

National College
of Art and Design

4th Year Visual Communication

From Basic Type Spacing
To
Creative Use of Type Spacing

by Chooi Siew Heng

Submitted to The Faculty of History of Art
and Design and Complementary

Studies in
Candidacy for
the Degree of B Des of Design in
Visual Communication
1993

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Content

Picture Credit

Introduction

Chapter 1: Type Spacing.

How principles of spacing work in relation to type

- (a) Intercharacter spacing.
- (b) Character spacing.
- (c) Word spacing.
- (d) Line spacing.

Consideration of the typographical spacing problems we are facing today .

Chapter 2: The method of checking spacing.

- (a) Harry Smith(Linotype) Method.
- (b) Diagraph Letter Frequency Method.
- (c) Kerning.

Chapter 3: Creative use of type spacing.

- (a) Texture create by type spacing.
- (b) Modular type spacing.
- (c) Perspective type spacing.
- (d) Transparency and Overlapping type spacing.
- (e) Curving and Bending in type spacing.
- (f) Movement in spacing.

Chapter 4: The success and failures in type spacing.

The success.

The failures.

Summary

Bibliography

Picture Credit

Chapter1

- Fig 1.1, 1.2, 1.3, 1.4 - Detail in Typography.Jost Hochuli.1987.
Fig 1.5 - Printed from Apple Macintosh.N.C.A.D. 1993.
Fig 1.6 - Page from Herb Lubalin, Art Director, Graphic Designer and Typographer. Gertrude Snyner & Alan Peckolik. 1985.
Fig 1.7 - Spacing Guideline from Graphic Print Shop.
Fig 1.8 - Example setting from different printing company.
Fig 1.9 - Frederic W Gaudy.Frederic W Gaudy. 1985.Pg 95
Fig 1.10 - Page from Telephone Directory.

Chapter2

- Fig 2.1, 2.2 - Linotype type margin indication.
Fig 2.2a - Pages from Letraset.
Fig 2.3 - Type from IBM Computer. 1993.
Fig 2.4,2.5 - Type from Apple Macintosh.1993.

Chapter3

- Fig 3.1 - 20th Century Type. Pg 137.
Fig 3.2 - Typographic Communication Today. Edward M. Go Hschall. Pg127.
Fig 3.3 - Type and Image. Phillip B Meggs.1989.Pg 82, 83.
Fig 3.4 - New typography.Pg 25.
Fig 3.4a - Graphic Source Book. Liz Mc Quiston & Barry Kitts. Pg 154.
Fig 3.5 - Graphic Design Steven Heller.1983. Pg 132.
Fig 3.6 - Typographic Design. Form and Communication. Rob Carter, Ben Day. Phillip Meggs.1985 Pg129.
Fig 3.7, 3.8 - Graphic Design. World Views. Jorge Frascara. 1985 Pg 94.139.
Fig 3.9 - From Word to Image and Back Again. Axel Menges. 1992. Pg 114.
Fig 3.10 - The Liberated Page. Herbert Spencer. Pg 213
Fig 3.11 - New Typography. Pg15.
Fig 3.12a, 3.12b - Type and Image. Phillip B Meggs. 1989. Pg 74,75.
Fig 3.13 - 22th Design Annual.Bride M Whelan.1986 Pg 206.
Fig 3.14 - From Word to Image and Back Again.1989. 139.

Chapter4

Fig 4.1 - From Word to Image and Back Again. Pg 167,168,169.

Fig 4.2a - Typography now, the next wave. Rick Poynor. Edward Booth. Clibborn and Why Not Associates.1991.Pg 120

Fig 4.2b - 20th Century Type .Lewis Blackwell. Laurence King. 1992 Pg 193.

Fig 4.3 - Emigre 9.

Fig 4.5 a,b - 20th century Type. Lewis Blackwell. Laurence king .1992. Pg165.

Fig 4.6 a,b,c - Document from Visual Communication Dept.N.C.A.D.1993.

Introduction

During my one and a half years in the N.C.A.D. I have had the unusual opportunity of observing the dramatic technological changes in computerised design which have affected my own approach and thinking about typography.

However, compared with the formal method of hand composition I learned in my native Malaysia, the modern computerised method of typography can often lead to greater faults in letter spacing.

I will try to examine the spacing problems which I found in some printed material from newspapers, magazines, posters, etc. I will also try to bring out some more general type spacing problems in design that we are facing today.

"The material of typography is the black and it is the designers' task with help of this black to capture space, to create harmonious whites inside the letters as well as between them". Andrian Frutiger. 1968.

Unfortunately, many contemporary typographers ignore the sense of good type spacing and it seems to be common opinion that a typographer shows ability and talent when he or she is able to create new typefaces which did not exist before. But, do they know that having created new faces there still remains a lot more to be done. Many fail to deal with the spacing problem, or maybe they just ignore it.

Today, there are still many professional designers who have problems in choosing a 'right' typeface for their design. However, the whole design may be a failure even with a beautiful typeface, because of a small spacing problem. I think it is time we looked back at what traditional typesetters can teach us about spacing with a view to applying their lessons to contemporary typography. In this thesis I will try to analyse the type spacing with the Harry Smith (Linotype) method, Diagraph letter Frequency and Kerning. With a few examples from a few famous designers and typographers to show the creative us in type spacing effectively. Finally I try to analyse some designs which with success type spacing and a few which did not work well in type spacing in today design field.

Chapter 1:

Type Spacing

I will begin this examination with the measurement of some of the letters in geometrical and optical way to show which solution is the correct solution for the appearance of the letters. When we draw a black box on a white sheet of paper, what we really see is not the black box but the paper itself, because when light falls on the paper and is reflected back to our eyes that's what we see, light is absorbed by the dark. We only see the box if the box is white on a black paper. Like all other two-dimensional images, letters are subject to optical rules too. The following points which must be observed in the relationship between type and space.

(A) Lettering Design.
by Micheal Harvey.
London.1975.Pg58

(1) Most of the letters can be grouped into three basic form; circles, triangles and squares. Normally the circles and triangles will look smaller than the squares if the three of the are in the same size. Because the space (white area) of the circles and triangles overtake the attention of the form, to make them look even they must be slightly bigger than the square in size. (A)

2

corrected geometrically



corrected optically



(Fig 1.1)



(2) When an area is cut exactly in half by a straight line, the upper half space will look bigger than the lower. To make the two upper and lower spaces look equal, the dividing line must be slightly above the geometrically exact centre line. (A)

(Fig 1.2)

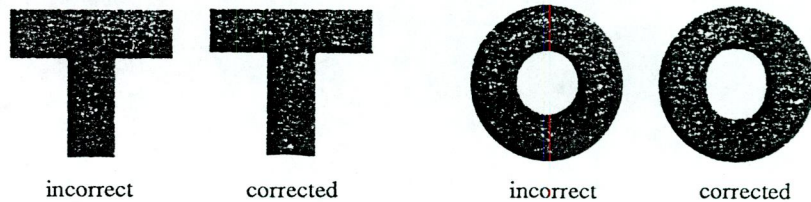


A1 and A2 are centred geometrically

B1 and B2 are centred optically

(3) In lines of equal thickness, horizontal lines look heavier than vertical lines. To equalise them optically, so that stems look the same weight as cross-bars, horizontal lines must be made a bit thinner. This applies also to rounded forms, which must be slightly thicker at their widest parts than at head and foot. Optically too, right-hand strokes must be a little wider, and left-hand strokes a little narrower, than the vertical.^(A)

(Fig 1.3)



(4) When two curves meet straight strokes or other curves or when two diagonals meet, a swelling effect occurs. The correct way is to add a little bit of space on that area.

(Fig 1.4)



(5) Small type sizes must be under interspace in proportion than larger. This is an optical requirement we can see in our own handwriting. The bigger we write, the narrower we make individual letters. and vice-verse.^(B) In the Bauer Typefoundry's Bodoni the large and small characters are differently drawn, depending on their size. The film-set versions are all made from one drawing. Apart from the uniformity in the drawing, the larger and medium sizes look too fat, because of lack in contrast in the different strokes.

(B) Letter of Credit.
by Walter Tracy.
London.1986.Pg117

48 pts Bodoni normal
enlarged to 52 pts

PENT

Actual Bodoni normal 52 pts

PENT

(Fig 1.5)

The careful manipulation of these spacings can make a great difference to the recognition of the character itself. The success or failure of a typeface is very much a question of getting a good balance between internal and external spacing of individual elements, Basically the internal space of the letters is fixed by the shape and design of the letters in a given point. But it is important to allocate the correct amount of space in between each of them to get a proper relationship when they are associated into words, words into phrases, into copy.

Type spacing is the rhythmic and dimensional field in which typography communication exists, it establishes a cohesive typographic arrangement. Unity is achieved through the principle of visual compensation; that is the spatial balance and integration of typographic elements.(c) Structurally, typographic space is defined form and space relationships that determine a compositions underlying spatial order. Understanding and use of optical adjustment is necessary for visual clarity.

(C) The Typographic Scene.
by Walter Tracy.
London 1988.Pg83.

Discussing type spacing, Ben Shann tells about his training as an apprentice who lettered on lithographic stones in 1913. The shop foreman explained, "Imagine you have in your hand a glass that will hold only so much water. Now you provide space between your letters, whatever their slants and curves may be, to hold just that much water, no more or less". (D) In my point of view this only works on certain typefaces only.

(D) Basic Typography.
by Ruedi Ruegg.
1989.Pg.36.

The universal principle for spacing is this; the typographer, calligrapher, or designer attempts to make the interletter space between each pair of letters appear equal to the space between every other pair of letters, because these conterform spaces have such different configurations, this spacing must be achieved through optical balance, rather than through measurement. We usually divide this complex type spacing into intercharacter spacing; character spacing; word spacing, line-spacing.

The number of books dealing with lettering is now fairly large, some going more or less deeply into the history and development of letterforms while others principally present models

This copy set in Avant Garde Typeface
(Fig 1.6)

(a) Intercharacter spacing

Intercharacter spacing is based on the thickness of the basic stroke weight. It is the principle factor which determines the lightness or darkness of the character. A thin stroke keeps more intercharacter spacing to produce a light effect for the character; a heavy stroke produces a dark effect. The evenness of the stroke is the primary factor affecting the texture of the typeface, that is the degree of contrast between the thickest and the thinnest parts of the letter, the rhythm between the thickness of a stroke and the spacing inside and in between it.

The distribution of the intercharacter spaces within a typeface is also very important in determining the evenness of texture. An example, the enclosed space of letters like "o" and "a" in typefaces like Avant Garde, is a bit too much in contrast, in comparison to the unenclosed space with other characters until lost the legibility when they form into words.

(b) Character spacing

Character spacing is the spacing between each character. It has to appear consistent. The same space may be added and taken out between characters in order to justify a line; if the spaces are very small, this addition or reduction is virtually imperceptible. The result is an evenness of colour that is unlikely if word spacing is visually inconsistent. In other words, spacing that is noticeable is incorrect. Generally our alphabet consists of all three groups.

- (1) Straight strokes such as ; I, J, L, N, M, etc.
- (2) Round Strokes such as; C, O, Q, etc.
- (3) Triangular letters such as; A, V, W, Y, etc.
- (4) The odd ones; S, R, B, etc.








These groups can appear in any combination to become words. What the eyes perceive is the overall space between the characters, which differs greatly from character to character according to the edge shapes.

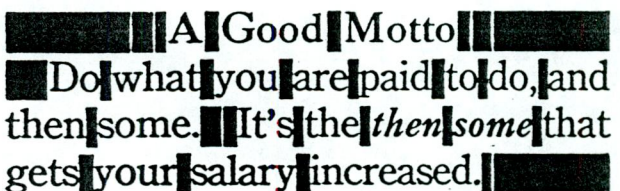
Since the beginning of typography, type designers have had to consider the rational shapes in deciding the amount of space to allow on each side of the character. I will show how to measure the spacing in the next chapter.

(c) Word spacing

Word spacing is measured with em system; the em quad is a square of a given point size. The en quad is one-half the square. The normal quads and spaces furnished with a font of type are the em quad, 2em quad, 3em quad, etc. These spaces are all based on the em quad, which is the square of the body size. For example, if the body is 12 points, the em quad is 12 points square.

*Standard Scheme of
Quads and Spaces.*

3-em quad		3
2-em quad		2
Em quad		1
En quad		$\frac{1}{2}$
<hr/>		
3-em space		$\frac{1}{3}$
4-em space		$\frac{1}{4}$
5-em space		$\frac{1}{5}$



(Fig 1.7)

Words composed with too narrow spacing appear to run together and one difficult to read. On the other hand, if spacing is too wide, the line appears choppy and lacks unity. If the spacing between words is noticeably uneven, a displeasing effect is created. This interferes with the legibility and readability of the type. It is important to remember that all of the principles and rules of the three hot type word spacing apply equally to two dimensional cold type. This includes mechanical and photo-composition methods,

One of the simple methods of checking the word spacing is to read the text upside down. If we notice the wordspacing very easily that means the word spacing is too loose and there is a need to narrow it. When word spacing is visually consistent, there are no big holes in the page caused by very large spaces between the words and no dark blotches caused by words that are too crowded.

In justified type this apparent equal space is by necessity an illusion. Since characters have different widths, and lines have different numbers of characters, the amount of space available to distribute between the words must be varied in order to justify the line endings.

When the accumulated width approaches that of the full line, the extra space between the words is distributed according to predetermined rules for minimum and maximum allowable amount. At this point, the decision is made Whether to distribute space, or to place, not easy to get a good result. Because there are so many possibilities, some designers try to ignore the problem and produce inconsistent and poorly spaced type.

(d)Line spacing

Line spacing today is normally called 'leading'. Many designers still refer to extra space between lines as leadings, often mystifying those who are unaware of typesettings hot metal past. When specifying linespace for body copy, the standard rule is to use from one to four points of leading. Type that has no leading is usually not recommended because the lines of types will appear too close to one another to be legible. Line spacing has a great effect on type colour. As we add space between the lines, a lighter overall effect is created. Even very black faces look less heavy with a good deal of space between the lines, and types with very high contrast tend to look somewhat less active with added space. Care and judgement are needed, however to be sure that space is not too great, otherwise readers will not be able to find their way back to the beginning of the next line.

Basically, types with large -x-heights tend to require greater line spacing to balance the internal spaces. If the typeface has extremely long ascenders and descenders, or if the face is being set in a light weight, it's still possible to set the text without leading. The effect of loose word and character spacing is exaggerated by tight line-spacing, while a bit of additional linespace might actually correct the appearance of excessive or unequal word spacing.

Generally, the leading should be about 20 percent of the type size. Rules are made to be broken. Exceptions like heavy typefaces and faces with large x - heights require more leading than do light faces with small x - heights. There are still many possibilities; the goal of maximum legibility means that the typographer must be flexible in adhering to formal rules.

Consideration of the typographical spacing problems we are facing today.

Type spacing problems in today's printed materials are getting more and more serious. We should look into this manner and look back at what we have ignored.

(E) Typography: Basic Principles.
by John Lewis.
1963 Pg 53.

Letters do not live in isolation; they are the elements of meaning, the components of visible language. Their spatial relationship with each other is crucial, not only for the rapid recognition of words by the reader but for the regularity of texture that is essential if the reader's comprehension is to be maintained for a long period. (E)

8

Electronic typesetting systems generally include a selection of automatic spacing routines, normally described as ;'normal', 'tight', 'tightest', 'touching' and 'loose'. This use of 'minus spacing' is a spurious sort of sophistication, because the spacings provided by the electronic typesetting are already fixed. On another words the spacings provided by the electronic typesetting are not suitable for all the typefaces. The practice can only be due to a compound of ignorance and indifference. Ignorance of the process of character fitting as described earlier is forgivable; it is an esoteric subject not part of the typographer's normal education. But ignorance of the essential role of character spacing has shown itself in the work of people who should know better.

Certain printers occasionally ask for type to be set thinner than normal, to get in more letters to a line. This is perhaps prompted less by taste than by economy. In these circumstances it is necessary to make some characters as thin as the extremities of the stroke will permit, so that no shoulder remains. And quite recently the manufacturer of an electronic typesetter issued an item of print composed in a face designed for the system, but they now thought that the fitting they had given the face in the first place was unsatisfactory. Perhaps the naive belief that character spacing is simply a matter of choice is due to unthinking enthusiasts for computer programmes.

Monotype How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings.

abcdefghijklmnopqrstuvwxyz 1234567890
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Linotron How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings.

Compugraphic How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings.

Photon How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings.

Monophoto How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings.

IBM Composer How can consistently high standards of typography be achieved and maintained? Naturally much depends on the ability of the designer and on the technical accuracy of the layouts sent to the printer. Nevertheless, perfection in design and the technical accuracy in the marking of the layout for printer are only beginnings. (Fig 1.8)

Optima Typeface
Left by Linotype
Light by Compugraphic
(Fig 1.9)

THE LETTERS of the alphabet are two-dimensional objects; the space around and between them, and inside them, is an essential factor in their identity. Even when the space is eliminated from a letter, as in some whimsical or provocative designs, the reader must mentally provide the necessary space from prior experience before he can identify the letter. Walter Tracy

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Zapf Hermann Seitersweg 35	7 68 25
Zapf Ilse Niebergallweg 18	4 81 89
Zapf Konrad Pfungstädter-90	5 67 90
Zapf Maria Gruber-2	71 38 57
Zapf Maria Kranichsteiner-14	7 54 78
Zapf Peter Heinheimer-76	7 49 77
Zapf R. Berchhaus-12	71 38 73

(Fig 1.10)

Faulty letter spacing is the most frequent problem in modern text setting. Many sources for mistakes are mainly due to letters cast or set in too narrow a space. Two examples are 'r' and 'n' set to look like 'm' and 'c' and 'l' set too closely to look like 'd' . Such critical letters are, as far as legibility goes, not only important in the small type used for book and newspaper printing, measuring only a few millimetres but also for the signing in towns and on highways. The letters must not be placed too close to each other in order to safeguard quick recognition even under poor lighting or bad weather conditions. As far as numbers go, the differentiation between 3 and 8 often presents certain difficulties even to the normal eye. This happens frequently in the recognition of numbers in telephone directories and bank accounts.

Not every type designer organises the spacing of his own typefaces. Most of them leave this fitting process to the manufacturer who builds the typesetting machine. Each manufacturer has his own typesetter to organise the spacing. So, even if we select the same typeface with the same point size, if they come from two different manufacturers we might get totally different results. For example, as far as I know, the Univers Medium 10 points is produced in six different versions by six different manufacturers, with two different spacing systems in Optima. I think there are more if we look into it.

When we are doing artwork or type setting, we might find text slightly too short or too long to fit in the space provided in the design because of the different versions from different manufacturers. Very often we have to reset the text in smaller point size or even change the whole design, which is both expensive and time consuming. It is very important to establish a standard format for spacing systems, especially in body type. This standardisation would be very useful for those who are dealing with typography and the designer can anticipate exactly how the text will turn out.

Chapter 2 :

A method to check spacing

Development of a method to check spacing is important. It is also important to educate the next generation on methods of achieving proper spacing and an overall sense of good type spacing.

(A) Harry Smith (Linotype Method.)

However, there are a few established systems which think are reliable to use. The most basic one is based on the principles of Harry Smith of Linotype. As we all know, in the Roman alphabets, capital and lowercase, most of the letters are formed by straight strokes, or rounded strokes, or a combination of both; the direction of emphasis is vertical. Generally, we have to group the capital letters first and then choose one letter with a straight stroke and another with round strokes as a start for the spacing measurement.

The letters will be grouped like this;

10

(1) Letters with a straight upright stroke;

B. D. E. F. H. I. J. K. L. M. N. P. R. U.

(D.U.B.could be in the round stroke group depending on the typeface.)

(2) Letters with a round stroke;

C. O. G. Q. P. Q.

(3) Triangular letters;

A. V. W. X. Y. T. Z.

(4) The odd ones;

S.

Letter "H" always is a standard one to start with, the main reason being the two vertical straight strokes make the spacing easier to measure.

First "H" has to be tested with a few other letters, the designer being satisfied that weight of its strokes, the width of its interior space and the shape and length of its serif are all in accord with his purpose. Four black on white copies of the "H" are needed. The width between the uprights of the letters is measured and half that amount is marked on each side of the letter on all four copies. They are set together in a row and the spacing is reduced or increased until the space between each letter looks equal to the interior spaces. Remember, the length of the serif must not be a controlling factor; they may be shortened. The spatial relationship of the vertical is the important thing. If the type is a san-serif typeface the side spaces should be narrower than those in a seriffed face. When the four "H"s look harmonious, the space between them is measured. A half of the amount is now the appropriate allocation for each side of "H" and for all the capitals having a straight vertical stroke.

11

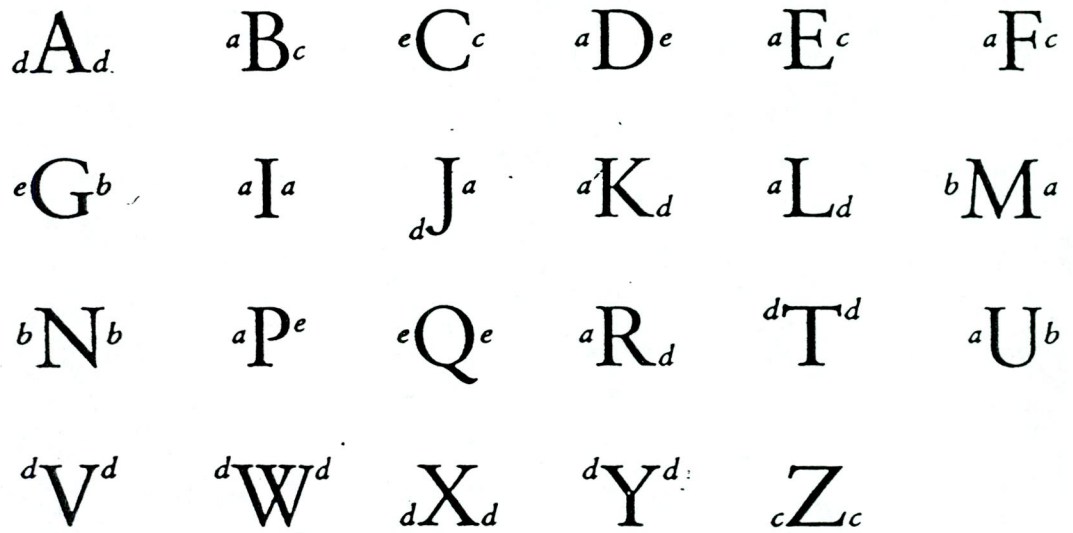
The next letter to deal with is "O", of which two copies are needed. First, one copy is placed between two pairs of correctly spaced "H"s and the spaces on each side of it are adjusted until all five letters seem to be in balance. The space is then measured. The amount belonging to "H" is subtracted and the remainder is therefore the amount due to "O". After that we still have to juxtapose two copies of "O" marked with the side space that we have measured and placed side by side between the two pairs of "H"s. This test may show the need to revise the fitting of "O" and "H" because it is a new test to show how the combination turns out with other characters.

When the ideal spacing of these two capital (H and O) has been achieved, these two spacings can be used as a standard to test the rest of the alphabet. The spacing would be as indicated.

Spacing indication for uppercase characters;

- (a) same as H.
- (b) slightly less than (a)
- (c) About half of (a)
- (d) Minimum space
- (e) Same as O

The rest of the alphabet is organised as;



(Fig 2.1)

S must be spaced visually, between standards.

12

Using the same method, the lower case procedure will start with the letter "n". The grouping of the lower case would be like this;

(1) Letters with a straight stroke;

b, d, h, i, j, k, l, m, n, p, q, r, u.

(2) Letters with a round stroke;

b, c, d, e, o, p, q.

(3) Triangular letters;

v, w, x, y.

(4) The odd ones;

a, f, g, s, t, z.

(a could be in the round stroke group depending on the typeface.)

Firstly the width between the upright of "n" is measured and a half of that amount is given to the left side of the letter and slightly less on the right because the arched corner seems to add to the space. Thus, if the left is given 10, the right will be 9 or 9 and a half. The four copies of "n" are marked up and set in a row as it was done before in the uppercase, until the eight uprights look equally spaced. Then the lowercase "o", can be dealt with and checked in combination with "n". The "o" has to test with the "n" in as many combinations as possible. Here are a few different ways. When the two letters look harmonious they are measured against the unit gauge and the widths of the letters and their side spaces modified so as to maintain the ideal balance of black to white. Which the "n" and "o" established as standard; By using the measured spaces of "n" and "o" a spacing indication can be organised as;

- (a) Same as left side of n
- (b) Same as right side of n
- (c) Slightly more than left side of n
- (d) Minimum space
- (e) Same as o
- (f) Slightly less than o

13

The rest of the alphabet is organised as;

^ab^e ^cc^f ^cd^a ^ee^f ^ch^b ^ci^a

^aj^a ^ck^d ^cl^a ^am^b ^cp^e ^eq^a

^ar^d ^bu^b ^dv^d ^dw^d ^dy^d

(Fig 2.2)

a f g s t z

must be spaced visually, between standard.

(This method also created by Harry Smith.)

The essential thing is that the space between letters should never be greater than the internal space of "n" , Unfortunately today the designer (some of them) ignored it.

1234567890

Cirkulus. 1970.

1234567890

Carlton.

1234567890

Camellia. 1972

1234567890

Cooper Black.

1234567890

Italic.

(Fig 2.2)

Numerals are a different case. Almost any typefaces, serifed or sans-serif, has to be spaced individually. Today most of the numerals occupy the same width, in spite of their difference in shape and proportion. This method is only suitable for some typefaces. In most of them '1' often looks unhappy and separate from the others. I think all the numerals have to be measured individually for spacing in order to find a proper fitting suited to it's shape. Studies by Tinker in 1930 showed that old style numerals, with ascenders and descenders (1 2 3 4 5 6 7 8 9 0) are easier to perceive at a distance than modern numerals (1 2 3 4 5 6 7 8 9 0). From my point of view the old style numerals might have some problems because occasionally an appreciable hesitation appears, particularly when the figures are grouped. Anyway, today a few new typefaces still arrange their numerals in the traditional style. for example; The Camellia 1972; The Cirkulus 1970; Letraset Claude Sans Italic; 1988, etc.

14

Punctuation marks are normally placed on the narrowest width possible but I think they need some space to be clearly visible. The comma and period can very well be centred on a half of the figure width, but when the colon is used as a punctuation sign it ought to be set slightly apart from the word it follows. The same applies to the semi-colon. Quotation marks, single and double, make their full effect when they stand slightly apart from the letters. The double opening quote, which is often followed by a capital, especially in conversational wording should be given some space on it's right hand side; the single opening quote should be treated the same. The closing double quote usually follows lowercase; so does the apostrophe, in it's own role and when it acts as the closing single quote.

Finally, this process has allowed us to reach a standard. Although this method takes a long time, compared to the automatic letterspacing display unit, it produces much better quality.

(B)Diagraph Letter Frequency Method.

The second method of type spacing is based on diagraph letter frequency for testing type which is for text face. The purpose of this process is to scrutinise the fitting relationship in the appropriate pointsize. Normally 9 point, 10 point, 11 point and 12 point would be the reasonable sizes for text face. First the letters will have to be combined like "aa", "ba", "ca", until "yaz". and second line starts with "ab", "bb", "cb", until "ybz" and so on. With this method the spacing already will have been adjusted by the typesetter, but the "ha" combination is found to be a bit too far apart. Note also how the "w" stands out as too bold when the font is presented this way. The space between "h" and "a" needs to be tightened and the weight of "w" has to be made thinner to fit the other letters.

aabacadaeafagahaiajakalamanaoapaqarasatauavawaxayaz
abbbcbdbefbgbhbjbkblmbnbnbobpbqbrbsbtbubvbwbxbybz
acbcccdcecfcgchcicjckolcmncocpcqcrcscucvcwcxcycz
adbdcdddedfdgdhdidjdkldmdndodpdqdrdsdtduvdvwdxdydz
aebecedeeefegeheiejekelemeneoepeqereseteuevewexeyez
afbfcfdfeffgfhfifjfkflfmfnfopfqlfrsfttfufvfwfxfyfz
agbgcgdgefgggghgigjgkglgmgngogpgqgrgsrgtgugvgwgxgygz
ahbhchdhehfghghhijhkhhlhmhnhohphqhrhshthuhvhwhxhyhz
aibicidieifigihiiijikiliminioipiqirisitiuiviwixiyiz
ajbjcjdejfjgjhijjjkljmjnjojpjqjrsjtjujvjwjxjyjjz
akbkckdkefkkgkhkikjkkklkmknkokpkqkrksktkukvkwkxkykz
alblcldlelflglhliljklillmlnlolplqlrlsltlulvlwlxlylz
ambmcmdmemfmgmhmimjmkmlmmmmnmompmqmrmsmtmumvmwmxmymz
anbncndnenfnngnhninjnknlnmnnnonpnqnrrnsntnunvnwnxnynz
aobocodoeofogohoiojokolomonooopoqorosotouovowoxoyoz
apbpcpdpepfpgphpipjpklpmpnpoppqpqrpsptpupvpwpxpypz
aqbqcqdqeafqgqhqiqlqlqmqnqoqpqqqrqsqtquqvqwqxqyqz
arbrcrdrerfrgrhrirjkrklrmnrnrprqrrrsrturvrwxryrz
asbscsdsesfsgshsisjskslsmsnsospsqsrssstsusvswsxsysyz
atbtctdtetftgthtitjktltmtntotptqtrstttutvtwtxtytz
aubucudueufuguhuiujukulumunuoupuqurusutuuuvuwuxuyuz
avbvcvdvevfvghvivjvklvmvovpvqvrvsvtvuvvvwxvyvz
awbwcdwewfwgwhwiwjkwlwmmwnwownwqwrwswtwuwwwwwxwywz
axbxcxdxexfxgxhxixjxkxlmxnxoxpxqxrsxtxuxvxwxxxyxz
aybycydyeyfygyhyiyjykylymynyoypyqyrysytyuyvywyxyyyz
azbzczdzezfgzhzizjzklzmznzozpzqzrzsztzuzvzwzxzyzz

this Diagraph Letter setted in 12 points. Univers Medium 10 points

(Fig 2.3)

This method has to set with a few other uppercase letters like "H", "O", etc. For example, "H", "aH", "bH", "cH", and so on. This is a good way to disclose inequalities of spacing. But something more is needed. Words must also be composed, to show all the letters in normal relationship, not only with other letters but with themselves, because in most languages letters are frequently doubled. For example, a lowercase "l" with too little side spacing as in some versions of Helvetica and Avant Garde makes an unfortunate clotted effect in a word like "million" and an "m" in words like "common" and "minimum", in words like "lilliputian", "lilies", and "lilt" wider interletter spacing is necessary to achieve balance and to avoid disturbing the underlying rhythm of vertical strokes.

(C) Kerning.

Basically kern is the selective reduction of space between two characters. In the old days kerning characters in handset type was a difficult and time consuming process. The wood and metal type involved either cutting off a small amount of the metal on the type to be kerned or add space between letters by placing thin sheets of metal between the individual pieces of type.

16

To

without kerning

To

with kerning

(Fig 2.4)

The best possible kerning must consider a broader context of several letters. For example, uppercase words must sometimes be spread out to achieve equal visual spacing because of a single awkward combination of letters. Kerning values depend on resolution if they are expressed in roster unit. One approach is to use a new table for each font at each resolution. However a generic kerning table is sometimes used, based according to the general shape of the letters in the alphabet. An alternative is to store kerning data at very high resolution for each style, independent of size or resolution, and round the value to the nearest value for the resolution being printed. This top-down approach less well at lower resolution. Another approach to automatic kerning is to calculate the kerning table based on the shapes of the letters themselves. One method is called sector kerning. Letters are divided into a number of horizontal sectors. For each letter and each sector) the designer of the typeface can specify

Research on the problem of correct visual spacing suggests that how deeply an adjacent letter can penetrate. For each pair of letters a value is found that provides the closest spacing that does not violate the penetration for any sector.

it is possible to model what people do when they make spacing adjustments visually, but with the current hardware the calculations may be too expensive. Nonetheless, such algorithms may allow kerning tables to be calculated for new typefaces. However, the kerning of the triangular upper case letters like "A", "V", and "W" which each other produces as many awkward effects as it cures. It improves the appearance of the word in one way but the same process will have a bad effect in another way like the "AVAIL" and "AVILA". In this case there is only one reliable way to balance with each other; add space between the according to their shapes. Here are some combinations of characters which might need the process of kerning depending on the typefaces.

AC AL AN AO AT AV AW AY
 Av Aw ac af ao at au av
 aw ax ay
 CA CO CT CY Co Ce
 DY du
 ew ex ey
 FA FG FO F, F. Fa Fe Fo Fu
 GY
 KE KO ke ko ku
 LA LI LL LO LS LT LV LW LY
 Ma mu
 NT nu
 OA OT OV OW OY
 PA PE PO PR P, P. Pa Pe Po Pr
 Qu
 RA RO RV RY ra rc re ro
 SA ST SY sys st
 TA TC TE TO TS TW TY T, T.
 Ta Te To Tr Tu Tw Ty
 VA VO VY V, V. Va Ve Vo
 WA WO WV WY W, W. Wa We
 Wh Wi Wo Wr wa we w, w.
 YA YO YS Y, Y. Ya Ye Yo
 ya ye yo ys y, y.
 ZA

(Fig 2.5)

For those who are interested in the area of typespacing techniques there are books for more information like;

Techniques of Typography

by Cal Swann,
Great Britain.
1969

Graphic Design for the Electronic Age

by Jan. V. White.
New York.
1988

How Typography works

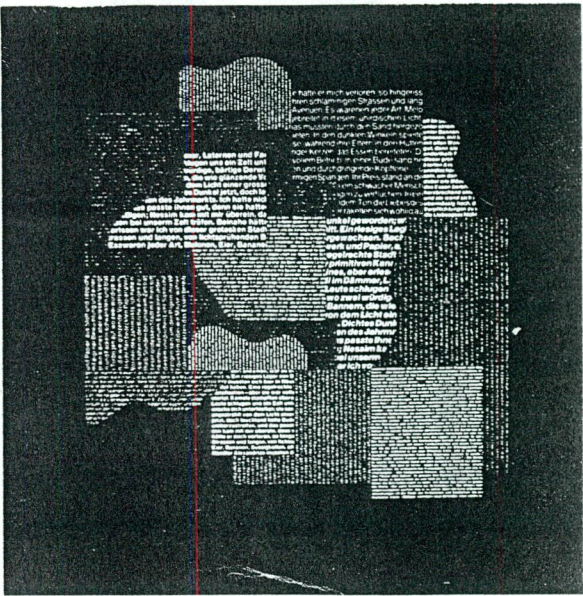
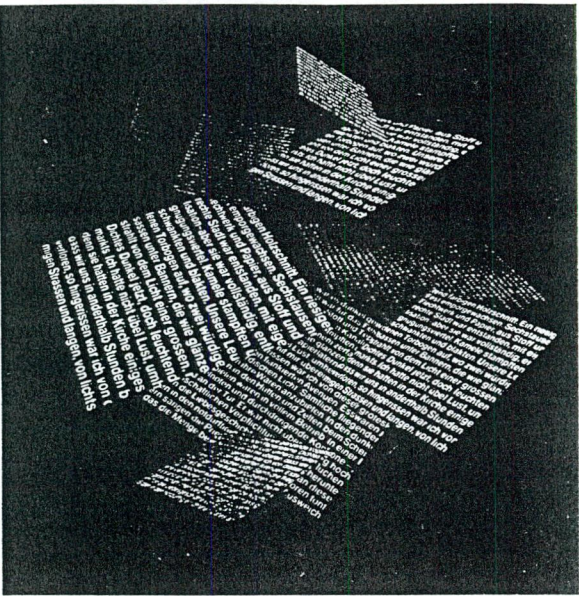
by Fernand Band
London.
1989

Photo Typography

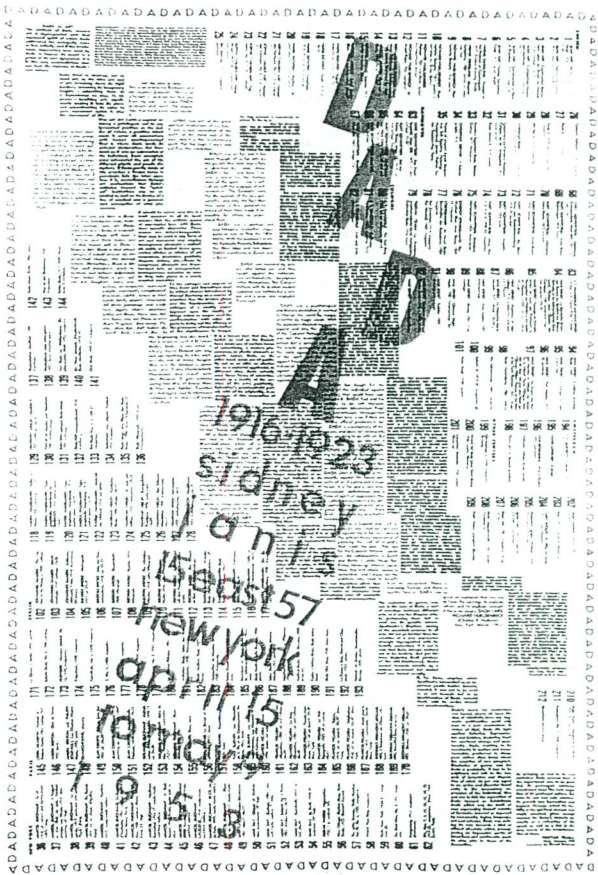
by Allan Haley
U.S.A.
1980

Basic Typography

by Reudi Ruegg /Godi Frohlich
Switzerland.
1972



(Fig 3.1)

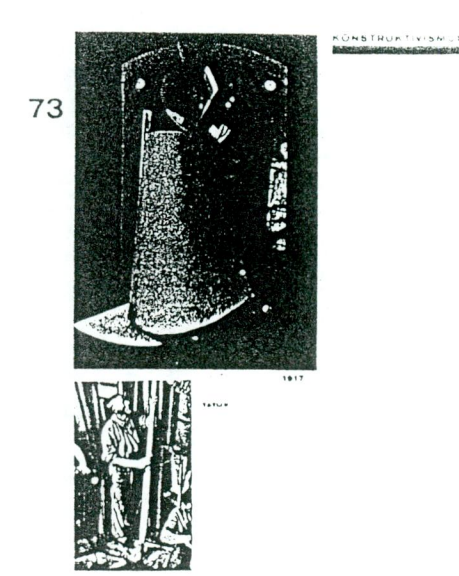
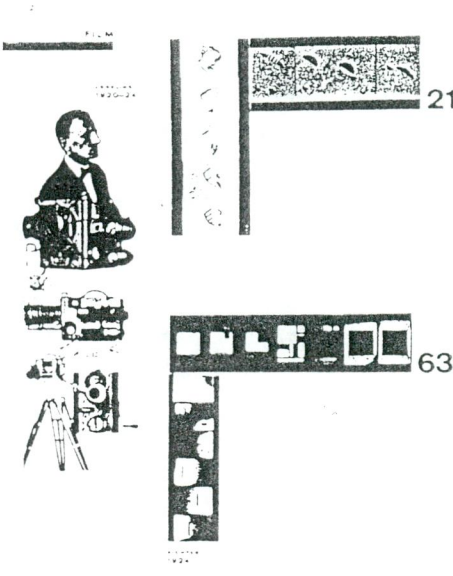
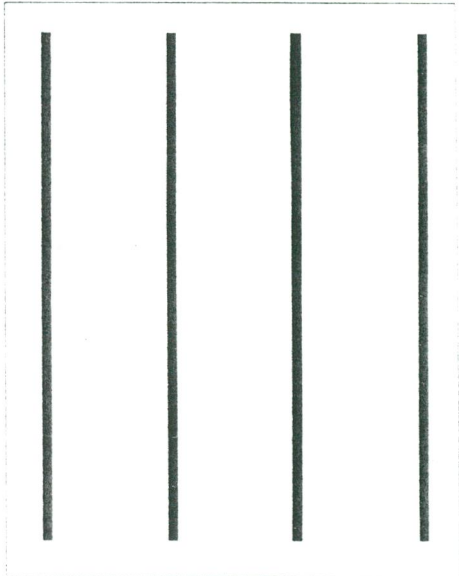
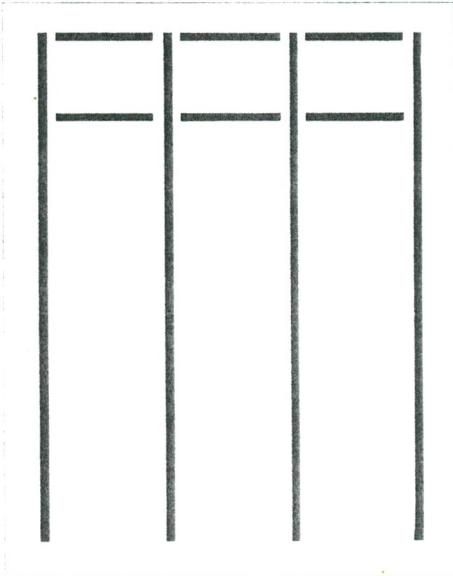
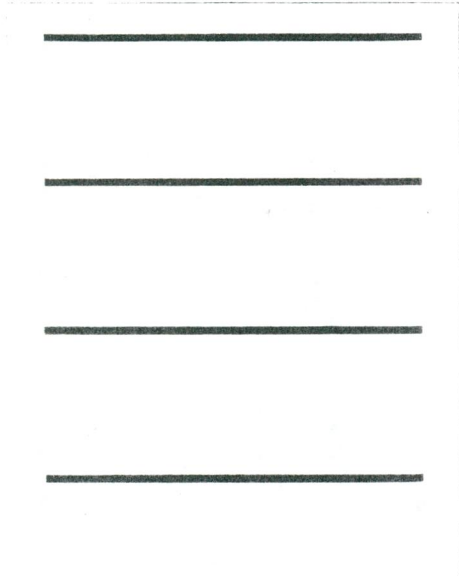


(Fig 3.2)

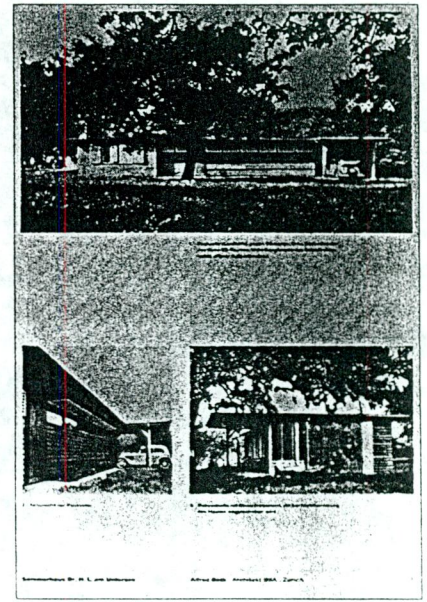
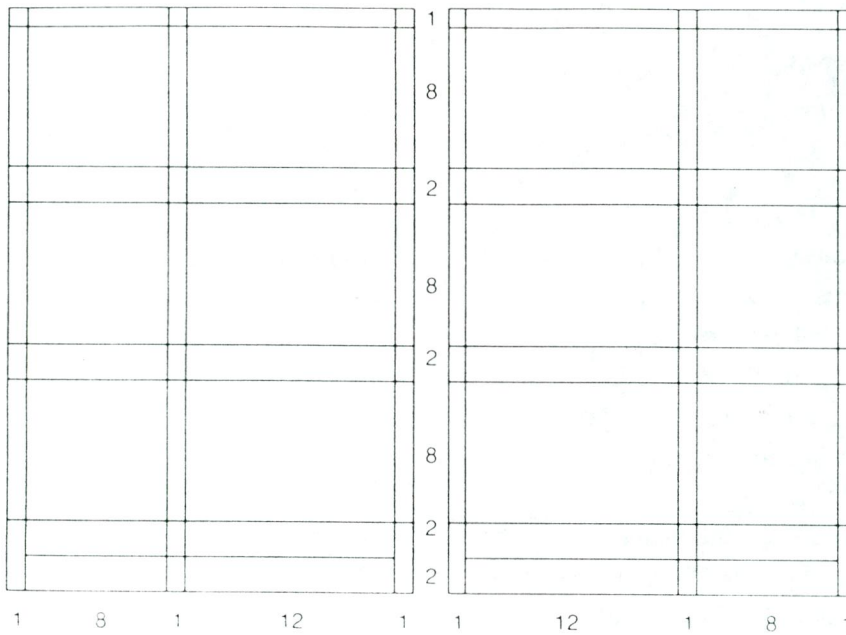
III	
DIE KUNSTISMEN	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
HERAUSGEGEBEN VON ELLISSITZKY	1916
UND HANS ARP	1915
	1914
LES ISMES DE L'ART	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
PUBLIES PAR ELLISSITZKY	
ET HANS ARP	
THE ISMS OF ART	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
PUBLISHED BY EL LISSITZKY	
AND HANS ARP	
EUGEN RENTSCH VERLAG	
ERLENBACH-ZÜRICH, MÜNCHEN UND LEIPZIG	
1925	

VIII	
KUBISMUS	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
CUBISME	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
CUBISM	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
FUTURISMUS	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
FUTURISME	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
FUTURISM	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
EXPRESSIONISMUS	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
EXPRESSIONISME	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
EXPRESSIONISM	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914

IX	
ABSTRAKTE KUNST	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
ART ABSTRACT	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914
METAPHYSIKER	
	1924
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	1915
	1914
MÉTAPHYSICIENS	
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SUPREMATISMUS	
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	1918
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	1916
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	1914
SUPRÉMATISME	
	1924
	1923
	1922
	1921
	1920
	1919
	1918
	1917
	1916
	1915
	1914



(Fig.3.3)



Einleitung 10

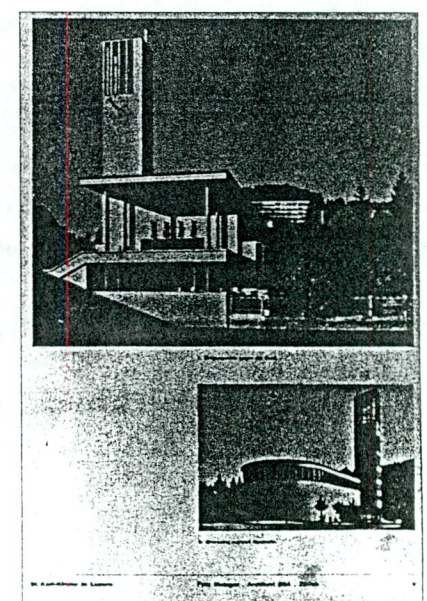
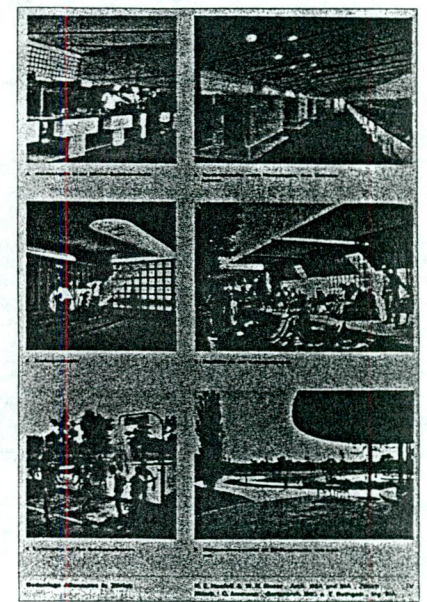
Die Aufgabe der Architektur ist es, die menschliche Umwelt zu gestalten. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht.

Die Aufgabe der Architektur 11

Die Aufgabe der Architektur ist es, die menschliche Umwelt zu gestalten. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht.

Die Aufgabe der Architektur 12

Die Aufgabe der Architektur ist es, die menschliche Umwelt zu gestalten. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht. Sie ist eine Kunst, die die menschliche Existenz in der Umwelt zu verankern sucht.



(Fig3.4)

Creative use of type spacing

Before we start creating new ideas, we should know the basics. Once we know the correct procedures we can look at them critically and see whether by deliberately flouting them, we can add anything new to normal ways of communication. Certainly in typography this would be the same; there are still many ways we can create new approaches in type spacing.

Thoroughly understanding type spacing requires considering the characteristics of the nature of human vision. Every design work occurs in an area of space that is usually a flat two-dimensional plane bounded by the four edges of a sheet of paper or other substance such as the film, video or computer image. The designer organises the spacing for the visual and verbal component of the message upon this surface and composes unlike elements into an ordered unified space. To create different kinds of unity, the possibilities for experimental type spacing are considerable.

Today most readers have a strong horizontal and vertical orientation that is insight to our very nature and experience. That's why most of the type set horizontally. As a designer we still can create new ideas from this naive orientation. Here are a few methods and examples in type spacing that I found interesting.

Texture created by type spacing.

All characters are different. These differences are due to the varying form and size of individual characters, and even then a single letter can be presented in a number of ways depending its weight of disposition. For instance a bold italic Caslon "C" is remarkably different from a regular straight Caslon "C". Therefore each character demands individual attention when spacing, depending on its form and context. Here are a few good examples. These two pieces of work were part of the personal visual experiments of Greg Thomas in the early 1970's (Fig 3.1). Greg Thomas used different weights and spacing to create the texture of typography and combined them to create a varying intensity image. The typespacing involved in these two designs were character spacing, wordspacing and linespacing, with the different forms for each different copy.

The DADA poster designed by Marcel Duchamp and Sidney James is another good example. (Fig 3.2) The background repetition of the blocks of small type in varying weights and spacing directs the viewers eyes from the top left to the bottom right. In the background textures of the poster, the letters weight and spacing combine to create an abstract texture. They also convey information, as the background text is the catalogue for the exhibition. At the same time, the piece as a whole represents an appropriate piece of Dadist work.

Modular typespacing.

A module is a basic elementary unit that can be combined and repeated to become the basis for the whole design. The most frequent use of modular spacing structure in type is the use of a modular grid of horizontal and vertical linear divisions. Russian constructivist design of the 1920's and De Stijl made an important contribution to the development of visual programmes. The trilingual 1925 book *The Isms of Art*, designed by El Lissitzky, is a milestone in the use of a modular grid spacing and mathematical measurement to bring order to complex visual material (Fig 3.3). Lissitzky carefully planned a visual program that gives order and consistent spacing properties for type. In this book Lissitzky makes generous use of spacing as an important compositional element. From this few reproduces major typographic pages above, their geometric structure for spacing, which Lissitzky emphasised by subdividing the space with black rules. The title page has horizontal bars to create a three-part grid structure for the trilingual text. The contents pages are divided with a central horizontal or vertical bar. The text pages have a three-column vertical grid containing German, French and English versions. The two sets of horizontal bars in the top portion of page (viii) are important to Lissitzky's program for the pictorial portfolio. The highest set established the top of the line area and aligns with the title placed on each portfolio page. The lower set established a flow line. This horizontal grid line is used consistently in many pages, bringing continuity to the format.

While El Lissitzky's approach to the module grid spacing allowed for a degree of flexibility Max Bill also made use of this idea to emphasise absolute mathematical order in many of his design works. On this page (Fig 3.4), Max Bill set the German version in a larger point size on the wider column and the English and French translations in smaller type in the narrower column. With this spac-



■ Dance and Choreography

Majors in this department prepare to become performers, choreographers, teachers, or participants in the many fields related to dance.



A daily modern technique class is part of the core curriculum. Ballet is studied concurrently with modern technique, but the choreographic emphasis of the program is on modern techniques. By the junior year, students choose either performance or choreography as an emphasis area. The senior project is a public presentation in either the performance or the choreographic area.

The curriculum includes the following courses:

- CHOREO 101
- CHOREO 102
- CHOREO 103
- CHOREO 104
- CHOREO 105
- CHOREO 106
- CHOREO 107
- CHOREO 108
- CHOREO 109
- CHOREO 110
- CHOREO 111
- CHOREO 112
- CHOREO 113
- CHOREO 114
- CHOREO 115
- CHOREO 116
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- CHOREO 198
- CHOREO 199
- CHOREO 200

i

Included in the curriculum are technique classes in ballet, modern, contemporary, and jazz, improvisation, technique, choreography, production, dance history, and theory. The senior project is a public presentation in either the performance or the choreographic area.



T

The Department is housed in a newly renovated building with eight fine studios, one of which is equipped as a performance space. Other campus performances are given in the Music Recital Hall and in the new Concert Hall. Off-campus performances are given in the Empire Theatre, Orpheum, and other public schools in and outside of the Richmond area. The YCUDANCECO calendar for 1983-84 will include two major collaborative productions with the Department of Music, one of which is to be televised.



Admission to the major program is by audition, and consideration is given to the applicant's previous training and performing experience. The Department also offers a minor in dance, and most of the dance courses are open to non-majors as well as majors. The Evening College curriculum offers Tai Chi and improvisation as well as dance technique courses.

(Fig3.4 a b)

Elements are organized within the aural field according to the principles of **rhythm**

melody

and **harmony** which determine spatial orientation in the visual field.

Activation of pitch as an effective variable transforms a rhythmic sequence into melody.

A vertical displacement of visual elements results from differentiation of pitch values, generating another level of spatial complexity.

As the magnitude of displacement from a horizontal axis increases, spatial orientation becomes ambiguous.

Harmonic relationships

Translation of rhythm produces a sequence of visual elements in horizontal orientation to the field, by the intervals

A vertical orientation

Although these elements have a common horizontal axis, volume modifications cause a limited degree of vertical extension, between pitch values

Curvilinear and oblique variations are developed of visual elements

As visual representations of certain expressive techniques

Increasingly complex spatial relationships are developed from the variation of positive and negative duration values, in complete opposition

is achieved

In the visual field

A smooth transition between successive sounds through the translation is represented as a curvilinear form

to rhythmic sequences.

while a horizontal succession of oblique forms of an harmonic sequence is equivalent to a rapid alternation of sounds.

which is based

on a simultaneous occurrence

of sounds.

ing format, Bill can accommodate from one to six photographs for the next page of the designs with a kind of unity in spacing and structure. (Fig3.4)

Order and clarity are achieved in this structure spacing. Attention is focused upon the manipulation of spacing and content. In other words, this modular spacing provides a framework, but the designer still must make careful decisions about the size and spacing of the type and elements and their relationship to one another. By changing the parameters of the module spacing, designers can alter the visual properties of the page. Here are two examples by John De Mao and Frank Armstrong. Both of them created unusual page layouts. The result is informal and dynamic. (Fig 3.4ab)

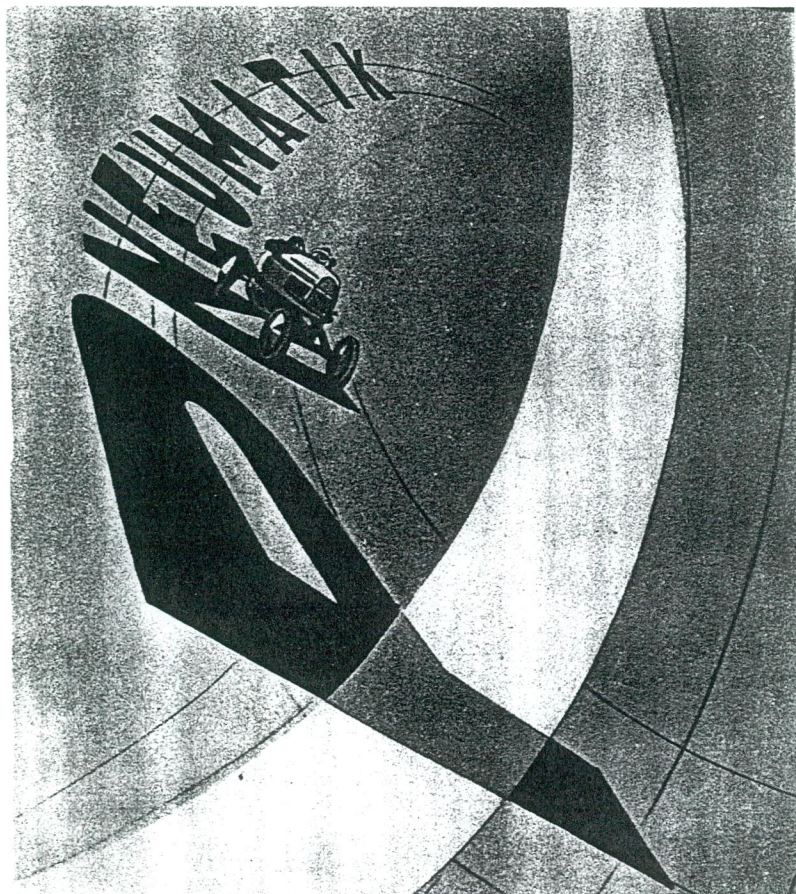
Perspective type spacing.

Letters and words seem to adapt well to perspective spacing. Letter forms have a visual familiarity that is easily retained and experiments have shown that they remain legible even when severely cropped. That is because the viewer is so accustomed to the shapes of letters that generally only a few selected visual clues are needed to recognise them. The same may not apply, however, to the more radical fonts, such as the Emigre and so the public are not as familiar with them.

The key to understanding typography that is manipulated by perspective is to see the compositional boundaries as the frame of an open window with the potential for limitless space. By regarding the edges of the format as an invisible frame through which lies unlimited space, typographic elements are released from their usual flat, front view plane and are allowed to occupy space and have dimension.

This perspective spacing is a combination of change in size and spacing so that it can come together as they recede from the viewer. In order to work properly, the viewing point must be placed at any position other than head-on, and the objects should be assumed to be of relatively equal size.

One of the earliest examples is Laszlo Moholy-Nagy's poster for pneumatic tires (Fig3.5). The poster demonstrates its functional use through the perspective type spacing treatment. Composition that is used in this poster is visually complex is that the typography not



(Fig3.5)



(Fig3.8)

(Fig3.7)

高北幸保作品展

Exhibition of panel works, posters and graphic arts by Yukihisa Takahara

会期/1980年11月10日(月)~16日(日)

会場/ギャラリーはぐせん・ギャラリー79・ギャラリー

高北幸保パネルワーク展

会期
1980年11月10日(火)~16日(日)
午前10時30分~午後6時30分(最終日は午後5時30分終了)

会場
ギャラリーはぐせん
460名古屋市千区第21113-21114番ビル3階
電話052-231-7887

高北幸保ポスター展

会期
1980年11月10日(月)~16日(日)
午前11時~午後7時(最終日は午後5時30分終了)

会場
ギャラリーはぐせん
460名古屋市千区第41117-267-1072番
電話052-241-5677

高北幸保グラフィックアート展

会期
1980年11月10日(月)~16日(日)
午前11時~午後7時(最終日は午後5時終了)

会場
ギャラリー79
460名古屋市千区第21114-11115番マンションビル2階
電話052-201-5979

only moves away from the viewer by converging, but it also angles and curves in space. Moholy-Nagy carefully controlled the spacing composition in order to achieve the most dramatic effects. The spacing extends beyond the top edges, sides and bottom of the format, a technique that has a tendency to cause the poster to expand visually. (Fig3.5)

Another two examples of using perspective type spacing are posters by Max Huber (Fig3.6) and Yukihiisa Takakita (Fig3.7).

Max Huber use of the converge perspective spacing in both the typography and the stylised image of the mountain roadway contributes to the viewers sense of depth, movement and visual excitement.

The dynamic visual impact of the converged perspective typography spacing in the Yukihiisa Takakita CREATION exhibition poster is heightened by the tensions created by the spacing of the letter-form in the word CREATION. The 'N' proximity touching the top and bottom creates a visual tension and emphasises impact. Despite the out of focus manner in which the first letters of CREATION appear, they still are legible, and the word is eminently readable. The perspective spacing principle of the focus effect is also at work, whereby the letters closest to the viewer are sharp and in focus, and as they recede in space, they become more out of focus. By working with perspective type spacing, the focus effect can be reversed. This method is thus consciously used by the designer to control how the work will be viewed.

22

Transparency and Overlapping spacing.

The illusion of transparency is dependent on a change in value and overlapping position. Within those composition the tones and positive negative can be subtle combinations of the two or more objects depicted. Colour compositions can create additional hues through mixtures of the colours that overlap. But using the principle of transparency, the hues that result when type of different colours overlap represent new abstract shapes within the piece that have to be taken into consideration when spacing. Because spacing can appear to be incredibly close, a change in size is not necessary for the illusion. Even when there is no change in the objects size or no additional perspective clues, the resulting change in tone can be dramatic. In many instances, transparency takes the place of the shade

Palabra e imagen

Exposición
auspiciada por
The International
Council of
The Museum
of Modern Art,
New York



Museo Nacional
de Bellas Artes

Av. Libertador 1473
junio de 1974

(Fig3.8)

(Fig3.9)

Type La tipografia nel filtro ottico.
È bene distinguere subito le diverse aree della tipografia che sono nate da specifiche applicazioni, onde evitare di costringere questa immensa materia ad un giudizio circoscritto e limitativo.
Innanzitutto la tipografia è nata per farsi leggere attraverso la spogliazione del segno dalla sua forma visiva, codificando le lettere ed estraendone il significato. La parola scritta, in questo caso, non viene ricordata come immagine, ma rimane solo parola che si realizza come idea.
Così è la tipografia per la pagina del libro o del giornale, dove il vuoto e il pieno delle lettere, la giustezza o la lunghezza della riga, il corpo o la grandezza del carattere, l'interlineatura o lo spazio tra le righe, i margini della pagina, concorrono a fornire quegli ingredienti di base che rendono facile ed invitante la lettura.
Ma i miei interessi professionali, estetici e creativi, si sono sempre indirizzati, sperimentalmente, verso una tipografia di alto richiamo visivo al servizio della comunicazione in ambiente saturo di segni, come per esempio, il settore della pubblicità, dove le frasi sono state scelte più brevi e incisive, assumendo talvolta il ruolo di figurazione.
Da un po' di tempo la riga tipografica ha perso la sua «periodicità meccanica» perché condizionata dalla foto-composizione che regola le distanze alfabetiche con accorgimenti microvisivi irregolari tali da non essere percepiti dall'occhio umano, e queste libertà ottiche hanno poi influito nei macrosegni ad alterare le forze spaziali quando esse fanno sentire le «differenze» che si rincorrono nell'area del campo di lettura, aumentando la tensione formale e l'intensità del significato della parola.
In questi ultimi anni è stato un fiorire di nuovi alfabeti che non possiedono più il veto della difficile lettura perché attraverso le nostre continue esperienze di nuovi segni, logotipi, insegne, espressioni grafiche libere, l'occhio ha acquistato una maggiore velocità interpretativa alla lettura.
Quando nel 1964 disegnai per la prima volta il carattere «Magnetic» ispirato ai numeri IBM, stampati con inchiostri magnetici, ebbi il dubbio della poca leggibilità (per quanto io li avessi usati per la copertina di «Pubblicità in Italia» 1964-65) ma nel 1966 questi caratteri furono ripresi in America e trasferiti in fotocomposizione e applicati subito alla titolazione avveniristica in migliaia di pubblicazioni.
La mia personale ricerca che man mano si è sviluppata dal 1953 in questo settore è stata la proiezione di segni alfabetici attraverso filtri ottici, per ottenere le sensazioni come «distanza drammatica». Il segno, con queste tecniche, diventa «fisico» non per la materia ma per la carica di spinte e contospinte che fanno sì che l'occhio umano veda attraverso emozione e sollecitazione che creano valori traumatici e rubano lo sguardo facendo sentire un disagio percettivo espresso in ansia.
Non è stata questa ricerca il bisogno del nuovo a tutti i costi, ma l'analisi della situazione della lettura tipografica influenzata dalla velocità meccanica dei mezzi di locomozione, o da interferenze di superfici trasparenti nelle architetture, o da ricuperi di forme riflesse in superfici curve e speculari.

Chiunque analizzi il futuro della comunicazione scritta non può non sgomentarsi davanti all'enorme, irrazionale, enfatico consumo di simboli. Valanghe di segni, immagini e illustrazioni, assorbono circa il 70% dello spazio nei mass-media togliendoci l'esercizio del controllo sui processi di memoria e abituando la nostra mente ad una superficiale osservazione.
L'area operativa della pubblicità sta diventando sempre più vasta e lo sforzo creativo di specialisti non riesce ormai a produrre, per due prodotti simili, quanto basta per differenziarli. In questo mondo di immagini, che sta raggiungendo valori ipertrofici, si impone la ricerca di nuovi valori segnici, fisici e costruttivi.
Anche la grafica moderna, a causa della sua estrema semplificazione, rischia una unificazione dei segni che porta ineluttabilmente alla similarità. Si è scritto che nel futuro l'immagine soppianderà anche la parola scritta, ma si può affermare oggi che la tipografia può essere il soggetto e può sostituire la figurazione quando applica l'espressività dinamica o quando la stessa lettera, ingrandita, diventa antropometrica per ricordare con le sue sinuosità il corpo umano.
Nell'800 la tipografia nella pubblicità entrava come sostegno alla figurazione e ne occupava lo spazio lasciato libero; ora la tipografia è immagine violenta per colore e tridimensionalità, con la funzione di fermare il lettore-pedone o l'automobilista nei canali del traffico cittadino. Oggi le città hanno due architetture, una fisica e l'altra di parole stampate e di neon; forse, parlare di prospettiva, è improprio, bisogna parlare di proiezione o di «tensione immaginativa» dove l'uomo vive la sua vita diurna e notturna nei canali del flusso viario.
Il graphic-designer, entrando in questi problemi, si appoggia ad una cultura scientifico-visiva: indaga lo spazio che lo attornia e che si rivela come una espansione radiale.
Finché qualche anno fa la grafica moderna si amministrava su moduli, ricercava l'ordine, l'armonia nella composizione, sfociando in un concetto statico. Ora, invece, non cerca l'equilibrio, la stabilità, ma un campo di sollecitazioni visive in continua trasformazione che rinvigoriscono di volta in volta le possibilità e le qualità del suo segno.
Che cos'è una distorsione se non l'infiltrarsi di uno spirito «sperimentale» verso la ricerca di aspetti alterati, decomposti, astratti, e logicamente anonomi; che cos'è la tensione, se non la lettura, sull'arco fisico del segno degli elementi della quarta dimensione psicofisica, un alcaide per la lettura di movimenti virtuali che aumentano l'intensità del significato...
Type è una selezione di esempi, alcuni già applicati, altri in riserva, di tutto ciò che si può ottenere vedendo «oltre» lo sguardo, un lavoro travagliato ma libero, inventivo, paradossale, inspiegabile e razionalissimo, uno spettacolo di idee che nutrono la fantasia.
Queste sperimentazioni, pubblicate in tutte le riviste grafiche del mondo hanno, alla fine, influenzato altre grafiche anche in altri paesi. Mi sembra opportuno, ora, mostrarle qui per indicare una cultura della visione aperta al miglioramento intellettuale di tutta la grafica che vuole chiamarsi moderna.
Franco Grignani 15 marzo 1984

Quanta
via Fatebenefratelli 15 20121 Milano

and shadow that would naturally occur in overlapping. It redirects the composition space so that the viewers eyes travels through the elements. In dynamic type spacing compositions, it also intensify the perception of movement. The Dada poster by Marcel Duchamp and Sidney Jans, represents an unusual for of transparency(Fig 3.2).

Travelling graphic exhibition poster designed by Rubin Fontana is another example of overlapping and transparency (Fig3.8), but the way of using this method is slightly different. Fontana set the title 'Palabra e imagen' in Helvetica extra bold condensed and Helvetica condensed italic. The word 'Palabra' already simplified by no inner-character space, 'e imagen' overlapping on the word 'Palabra' by careful use of character spacing and composition. It became a dynamic and powerful image. Yet the words Palabra e imagen still can be read easily.

Franco Gringnani using the same principle of overlapping and positive -negative of type to create an unusual transparency of type spacing to turn the simple design into an outstanding piece of typography design (Fig3.9) .

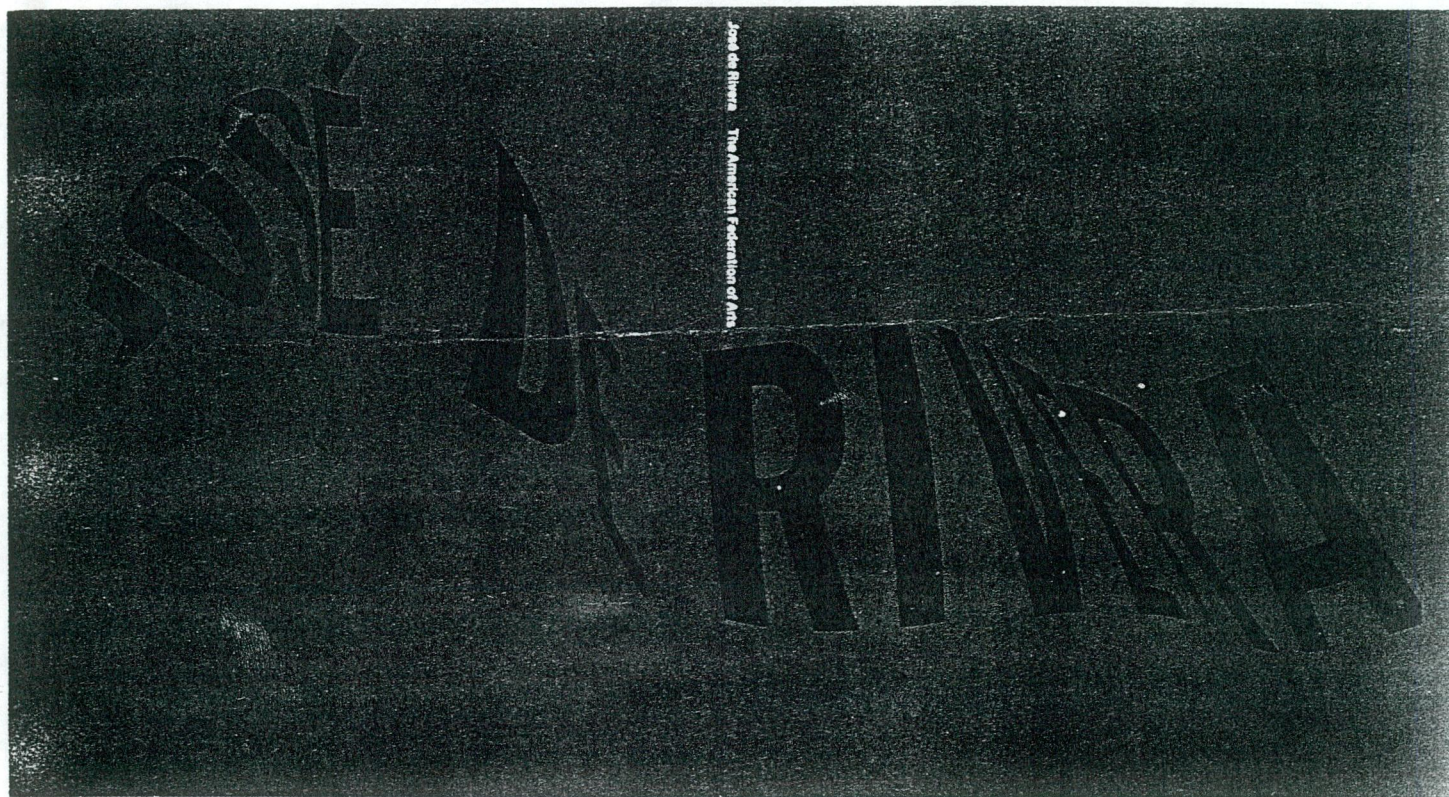
23

Curving and Bending in type spacing

The curving and bending in type spacing are implied by distorting the surface plane on which the typography rests. Typographic characters are excellent subjects for the visual communication of curving and bending, as the eye is programmed to see letterforms in a single plane horizontal, frontal context.

The slightest distortion of the letterform or type spacing by curving, bending or twisting the surface plane is immediately noticed, and the eye is fascinated by the curving that they leave this frontal position for a change in point of view.

An awareness of the invisible plane on which all typography rests is important to understanding the effect of implied movement. For the designer, compositional window with the potential for limitless space are essential to both understanding and developing such compositions. Experiments by George Tschery show the potential of curving and bending in type spacing (Fig3.10). The image here is the front cover, spine and back cover for an exhibition catalogue of Rivera's work. Resisting the obvious solutions to a project of this



(Fig 3.10)

(Fig 3.11)



kind, Tschery used the typography to develop an exciting identity of the image, which accordingly contributed to the viewers understanding of the artists work. It is clear that Tschery carefully controlled the typespace movement on the surface and distortion of the type in order to maintain readability; at the same time he allowed the typographic image to create a sense of depth, space and movement.

The poster design by Gordan Shalchow is a good example of curving (Fig3.11). The curvilinear type spacing is reminiscent of the bent plywood furniture of the preface and also provides a strong visual contrast with the highly structured images and typography. The typography curves, bends and recedes in space, an effect that is enhanced by bleeding it off the edge.

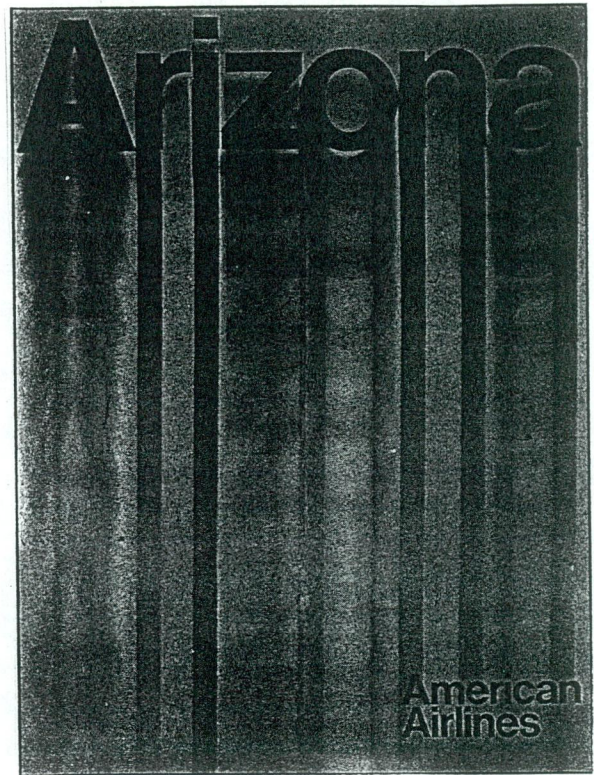
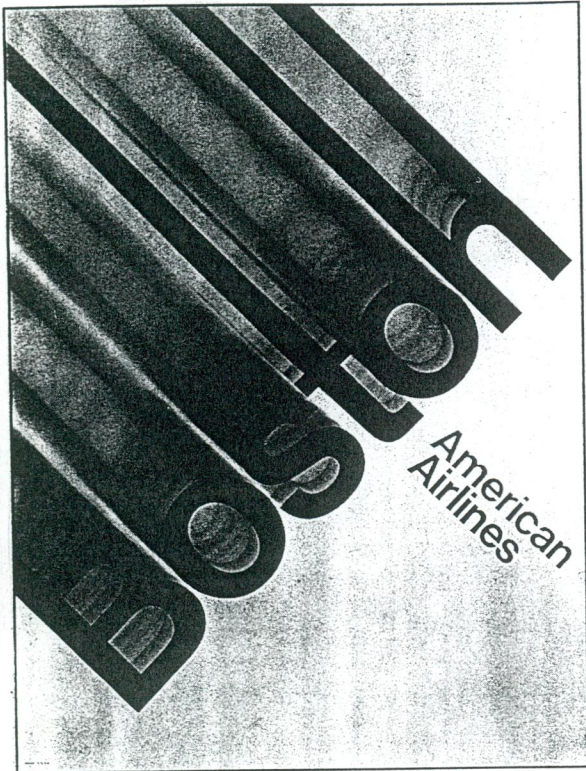
Movement in spacing

Few techniques can make typography as animated as the illusion of motion or movement. Modern material and technology have developed new methods of implying movement. Light-sensitive photographic paper will reveal a "light trail". if a film negative is moved across it while it is exposed to light. A kind of tail follows the image will create. The viewers eye perceives an unmistakable movement of form and in some instances an aural sensation of whooshing movement. The movement of repeated elements can be enhanced by the illusion of transparency that is created by overlapping transparent inks or half tone screens. The repeated elements move in a linear manner and also create the illusion of depth as the viewer perceives multiple planes that light passes through.

Examples like the two posters designed by Fred Troller for American Airlines and Orta soft drinks poster by Inge Pruckrey (fig3.12a,3.12b). Fred Troller's poster is very simple, using the animation of the word Boston and Arizona to show the speed and movement of air travel. These works were probably produced by dragging a negative film across print paper while it was exposed to light.

The Orta soft drinks poster by Inge Druckney is using repetition and colour changes to create movement (Fig3.13). The company name, Orta, is repeated as a solid form and also as a line screen, with the width of the lines as colour as variable elements. The typography moves and undulates in a moving pattern. Restraint and sensitivity are used in the spacing of the typography on a white field that softens the colours.

(Fig 3.12a b)



(Fig3.13)

(Fig3.14)



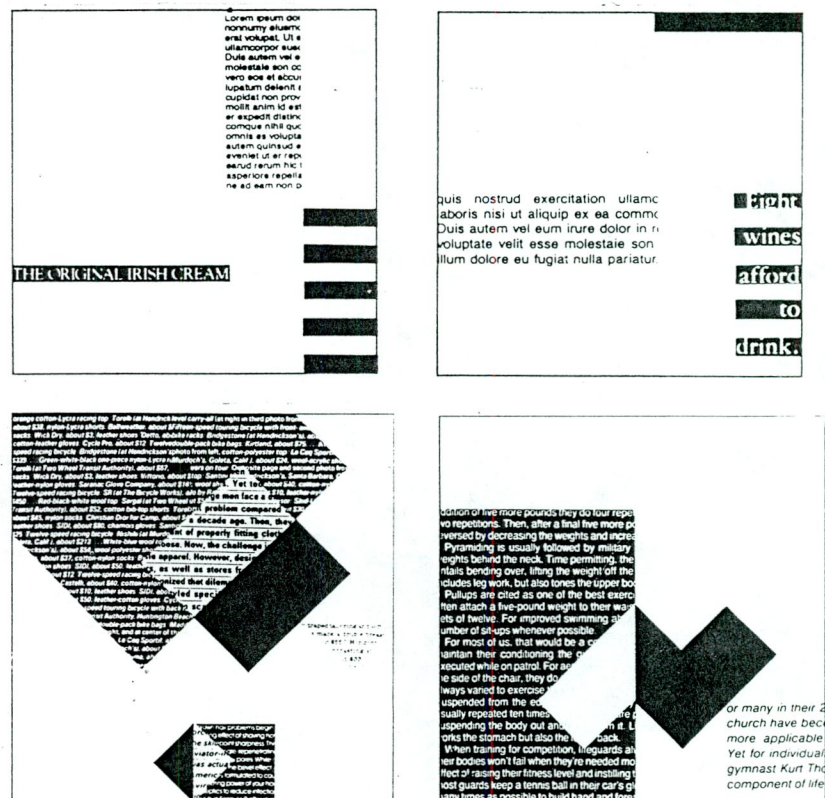
Another simple method is by arranging the letters in a disorganised way with the well organised type. Using the contrast of these two different spacing methods to express the free movement and strong visual attention or change the direction of each phrase to create a kind of exciting and lively movement (Fig3.14). Although these methods look very simple, the careful use of type spacing is the main key to reach the goal.

As with these methods I discussed in this chapter, there are a few exercises from some other colleges which I found interesting. These exercises help us to explore and make full use of typespacing creatively and innovatively.

The Carolina State University.
Visual organisation and good structures
by Greg Prygrocki.

This exercise introduces the grid structure as a formal design element. The grid module is the basic compositional unit, bringing order to the arrangement and spacing. Students consider contrast, structure, positive and negative space, balance of spacing texture, tone and rhythm as design properties.(F)

25



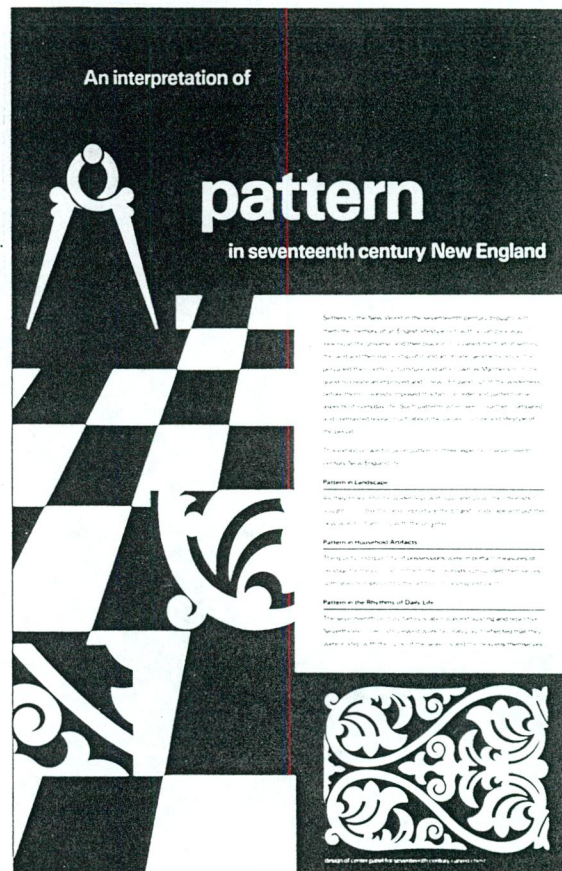
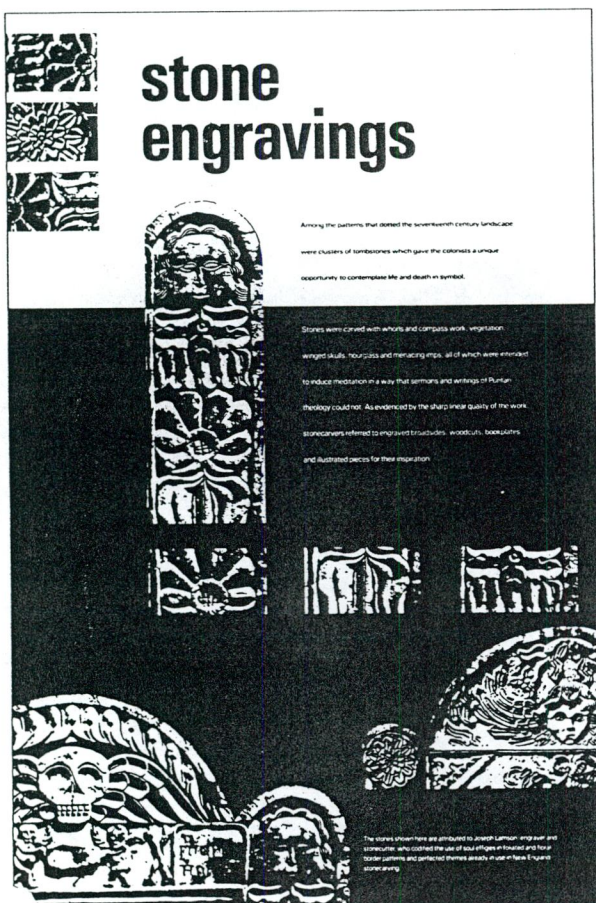
Virginia Commonwealth University
 Typographic variations through changing parameters
 by Rob Carter

This project is to make students aware that a visual hierarchy can be created by changing typographic parameters. Students learn that an infinite number of possible solutions to each problem is available by using type spacing. A typographic designer can generate and evaluate these possible solutions for their communicative effectiveness.(F)



Boston University
Thematic Exhibition posters
by Alston Purvis and Jean Brueggenjohann.

In this advanced self-initiated project, the student made use of principles of grid organisation to bring unity to each poster. Since the artifacts shown varied widely in design and format, major compositional axes were used as a structural theme unifying the series. Emphasis was placed upon the integration of images and type into cohesive compositions. (F)



(F)More information can be found in ;
From and Communication
by Rob Carter. Ben Day. Philip Meggs Van Nostrand Reinhold Company.

Chapter 4:

The success and failures in type spacing.

Everyone knows that typography serves to aid our reading and understanding, and that it has something to do with attraction. To reach this point, many designers try different kind of methods, some using unusual structure for the design; some utilised strange type-faces as a medium. With the advance technology of computers, some of them even create different kinds of new faces for their design. Their stylistic highpoint was simply alien to many designers and readers. I found that the type spacing in the latest issues of Emigre were a bit overplayed compared with their earlier issues. The following I consider examples of good type spacing. They have used type spacing carefully and creatively to produce design of powerful visual attraction. I will also show a few examples which have significant spacing problems.

The success of type spacing

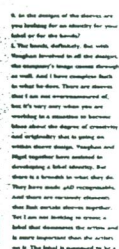
The inside pages of the IDZ Annual Report showed an interesting use of type spacing to make normal report turn into an outstanding piece of typographic design work (Fig4.1). Basically this design uses the modular type spacing method as a base, which treats the setting as a composition of "block of copy". The shall of these pieces lies in the manner that some blocks have been punched out of alignment while retaining a bond or relationship with the rest of the text the skill is the preservation of the unity of the piece despite the visual distortions. Without using unusual typefaces or contract of typesizes, this report shows a sensitive rhythm of the white space and texture of the text. In other words, the success of this design is purely based on the creative use of type spacing. (Fig4.1)

These two posters designed by Neville Brody for the Mute Records and Nike are another pieces of exciting type spacing design (Fig4.2a,4.2b). Both posters use contract of large and small type to create the visual impact of the posters. Although the extremely tight character spacing and word spacing has been used in both posters, the legibility still remains perfect because all the words, slogans are very short and simple, it gave Brody an opportunity to show his potential of using type space.

just zap it

bool

(I've Watts-Russell in a letter to *The Offence*, 1981)



Basically Brody used the contrast of type size as a visual attraction. If we study more carefully we will notice these two posters were using the modular typespacing as a base structure. Brody divided these two posters into six columns to arrange the words and slogans wisely to create a punching and dynamic visual images, especially the Nike poster.

The Nike poster used the overlapping type spacing to give more depth, space and contrast with black and white space to give the design more lively, active and sportive visual impact.

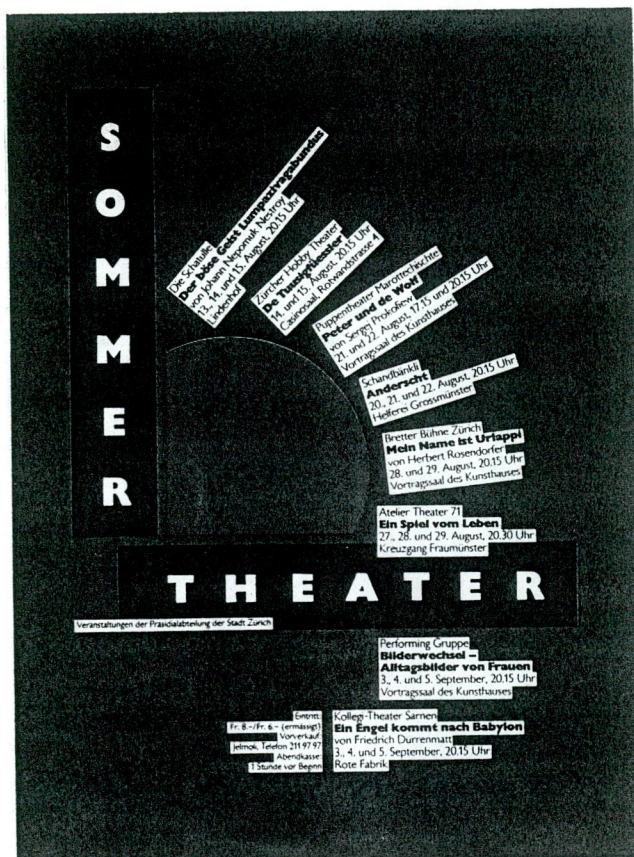
These two pages are from the famous typography magazine Emigre 9, directed and published by Rudy Vanderlans and Zuzana Licko (Fig4.3a,4.3b). Both of them used the Macintosh computer to develop the composition. Typography, spacing, almost everything in their design is without precedent. The computer offers the designer complete control over the major design elements of column, position, widths and shapes. The line spacing, word spacing and character spacing are also ultimately flexible (sometimes) and can be changed with only a few key strokes.

29

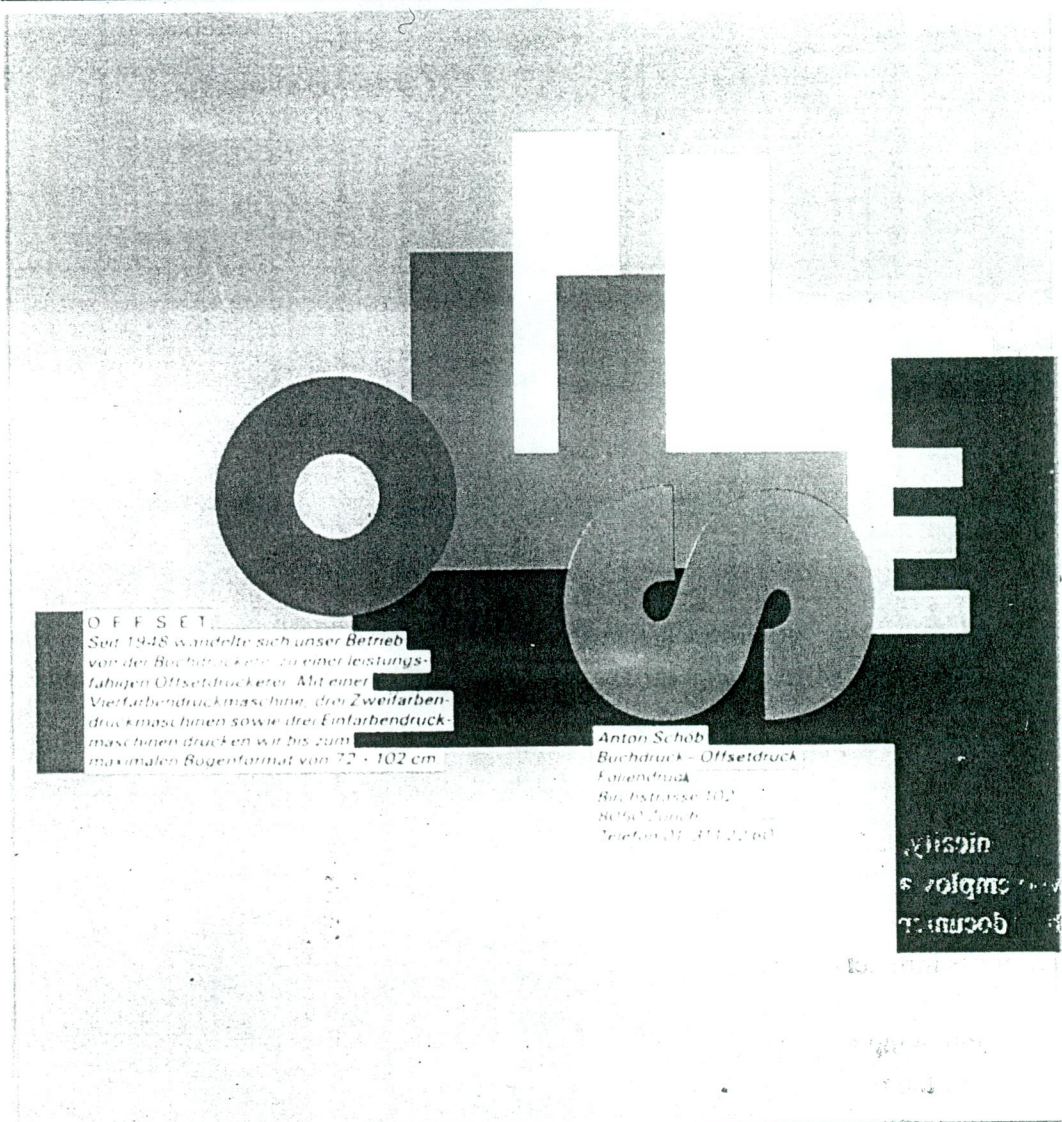
From the interior opening page features a unusual display type, named Oakland Syx, designed by Zuzana Licko (Fig4.3a). This typeface uses all uppercase characters, wide letterspacing and line spacing to increase readability and to create a graphic texture on the page. This bold and airy texture is contrasted to the "introduction" column that is typeset in another face of much smaller size and tight linespacing to create more intense texture. The composition of the page is a fluid play of white spacing and textural elements.

The second page is an interior spread of Emigre 9 (Fig4.3b). Modular type spacing style and objectives are pursued throughout the magazine. Different parts of the information are separated into columns. Each column has its own texture and shape, giving it an individual identity by using different characterspacing, word spacing, line spacing and compositional space. The page numbers are in the body of the page and are offset by bold rules and bold type. Images are handled in the same way as text.

The success in these two pages are the careful use of typespacing on some unusual typefaces to make it legible to read and the interesting combination textures of types.



(Fig4.5a)



(Fig4.5b)

Mater Dei Counselling Centre

Mater Dei Institute of Education
Clonliffe Road
Dublin 3

12 October 1992 ^{Telephone 371892}

Mr Bill Bolger,
Graphic Design Section,
National College of Art and Design,
100 Thomas Street
Dublin 8.

Dear Bill,

Thank you for agreeing to your students doing a 'logo' for our centre.

The Mater Dei Counselling Centre provides a counselling service for adolescents and their families who are experiencing a wide range of difficulties including drug abuse, alcohol abuse, overdose, communication difficulties, separation and bereavement.

Fig4.6a

Our underlying philosophy understands adolescence as a normal developmental stage and we would place the problems we encounter firmly in a family context. Until now, we have had no set logo or emblem with which to identify ourselves. The ideas we wish to explore and convey include GROWTH and DEVELOPMENT for both adolescent and family which would be the central aims of the counselling process.

As I explained by phone, we are a voluntary body funded by the National Lottery, Eastern Health Board and voluntary contributions. We are generally working from a budgetary deficit and are therefore not in a position to fund this project. However, we would be eager to display the logo at the centre and accredit it either to NCAD or the individual worker.

We would also consider the logo as a signed piece of work which would be included on our information pamphlets and stationery.

I appreciate your considerate response to this project and look forward to further discussions and the finished work.

Yours sincerely,



Fidelma Beirne, B.S.S., C.Q.S.W.
Social Worker.

1994 LOVE STAMP DESIGN COMPETITION

1. Brief -

The design may represent love in any manner - serious, romantic, humourous etc.

2. Personal details -

The design should not be signed - the designer's name, address, age and occupation should be provided on the rear of the design or on a separate sheet of paper.

3. Technical details -

The design may be in any medium and should be submitted on flexible board, paper, canvass etc., maximum thickness 0.25mm, which is suitable for scanning for lithographic printing.

4.6b_____

The size of the design should not exceed 160.8mm x 225.6mm and should maintain these proportions in order to suit the print area of the stamp (26.8mm x 37.6mm).

4. Text -

The design should allow space for the words "Grá" or "Love", "Eire", and the denomination 28 or 32. These need not be included by the designer.

Note: If "Grá" or "Love" forms an intrinsic part of the design it will not be necessary to allow space to include same.

5. Copyright -

All entries will become the property of An Post, and the copyright in respect of the designs will become vested in An Post.

The entries will not be returned to the designers.



LIFESTYLE DEVELOPMENT CONSULTANCY

61 Slieve Rua Drive, Stillorgan, Co. Dublin. Tel: (01) 832547

29th November, 1992

Professor John Turpin,
Head of Design Department,
National College of Art and Design,
100, Thomas Street,
Dublin 8.

Dear Professor Turpin,

A consequence of the heavy investment in promotion made by the major charitable bodies in recent years, allied to their strong staffing levels, has been that the worthwhile work of other volunteer driven, deserving causes has become cloaked.


In an effort to redress this unhelpful situation four respected bodies, under the common banner of CARE are looking at combining forces in mounting joint appeals. By this means we can create greater awareness of our needs, nationwide, while also reducing costs through shareing.

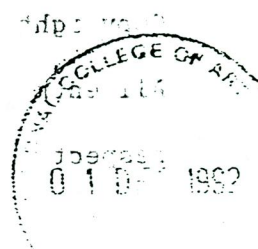
Early next year we hope to organise the initial appeal on behalf of the 'umbrella charities', which brings me to the reason why I am writing to you. We need an emblem, which will be readily recognizeable and project the funding needs of the umbrella grouping, while at the same time can be used irrespective of the particular type of fundraising promotion engaged in.

Various suggestions have been made. These include marrying the distress signal S O S with a protective umbrella in a strong graphic, using the S O S with a flare, a shooting star, a rainbow etc. One of the slogans under consideration is 'Sharing the Caring', or more directly, 'Share the Care'.

I wonder if some of the bright minds amongst your student body would volunteer to help us out by brainstorming the concept. I will be happy to come and talk to the students about our ideas, and do hope you can see your way to accommodating our need, in the near future. Thanking you for your consideration.

Yours sincerely,


MARY E. MULCAHY.



Rosmare Tissi shows another style of using typespacing in his two posters, the "Sommer Theater" poster (Fig4.5a) and Offset poster (Fig4.5b). From the "Sommer Theater" poster, Tissi offers a strong spacing constructions, its strength deriving the crude while robust way that the sections of type are pasted in an arc. Rather than forcing the descriptive copies into a rectangular shape or hiding the shape on a white background, the text block shape is determined by the typeset copy in much the same way that eye perceives textures of type spacing. These shapes become an irregular texture that marches down the page around the red circle representing the sun. The smooth geometric construction of the circular sun shape and the bars holding the words "Sommer Theater" are at variance with the irregular copy blocks. Movement in space occurs when the copy blocks overlap the horizontal "Theater" bar. This poster shows the unusual textures from the copy and exiting free spacing composition of different text block created by the line spacing.

In the offset poster, Tissi used the titles letters turned 90 degrees and cropped by overlapping. The compositional space is the controlling force, with the "O" composed of geometric circles without the need for baseline orientation. The "O" as a circular form is the most compelling element and the natural starting point. The "f" letterforms move the eye back in space and bring it back to the foreground with the front "s". Once again the eye is guided back in space with the overlapping "e" and "t". The small blocks of type and their cut-out shapes mirror the forms of the "f" and "e", as well as contrast with the curvilinear forms. This control of compositional space adjusts, guides and arranges the manner in which the poster is read, to make it both logical and visually stimulating. In this poster, Tissi showed the clever way of using composition, overlapping and completion position of the typespacing, at the same time legibility always clear and easy to read.

There are a good few designers who use type spacing successfully, for example; Frank Armstrong, Rob Corter, Adrian Frutiger, Herb Lubalin, Wolfgang Weingart, etc. Their works strongly show their talent of using typographic space. In my point of view it's wise to study and analyse their method and learn the possibilities of typespacing.

A B C D E F G H
a b c d e f g h
I J K L M N O P Q
i j k l m n o p q
R S T U V W X Y Z
r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

Fudoni Bold Remix 1991
designed by Max Kisman.

A B C D E F G H I K
L M N O P Q R S
T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z

Spindly Bastard 1990
designed by Jonathan Barnbrook.

A B C D E F G H
a b c d e f g h
I J K L M N O P Q
i j k l m n o p q
R S T U V W X Y Z
r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

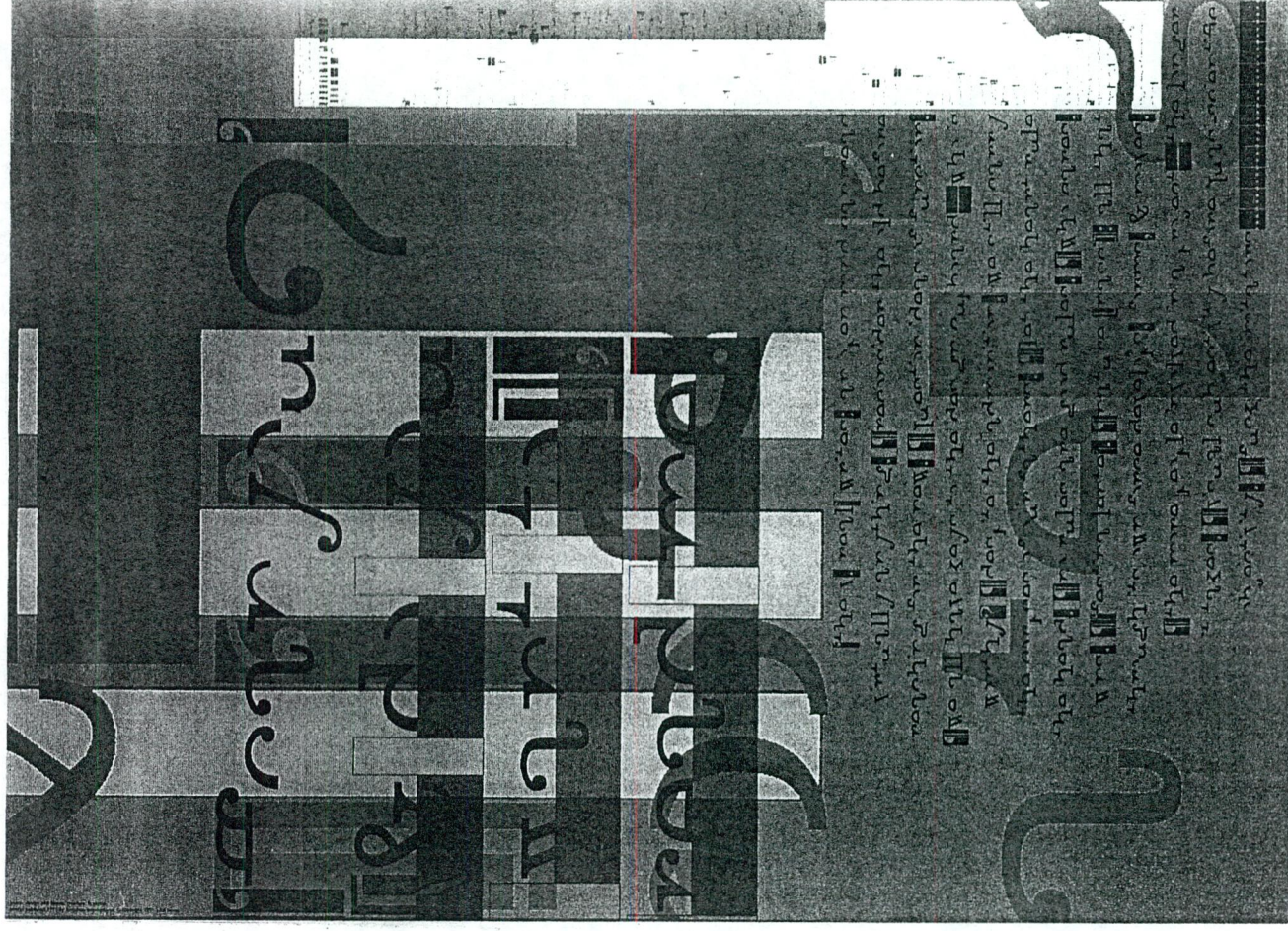
Hard Times Regular 1990
designed by Jeffrey Keedy.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

F. State 1991
designed by Neville Brody.

A B C D E F G H
a b c d e f g h
I J K L M N O P Q
i j k l m n o p q
R S T U V W X Y Z
r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

Prototype 1990
designed by Johnathan Barnbrook.



F Can You 1991
designed by Phil Baines.

The failures in type spacing

Today there are still a great deal of important documents and messages typed out by electronic typewriter and computer typesetting with faulty type spacing. The appearance on these documents are tiring and inefficient to read. Unfortunately many people still ignore these short comings in favour of convenience and continue using such typewriters because of represents a cheaper solution .

"Ironically, it has been demonstrated in the past that companies who employ a better or more sophisticated means of typesetting for their documents present a more professional face to their clientele and this is turn generator more revenue." Joe Duffy. 1992.N.C.A.D.

The following are 3 examples of documents that do not work because of the poor typespacing of the setting (Fig4.6a,4.6b,4.5c). To read them requires too much effort from the viewer and so they are generally ignored and unresent to read.

From technical point of view, the faulty typespacing in the first example (Fig4.6a) show the intercharacterspacing of each letters are are too widely spaced, especially letters like 'r', 'u', 'n', 'b', 'd'. The character spacing and word spacing are having the most serious problem in this document. The characterspacing of the letters 'i', 't', 'j', 'f', 'y' are set in too much space, words like 'experiencing', 'families', 'difficulties' in the first paragraph are look choppy and lost . Another characterspacing is the 'OWT' and 'MAN' of the words 'GROWTH', and 'DEVELOPMENT', in the second paragraph stand out as too bold because of too narrow in character spacing. The lowercase letters 'w' and 'm' are having the same problem of too narrow intercharacter spacing, wider intercharacter spacing is necessary to achieve balance with the other letters. The wordspacing is too much in space as well and the unequal wordspacing make the copy look choppy and unresent empty 'hole' appear especially the third and forth lines in the second paragraph.

The second example (Fig4.6b) show the poor appearance of the copy because of too open in linespacing, they need to be tightened, the letter 'm' is having the same problem as too narrow intercharacter spacing.

A B C D E F G H
a b c d e f g h
i j k l m n o p q
r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

(Fig4.7)

**There will
going to be
just too
many typefaces.**

(Fig4.7a)

The third example (Fig4.6c) show the characterspacing is extremely open, the copy is tiring and difficult to follow when reading it, It require tighter characterspacing to reach the goal of legibility.

Following the advanced changes in technology, more and more designers have become interested in typeface design. Unfortunately, many of the do not take typespacing seriously, or maybe they just ignore it. There is no doubt some of the typefaces are beautiful in form and shape, but without the proper type spacing, those typefaces still cannot be considered as successful type. I always ask, so we still need more new typefaces. So many typefaces have been created and most of them have been forgotten because of lack of legibility. If the type cannot functionally serve the needs of communication, there is no reason to continue to use it. Here are a few examples we should consider carefully.

The Keedy San Bold (Fig4.7) designed by Jeffrey Keedy in 1989 show the imbalance of weight and intercharacter spacing in some of the characters. Each character had different construction without any connection with the others. From my point of view, alphabets should have a kind of unity, like a family, with identity as a group. It's not just because of the look but on some occasions this identity is more important than the beauty of the type. (Fig4.7)

(Fig4.7a)

If we look at the piece in Keedy San Bold (Fig4.7a), we'll notice there are so many spacing problems, from character spacing to line-spacing; in other words it's simply disorganised. There are a few more typefaces having the same problem, for example;

Oakland Ten 1985
designed by Zuzana Licko.

Faveller Regular 1991
designed by Max Kisman.

Spindly Bastard 1990
designed by Jonathan Barnbrook .

Fudoni Bold Remix 1991
designed by Max Kisman.

Hard Times Regular 1990
designed by Jeffrey Keedy.

Summary

Typespacing is a complex subject with even widening applications, and in this short thesis I have had only sufficient space to deal with the essentials, though the attempt has been made to indicate the basic and creative use of typespacing. I have also examined the consideration of the typographical spacing problem we are facing today and the method of checking typespacing. Some of the successful and failed examples of utilised typespacing, which should be studied by any would be typographer has also been discuss.

(G)20 th Century Type
by Lewis Blackwell
Laurence King Publishing.
1992.Pg 218

The "New Typography" of today, such as that practiced by the designers associated with Emigre Magazine and the Cranbrook School in the United States, questions the notion that legibility is paramount. We detect within such an assumption that legibility is all, a glib political agenda requiring conformity to a narrow range of meaning, a single route, a rejection of the potential of a text to have many levels of meaning and way of expression(G).

Designers and manufacturers alike involved in this radial reappraisal of typographic communication are often required to employ unconventional means of an inarticulate and ineffective product, but such failures are an inevitable consequence of a necessary movement, i.e. the exploration and re-evaluation of our societies values and culture as expressed through the medium of typography. In my point of view, the legacy of tradition experiment in typespacing needs to be re-examined constantly; with the advanced technology available today, we may improve the methods of checking the spacing problems of those new typefaces.

Finally I hope that this thesis will be at least a signpost, showing a few of the paths that must be travelled by the aspiring typographer and any would be typographer if he is to make useful contribution to the progress of his profession and the great craft to which it is firmly linked.

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