

NC 0020608 3



National College of Art and Design.

Faculty of Design.

Department of Visual Communications.

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Submitted to the Faculty of Art and
Design and Complimentary Studies in
candidacy for the Degree of Bachelor of
Design in Visual Communication.

1993.



ACKNOWLEDGMENTS

I wish to thank the following people for their help and co-operation:

Mr Bill Bolger,
Dept. of Visual Communication,
National College of Art and Design,
100 Thomas St.,
Dublin.

Mr Simon Healy,
Dept. of Visual Communication,
Athlone Regional Technical College,
Co Westmeath.

Cynthia Hollandsworth
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Herr Peter Karow,
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Angus Mc Donagh,
Agfa Typography Ltd.,
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Dun Laoghaire,
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Dr. Frances Ruane
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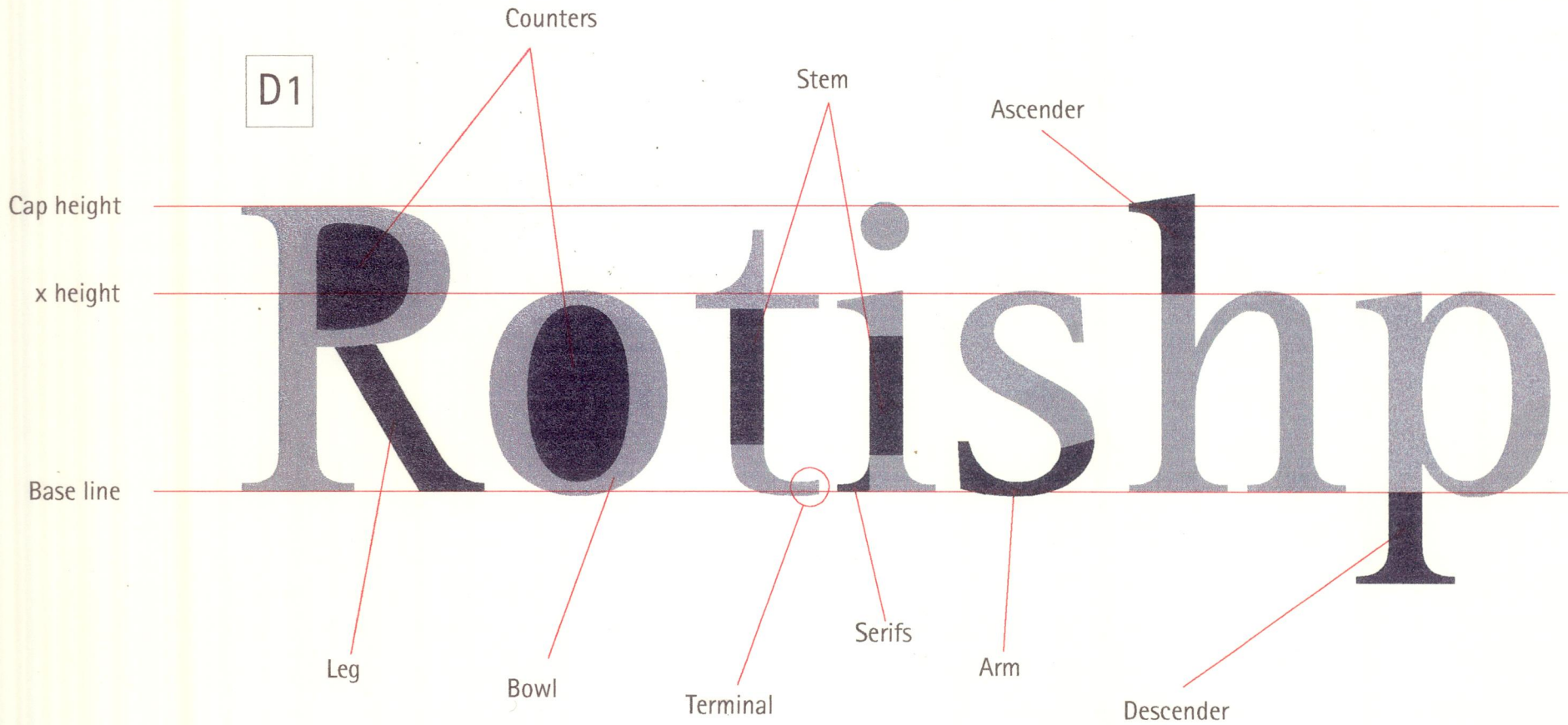
INTRODUCTION

Rotis

Since the origins of type we have striven to achieve the ultimate alphabet, an alphabet which communicates the message so clearly and quietly that the reader is not aware of the communicative process itself. Too much detail simply creates visual noise which makes the text difficult to understand and uncomfortable. The message is sacred and the type which communicates this message must act as a window to the author's feelings and thoughts. For the first time in the long history of type we are without major influences; we no longer have to adjust stem weights and counter size to suit whatever technology is available, and we are mature enough to ignore or admire traditional types as we see fit. When we talk about historic faces we usually mean the ones which are available today, but these are sometimes far different from the ones the original designers drew. Hot metal types developed very gradually over a period of 500 years and even those shapes followed thousands years of development. Unfortunately the introduction of phototypesetting and digital typesetting was so swift that no new fonts were designed to suit this new age. Classic fonts which existed happily for hundreds of years were stretched and bashed to conform to the new restrictions of printing. The past 5 - 6 years have shown a certain growth in standards; the type world has had time to breathe and we are realising that poor copies of classics are not good enough. This distinct decline in typographic standards prompted the German printing house Druckhaus Maack to commission the German designer Otl Aicher¹ to write a book on the subject. This book called *typographie* gave Aicher the chance to develop a typeface which he was working on since the early seventies. Josep Rommen, managing director of Druckhaus Maack worked alongside Aicher and three design assistants over several years to develop this typeface which he named Rotis after a renovated mill east of Munich where he had his studio. This type family was designed when computer interactment and photo composition seem

1 - Otl Aicher is known more as a Graphic designer than a type designer: he is responsible for the Braun, Erco and Lufthansa logos. His most famous work must be his Munich Olympic icons designed for the '72 Olympics.

D1



to be reaching a level of control. The cameras, printers and computers do not seem to be stunting type standards anymore but are giving us the opportunity to develop fresh ideas and also to use this technology to revive the original drawings of the classic types and begin afresh.

In chapter one I will show how the complete Rotis type family is split into 4 distinct subfamilies Sans Serif, Semisans, Semiserif and Serif. By outlining each of these subfamilies separately and in relation to the other subfamilies it should provide a basic understanding of the family.

In chapter two I do not wish to state endless facts about type history, but try to trace a specific trail through time which leads to Rotis. A number of faces, old and new, are indirectly responsible for Rotis and its quality, so Aicher cannot get all the credit. He used his great knowledge of type and legibility factors and by compiling these proven qualities, he created the Rotis family.

This family is more than just a typeface, it is a typographical programme. It involves a standardisation of the entire family, creating a bridge over the void which has always existed between serif and sans. By creating two intermediate fonts, the Semisans and the Semiserif, the gap is considerably shortened. The basis of a homogeneous family is basic structure: each Rotis font contains certain common elements which create harmony throughout the family. In chapter 3 I will assess how successful Rotis is as a family, and how this uniformity can be used to its full potential. I will also discuss Rotis in terms of legibility. After all, Aicher's goal was not to design for production techniques but for the physiology of the human eye.

A huge contributor to the development of the Rotis family was Ikarus M, a computer programme which makes interpolation possible. This is a process where an intermediate variant is created by averaging 2 extremes, like an extra bold and a light, thus creating a semi bold and bold versions. By using Ikarus M and Fontographer¹ programmes to create my own interpolated Rotis fonts I will simulate the steps Aicher took in creating his interpolated fonts. Then, by overlapping mine with his I will attempt to determine the amount of human input in the design of these interpolated fonts.

1 - Like Ikarus M Fontographer is a computer programme designed for type face design.

Characters per pica chart

Characters per pica ¹	8pt	9pt	10pt	11pt	12pt	14pt	18pt	24pt
Rotis Semisans 45	3.86	3.43	3.09	2.81	2.57	2.21	1.72	1.29
Rotis Semisans 55	3.68	3.27	2.94	2.67	2.45	2.10	1.63	1.23
Rotis Semisans 65	3.56	3.17	2.85	2.59	2.38	2.04	1.58	1.19
Rotis Semisans 75	3.52	3.13	2.82	2.56	2.35	2.01	1.57	1.17
Rotis Semiserif 55	3.67	3.26	2.94	2.67	2.45	2.10	1.63	1.22
Rotis Semiserif 65	3.44	3.05	2.75	2.50	2.29	1.96	1.53	1.15
Rotis Serif 55	3.45	3.07	2.76	2.51	2.30	1.97	1.53	1.15
Rotis Serif 65	3.35	2.97	2.68	2.43	2.23	1.91	1.49	1.12

THE ROTIS FAMILY

chapter 1

The Rotis family incorporates a numbering system for classification instead of naming. In this system the light versions are numbered in the 40's, the mediums are in the 50's, the bolds in the 60's and the extrabold weights in the 70's.

Rotis Sans Serif 45	-	(light)
<i>Rotis Sans Serif 46</i>	-	<i>(light italic)</i>
Rotis Sans Serif 55	-	(regular)
<i>Rotis Sans Serif 56</i>	-	<i>(regular italic)</i>
Rotis Sans Serif 65	-	(bold)
Rotis Sans Serif 55	-	(extra bold)

Rotis Semisans 45	-	(light)
<i>Rotis Semisans 46</i>	-	<i>(light italic)</i>
Rotis Semisans 55	-	(regular)
<i>Rotis Semisans 56</i>	-	<i>(regular italic)</i>
Rotis Semisans 65	-	(bold)
Rotis Semisans 75	-	(extra bold)

Rotis Semiserif 55	-	(regular)
Rotis Semiserif 65	-	(bold)

Rotis Serif 55	-	(regular)
<i>Rotis Serif 56</i>	-	<i>(regular italic)</i>
Rotis Serif 65	-	(bold)



ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Q b c e g t
C G c a

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Rotis Sans

The sans is a skeleton of a type family's basic structure. To study Rotis without its clothes on you just examine the sans and the essence of the face is revealed.

- Rotis sans is visually monoline in stroke thickness.
- It is slightly condensed in comparison to most other sans faces.
- Between italics and weights it comes in 6 typefaces - 45, 46, 55, 56, 65 and 75.
- It is most successfully used in display situations although it is readable in short length text.
- It is designed to be used with Rotis Serif.
- Tail of the upper case Q is horizontal.
- Ascender of b merges with bowl.
- Lower arms of the c, e, g and t are flat.
- Upper arms of the C, G, a, and c curve downward.

Rotis Semisans

- Very similar to the sans in structure but has contrasting stroke weights.
- It is slightly condensed thus providing economy of space when set in semi text situations.
- It comes in 6 typefaces - 45, 46, 55, 56, 65 and 75.
- It is designed to be used with Rotis Serif.
- Can be used in moderate length text.



ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

n N R

Rotis Semiserif

- Rotis Semiserif is classified as a modified sans serif.
- It is slightly condensed.
- It comes in 2 typefaces - 55 and 65.
- Like the Sans and Semisans it has a one story lowercase g.
- It's serifs occur on the top left corner of the letters.
- It was designed to add variety to the family.
- To be used in display situations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

rack caj

Rotis Serif

- The basic structure is similar to the rest of the family.
- It is slightly condensed thus providing economy of space when in semi text situations.
- Between italics and weights it comes in 3 typefaces - 55, 56, and 65.
- Rotis serif italics are true italics.
- Two story lower case g.
- Bulbous terminals on the c, a and j.
- To be used in moderate length text.
- Rotis characters¹ are smaller and more condensed and than the average type. This means more words per page of text.

¹ - This applies to all Rotis Subfamilies



INFLUENCES

chapter 2

A specific trail can be seen in typographic history and our colourful past tends to confuse this path. Wars, religion, culture and other facets of human endeavour combined to produce a network of styles which eventually combined to become the alphabet as we know it today. I believe that any typeface, be it text or display, was created because of historical influences on the designer and his interpretation of these influences. An extreme example is something like 'tiger rag' designed by John Viner. This face bears a very close resemblance to Roger Exoffou's, 'Choc' designed 20 years previously in 1955. Both faces are extremely alike and bear close connections to oriental scripts, showing how even the most rebellious designs are derived from the past. Display faces are more extreme and are, therefore, easier to discuss because they are more distinct. Considering that their job is to shout a message, it is no wonder so many are available, making type manuals deafening. On the more quiet text face side it is different: only a few make the grade. They must adhere to certain rules to ensure legibility and therefore it is easier to accurately analyse influences.

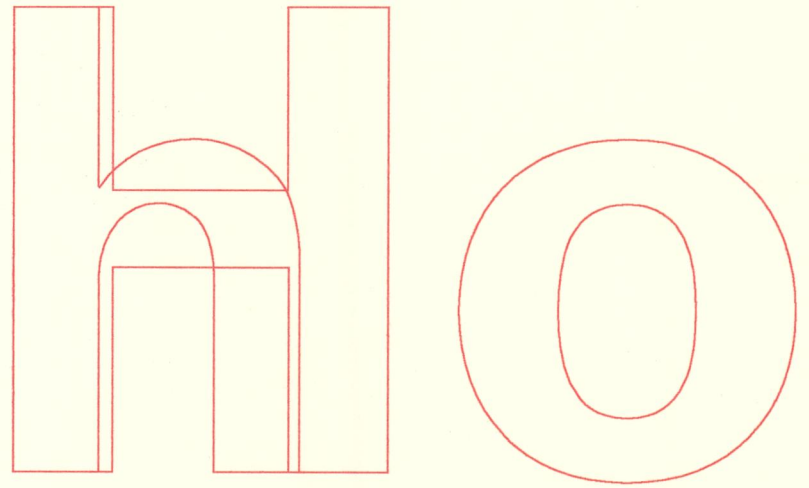
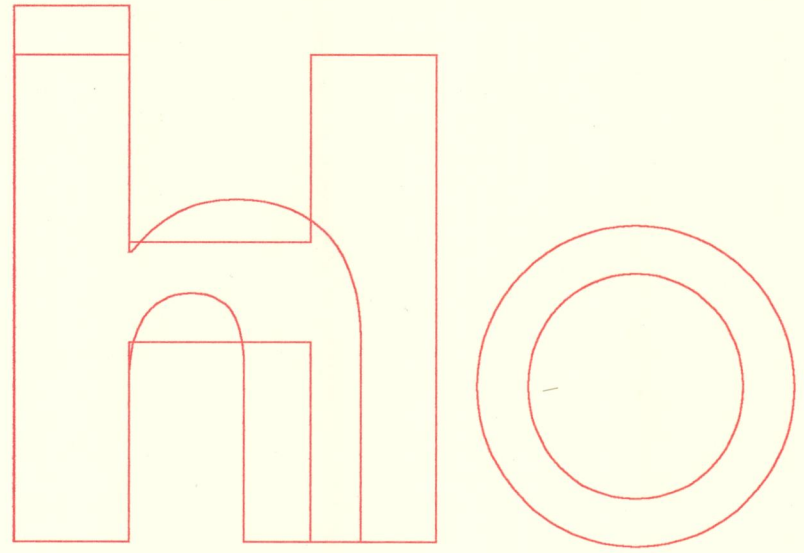
Aicher had an excellent knowledge of type history, but he also had the confidence to make assumptions - to make guesses about the shadier parts of type history. Previous to the 20th century most fonts were designed for somebody or something specific like a particular book or type foundry. The technological barriers held sway over designers, who along with printers were over influenced by tradition. The opposite is occurring today, with post modernism tending to make classic typeface bashing a favourite past-time for many designers and type users.

Otl Aicher, Sumner Stone¹ and Matthew Cartier² are part of a movement which accepts the changing technology and yet uses the proven legibility factors of the greats like Garamond, Caslon, Times and others. After all, what is a typeface but a system and series of symbols designed to form coherent, harmonious communication. So many fonts have existed

1 - Designer of the Stone typefaces.

2 - Designer of the Cartier fonts for low resolution printers.

D3



UNIVERS
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

happily for over 200 years, so why disregard them as old fashioned when they can provide us with clues to the formation of a universal typeface? By trying to beat these classics, modern type designers often fail because they try to beat the Garamonds and Caslons by breaking the rules blindly to create something different.

My reasons for choosing Rotis as a subject face were many, but the main one is because it is the first successful 'Original' typeface designed in recent times and the reason for this is because Aicher reached back into history and learned from proven typefaces to create Rotis. By finding clues within the Rotis family I can trace some of the fonts which Aicher used.

Rotis Sans Serif

The twentieth century kicked off with a typographical declaration of war. Art Nouveau altered letter forms at random; display faces sprouted stems and flowers: style was king. From this one extreme flowed another - the Bauhaus with its form follows function philosophy¹. The square, circle, and right angle attempted to blow the natural letterforms of the past out of the water. Typography was never so popular; people became aware of its importance with the World Wars and the propaganda machines. The written word was suddenly a philosophy.

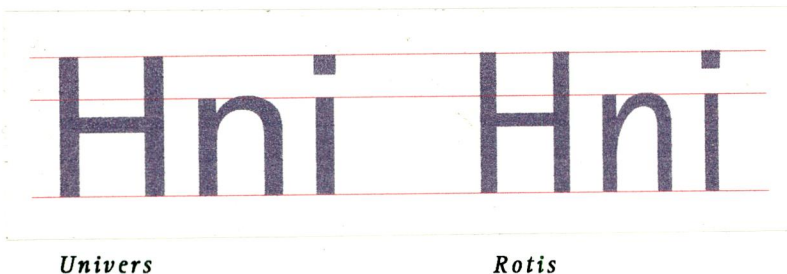
Univers - Adrian Frutiger 1955

The advent of the sans serif generated strong feelings in type circles and each school of thought denounced the others. Univers showed people how a family of type could work and had a lasting effect on Aicher's work both in graphic design and type design. He used it extensively in his Olympic Games programme in Munich 1972, both in text and display situations. The most notable association between Rotis sans, Semisans and Univers is the distinctly natural shapes which occur in the letter forms. Like Univers, Rotis has disassociated itself from pure sans serif (i.e. Uniform stroke width and geometric shapes) by ensuring that stroke widths, heights and shapes are determined by optic rules, see (D 3).

D 6

g g g

D 4



Univers

Rotis

D 5

a c e g s

D 7

Post Office

Futura

Both faces have a large x height; this allows for a tranquil appearance on the page. This is because there is no stepping effect between the upper and lower case and in the German language the use of caps is much more frequent than in other languages (D 4).

When Adrian Frutiger designed Univers he reverted to hand written letterforms because handwriting has a natural left to right emphasis. The terminals on the Univers lower case **a**, **c**, **e**, **g** and **s** are horizontal, this is an uncial trait also used in Rotis sans, Semisans and Semiserif where the upper arm of the c and a curl downward into horizontal terminals, (D 5) Rotis has increased this effect to ease movement along the line of text. This is most evident in the **c**, **e** and **s** where the counter is opened on the lower arm and the terminal is almost horizontal on the base line.

By condensing a Rotis semi sans lower case **g**, one can see the distinct similarities between it and Univers letter forms. It is almost as though Aicher used the computer to adjust the Univers bowl shape. D 6 illustrates this likeness.

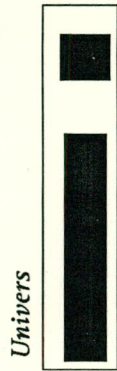
Rotis sans is almost too grotesque¹; it is bordering on its class. Was there any need to treat the sans version so naturally when the semi sans fills this role so well? The logical progression may have been to firstly design a true geometric sans with little difference between thick and thin and then soften the transition from Sans to Serif by using the Semiserif and Semisans. This true Sans could reflect some of the qualities of Paul Runners Futura. Futura's monoline thickness gives it a distinct factual feel, D 7 shows how the geometric Sans is perfect for services like a Post Office. It is an informative display or semi display face yet it fills a certain niche in the type market.

Rotis sans has natural handwritten properties which repeat the feel of its brother the Semi sans. The major strength of Rotis and Univers is the standardisation of the entire family. Frutiger created different versions of his typeface but basic structure remained the same. This enables a passage of text to be set in a bold, plain and italic yet still hold the pages overall harmony. This was a huge influence on Aicher's Rotis family. This will be discussed in a later chapter concerning homogeneity.

1 - Grotesque describes Sans Serif faces with varying stroke widths.



D 8



Rotis Sans



Rotis Serif



D 9



Rotis



Gill Sans

When Univers originated phototypesetting was in its early stages. High intensity light was shone through a stencil on to paper thus exposing the letter. However proportionately less light penetrates through an i dot than the stem thus causing the dot to appear small - by enlarging the dot this problem is compensated. Today however, laser light generated from computer data enables printers to be more accurate thus Rotis is not designed to constraints like Frutiger was when he drew Univers. Both Rotis Sans and Semisans have square i dots, unlike Rotis Serif which has round dots. In Univers Frutiger increased the size of the square dots making them almost 110% thicker than the stems. Because of the condensed nature of Rotis the dots are more apparent than in a broad face like Univers and do not need to be stressed so much. A square dot also makes the **i** and **j** seem more of a unit (D 8). When a circular dot is used the left to right movement is impaired because the **i** and **j** become more complicated and the eye will hesitate fractionally.

The lower case **b** and **d** usually reflect each other visually; however, Aicher has used a novel approach by removing the crotch of the **b**. This is a serif function is used for practical purposes in the sans as a legibility aid. If the vertical stem of the **b** descends down to the baseline it creates a visual block in what should be smooth left to right movement. The vertical stem on the right of the **d** can stay complete. It does not hinder legibility because the bowl eases the eye through and past the letter. This can also be seen in Eric Gill's treatment of his lower case **b** where the stem and bowl meet into a sharp corner, with no indentation and therefore less fuss. (D 9)

This quirk occurs also in the Semisans but not in the Serif or Semiserif because the more complicated seriffed letters need the support of a crotch because the contrast between thick and thin is greater.

Rotis Semisans

Rotis Semisans is the pillar of the family. It embodies Aicher's dream of bridging the gap between serif and sans; it is the transition between the two polarities. It has the feel and colour of a Roman yet has no serifs and

a b c e

g j h s

o p r y

G R E O

D 11



can not only be seen as a successful variant in the family but as a face in itself it is practical yet soft. It reflects the informative regularity of the sans and is legible like a Roman Serif.

*'This modified sans serif script is, as it were, the mother of our new script family, the father of the familiar Roman as reflected today in say Times.'*¹

Because of the condensed nature of the family the Semisans can read comfortably for longer than Univers or Gill yet I do not believe it can be successfully used in an editorial situation like a newspaper, magazine or book. Roman as it may be, it cannot be seen as a full text face no matter how stubborn Germans may be in claiming the sans as such. It can be used in sub text situations and also to highlight large sections of text where an italic will fail because it is too taxing on the eye. The major downfall of Futura in text was its appearance as a string of pearls. The large round counters caused fixations². These fixations caused the eye to stutter and jump across the text. Aicher condensed his characters and in the semi sans this gives designers the facility of increasing the word and letter spacing and also preventing pearling because the counters are oval shaped.

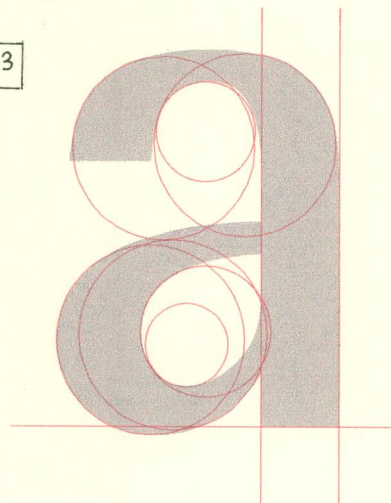
The Semisans is not a true Grotesque nor a true sans because its horizontal stroke widths differ from the vertical strokes, creating a more Roman looking sans serif. D 10 illustrates this point by overlapping the sans in grey with the semi sans in red outline. The contrast between thick and thin is increased in the Semisans.

A slight discrepancy occurs in this comparison. Aicher wrote of consistent character widths in his book. D 11 is a diagram taken from *Typographie*, it shows the even width of a Rotis Serif and Rotis Sans lower case a. However, the b,g,h,o,p,u and y are not of even width in both fonts; the g, b and y Semiserif are almost 8% wider than the Sansserif. This inconsistency is even worse when the Serif and Sans are compared, the serif being almost 10% wider than the sans. I can only assume that characters were made of equal thickness wherever possible and for optical reasons each font was changed slightly.

1 - Otl Aicher, *Typographie*

2 - This is a term used to describe how the eye moves in a series of jumps or saccadas and stops which are called fixations. Each fixation takes between 0.2 - 0.4 seconds depending on experience. An efficient font like Times enables saccadas to last up to 12 words before the next fixation.

D 13



Optima

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

D 12



D 14

IRISH

Optima - Herman Zapf - 1958

Optima is a typeface designed by Herman Zapf during the '50s. like Rotis semi sans, It is a sans which attempts to soften the gap between serif and sans. The most notable feature of Optima is its flared terminals which make it officially a sans but actually a serif. This use of flaring can be seen in the semi sans lowercase **s**, **a**, **t**, **g** and **c** - (D 12). Optima and Rotis semisans are not alike in basic structure but when Herman Zapf drew Optima his goals were similar to Rotis, ie; to design a Roman Sans serif. As a result both faces have many of these Serif qualities in common.

Due to the monoline thickness of the sans it is visually heavier than the Semisans. To be compatible each family must occupy the same optical space enabling them to appear the same colour' on the page. Rotis Semisans has slightly thicker downstrokes than Rotis Sans to compensate for the space lost on the thin parts of the letter, thus the black to white ratios are optically the same (D 10).

By constructing a lower case a it was possible for me to become familiar with the letter itself, how it was drawn and how accurate the construction methods were. The Semisans a is obviously determined by optical rules. The lack of any association with the circle and rectangle is evident. It would be easier to draw this letter with a french curve than a compass (D13).

Rotis Semiserif

Rotis Semiserif is a distinctly Celtic looking type face. The word 'Irish' becomes stressed when set in it - (D14). The use of the x height and cap height serif is an uncial trait. This influence is mentioned in Aicher's book *Typographie* when he discusses the early manifestations of European writing. This is most apparent in the stems of the non serifed characters such as e,c,a and g. Although these are almost reflections of the semi sans characters, when they appear with the semi serifed characters they seem to be an extension of the miniscules of the 14th and 15th centuries. It was



D 15

american
uncial



D 16

Irish Museums Association
Cumann Musaem na hEireann

here that the sudden transition began with printing presses and raised type on wood and metal. The script faces had to be adjusted for mechanical reproduction. During the Renaissance the Carolingian minuscule, Uncial scripts and Italian scripts began to merge giving us the seriffed Garamonds and Bembos we know and love so well today. However, the Semiserif faded into the manuscripts and journals of the museums only raising its head in the ugly American pseudo-Irish 'American Uncial', 'Kells' (D 15) and others to numerous to mention.

Can Rotis Semiserif be justified as a tribute to the Celts and the scribes of the courts or is it merely a transitional variant between Sans and Serif? The latter is probably its primary function but for an Irish designer I find the semi serif to hold qualities which even Aicher may not have foreseen. The face is not 'traditional' enough to fall into the kitsch style of the American Uncials we see advertising thatched cottages in Killarney. Rotis Semiserif is an example of how type design can revert to its past unconsciously.

During the month of October my design class began a project to design a logo/logotype for the Irish Museums Association. The brief encompassed everything on public exhibit in Ireland, everything from the Book of Kells to Ireland's contributions to the European Space Agency. (D 16) is an example of some solutions using Rotis Semisans. The students who used Rotis Semiserif were not familiar with the font before as it was only available since the beginning of the month and the decision to use it was made purely by discovery; no one prompted anybody. Therefore it was used only for its Celtic modern appearance, not its history.

The quill requires initial pressure to set the ink flowing, this generally leads to a crook at the origin of the letter. As writing can only be performed easily when there is a rhythm, this practice emerged as a distinguishing part of quill written letters. The reason for lack of base serifs is due to the finishing of the downstroke of a letter; when the pen is lifted away from the page no indent or crook occurs.

D 17 is an upper case Rotis Serif A in outline over the Semiserif A. The arrows show how the Semiserif stems flare out as they get nearer the

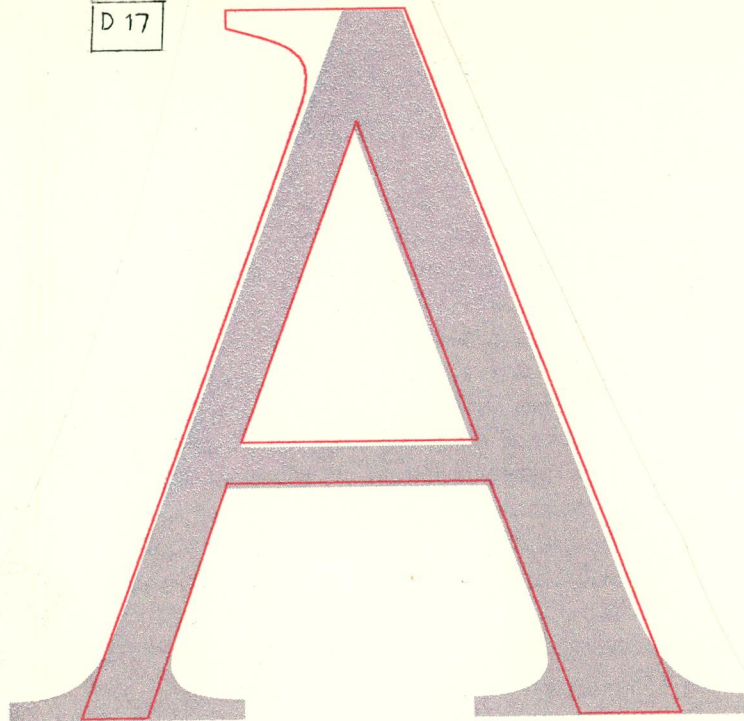
D18

G R A Y

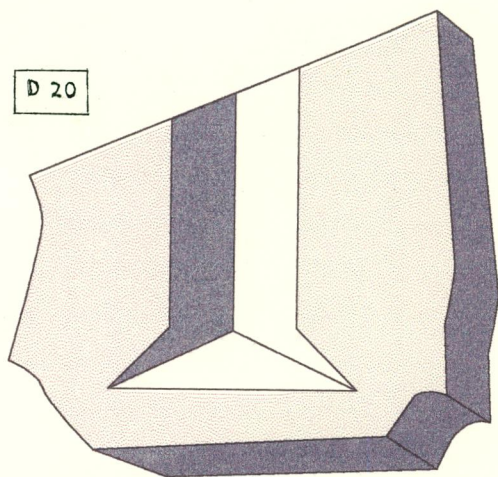
D19

w x y E N M V
k b H I J K L I

D 17



D 20



serif. This is to prevent the letter becoming top heavy. The heavier stems support the extra weight of the serif. You can also see how the bar of the serif is higher than the stem thus preventing the serif's bar becoming too close to the stems, preventing black spots appearing at smaller point sizes. The terminals on the *s*, *e* and *t* are flared like the Semisans.

D 18 illustrates how the Serif and Semiserif differ; most notable is the slightly longer serifs in the semi (see point 1) and the severe serifs on the *R* (see point 2). This is an extenuation of the serif, a function which makes the semi serif more distinct but also makes it even less usable in text or even semi text situations.

Rotis Semiserif has more in common structurally with Semisans than the serif. It is basically the Semisans with capital line serifs added to the top left side of *H*, *I*, *J*, *K*, *L*, *U*, *I* and *k* these serifs are wedge shaped reflecting the quill shapes of the scribes when drawing vertical stems (D19). However letter with diagonals like *w*, *x*, *y*, *N*, *M*, *V*, *W*, *X*, and *Y* have bracketed serifs like the Rotis Serif, a wedge shaped serif on these letters would be too complicated.

Rotis Serif

The serif emerged as a result of technology available 2000 years ago and not as an aid to legibility. When a letter is carved in stone or wood the vertical stem is chipped out, and to ensure uniform depth a triangular notch is chipped out therefore an oblique stroke is applied by the chisel, resulting in an accentuated final stroke named a serif (D 20). When writing found its way to paper the same principal applied, a quill needed initial pressure to set the ink in motion causing a crook at the top of the letter. A face like Garamond has upper serifs originating from the quill and has lower serifs originating from chisel cut letters. Scholars and printers soon realised that the serif was also an aid to legibility. The horizontal strokes of the serif were perpendicular to the vertical heavier strokes of the stems and aided the eye in left to right movement. So the serif gained stature and began to appear in different forms; hairline, thick, thin, bracketed, slab transitional.

d p

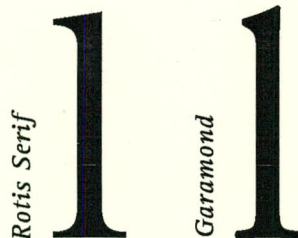
D 23

P p

D 22



D 21



Enlarging a Rotis Serif letter makes it seem badly proportioned, the large wide serifs are ungainly and make Rotis secondary as a display face. However at 9, 10, 11, or 12 point the letters begin to work. The long tapered serifs become an integral part of the reading machine; they fuse with the main structure of the letters to form an optical line connecting each letter.

Diagram D 21 shows the similar treatment of the upper and lower serifs in Garamond and Rotis serif. However diagram D 22 is a Garamond **p** overlapped by a **d** which has been rotated by 180°. This illustrates how each Garamond character was designed in relation to its function and not by the shape of other characters in the font. Each bowl is a different shape and the ascender is much longer than the descender.

Diagram D23 is the same experiment carried out with Rotis serif. This shows how the **p** was created by simply rotating the **d** 180° and then raising the upper serif at an oblique angle to the stem. This also occurs in the **b** and **q**.

I believe the classic faces were drawn by craftsmen who lived and breathed their word. Garamond was drawn letter by letter over many years, each crook and curve were lovingly altered until it was perfect. These diagrams compare not only 2 typefaces but 2 eras. Aicher was undoubtedly a very fine designer but can he or any of his contemporaries ever create letters without taking the shortcuts illustrated here? These shortcuts are created by time deadlines, computers and lack of interest in perfection. Most of today's type designers fail to meet this love of letters bordering on religious, a love which was generated by the Claude Garamonds and William Caslon all those years ago.

The Garamond serif may have had an influence in Rotis serifs but certainly the types of the 1700s played a huge part overall in creating our modern designs. In more recent times, fonts have been drawn which are distinctly Rotis like. I believe these fonts had a direct influence on Aicher's Serifs, some more than others.

D 26

l
Rotis serif

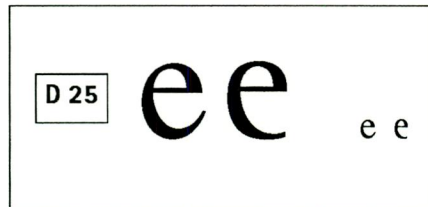
l
Times

Times

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

D 24

Rotis serif Enders Game
Times Enders Game



Melior

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Times - Stanley Morrison - 1932

When I first became interested in type design I hated 'Times' purely because it was boring; it had no character. But after a couple of years I realised that Times was boring because it was perfect, it was totally anonymous because we were exposed to it everyday in newspapers, books, television and other media. I still cannot use it because it reflects lack of creative input. It has to a certain extent been worn out. However, it is still a beautiful Roman and provides us with a role model to use as a reference. The fascinating thing about Rotis Serif and Times is their general similarity. They both have the same colour in text and display even though their letter forms are completely different.

Diagram D 24 illustrates this. At a glance Enders Game appears to be set in the same typeface because the visual ratios between black and white are similar

Diagram D 25 is a comparison between the lower case e's of each face. the weight distribution of each is totally different yet when seen at smaller point sizes the colour is the same.

D 26 is a comparison between Times serifs and Rotis serifs which are both transitional bracketed serifs which grew from Baskerville in the early 1800s.

These similarities is too close for Aicher not to have used Times for inspiration.

Melior - Herman Zapf

Herman Zapf designed Melior to cope with the rigors of printing onto newsprint. Wherever possible the counters are opened as much as possible resulting in its distinct square appearance. The transition from thick to thin strokes is swift creating square shaped letters (D 27) This treatment allows for a certain amount of blotting to occur yet still retains the letter's clarity almost like the ink traps used in the old wooden and metal types. This idea is also reflected in the Rotis family, particularly the caps which are far more condensed than Melior but have a distinct square feel. This Thesis is printed on a low resolution 350 dpi laser printer, therefore

D 27

D G

Rotis

D G

Melior

Benguait

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

D 28

e G

Rotis Sans

e G

Benguait

the caps help them reproduce better at smaller sizes. Unfortunately Some of the lower case letters, particularly the e counter space fills in slightly

Benguait

Benguait is a font available in a sans and serif version. This however is a forced marriage because the structure of the letterforms is radical and would be recognised as Benguait from 2 miles serif or no serif. My interest in the Benguait is in the upper case **G** and lower case **e**. Diagram D 28 shows a Benguait **G** and Rotis Serif **G**, the top left curve of both letters is sharper than the bottom left curve. This curve meets a stem which is particularly higher than average, almost reaching up to the x-height. This feature is accompanied by a sharp corner at the base of the letter, thus preventing it from being mistaken for an **O**.

Benguait was for some time one of the only fonts with a flat lower arm on the **e** and **c**. Aicher incorporated this feature into Rotis as a legibility aid.



THE HOMOGENEOUS FAMILY

chapter 3

quam duocenta iugera possideret & intellegebat enim
contrarium esse minorem maiorem modum posside
re quam qui ab ipso possidente coli possit ut uero ro
mani omnium gentium peccati sunt agros ex hoste
captos in uictorem populum partiti sunt alios uero
agros uendiderunt ut sabinorum . Ager quid dicitur
quaestorius eum limitibus actis diuiserunt & denis
quibusdam quibusq. actibus litereculi quinquagena
iugera incluserunt atq. ita per quaestores populo ro
mano uendiderunt . postquam ergo maiores regi

D29

Adiutor meus & pro
tector meus tu es
dñs meus ne tarda
ueris . IN TINC (1)

D30

Up to the 10th century type styles were more or less isolated from each other, each style developed for different societies - the Romans, the Celts, the Greeks, Franks and so on. Following the Roman dominance type began to be personalised; Celtic uncial forms dominated for a couple of centuries, in response, the Franks created the Carolingian minuscule with its ascenders and descenders (D 29). Eventually all 3 dominant forms of writing in Europe merged when scribes began to punctuate minuscule text with Roman capitals and uncial inserts for high-lighting in much the same way we use italics today (D 30). Upper and lower case are so ingrained today that we perceive them to be part of the same script when they are actually separated by 1000 years. Initial capitals were very popular through the 6th, 7th and 8th centuries and were eventually to develop from a decorative letter into a practical form of emphasis. The scribes who wrote these manuscripts created compatibility in differing letterforms by using the same type of pen or quill and also common letter heights.

The first direct and intentional attempt to design specifically for a coherent family was an italic and Roman font designed by Nicholas Kis in 1686. He used global characteristics such as similar weights, character height and x-height. From here on most faces designed included an italic and so the type family was created.

Restricting oneself to a specific typeface for a particular job can be seen by some as a challenge - it reflects the quality of idea and ensures a certain harmony. Nowadays, however, there has been an enormous increase in exposure to letters in every form. Type has become loud to compete with modern culture. Because of this bombardment of letterforms people are beginning to develop a sense of type awareness. Society's visual IQ has increased. A family of type faces such as Univers, Stone or Rotis not only enables designers to create interesting yet compatible work but it is

To the Letter

FIFTY YEARS AGO THIS MONTH GEORGE BERNARD SHAW ISSUED A PUBLIC LETTER, PRINTED AS A BROAD SHEET, OUTLINING HIS PLANS FOR HIS NEW ALPHABET.

am at present making my will. As I intend leaving my property, including certain copyrights, the value of which may run into six figures, to the nation for a specified purpose which is outside the routine of any existing Government department, including that of the Public Trustee or the Charity Commissioners, but which aims at the achievement of an immense national economy, I am up against the difficulty of ascertaining which public department or committee, or what learned Society, I should nominate as an executant of my scheme instead of attempting to create a private Trust ad hoc.

My particular fad is the saving of labour by the establishment of a fit British alphabet containing at least 42 letters, and thereby capable of noting with sufficient accuracy for recognition all the sounds of spoken English without having to use more than one letter for each sound, which is impossible with the ancient 26 letter Phoenician alphabet at present in use.

There are before the public several phonetic alphabets which fulfil this condition, notably those of Pitman in the British Isles and Gregg in the United States of North America. Both have behind them capable business organizations, for lack of which the alphabets of the eminent English phonetician Henry Sweet and others remain practically unknown. But they have been corrupted and spoilt

for general use by being taught exclusively as shorthands for verbatim reporting. Phonetic writing can never reach the speed of human utterance; for the contractions, grammalogues, phraseograms and arbitrary dots and dashes and ticks by which verbatim reporters contrive, after years of practice, to report speeches verbatim, are illegible to anyone but the writer, and hardly even to the writer after memory of the utterances has faded. The classical instance is that of Charles Dickens, who, though qualified as a professional reporter by prolonged and irksome study and practice, nevertheless had to write all his novels in the ordinary script to make them legible by the printer. *Shorthands as such may be dismissed as useless for general scripture, though their alphabets, if used without contractions, should be examined by all designers of new alphabets.*

Beside these shorthands there are in use, in pronouncing dictionaries, and by professional phoneticians and students, ways of making the 26 letter alphabet phonetic. But the notation of our 16 vowels by the five letters a e i o and u can be done only by using two letters for one sound, and attaching consistent meanings to each permutation. This seems simple and practical because the possible permutations of five letters are far in excess of the number of sounds that need be noted to make a script generally intelligible. Hence we have what is called Simplified Spelling and the spelling of the phonetic textbooks, to say nothing of the attempts of novelists and playwrights to represent the dialects of their characters—of Sam Weller, Caleb Balderstone, Handy Andy, Fluellen and the rest—by grotesque misspellings. My own experience as a playwright in efforts to write modern cockney dialect phonetically with 26 letters has convinced me of its impossibility. Actors who specialize in cockney have had to transcribe my text into conventional spelling before they could study their parts.

Stone Sans Stone Sans Semibold

Stone Serif Stone Serif Semibold

Stone Informal Stone Informal Semibold

available to amateur 'typesetters' who are now armed and dangerous with computer facilities. Their new wave typography is rampant in our main streets: flyers, posters, brochures and so on are swamped with every conceivable font weight and style. The rule of the day is clash. Using a homogeneous family it is almost impossible to avoid some semblance of coherence.

The basis of an homogeneous family is basic structure, the skeletal structure of the letterform. In my opinion Rotis will become one of the most popular families for some time because with Rotis Aicher adhered to structural compatibility more rigidly than Stone, Legacy and Benguait, which are all families which attempt to bridge the serif/sans divide¹. This raises the argument of whether Rotis is just a sans serif with clothes on. Certainly Stone does provide a coherent colour and style when set together but these styles differ so much that each face has its own character; each member is too distinct from the other. While Stone is officially a family, only the sans appears successful; all the other members are too fussy, also, because it was designed specifically for low resolution printers the counters are huge, thus causing it to pearl² in text. Nowadays however, this technology is obsolete and low resolution printers are fast being replaced by cheap 600 and 1200 d.p.i. printers. Rotis characters are designed for the family, not the font. The result is a face which can be comfortably set in all styles and still retain colour. D 31 illustrates how Rotis appears in text. Each font fuses with the next to provide clean text. A closer inspection reveals that Sans, Semisans and Semiserif have been used; the transition from each is subtle and can only be detected when reading the text.

The inconsistent character widths within the family may create problems in translations, each font should occupy the same width as the others enabling two passages of similar word count to be set in different combinations and still be the same length, this is not the case however because if a passage of German is set in 10 point Rotis Semisans, and a translation in English is set in 10 point Rotis Serif the English version will be about 5% longer than the German, over 200 pages of a book 5% adds up to a lot of extra pages.

¹ - These three families include sans serif and serif fonts.

² - A type face like Garamond has small counters in the lower case e, and when printed at low resolution the large pixels tend to fill in these counters thus causing black spots. To counteract this, fonts like Stone enlarge the counters to avoid filling in this caused glaring white spots or pearls in the text.

Stone Serif

I am at present making my will. As I intend leaving my property, including certain copyrights, the value of which may run into six figures, to the nation for a specified purpose which is outside the routine of any existing Government department, including that of the Public Trustee or the Charity Commissioners, but which aims at the achievement of an immense national economy, I am up against the difficulty of ascertaining which public department or committee, or what learned Society, I should nominate as an executant of my scheme instead of attempting to create a private Trust ad hoc.

Stone Sans

I am at present making my will. As I intend leaving my property, including certain copyrights, the value of which may run into six figures, to the nation for a specified purpose which is outside the routine of any existing Government department, including that of the Public Trustee or the Charity Commissioners, but which aims at the achievement of an immense national economy, I am up against the difficulty of ascertaining which public department or committee, or what learned Society, I should nominate as an executant of my scheme instead of attempting to create a private Trust ad hoc.

Rotis Serif

I am at present making my will. As I intend leaving my property, including certain copyrights, the value of which may run into six figures, to the nation for a specified purpose which is outside the routine of any existing Government department, including that of the Public Trustee or the Charity Commissioners, but which aims at the achievement of an immense national economy, I am up against the difficulty of ascertaining which public department or committee, or what learned Society, I should nominate as an executant of my scheme instead of attempting to create a private Trust ad hoc.

Rotis Semisans

I am at present making my will. As I intend leaving my property, including certain copyrights, the value of which may run into six figures, to the nation for a specified purpose which is outside the routine of any existing Government department, including that of the Public Trustee or the Charity Commissioners, but which aims at the achievement of an immense national economy, I am up against the difficulty of ascertaining which public department or committee, or what learned Society, I should nominate as an executant of my scheme instead of attempting to create a private Trust ad hoc.

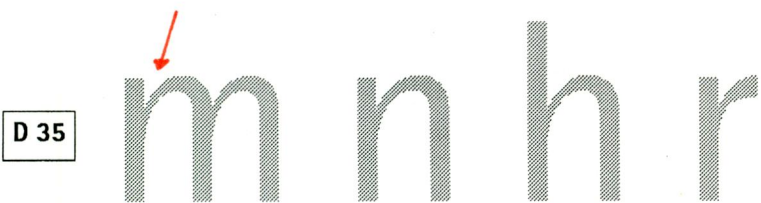
The traditional way to emphasise words in continuous text is to set them in italics. *Usually italics are slower to read than normal text so it is not particularly enjoyable when reading.* Italics also break the reading pattern; they 'sound' different than normal text. Emphasising text using other methods like underlining or a shift in typeface leads to an interruption of flow. By using Rotis the changes occur subtly, providing more informative and interesting typography.

D 32 is a comparison of Rotis and Stone in text situations. The Rotis text has an even colour whereas varying styles in the Stone example make it spotty, breaking the text into units. When Stone was designed it was made to be a series of fonts which could work in harmony. Rotis was designed to be a single family; the changes in typeface occur so subtly that the eye will not detect the change unless that is what it is looking for, for example: a factual statement could be set in Rotis Sans followed by an opinion by a critic or author set in Rotis Semisans or Serif. Only the words as they are registered in the brain will be separated and not the shift in typeface.

D 31 illustrates how Rotis subfamilies work in a text situation. Appearing in a body of text each subfamily fuses together with the others to form a coherent and aesthetic whole. The main factor when designing each font was optically uniform character width in all versions, ensuring each letter of each font occupies the same black and white ratio. Uniform character heights were not used due to visual illusions occurring between serif and sans characters - the seriffed characters are not as tall as the sans.

Simplicity of form - Fonts like Bembo, Palatino and Garamond are successful in text situations but they are comprised of complex structures and weight balance. This prevents them from being expanded into homogeneous family's because the subtleties of form are too delicate and thus cannot be mimicked in a bold or extra bold. The likes of Univers, futura and Rotis are easier to expand because shapes and weight distribution are basic. Thicks and thins have a simple horizontal stress thus the characters can be made bold, light, italicised etc, while the unique structure remains





the same. Rotis fonts are all condensed slightly which helps in economy of word in typesetting. This also has the advantage of creating a specific shape which is a significant factor in Rotis overall appearance. The condensed face has been given a bad name because of computers which stretch and squash existing faces causing mutations on curves. This plays havoc with legibility which is unfortunate because typefaces which are purposely drawn slightly condensed like Rotis are faster to read.

legibility

The term 'microtypography' deals with letters themselves and the relationship between letter spacing and words and inter linear spacing and type columns. On a broader spectrum, macrotypography deals with typography as a whole or layout. Rotis was designed taking both these into account and its success can be attributed to its very subtle characteristics.

A normal saccada will last between 5 to 10 words before stopping, so it is really how characters fuse together to form words and sentences that determines their success. This is Rotis's major advantage and I believe this is mainly due to Aicher's ability to draw characters which have as little resistance as possible, almost like aerodynamics, yet each character must have enough resistance to register in the mind. D 33 shows how open the counters of the lower case **c**, **e**, **s** and **f** are, thus preventing too much vertical stress, the lower terminals on these letters are horizontal thus helping horizontal stress (D 34). Similarly the arms of the **m**, **n**, **h** and **r** have angled strokes where the strokes intersect (D 35). This gives the intersection points room to breathe, preventing the ugly optical black spots which sometimes occur.

Rotis Serif will probably be used more than the Semisans for large bodies of text because of the horizontal emphasis. This is the principle of 'good continuation' where separate elements can form a line. The large splayed serifs on Rotis sandwich the basic structure thus forming a single line.



D 36

Rotis Semisans

This is a sample of seven point type set in Rotis Semisans

Rotis Serif

This is a sample of seven point type set in Rotis Serif.

D 37

Reversed Type

Sans Serif Sans Serif

Reversed Type

Semisans Semisans

D 38

Ooo Ooo

The counters in the bold appear brighter than the counters in the regular.

A novel is a 'continuous narrative' and is a good example for the study of legibility. It is pure type void of illustrations and headlines. If any established book font is used it will not automatically be fully legible. Each typeface has different needs as far as kerning, typesize and leading is concerned. Each member of the Rotis family seems to work best at 10 point using 12 point leading with a kerning factor of 10 units. The condensed nature of Rotis enables a column of text to be spaced more than conventional faces like Garamond providing almost 15% better economy of space. Should smaller sizes be required then the Semisans can be used as it works better than the Rotis serif at 7 or 8 point because its forms are simple enough not to blot (D 36). This is true in cases where text is set in high contrast situations, using black type on white paper for example. But when Rotis semi sans regular or light is reversed it loses much of its readability and character. When reversing using Rotis it is better to use Rotis sans serif because the monoline thickness reproduces better (D 37) although I don't think any member of the lights, regulars or bolds reproduces successfully when reversed.

I have used Rotis Semisans for the body text in this thesis because it is cleaner than Rotis Serif when output at low resolution. The low resolution printer is very unforgiving with the more complicated Serif. When using Rotis Semisans from a low resolution printer it is advisable to use Rotis Semisans 45 light, thereby compensating for the bad resolution, the light version at 300 dots per inch (low res.) will look like the regular weight at 1200 dots per inch (high res.).

When highlighting a point of view some people prefer bold type to italics. This should be used sparingly because it is so black and the white counters appear bright. This causes an after-image, something like looking at a light and then looking away (D 38).

The eye is lazy; it refuses to fully read anything which is not pleasant. For example - when counting coins the eye will automatically pick up the 50p's, then the 20p's and the 10p's, when we reach the 2p's and 1p's it becomes more difficult to separate. If we are not interested in something



D 39

1234567890

Rotis aligned numerals

1234567890

Garamond non-aligned numerals

we become easily distracted and seek to find something more pleasing. So consideration for the reader is essential in written communication. However, even though a font like Garamond or Times may be easier to read than Rotis Serif, they are still over exposed, thus creating a niche in the market for a new legible font. Rotis Serif fails lengthy text because of its quirkiness: it is a new style and not what people are used to. Even though the little characteristics in Rotis were created for greater legibility, they are still an interruption in our perception of what type should look like. If Rotis is accepted, and is used as much as Univers, Gill and Times are today then these characteristics will blend into our subconscious message and provide a clean legible font.

Rotis numerals are aligned, this means they all occupy the same height. The original printed fonts like Garamond had non-aligning numerals, these numerals have ascenders and descenders enabling them to blend into the letters (D 39). I find non-aligned numerals are far more subtle in text situations, for example when setting the year 1993 in Rotis it appears like four upper case letters. In non-aligned numerals 1993 blends into the message.. If Aichers primary concern was legibility he should have designed non-aligning numerals, I believe this would have been a distinct improvement on what are otherwise very adverage numbers.

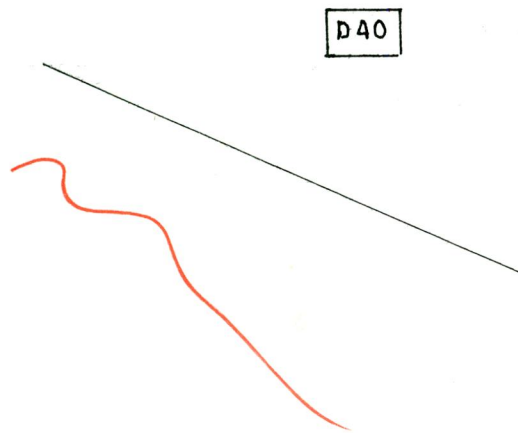


COMPUTER INPUT

chapter 4

Modern type books are speckled with the name Ikarus M, describing the computer programme designed by URW, to aid type designers in developing type. While it makes it easier to actually design a font, but it can also hinder ones perception of good type design, for example - by setting type by hand on a press, the printer/setter can feel the type letter by letter, they were concerned with en space, picas and units - what are all these strange words? Ask any young designer and they will stare at you with a blank expression! The Macintosh and IBM have deprived design of the 'hands on approach' to type setting. The same applies to type design. Fonts have been conformed to suit our own limitations and laziness,

The curve outside the bowl of a lower case d in a font like Rotis is an optical decision and simply cannot be drawn directly onto screen, these letters are first drawn by hand then scanned into a programme called Linus M which converts the template into the Ikarus format'. To drastically adjust a curve at this stage would change the natural characteristics of the letter isolating that curve from the rest of the family. Once these curves are traced then the rest of the font can be generated, for example D 40 shows a line drawn directly onto the page using a bic biro. and a curve drawn using Adobe Illustrator. The computer line is a perfect debt, width and curve and because it is a computer generated line it is not permanent, it can be changed. The bic line reflects more natural methods, the resistance to the pen as it digs into the paper, the uneven ink flow. and the permanence all combine to produce a texture which we have developed over 40,000 years. The computer curve is hindered by perfection and the option to adjust and correct the same line causes all spontaneity to be lost, there are no accidents which can often have better results than the original.





I found the easiest and most accurate way to analyse and compare these computer age typeface's is on the computer screen because the characters which appear on screen are the originals. By enlarging a character to 700 pt and overlapping it with other characters I can see the methods through which the face was created. This would be impossible to do with a face like Garamond or Baskerville because these faces incorporated years of sketching and matrice cutting, an art which has been long lost

The involvement of computers has given designers the capability of designing type family's in a matter of weeks The specialist type designer can no longer sustain himself on type design alone because computers have taken much of the trade qualities out of the business. This drop in standards prompted Aicher to design Rotis.

Interpolation

Aicher was a pre-computer designer, he learned the hard way, getting ink on his hands. He learned that type is created letter by letter and not page by page. Yet he accepted the introduction of the computer into his studio and used it to create Rotis. The major influence of the computer occurs in the interpolation process. This means averaging the light and bold outlines of a character to produce an outline of an intermediate weight. This certainly makes the process faster, enabling a designer to design as many variant weights he wishes at the touch of a button (D 41).

Another computer facility available is obliquing; this simply means slanting an upright character while sustaining the correct stress to provide an italic. Can we take these computer fonts seriously, when they have to be redesigned after the interpolation process?

By generating my own fonts using the same fonts and methods as Aicher used to create the Semisans bold and the sans bold. I can determine the human factor in this process.

Font 1 - Using Ikarus I have generated a regular version for the Sans. This font was created using Sans regular and Sans extrabold as the source fonts, the

D42

a b c d e g

l m o r 6 8

A B G H O

interpolation factor was 50%,¹ I have named this font 'Font 1'. D 42 is a comparison between Font 1 in red outline and the original Sans bold in grey. Changes made to the **c** and **e** are minimal, however the **o**, **d** and **a** has been broadened considerably to be compatible with the rest of the font. An interesting comparison occurs in the numerals, the 6 and 8 have no traces of adjustment. This also occurs in the pound symbol. This shows how Aicher treated the Alfa characters² with far more consideration than the rest of the font. Granted the Alfa characters are the most important members but does this justify taking shortcuts with the rest of the font. D43 (next page) is a more detailed diagram of the **B**, **8** and **£**, and shows the extent to which the **B** was adjusted but not the **8** or **£**.

Before computers became so dominant in type design the art of Rubylith cutting was the most popular way of producing letters. The individual characters were sliced out of a large sheet of Rubylith using a scalpel. This had the advantage of producing perfectly natural curves created through the sweeping motion of the arm wrist and scalpel. The initial proofs for Rotis were output on a plotter. The plotter produces the letter using a horizontal and vertical arms attached to an ink pen. This simulates the action of the Rubylith cutter far better than a laser print which generates the curve using pixels. This difference may seem minuscule but the true natural forms can only be produced using natural methods or in this case simulated natural methods.

The interpolation process is not capable of making aesthetic decisions. It will not decide to make a horizontal stroke thicker than a vertical because this is an optical decision. These computer generated fonts are determined by the source fonts. The bold is not simply a heavier version of the regular but is a font in itself therefore it has inherent characteristics which a light and regular font would not have. Rotis bold and light differ in width by about 10% the weight difference is 30% therefore the computer cannot determine the optimum width because the Interpolated font (D 42). The raw interpolated font's lower case o is narrower than Aicher's version which shows signs of adjustment after the computer. This width adjustment does not

1 - This means that each parent or source font was averaged by 50%.

2 - Alfa characters, these are the 52 letters which make up the upper case and lower case.

D43

B8f

occur in the N because the white spaces are not enclosed and the angle of the diagonal would change if the width was reduced.

Italicising

The Sans and Semisans italics are unlike Serif italics in that they can be generated directly from the upright fonts. This enables the sans faces to be obliques by 11° to create all of the Alfa characters with the exception of the **a** which changes to a single story **a** in the italics. The Serif italics are true italics and have to be drawn as a separate font.

Font 2 - By obliquing the Semisans regular by 11° (red outline). This font is over the original Semisans regular in grey (D 44). The changes made can be seen clearly in the counters of the **B**, each curve has been moved so that the horizontal stress returns.

The Computer obviously had a major hand in the creation of Rotis, but when does it stop becoming a tool and begins to influence the actual shapes. This did not occur in the Alfa characters which seem to have been given close aesthetic attention. But the influence in the numerals show that Rotis as a family was influenced to a certain extent by Ikarus M.

D44

ghi **AB**



CONCLUSION

Times new roman was one of the greatest face of its time. Unfortunately over-exposure on everything from aeroplanes to sardine tins killed its uniqueness. Will this fate befall Rotis, or is it good enough to become overexposed in the first place? Only time will tell. During the course of my thesis I have studied and tested Rotis in great detail moreso than I have any other face. Yet I still enjoy using it, I still find its forms refreshingly new. Moreover it is a measure of the effeciency of this face that despite the disparity between Aicher's dream of similar widths and heights between the subfamilies and the reality of the compromises he was forced to make, it is still a highly successful type family.

Although highly successful as a typographical programme, Rotis can never claim to be the universal typeface because of its failure to be neutral like the Swiss forms of Univers and Helvetica. Its quirkiness makes it slightly aggressive which is why it is being used for the signage system of the subway system in Bilbao Spain, and in a new airport under construction in Osaka, Japan. Perhaps future type designs will reflect the Rotis characteristics and change these 'quirks' into common characteristics. This quirkiness is unfamiliar to most readers, causing Rotis to change words into letters rather than letters into sentences. The true test of a typeface is time, and when a typeface like Rotis becomes an inherent part of society then it will become anonymous.

The computer was an important but not a vital component in the design of Rotis. Through my own interpolated fonts I have to a certain extent ascertained the amount of human input involved in Rotis and I don't believe many concessions were made by Aicher in the actual interpolated bolds or obliques italics. However there is evidence of the computer in the basic letterforms I believe he oversimplified the source fonts thereby



ensuring the variant to be structurally compatible with the rest of the family. Most importantly however is the family and how each variant fuses with the next to provide coherency and a harmony which up to now was impossible to achieve unless one restricted oneself to one or two typefaces.

Aicher was concerned with Readability and Legibility. Why and how we read is an almost a mechanical process which can be learned: consider a car manufacturer studying the ergonomics of the physical driving position, the position of the foot pedals and general comfort of the passenger. Why shouldn't more type designers do likewise? The Neville Brodys and the Baines of this world should never be considered type designers. Their playful alphabets scream at us and are a testament to our disposable society. This distinct failure to understand that type is the mirroring of speech and not the dominance of it was the cue for typefaces like Rotis and hopefully many others in the future .



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