

HAHBHCHDHEHFHGHGHHHHIHHJKHLHMHNHOHPHQ
HRHSHTHUHVHWHXHYHZH

OAOBOCODOEFOGOHOIOJOKOLOMONOOOPOQO
ROSOTOUOVOWOXOYOZO

nanbncndnenfngnhninjknlnmnnnonpnqnrsntnvnw
nxnynzn

oaobocodoeofogohiojokolomonooopoqorosotouovowoxo
yozo

0102030405060708090 1021324354657687980

The process of making a typeface begins long before the first letter is drawn. Spacing is not applied to finished shapes; it is designed with them, and a glyph without its sidebearings is only half a decision. The rhythm of stems and counters continues into the gaps between letters, and a paragraph set solid will show a spacing error faster than any pair test.

Working at text sizes keeps the judgment honest. What reads as elegant at a display size can fall apart at nine points, where the eye stops seeing outlines and starts seeing texture. A page of running text is the instrument panel: even color means the fitting is close, and dark or light patches point straight at the letters that need attention.

Most spacing work is done between n and o. The straight-sided control and the round control between them describe nearly every combination the alphabet can produce, and once those two are settled the rest of the lowercase follows by class. The caps take their own pass against H and O, and the figures a third, since lining figures must survive both text and tables.

None of this is glamorous. It is long sheets, small sizes, and the same words over and over, which is exactly why the sheets should waste no paper and no attention on anything but the letters.

HBHDHEHFHIIHKHLHMHNHPRHRHTHUHVHWHXHZ
H nbndnhnknlnmnpnrntnunvnwnxnz

OBODOEFOGOIOJOKOLOMONOPOQOROSOTOUOV
OWOXOYOZO

obodoeofogohiojokolomonopoqorosotouovowoxoyozo

HOHOHAHOHOH OHOHOBHOHOH nononanonono
ononobononon

1112131415161718191 0102030405060708090
2021222324252627282920

Set a page of nothing but the control strings and the texture goes abstract; set a page of nothing but prose and the classes hide inside words. The working sheet needs both: strings to isolate a fit, prose to test it in traffic. Alternate between them on the same page and the eye carries the standard from one to the other without a second sheet.

There is a reason the old shops kept spacing copy on a nail by the frame. The words were chosen because they were ordinary, and ordinary words are the hardest audience: they offer no display flourish to hide behind, only the steady alternation of straight, round, and diagonal that a text face lives on. Handgloves and hamburgefonstiv survive because they compress that alternation into something you can set in a minute.

A last pass should always happen at the size the type will actually be read, on paper, in the light you have. Screens flatter thin joins and hide clogged counters; a laser print at nine and ten points tells the truth about both. Print, mark, adjust, print again. The loop is the method, and the shorter the loop, the better the spacing.

The quick brown fox jumps over the lazy dog. Grumpy wizards make toxic brew for the evil queen and jack. Sympathizing would fix Quaker objectives. Five or six big jet planes zoomed quickly by the tower. Crazy Fredrick bought many very exquisite opal jewels. The five boxing wizards jump quickly over the lazy dwarf.

A smaller size and a narrower measure change the questions. At nine points the joins thicken, the counters close, and the space inside a letter argues with the space around it. Three narrow columns put more line breaks on the page, and line breaks are where spacing problems hide: the end of a line exaggerates a loose fit, and a hyphenated break shows whether the word space is holding its own against the letterfit.

Read the page at arm's length before reading any word on it. The gray should be even from column to column. Then read a single column closely and mark every place the eye stumbles. A stumble is not always a kerning pair; more often it is a class fit that is slightly generous or slightly mean, repeated often enough to make a pattern.

Quick brown foxes jump over the lazy dog while vexed zebras quietly graze. Jackdaws love my big sphinx of quartz. Pack my box with five dozen liquor jugs. How razorback jumping frogs can level six piqued gymnasts. Amazingly few discotheques provide jukeboxes.

The figures deserve their own paragraph in running text: in 1984 there were 365 days, 52 weeks, and 8,760 hours; the 7:45 train left from platform 12 and arrived at 10:03. Prices moved from \$1.99 to \$24.50 to \$1,038.00 without the tabular setting anyone expected.

After the lowercase settles, the small sizes are where the word space earns its keep. Too wide and the line falls into beads; too narrow and the words weld together. The right value is the one you stop noticing.

Waltz, bad nymph, for quick jigs vex.
Glib jocks quiz nymph to vex dwarf.
Sphinx of black quartz, judge my vow.
Two driven jocks help fax my big quiz.
Five quacking zephyrs jolt my wax bed.
The public was amazed to view the quickness and dexterity of the juggler.
While making deep excavations we found some quaint bronze jewelry.

The narrow measure also referees hyphenation and the word space at once. When a column runs eleven or twelve picas, every line ends under pressure, and the compromises pile up where you

can count them. If the color survives a page of that, it will survive a book. If it does not, the failures are already sorted by frequency, which is the order you should fix them in.

Numbers in tables behave differently from numbers in prose, and both differently from numbers in dates: 3.14159 and 2,718 and 1/2 and 3/4 and the 21st of May, 2026, at 6:15 in the evening, seat 44F, gate B7, flight 962. Oldstyle figures drop into text without shouting; lining figures stand up straight in a column. A working face needs a plan for both, and the plan shows at nine points before it shows anywhere else.

Punctuation earns its fit in running text: commas, periods, colons; the question mark? The exclamation! Quotation marks "double" and 'single,' parentheses (like these), brackets [like these], the em dash and the en dash and the hyphen-heavy compound-modifier pile-up. Each mark has a color of its own, and a page like this one is where the marks stop being afterthoughts.

Finally, capitals in running text: NASA and UNESCO and USA sit inside sentences without tripping them, provided the caps are fitted for words rather than for initials. A face whose caps are spaced for display will stripe a paragraph with dark patches at every acronym; the fix is in the fitting, not in the tracking.

A word on rhythm at the smallest sizes: the reader never sees a letter, only the word-shape, and the word-shape is mostly white. Tighten the fitting one unit across the lowercase and a nine point paragraph gains a shade of gray; loosen it one unit and the same paragraph breathes. Neither is wrong. What is wrong is not deciding, and letting the classes drift apart until every page argues with itself.

The diagonals are the last to settle. v w x y and their capitals push air into every neighbor, and the temptation is to kern the air away pair by pair. Resist it until the sidebearings are final; a hundred kerns written against provisional fitting are a hundred kerns to rewrite. Class first, pair second, exception last, and the

exception list should embarrass no one at the end.

When the sheet is marked up, resist the second temptation: fixing on screen what you found on paper without printing again. Every change moves neighbors you were not looking at. The sheet is cheap. Print it again, read it again at arm's length, and stop when two consecutive prints give you nothing to mark. That is what finished spacing feels like: a page with no news on it.

AV AW AT AY AC AG AO Av Aw Ay FA
LT LV LW LY LO PA P. P, TA Ta Te To Tr
Tu Tw Ty T. T, VA Va Ve Vo Vu V. V, WA
Wa We Wo Wr Wy YA Ya Ye Yo Yu Y. Y,
OA OV OW OY

av aw ay f) f] ff fi fl fo ft ky ny ry rv rw ry
r, r. ta te to ty va ve vo vy wa we wo xe ya
ye yo y, y.

AVATAR WAVERLY TAVERN VOYAGE
TYPEWRITER LATVIA AWKWARD
FLYAWAY OKLAHOMA

Tavistock Yorktown Avondale Wyvern
Taylor Voyager Anywhere Keyway
Layaway Watery

Delivery davenport waywardly everyway
avowedly livery revelry towaway waylay
verify

L'Avventura d'Artagnan O'Grady 7-
Eleven 4x4 No. 7 (parenthetical)
[bracketed] "quoted," 'quoted,' T. V. W.
Y. F. P.

Ko Ke Ka Kn Ku ko ke ka kn ku Ry Ra Re
Ro Ru rv rw ry ra re Xa Xe Xo xa xe xo Za
Ze Zo za ze zo

Fa Fe Fi Fo Fu F. F, Pa Pe Pi Po Pu Jo Ja
Je Ju ja je jo ju Qa Qe Qu qu Ga Ge Go
Gy gy ga ge go

difficult offhand affable raffle waffle
office official effect affect diffident
scaffold sheriff cliffhanger

Kevin Knox Kyoto Texas Zurich Prague
Quebec Java Fiji Georgia Yukon
Waterloo Ottawa Tokyo Ypsilanti
Reykjavik

TOKYO QUEBEC ZURICH PRAGUE
WATERLOO OTTAWA REYKJAVIK
YUKON TEXAS FIJI JAVA KYOTO

To. To, Ta. Ta, Te. Te, Vo. Vo, Va. Va,
We. We, Wo. Wo, Ya. Ya, Yo. Yo, r. r, v. v,
w. w, y. y, f. f,

Ave Way Aye Try Fly Ply Sky Sly Why
Wry Away Ivy Lynx Onyx Oryx Envy
Navy Wavy Tywyn Gwynedd

A family earns its keep when the styles sit together in one paragraph. The roman carries the argument, the *italic leans in for emphasis or a title*, and the **bold interrupts only when it must**. If any of the three announces itself for longer than a phrase, the fitting or the color is off.

Consider a working sentence: the report cited *On the Origin of Species* twice, flagged the deadline as **Friday, March 14**, and quoted a reviewer who called the draft *generous, unhurried, and occasionally sharp*. The italic must match the roman's color without matching its rhythm, and the bold must gain weight without gaining width it cannot afford.

Now the stress test, pairs across styles: version **2.0** versus 2.0, the word *very* against **very** against very, and a run where **bold begins** mid-word and the roman resumes immediately after. Watch the joints where styles change; a spacing system that survives its own seams is finished.

Finally a longer italic passage to judge sustained color: *the quick brown fox jumps over the lazy dog, then turns, unhurried, and jumps back, because italics are read in whole sentences more often than in single words, and their fit must hold for a paragraph, not a phrase.*

One more paragraph belongs to the seams between sizes. Emphasis set a size down, like a caption, keeps the italic honest at *nine and ten points*, and a run-in head keeps the bold honest at the top of a paragraph: **Method**. Print the sheet, mark the stumbles, fix the classes before the pairs, and print again. **Result**. A page whose changes of voice read as changes of voice, not changes of typeface.

And a closing test that mixes all three within arm's reach of punctuation: the committee (which had read *both* drafts) voted **seven to two** to adopt the second, noting that the phrase "*per the usual arrangement*" appeared **fourteen times**, and that *fourteen*, in this context, was **thirteen too many**.