the lines.

Line spacing in large sizes of lettering, however, cannot be achieved by mechanical measurement. Because of the large shapes involved, every ascender and descender strongly affects the spatial areas between lines, which means that mechanically measured line spacing would not be spatially correct.

ring
for
repro



*Line spacing adjusted to
acknowledge ascenders and descenders.*

While it is possible to line-space hand lettering tighter than type, the line spacing should never be tighter than word spacing. Otherwise, the spatial tension between words would be stronger vertically than horizontally, and the eyes would tend to read down rather than from left to right.

**LINE SPACING THAT
IS TIGHTER THAN
WORD SPACING WILL
DAMAGE LEGIBILITY.**