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Visual Communication  
Special Project  
1993

# Aspects of Organization of Text

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Guided by Prof. Ravi Pooviah

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*Aspects of*  
**Organization**  
*of Text*

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## **Approval Sheet**

Visual Communication Special Project entitled  
**Aspects of Organization of Text** is approved in partial  
fulfilment of the requirements of the  
Master of Design in Visual Communication.

Guide Muns.

Chairman \_\_\_\_\_

Internal Examiner Manisha

*“ The question is ” said Alice,  
“ whether you can make words mean  
so many different things. ”*

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**Lewis Carroll**  
*Through the Looking Glass*

In our daily life, we come across more and more visual verbal information. Ever since writing has been used to store thoughts, the written word has been used to convey information. Text has been playing a major role in communication in all media. Text manifests itself in different forms in books, magazines, newspapers, leaflets, brochures etc. (print media), computer screens, television, video (electronic media), signage, environmental graphics and most likely in all media of the future too. Though it is said that a picture is worth a thousand words, it takes words to bring out this exact message.

With the importance of text known to all, several methods have been devised to present text in its best appropriate form. From the micro level to the macro level, many methodologies are being used to enhance text. At the micro level, the fundamental unit of text, the alphabet, have been made available in different styles (typefaces) and at the macro level, various ways of organization of text have been experimented with. Over the years several norms have been accepted as essential in the organization of text.

Organization is described in the dictionary as 'systematic arrangement/ give an orderly structure to / form into an organic whole etc'. It can be said that organization leads to structuring and order. Since order helps in learning, this in turn aids in easy retrieval of information.

We know how a newspaper looks, how a magazine, a paperback novel or a cheque book would look. We have taken for granted many of these norms and we become aware of it only when drastic changes are made to these. The organization of text has established these norms.

***Here we would look in to these norms that organize text.***

## **The Criteria for organization**

The criteria for organization in different media will be different. Some of the important criteria for organizing text is listed below.

- Readability
- Identity
- To grab attention
- Aesthetics
- Content
- Type of text
- Hierarchy of information
- Meaning

### *Readability*

In the case of text books and other sources of knowledge, readability is more important than other criteria. Hence the point sizes are often larger, the design is underplayed and the visible devices used are minimal.

All to avoid any disturbance in the smooth flow of knowledge.

### *Identity*

The organization may be dictated by the necessity to create or maintain an identity. So publications from a corporate firm may look alike, books published by the same publishing house may retain some features and so on.

Tradition also builds the identity of a publication. That is why most of the diaries, cheque books, cinema tickets etc. look similar.

### *To grab attention*

One look at the trendy magazines is enough to surmise that readability is not the prime criterion there. Pages with reverse text, inordinate extra letter spacing, all types of text orientation and more.

Similarly newspapers also try to grab the viewer's attention by discriminating one item of news against another even to the

point of sensationalizing it.

The idea is to make the reader look at it, not necessarily learn from it or even enjoy it.

### *Aesthetics*

Apart from the norms, aesthetics do play a dominant role. For a particular occasion or application, the organization of the text used may thus be governed by aesthetics. Wedding cards, visiting cards, greeting cards are some of the examples that come to mind.

### *Content*

When content is most important, text organization goes to the semantic levels. Probably science research reports, theoretical analyses and else wear a dreary look because of this.

### *Type of text*

Pages from different novels look almost the same. This could be because of the need to let the plot take the prominence, with the layout secondary. Hence there is utmost frugality in design. Poetry is handled differently, not being restricted to box justification or copy fitting compulsions.

### *Hierarchy of information*

Organization of text in maps and diagrams are ruled by the hierarchy of information rather than anything else. One piece of information has a relative importance to another and this is clearly shown.

### *Meaning*

Concrete poetry is perhaps the best example for organization of text is done mainly according to meaning. All rules in the book are broken to create the desired effect. Readability and identity are no longer valid.

Many a times in a particular text, organization can be done with two or more criteria given importance. But still, one has to be more important than the other.

## *Aspects of Organization*

We shall broadly look at the physical and relational aspects of text. Physical aspects include shape and texture of text, while the relational aspect covers size, position, spacing and orientation.

### **Physical aspects of text**

From a designer's point of view, the organization begins at the level of the typeface(s) used in composing the text. Physical aspects of these typefaces have a lot to do with the message conveyed. For a designer it is not a difficult task to identify a typeface that conveys a mood, like authority or friendliness.

We can classify text according to the following two physical aspects.

#### **1. Shape**

The characteristics of the typefaces determine the shape of the text at the micro level.

Classification of typefaces is generally done according to the history of typography. Since there are several books dealing with the history and evolution of typefaces, that subject is not discussed here. While organizing text, one is not bothered about whether the typeface is Transitional or Modern, but rather how much space it occupies, whether it is appropriate or not, whether it is readable at a particular point size and else. Hence, typefaces need to be classified according to some benchmarks which have their relevance in the organization of text.

The four most important benchmarks are listed below.

1. Nature of the typeface (serif/sans-serif/Novelty)
2. X-height to type size ratio
3. Blackness value
4. Character width

In most cases once the layout is finalized, the area for the text is demarcated and then the typeface is chosen such that the text fits in the space. For this selection, the benchmarks listed above will be considered.

**Chart 1**

Typeface name	1	2	3	4	Typeface name	1	2	3	4
AvantGarde-Book	■	●	◆	1.19	Helvetica-Narrow	■	●	◆	0.89
AvantGarde-BookOblique	■	●	◆	1.19	Helvetica-NarrowBold	■	●	◆	0.97
AvantGarde-Demi	■	●	◆	1.19	Helvetica-NarrowBoldOblique	■	●	◆	0.97
AvantGarde-DemiOblique	■	●	◆	1.19	Helvetica-NarrowOblique	■	●	◆	0.89
BernardModern-Roman	▲	●	◆	0.98	Helvetica-Oblique	■	●	◆	1.07
Bookman-Demi	▲	●	◆	1.29	Melior	▲	●	◆	1.13
Bookman-Demitalic	▲	●	◆	1.31	Melior-Bold	▲	●	◆	1.15
Bookman-Light	▲	●	◆	1.20	Melior-BoldItalic	▲	●	◆	1.17
Bookman-LightItalic	▲	●	◆	1.16	Melior-Italic	▲	●	◆	1.13
BrushScript	●	●	◆	0.95	NewCenturySchlbk-Bold	▲	●	◆	1.29
Futura-Book	■	●	◆	1.07	NewCenturySchlbk-BoldItalic	▲	●	◆	1.25
Futura-Condensed	■	●	◆	0.76	NewCenturySchlbk-Italic	▲	●	◆	1.10
Futura-CondensedBold	■	●	◆	0.89	NewCenturySchlbk-Roman	▲	●	◆	1.12
Futura-CondensedOblique	■	●	◆	0.76	Optima-Bold	▲/■	●	◆	1.07
Futura-Heavy	■	●	◆	1.07	Optima-BoldOblique	▲/■	●	◆	1.07
Futura-HeavyOblique	■	●	◆	1.07	Optima-Oblique	▲/■	●	◆	1.07
Futura-Light	■	●	◆	1.02	Optima-Regular	▲/■	●	◆	1.07
Futura-LightOblique	■	●	◆	1.02	Palatino-Bold	▲	●	◆	1.13
Futura-Oblique	■	●	◆	1.04	Palatino-BoldItalic	▲	●	◆	1.08
Galliard-Bold	▲	●	◆	1.14	Palatino-Italic	▲	●	◆	0.98
Galliard-BoldItalic	▲	●	◆	1.03	Palatino-Roman	▲	●	◆	1.09
Galliard-Italic	▲	●	◆	1.00	Tiffany-Demi	▲	●	◆	1.20
Galliard-Roman	▲	●	◆	1.07	Tiffany-Demitalic	▲	●	◆	1.19
Garamond-Bold	▲	●	◆	1.19	Tiffany-Heavy	▲	●	◆	1.44
Garamond-BoldItalic	▲	●	◆	1.20	Tiffany-HeavyItalic	▲	●	◆	1.47
Garamond-Light	▲	●	◆	1.08	Times-Bold	▲	●	◆	1.05
Garamond-Lightitalic	▲	●	◆	1.04	Times-BoldItalic	▲	●	◆	1.01
Helvetica	■	●	◆	1.04	Times-Italic	▲	●	◆	0.98
Helvetica-Bold	■	●	◆	1.16	Times-Roman	▲	●	◆	1.00
Helvetica-BoldOblique	■	●	◆	1.16	ZapfChancery-MediumItalic	●	●	◆	0.87

To calculate the  
linelength in another  
typeface:  
Compose the text in  
Times Roman with  
normal settings,  
multiply the length of  
the text by the factor  
given in the 4th column.

**Key**

1: *Typestyle* : Serif(▲)/Sans serif(■)/Novelty(●) 2: *X-height to Typesize ratio* : High(●) / Medium(●) / Low(●)  
3: *Blackness value*: High(◆) / Medium(◆) / Low(◆) 4: *Character width ratio with respect to Times Roman*

Avant Garde

The quick brown fox jumps over the lazy dog  
**The quick brown fox jumps over the lazy dog**  
*The quick brown fox jumps over the lazy dog*  
***The quick brown fox jumps over the lazy dog***

Melior

The quick brown fox jumps over the lazy dog  
*The quick brown fox jumps over the lazy dog*  
**The quick brown fox jumps over the lazy dog**  
***The quick brown fox jumps over the lazy dog***

Optima

The quick brown fox jumps over the lazy dog  
*The quick brown fox jumps over the lazy dog*  
**The quick brown fox jumps over the lazy dog**  
***The quick brown fox jumps over the lazy dog***

Palatino

The quick brown fox jumps over the lazy dog  
*The quick brown fox jumps over the lazy dog*  
**The quick brown fox jumps over the lazy dog**  
***The quick brown fox jumps over the lazy dog***

Times Roman **bjnpzFJQ**

Times Italic *bjnpzFJQ*

Times Bold **bjnpzFJQ**

Times Bold Italic ***bjnpzFJQ***

Chart 1 classifies 60 popular typefaces on the Macintosh DTP platform according to these benchmarks.

A closer study of the chart gives the following details:

- For sans serif typefaces the character width is the same for both the normal and italic (oblique) variants, so also for bold and bold italic (oblique) variants.
- Avant Garde retains the character width over its range. This is of much help in copy fitting. Avant Garde Book is made into Avant Garde Demi by increasing the stroke width along the inner outline of the character. Melior, a serif typeface has nearly equal character widths for its variants. This may be attributed to the purpose behind its design —it is meant for use in newspapers and magazines. Some other typefaces which have almost equal character widths are Optima and Palatino (only between Roman and bold), which are popular book typefaces.
- The degree of variation in design in typefaces across its variants is very much. Take Times Roman for instance, when it is made into bold, the serifs become straight. Italics are very different, and in some characters of the bold italic variant the difference is very much apparent.

We have examined, just 60 typefaces, which is less than one hundredth of the total typefaces available in Roman script. At this juncture, an important question arises, what necessitates different typefaces ?

One probable answer can be the following:

Since there are so many occasions to use type, there has to be so many typefaces ! No one would like to see all printed matter that he comes across to be set in the same typeface.

Text is often organized so that it never gets in the way of the message. If some particular portion of the text is to be given a different treatment, if a different typeface or a larger typesize is used, it may stand out starkly. To avoid this, type variants are used. The style variants bold, italic, bold italic are common. Modern typesetting systems offer other variants like outline, shadow, reverse etc. These variations within the design constitute the type family. ITC Garamond has 16 variants, whereas the family range

ITC Garamond Light  
ITC Garamond Book  
**ITC Garamond Bold**  
**ITC Garamond Ultra**  
*ITC Garamond Light Italic*  
*ITC Garamond Book Italic*  
*ITC Garamond Bold Italic*  
***ITC Garamond Ultra Italic***  
ITC Garamond Light Condensed  
ITC Garamond Book Condensed  
**ITC Garamond Bold Condensed**  
**ITC Garamond Ultra Condensed**  
*ITC Garamond Light Condensed Italic*  
*ITC Garamond Book Condensed Italic*  
*ITC Garamond Bold Condensed Italic*  
***ITC Garamond Ultra Condensed Italic***

ITC Garamond offers 17 variants

of a typeface can go upto 50 variants !

The weight variants - light, book, demi, heavy, ultra etc. - have probably been introduced to suit a particular purpose, when the normal style variants are insufficient and type choice cannot be changed. The condensed version of typefaces have been introduced to pack in more text with the same typeface.

Shape wise within a typeface design, in almost all cases, there are the options of Full caps and Mixed case — upper and lower case ( A notable exception is Microgramma). Long text is generally composed in mixed case and rarely, in full caps as this hampers readability when used to compose long text. For display purposes, even full caps are used with liberty.

## 2. Texture

Text has a texture at a macro level. A small area of text can be considered equal to a certain percentage of grey. Readability is more for text of an even moderate grey tone.

A single line of text has a grey tone in itself. If the typeface is made bolder, the grey tone increases. Hence different typefaces give different grey tones. As the grey tone of the text increases, the spacing should be increased proportionately. We have seen that choice of typefaces play an important role in the texture of text. Reproduced on the next page are some pieces of text with varying textures.

## Relative aspects of Text

### 1. Size

Each piece of text has a relative importance. One of the ways of showing this is by using different type sizes. Sizes are also necessitated by the reading distances. The headline of a newspaper would not look as catchy if it was set in the same point size as the text.

Modern technology allows the usage of typeface designs in any size, limited only by the range of the typesetting unit. Size of the text at the macro level is determined by the size of the typeface at the micro level.

### **Futura Light**

Typography is not a free art. Elements and space are not arranged for purely expressive purposes. Rather, there is a logical basis. Typography is a means to an end. Its function is to aid in effective communication. The most prosaic typographic presentation is probably better received than typographic trickery and distortion. But there is always room for a freshness of style and presentation

### **Galliard**

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### **Bookman**

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### **Avant Garde**

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### **Palatino**

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### **Helvetica**

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### **Times Roman**

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### **New Century Schoolbook**

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### **Futura Heavy**

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***Textures shown by different typefaces***

Bernhard Modern Roman

Times Roman

Fenice Regular

kfm g

kfm g

A 6 pt. output and 72 pt. output produced from the same design reduced to the same size shows marked differences due to hinting.

Times Roman	Times
Times Italic	<i>Times</i>
Times skewed at 5°	<i>Times</i>
Times skewed at 10°	<i>Times</i>
Times skewed at 15°	<i>Times</i>

Readability of text cannot be compared based on the type sizes. This is because within a size, the ratio of typesize to x-height varies. More the x-height, smaller the type size can be for a context. The x-height of Bernhard Modern Roman is lesser than that of Times Roman, for the same point size which in turn is less than that of Fenice Roman.

Nowadays the trend is towards typefaces with large x-heights. But, as x-height increases, the leading also have to be increased correspondingly. This effectively nullifies any space saved otherwise.

The unwritten rule is that continuous text should be composed in typesizes below 14 pt. and display text should be composed above 14 pt. It has been proved that after 14 pt. human eye sees text characters individually, rather than as word clusters as is ideal for easy reading.

In olden days, type design for display sizes were done separately from those for text sizes. But nowadays, text and display sizes are produced from the same design with suitable optical corrections. This process of correction — called hinting — is done at the output device level and are software controlled.

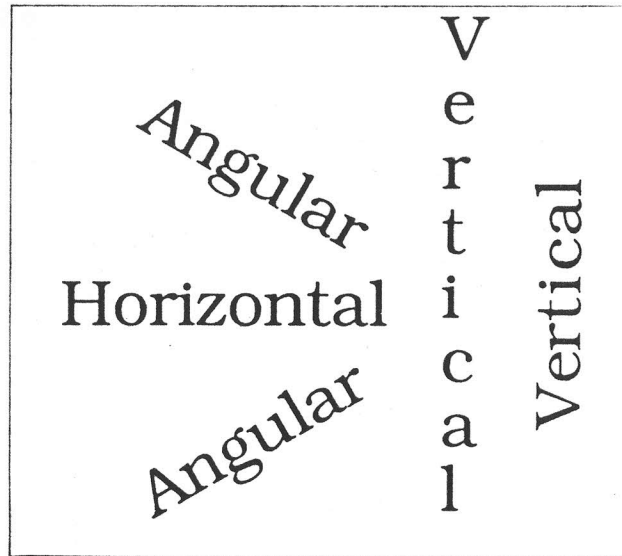
When text is printed in colour, the point size used has to be larger than that for printing the same text in black.

## 2. Orientation

### a. Italics.

Italics were invented to pack more characters in a given space and were considered separate and distinct faces for decades (the italic variants of a few serif typefaces are found to be occupying more space than the Roman. So we presume that this intention is no longer there.) Today they are considered more of a family variant since they follow some traits of the upright original in the type family.

Most of the Italics are designed separately from their upright counterparts, rather than being derived from them. This distinction is clearer in the case of serif typefaces but in Sans-serif typefaces, the italics or obliques as they are popularly



called, are obtained by mechanical skewing followed by some optical corrections. Additionally modern technology facilitates the inclination of typefaces at any angle.

*b. Horizontal/vertical/angular*

While horizontal orientation is the most commonly used in Roman script, text at the word level, sentence level and sometimes even at the paragraph level acquires new meaning with vertical and angular orientation in display uses. This is more evident in entertainment magazines and posters.

### 3. Position

The relative position of text is another aspect of its organization. In a book, the page number is positioned somewhere at the periphery of the page, the title of the book (or chapter) is at another periphery while the text matter is at the centre of the page.

In publications of several pages, position is effectively used to create structure. After seeing a piece of text repetitively in one position, the reader expects to see the same piece of text ( or even a similar piece of text) in the coming pages also.

### 4. Spacing

Spacing in the text is not arbitrary. Depending on the characteristics of the typeface, the size and other attributes, spacing is determined.

**Letter spacing:** is the space between letters in a word. Letter spacing is most often preset for a particular point size. It increases as the type size increases. In display uses, letter spacing is often manipulated to create an added effect.

Inter character spacing can be controlled by tracking and kerning also. The side bearings of the characters in a typeface can be tightened or loosened for a global effect by tracking. Appropriate kerning brings together letter pairs that are optically too widely spaced. For text sizes, automatic kerning suffices very often. But for display sizes, kerning may have to be controlled manually, so that text will have an even tone.

**Word spacing:** A reader reads clusters of words, generally three to five

### *Variable levels of Letter Spacing*

Typography is not a free art. Elements and space are not arranged for purely expressive purposes. Rather, there is a logical basis. Typography is a means to an end. Its function is to aid in effective communication. The most prosaic typographic presentation is probably better received than typographic trickery and distortion. But there is always room for a freshness of style and presentation so long as it does not inhibit clear exchange of information and consequently meanings.

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### *Variable levels of Line Spacing*

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words together and can cope with three or four similar clusters per line. Word spacing has a direct bearing on the efficiency with which a reader will recognize word outlines and scan cluster of words. The space around words on all sides should allow the reader to distinguish words quickly without ambiguity. Hence word spacing is related to the space between the lines as well.

**Leading:** The space between lines of text is dependent on the x-height of the typeface and the point size. Leading affects a reader's ability to pick up each new line and governs his reading pace. Leading is supposed to be more than the inter-character spacing in the text. Extra leading is used for effect in short chunks of text. But too little leading is never advisable.

Proper spacing is of premium importance for readability as it balances the black and white of text. This helps in easy cluster formation and thereby in scanning which precedes comprehension.

### **Applications**

Text comes in two different forms : body text, which is usually long and continuous and display text which is short. The typographic norms for these two applications are very often not the same.

For text uses, serif typefaces are still popular, though sans-serif typefaces have gained acceptance. It is believed that serifs help in linking one character to another in a word and aids in easy reading. Another reason for the popularity of serif typefaces is said to be the variety available in this range to suit any need.

Continuous text composed in Sans-serif is readable, yet because of the above mentioned reasons and tradition, serif typefaces are still most widely used for continuous text.

With the basic characteristics of text known to us, we can go into the various aspects of organization of text from three vantage points. Following Eisenstein's classification, we shall define the three levels as Close-up shot, Medium shot and Long shot.

### *Close-up shot*

Text is often seen at close quarters. The close up view gives the shape of the letter, the spaces in between the them, the shape of words and the spaces between words.

### **Letters**

Letters are the elements with which words, sentences and whole stories are constructed. Letters may thus be considered to be the basic building blocks of speech and thoughts made visible. Each letter has a distinct shape which helps us in identifying them, and a sound. But letters individually do not have any meaning. One letter is separated from another by the space between them. Hence spacing between letters acquires importance in the proper organization of text.

One of the few instances when letters individually acquire a meaning is when they are used for sequencing text into sections and sub-sections.

Roman letters are used in upper and lower cases. Sentences begin with a Capital letter, so do names. Within a word, a capital letter can occur only as the first letter in written English. But the English used for day-to-day computer applications have changed all that. Terms used for them can have capital letters in between also.

The skeletal shape of a letter remains the same regardless of the typeface the letter belongs to. Within a typeface family, the skeleton of a few characters like a (*a*) and g (*g*) changes between Roman and Italic. Otherwise, whether the typeface is Garamond or Optima, the skeleton remains the same.

### **Words**

Combinations of letters give birth to words. Except for a few scripts, words are read left to right and in the horizontal direction. Each word has a sound associated with it.

Purpose of a word is to convey some meaning. This meaning is enhanced by the context. Proper inter word spacing (letter spacing) and intra word spacing (word spacing) make these array of letters into a word. Often a word may mean different in

different contexts.

A word can be formed by a single letter or several letters (There are claims and counter-claims regarding the longest word in English). A word can be a noun, a verb, an adjective, an adverb, or any other according to parts of speech.

Text composing often necessitates the breakup of words by a hyphen. In word processing programs, there are several algorithms to handle proper hyphenation.

### *Medium shot*

### **Sentences**

A group of words form a sentence. Words in the sentence are demarcated by the gap between them. Sentences have a capital letter in their beginning and a period for termination. Apart from word spaces, the sentence also has punctuation marks to connect words together. Sentences follow a structure dictated by the norms of the language. Sentences may have a complete meaning in them or can have a meaning in relation to the other sentences in the text.

Since most of the printed matter come in columns, line length is also an important aspect. Though there are no hard and fast rules about the optimum linelength, 40 to 60 characters per line is reasonable. This translates roughly into 9-12 words. Newspapers may have lesser number of words per column and novels may have more.

The concept of line length raises an important point. Should text be organized according to this constraint everywhere? Since we are used to columns of text everywhere, we may not find this constraint awkward. There is a school of thought that text should be presented as idea units (rather than broken lines) like it is done while printing poetry in books. The process of learning can be made better if children's books had this treatment.

### **Paragraphs**

A set of sentences is grouped as a paragraph and is given a different treatment. At this level, the entire mass is considered as one,

Narada, the mischievous sage,  
was on another visit to Satyabhama, the wife  
of Krishna.

*If this line came on the next page or next column, Satyabhama would be wrongly construed as Narada's wife*

Narada, the mischievous sage,  
was on another visit to  
Satyabhama, the wife of Krishna.

*Presenting text as Idea units would avoid such errors, but at the cost of space.*

among many, and is assigned some characteristics that will differentiate it from the others, yet show that it is similar to the rest.

Indentation and justification are used paragraphs to break the grey monotony and paragraph spacing separates them from each other. Indentation and paragraph spacing are rarely used together because both serve almost the same purpose. Box justification and left justification (ragged right) are most popular since they lead the eye to a common starting point, whereas centre justification and right justification is rarely used for text type sizes. Hyphenation is resorted to give text an even tone, especially for boxed justification, where otherwise white rivers will mar the texture.

We are in the midst of an Information explosion, when the amount of information one has to contend with is enormous, a few ways of presenting information according to the level of importance have been devised.

1. **By space:** Different levels of information are given different indents. The text at the innermost indent level and that at the outermost indent level will have different degrees of importance. This type of organization can be done at sentence and paragraph levels.
2. **By weight:** Levels of information can be given with different weights. Here the increasing blackness will denote the increasing degree of importance. This type of organization is usually done till sentence level only because density contrasts among paragraphs is not easy for the eye.

To differentiate pieces of text in the same page the following methods are used.

1. **By typefaces:** Two different typefaces can be used to denote two different sets of information. This is commonly used for comparisons, questions and answers etc. This method can be used at the sentence and the paragraph levels.
2. **By color:** Two different pieces of text can be given syntactic disparity by using dissimilar colors as well. This method is adopted for paragraph and higher levels, and is not

**To indicate hierarchy within text matter**

Lorem Ipsum dolerum petit famitas questots lapis larmatifat .  
 Legrand matar Plataristudate fascita. Ipsum dolerum petit.  
  
 Famitas questots lapis larmatifat. Megrand matar  
 Plataristudate fascita. Dolerum petit famitas  
 questots lapis larmatifat . Legrand matar  
  
 Plataristudate fascita. Petit  
 famitas questots lapis  
 larmatifat. Gegrand matar

**By Space**

**Lorem Ipsum dolerum petit famitas questots lapis larmatifat**  
  **Legrand matar Plataristudate fascita. Ipsum dolerum petit**  
  **famitas questots lapis larmatifat.**  
 Megrand matar Plataristudate fascita. Dolerum petit famitas  
 questots lapis larmatifat . Legrand matar Plataristudate fascita.  
 Petit famitas questots lapis larmatifat.  
 Gegrand matar Plataristudate fascita. Horem Ipsum dolerum  
 petit famitas questots lapis larmatifat . Travais egrand matar  
 Plataristudate fascita.

**By Weight**

**To differentiate pieces of text**

Lorem Ipsum dolerum petit famitas questots lapis larmatifat .  
 Legrand matar Plataristudate fascita. Ipsum dolerum petit famitas  
 questots lapis larmatifat.  
 Megrand matar Plataristudate fascita. Dolerum petit famitas  
 questots lapis larmatifat . Legrand matar Plataristudate fascita.  
 Petit famitas questots lapis larmatifat.  
 Gegrand matar Plataristudate fascita. Horem Ipsum dolerum petit  
 famitas questots lapis larmatifat. Travais egrand matar  
 Plataristudate fascita.

**By Typefaces**

Lorem Ipsum dolerum petit famitas questots lapis larmatifat .  
 Legrand matar Plataristudate fascita. Ipsum dolerum petit  
 famitas questots lapis larmatifat.  
 Megrand matar Plataristudate fascita. Dolerum petit famitas  
 questots lapis larmatifat . Legrand matar Plataristudate fascita.  
 Petit famitas questots lapis larmatifat.  
 Gegrand matar Plataristudate fascita. Horem Ipsum dolerum  
 petit famitas questots lapis larmatifat. Travais egrand matar  
 Plataristudate fascita.

**By Justification**

common at the sentence level.

**3. By Justification:** When paragraphs occupy many lines, justification can also be used effectively to differentiate text.

The above four methods are being used effectively for organising bilingual text in publications.

### *Long shot*

#### **Pages**

Several paragraphs constitute a page. Depending on the nature of the text, the paragraphs may look similar or different. Pages in novels and technical literature may look alike, despite several differences. In magazines and newspapers, contents and the style will distinguish different pages.

Sometimes, it is left to the page number to show continuity in the publication. Pages, as they come in two's, are designed two together rather than individually. This is specially true for magazines and books on specialized subjects, and not so in a newspaper or a novel.

#### **Sequence**

The sequence of pages is broken into chapters and parts in novels and books on specialized subjects. In magazines and newspapers this division is not present.

While different chapters may deal with different subjects in books, there is an underlying thread in novels. In all these cases the chapter number binds them together.

#### **Book**

Finally, the book (or magazine or newspaper) is formed. A book is distinguishable from another by its design. However much the design varies throughout the pages, the book has a design unity that gives it a character. The book will be linked by a common theme, or a holistic theme. Unless, there are different parts to the book (like in a series) the design will not be repeated intentionally.

Newspapers and magazines are also characterized by their design, in addition to their periodicity.

### Intra Organizational elements

The design of a typeface includes not just the upper and lower case alphabets, but numerals, punctuation marks and ligatures. These extra elements can also be used effectively at the micro level. Numbers are used to denote quantity as well as to sequence text. Punctuation plays an important role at the sentence level. Hyphens are used to break words, apostrophe, quotes, question mark and exclamation are used at the sentence level.

Just as the presence of text, its absence can also be used to organize text. Examples of usage of letter spacing, word spacing, line spacing and para spacing have been cited before. The following chart summarises our observations.

**Chart 2**

		<i>Syntactics</i>	<i>Semantics</i>	<i>Connections</i>
Closeup View	Letters	Shape/Sound	No meaning	Letter space
	Words	Position/Sound	Local meaning	Word space
Medium Shot	Sentences	Structure	Relational meaning	Full stop Punctuation
	Paragraphs	Texture	Complete meaning	Indentation Paragraph spacing Justification
Long shot	Pages	Layout	—————	Page number
	Sequence	Chapters	Subject	Chapter number
	Book	Style	Theme/story	—————

***From media to media the organization of text shows marked differences. The following section presents a case study of samples from various media.***

## **Case Study**

### **Novel:**

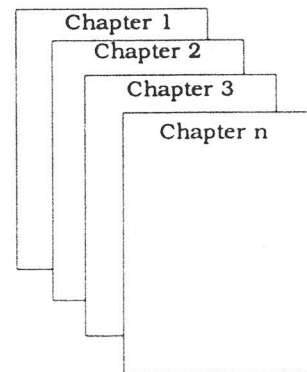
Novels always come in a vertical format. The cover of the novel is most probably an illustration or a photograph with the title and author's name displayed in a prominent manner. The first page is often a short writeup on the author and his or her literary history. Then comes the title page with the title, author's name and the publisher's name among other information. On a left page the details of the publication is given in small print.

With an introduction, the novel starts. Distributed into chapters, the novel may also be divided into a few parts. Every part and chapter has a number and/or a name to it. In every page, the name of the book, page number and some times, the chapter name also comes in the white-space surrounding the print area.

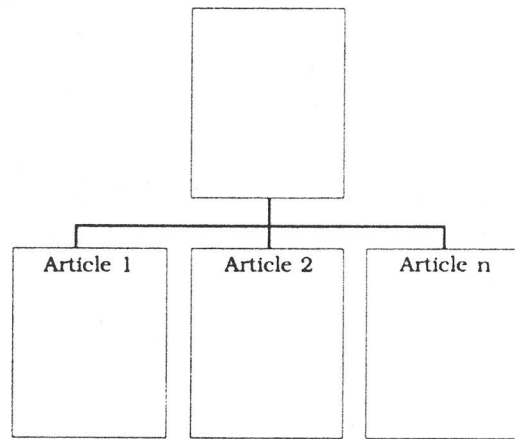
Apart from these, the narrative goes plainly, in a single column. In some novels illustrations are used to compliment the text. Other ways of breaking the syntactical monotony is to use drop initials at the beginning of the chapters. There is always an indent for the paragraphs, but when drop initials are used, they are aligned to the starting of the line. Paragraphs are rarely given additional spacing. Italic is the only typeface variant used in the running text to stress some word or phrase. Usually one or at the most two typefaces are enough for a novel. One for the body text and other for the shorter text. However, the cover may use other typefaces.

The semantics of the novel is seldom reflected in its organization of text or typography. Whether the plot of the novel is simple or complex, the organization is the same.

A novel usually ends with an afterword. The back cover usually has a short synopsis of the novel, followed with favourable excerpts from the reviews it had got.



*Text organization in a novel is sequential*



*Text organization in a magazine is sectional*

### **Magazine:**

A magazine again follows a vertical format. One magazine is readily distinguished by its cover design. The mast head being more prominent. In a magazine, since there are advertisements apart from its contents, organization of text is limited to the contents only.

Advertisements start with the outer back cover and the two inside cover pages. In the magazine pages, though they appear in right and left pages, they tend to be more on the left pages.

The magazine is most likely to start with a page for letters, and then a contents page, to be followed by an editorial page with the credits of its production.

The magazine usually have multi column layouts. From two columns to four columns, the magazine tries to follow a grid structure, adding as much variety as possible in organizing text and visuals in it. The typography and the layout of the magazine depends on the image the magazine wants to project. A serious news magazine will have a standard layout which it will follow whether the report is about politics or films. Had the visuals been not there, the pages would have been alike.

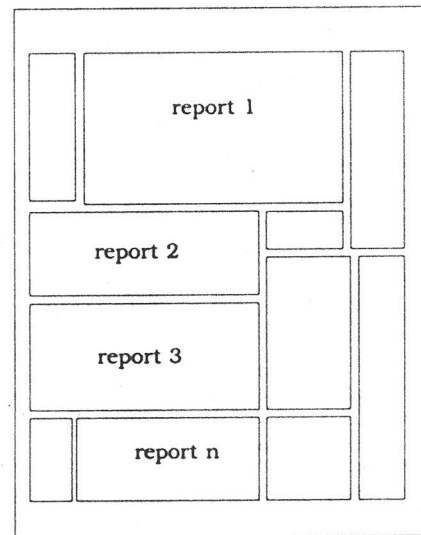
Some magazines use just a single typeface in all its variants for all its typographic needs (Like India Today which uses only Photina). The most common trend is to use one for text, another for headings and possibly another for captions. Text is normally in a serif typeface, though sans serif typefaces are used in some. Display is mainly in a sans serif typeface and the combination of a serif typeface for text and a sans serif typeface for display is still most popular.

Columns use mostly box justification, though for lighter articles, left justification is common. The monotony of text is broken by italics within the text and the highlighting of short excerpts outside it. Drop initials or raised initials are used to begin an article. Often these initials are followed by the remaining word in small capitals, to ease the transition. If the first word is very

short then the second word also may be in small capitals. If the printing uses more than one color for text, then, the headings will be in color and probably boxes for short excerpts and articles will be in a tint of the color. In some magazines the initials are also in color. These added elements are used to pull the reader's eye into the text. Whenever color is used for text, the size is often found larger than that for the same text in black.

If the magazine is more of a social nature or is regarding entertainment, then the typographic variety is more. Display can then be in many typefaces, depending on the nature of the article. Thus typography is also used for semantic purposes.

Orientation of text can also change there. Display text might now be vertical or angular. Wrapping around curves is also in vogue now. These magazines try to create reader interest by changing the default settings of the leading and perhaps even the character and word spacing. Some pages might even be printed in reverse or in color.



*Text organization in a newspaper is random*

### **Newspaper:**

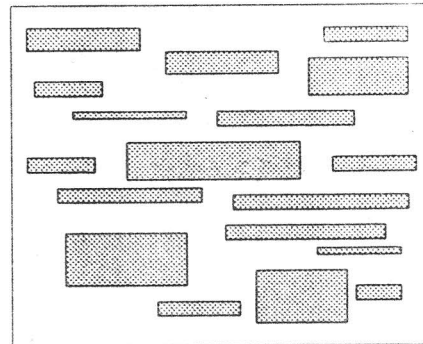
At the first look, newspapers are characterized by their mastheads and their typography. Generally divided into eight columns (there are some exceptions to it, eg. The Hindu), newspapers use serif typefaces for their body text (again the exception is The Hindu, which uses Univers). The display text is usually in a typeface similar to the body text, if not the same. The combination of serif for text and sans serif for display is not very popular in newspapers nowadays.

Headlines are given different levels of importance with size variants and weight variants. The number of columns a headline uses also suggests its importance. Some news items are given a special treatment, by putting them in boxes or by extending them over two columns. In the former case, the line length is decreased to accommodate the box around it and in the latter case, the size of the typeface is increased slightly to make reading easy over the longer lines.

Drop initials are commonly used to start a report. Raised initials and hanging initials are reserved, if ever used, for the inner pages. Paragraphs are seldom given any extra space in between but are generally indented to break the monotony, justification is in almost all pages boxed. Left justification is used in the inner pages for lighter reading. In the inner pages, an additional typeface may crop up for page headings. Some times, captions for photographs are also set in a different typeface.

The name of the newspaper, date and page number appear in the top extreme corners right from the second page. The Editorial that appears in one of the innermost pages is usually spread over two columns and uses a slightly larger type size.

The supplements that come with the newspaper are treated differently. All the typographical restraint shown in the newspaper may be broken here. The layout now becomes more like a magazine, with more typefaces for display, often with semantic associations. Color supplements try to use color syntactically and some times semantically. The better and more context sensitive design of the newspaper supplement can be associated with the fact that they need not necessarily contain the day's news and are printed at leisure.

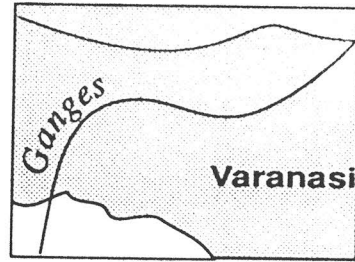


*Text organization in a map is hierarchical.  
The grey boxes indicate that information position is unchangeable.*

### **Maps:**

A map is almost like a single sheet of newspaper in its organization of text. But, in a map, the relative position of a piece of information is almost unchangeable, unlike in a newspaper. A particular item may appear anywhere in a newspaper, subject to editorial policy. But in a map, a particular information has to come at a particular place so that there is a corresponding relationship between the image and the text.

With such a crucial limitation, the handling of text becomes very important in a map. Place names are usually in upper and lower case. To show importance of some places, the names are either in bold, or they are in full capitals. The size range of type faces in a map is also limited. Hence even inter letter spacing has to be increased so that a particular name is spread over a larger

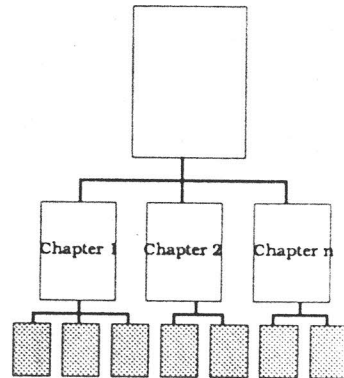


area. Orientation of text is usually horizontal, but it can be angular as well to fit in a limited horizontal space.

It has been found that sans serif typefaces are more legible for intermittent reading hence they are commonly used for maps, diagrams and charts. In maps sans-serif Roman typefaces are popular for place names, serif italic typefaces are usually used to denote rivers and lakes. Usually seas and oceans are named in sans-serif oblique typefaces. One of the rare instances of semantic usage of text is when river names are aligned along the contours of the lines denoting rivers.

Most of the maps being in multi color, color is used to advantage to represent the geographical and political divisions. But text is always in black, except probably for the heading of the map.

Since a map can potentially represent an infinite amount of information, often information is given only till a certain hierarchical level. If details of a particular place is to be given, then insets are used.



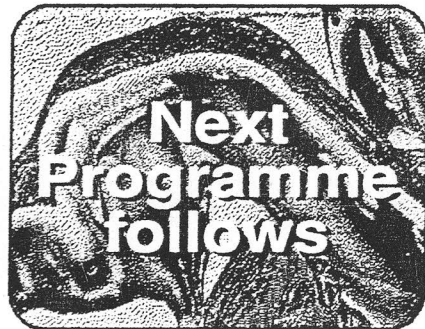
*Text organization in a textbook should ideally be hierarchical. The grey boxes indicate that at the lowest level, information position is unchangeable.*

### **Textbook:**

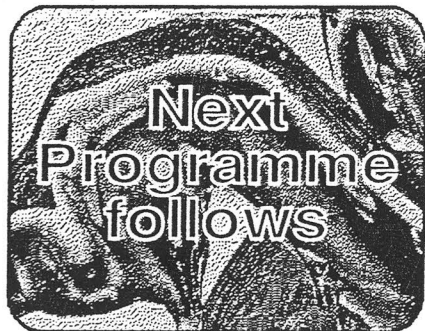
In a textbook, organization of text is hierarchical. The subject of the text book is divided into chapters, and within chapters they are divided into sections, subsections and more. At a subsection level, the information is complete, at the section level it is more so, and the chapter will give the entire information.

At the typographical level, typefaces used for running text and for display are serified, and with heavy serifs at that. Text point size is 10 pt. to 14 pt. and display point size is 14 pt. to 24 pt. In textbooks, typography is normally very plain, with one or at the most typefaces in use. Within the text, the italic variant of the typeface is used for emphasis, and section and subsection headings are in its bold variant. Depending on the size of the page, there will be one or two columns. Justification is boxed and paragraph indenting is used. Chapter headings and figure captions are mostly center justified. In every page, the page number comes prominently in the upper or lower margin of the page.

1. Shadow text method



2. Inline-outline method



### Television:

The major difference between text in print media and text in electronic media is that the latter is dynamic whereas the former is static. Imagine that the text is presented on the electronic media as it is in print media. Then it would be like watching a slide show, one text slide after another.

But that is not the case. Television gives moving text, which would be on screen long enough to be read, which is in a size that is readable even from a distance of around 5 metres and which by virtue of the media is used much less when compared to the extent of images used on it.

Very seldom is text given importance on television. News headlines, captions (for images, places, events, people etc.), subtitles, announcements, statistics and to some extent in advertisements are the occasions when text is used.

Both serif and sans-serif text are popular on TV. Short pieces of text is sometimes in some novelty typeface if the size is sufficiently large. Because of pixelization, in medium sizes, different typefaces may look alike. So when typographical variety is needed, the typefaces used should have some marked differences in them.

Background of the text is sometimes dynamic in this media ( eg. subtitles for movies, captions for images) and this necessitates that the text in the foreground be in a suitable format so that the readability is not at stake when the images move in the background. This is often done in one of the following ways.

- 1. Shadow text method:** Text is composed in white, with a black shadow. This arrangement makes sure that whatever the background is at a given instant— in the extreme cases, let it be black at a time and white at another time—text is always readable. Shadow text requires more space and the type size has to be larger.
- 2. Inline-outline method:** Here text is in one color, each character is given an outline in another color with a marked color contrast. So if the text is in yellow, the outline of the characters can be in

any dark color like black, dark blue etc., but not in any pale color like grey, orange, or pale green.

Because of the necessity of contrast, text displayed by the above methods should be the least complicated, so sans serif typefaces are favored for such uses. In larger sizes, serif typefaces are also used.

Orientation of text is horizontal only, but for statistics which may have words in vertical orientation. Pixelization puts curbs on the degree of angular orientation, since vertical and horizontal lines are better displayed on screen than angular lines, which will show aliasing.

Text displayed on screen is not very long. At the most the number of words on screen will be less than 50. So organization is at the display level, and as a sentence. Centre justification is usually used here since the boundaries of the 'page' is well defined, but left justification is also resorted to occasionally.



### Street Signs:

Text is the least organized in the environment, in signage, signboards and else. Because here, each person sets his own rule. It is almost like a newspaper with each news item being organized by a different person! There is an array of typefaces, typesizes, colors and orientation. Materials and the third dimension are significant here. With so many variables at hand, the possibilities are more and so one comes across a lot of variety.

Each signboard is designed to be more prominent than the rest, within the limitations of space. In most cases, the text is not more than a few words, with each word or group of words being treated differently.

Three dimensional text is used for shop signs to make them more prominent. These letters are fabricated out of materials like wood, plastic, glass, metal etc. which are durable. The advantage with extruded or raised 3D text is that lighting gives interesting effects to the letters, and they are readable from a

wider angle.

In street signs, type sizes can no longer be mentioned in points, but in other measures like centimeters and feet. Many of the parameters that are important in the print media loses significance here, like justification, paragraphs, pages etc. But at the micro level the organization is still the same.

Text is most often in full capitals on sign boards. In India, signboards can also have text in the regional language apart from English, but prominence will be given to one only.

### **T-shirts**

Organization of text on T-shirts is very similar to that of street signs. The same level of freedom is there. Only three dimensional text has not surfaced on T-shirts yet !

Another notable difference is the casualness seen in the typography on T-shirts which is visibly similar to graffiti.

### **Product Graphics**

Product names and labels are the common instances where text is used in products. Organization of text is at the word level in product logotypes, but it can be at the sentence level for the specifications and instructions if they are carried on the product.

Orientation is horizontal, type sizes for product logos are in the display range, for specification labels, they are in the text range, point sizes used are much less for this text. Justification can be left, centre or boxed. The typefaces used in logotypes may be custom-made.

Chart 3 on the following page summarises these observations.

**Chart 3**

	<b>Format</b>	<b>Columns per page</b>	<b>Nature of Typefaces</b>	<b>Visible Devices</b>	<b>Semantic Associations</b>	<b>Layout</b>	<b>Levels of Organization</b>
<b>Novel</b>	Vertical	Single	Single serif typeface used with its italic	Drop Initials Indent Box Justification	None	A page at a time	Sequential Typeface level to book level
<b>Text book</b>	Vertical	Single or multi depending on the size (1 or 2)	1 or 2 serif typefaces used with all its variants	Indent or Para spacing Box Justification	None	A page at a time	Hierarchical Typeface level to book level
<b>Magazine</b>	Vertical	Multi (3 or 4)	Many serif or sans serif typefaces used with all its variants	Drop Initials Indent Box or left Justification	Choice of typefaces color, layout	A spread at a time	Sectional Typeface level to book level
<b>Newspaper</b>	Vertical	Multi 8 or rarely 6	Serif for text/Serif/ sans serif for headlines and captions 1 to 3 typefaces.	Drop Initials Indent Box Justification	Importance of the news shown by the type size and line length of the headline	A page at a time	Random Positioning. Typeface level to book level
<b>Map</b>	Not applicable	Not applicable	Sans serif normal and bold for all. Serif Italic for rivers & lakes Sans serif Italic for seas	Centre Justification	River names, mountain names follow their contours	A map at a time	Invariable Spatial Typeface level to page level
<b>Television</b>	Horizontal	Not applicable	1 or 2 serif or sans serif used with shadow or outline-inline	Centre Justification	Dynamic text is often used semantically	A screen at a time	Sequential Typeface level to book level
<b>Street signs</b>	Vertical and Horizontal	Not applicable	Infinite serif/ sans serif/ novelty/ 3D typefaces	Not applicable	Typefaces and materials used semantically	A board at a time	Sequential Typeface level to page level
<b>T shirts</b>	Not applicable	Not applicable	Many Serif/ Sans serif/ Novelty typefaces	Not applicable	Choice of typeface and positioning	A side at a time	Random Organization Typeface level to word level
<b>Product Graphics</b>	Not applicable	Not applicable	1 or 2 Serif/ Sans serif/ Novelty customised typefaces	Not applicable	Text is made into a logotype	A label at a time	Limited Randomness. Typeface level to word level

## ***Simulation of Text***

As an exercise in understanding the variations in the organization of text in various media, a page of text from a History textbook for Class 8 has been chosen and has been simulated in various ways in the following pages.

The media chosen for simulation are

1. Novel
2. Magazine
3. Newspaper
4. Map
5. Street signs

This exercise shows that the same text acquires different forms in different media. This underlines the premises of this paper. We have also identified those norms that have been established by the organization of text.

These norms are by no rules inviolate. They have been changed and are being changed to bring variety and to follow the trend of the times.

**This is perhaps one of the best examples of how a textbook shouldn't look. As you may have noticed, the organization is very much like in a novel. Had some organization that showed the levels of information clearly, it would have helped in better understanding of the text. Here, there is no choice, either take it or leave it. A student learns something only if he reads the text entirely.**

*Restrained Typography, only Times Roman and Times Bold have been used.*

*Indenting at the beginning of the paragraphs is used instead of paragraph spacing, because space has to be used with economy.*

*Section headings are made bolder and are not spaced from the paragraphs to save space.*

**A page from the History Textbook for Class 8 reproduced as it is.**

## **6. RENAISSANCE IN EUROPE**

During the period between the 13th and the 16th centuries there were many peasant uprisings in Europe. These uprisings were revolts against Feudalism. An uprising took place in England under the leadership of John Wall. The nobleman used to call John 'mad'. But the peasants of England considered him their leader. 'How has it been decided that these noblemen are superior to us? Who gave them this superiority?' These were the questions which Wall used to ask bluntly. Watt Tyler was one of the leaders of the peasants during this uprising. He was beheaded. In 1358 there were peasants uprisings against the feudal lords in France too. These uprisings shook the very foundations of society based on the principle of organized hierarchy. The revolutionary movement of the peasants laid the foundation of the Renaissance which was to take place soon.

**Principles of Bacon:** These uprisings had an impact on social thinking. Earlier, man, in his efforts to enrich his life, was controlled by nature and its forces. He had not been able to conquer the forces of nature. Under these circumstances he could not do anything except trust his fate.

Developments in the science of navigation, new geographical discoveries and revolts against the feudal laws were some of the happenings which led to an increase in the self confidence of the people. They also prepared the people for social awakening. A statement of Roger Bacon is symbolic of this new attitude. Bacon used to say that no statement must be accepted, only because it is divine. It must appeal to our intelligence.

**Why the Rebirth of the Past?:** The ancient Greeks were motivated by a desire to live a good and happy life. The new thinkers of Europe were reminded of this great tradition. There was an immediate cause for remembering the Greeks. In 1453, Constantinople was captured by the Turks. As the result, many Greek scholars and artists came to stay in European States. They went to Italy, France, Germany and England and established new centres of learning. They started teaching in the universities in these countries. The universities of Oxford and Cambridge which were established in the 12th and 13th centuries participated in these intellectual movements. The scholars of these universities were in the foreground of the Renaissance. They established new traditions in the fields of art, literature, science and political thought.

**New Creations:** The geographical discoveries opened up new lands for trade and commerce. In reality, all these people were searching for new knowledge. New land routes, new science of navigation, emergence of the idea of nation-states and abolition of slavery were some of the new things that were coming up. Because of this, the period is called the period of rebirth of knowledge. As a matter of fact this was a new creation.

**In a novel, the narrative takes the lead role. The organization and layout is of secondary importance only. It should n't distract the reader from the flow of the story. Hence visible devices are rarely used, so also typographical variety. Perhaps, this is the media in which organization has changed so little ever since the first novel.**

*Restrained Typography, Palatino Roman and Palatino Italic in use.*

*Indenting to demarcate paragraphs. Box justification for a compact feeling.*

*Larger inner margin to allow paperback binding.*

*Larger lower margin to allow holding of the book while reading it.*

**A page from the History Textbook for Class 8 reproduced as a page from a novel.**

*Renaissance in Europe*

During the period between the 13th and the 16th centuries there were many peasant uprisings in Europe. These uprisings were revolts against Feudalism. An uprising took place in England under the leadership of John Wall. The nobleman used to call John 'mad'. But the peasants of England considered him their leader.

'How has it been decided that these noblemen are superior to us? Who gave them this superiority?'

These were the questions which Wall used to ask bluntly. Watt Tyler was one of the leaders of the peasants during this uprising. He was beheaded. In 1358 there were peasants uprisings against the feudal lords in France too. These uprisings shook the very foundations of society based on the principle of organized hierarchy. The revolutionary movement of the peasants laid the foundation of the Renaissance which was to take place soon.

Principles of Bacon: These uprisings had an impact on social thinking. Earlier, man, in his efforts to enrich his life, was controlled by nature and its forces. He had not been able to conquer the forces of nature. Under these circumstances he could not do anything except trust his fate.

Developments in the science of navigation, new geographical discoveries and revolts against the feudal laws were some of the happenings which led to an increase in the self confidence of the people. They also prepared the people for social awakening. A statement of Roger Bacon is symbolic of this new attitude. Bacon used to say that no statement must be accepted, only because it is divine. It must appeal to our intelligence.

Why the Rebirth of the past?: The ancient Greeks were motivated by a desire to live a good and happy life. The new thinkers of Europe were reminded of this great tradition. There was an immediate cause for remembering the Greeks. In 1453, Constantinople was captured by the Turks. As the result, many Greek scholars and artists came to stay in European States. They went to Italy, France, Germany and England and established new centres of learning. They started teaching in the universities in these countries. The universities of Oxford and Cambridge which were established in the 12th and 13th centuries participated in these intellectual

## RENAISSANCE IN EUROPE

IN THIS PART OF THE SERIES ON HISTORY, LEKHA J. SHANKAR WRITES ABOUT THE DEVELOPMENTS IN EUROPE THAT LED TO RENAISSANCE.

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### New Creations

The geographical discoveries opened up new lands for trade and commerce. In reality, all these people were searching for new knowledge. New land routes, new science of navigation, emergence of the idea of nation-states and abolition of slavery were some of the new things that were coming up. Because of this, the period is called the period of rebirth of knowledge. As a matter of fact this was a new creation.

**Bacon used to say that no statement must be accepted, only because it is divine. It must appeal to our intelligence.**

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### Why the Rebirth of the past?

The ancient Greeks were motivated by a desire to live a good and happy life. The new thinkers of Europe were

*Bolder typography (Use of a sans serif typeface for text.) to keep up with the trend.*

*Use of design elements (rules, dots and boxes) to create a style.*

*Use of Drop initials to attract the reader's eye.*

*Multi column layout with a lot of white space around for more variety in layout in other pages.*

*Vertically aligned headline, Introduction in full capitals, use of two different typefaces (Tiffany and Futura), all for the trendy look.*

**A page from the History Textbook for Class 8 reproduced as a page from a magazine**

**The variables in a magazine are more. More number of columns, visible devices, design elements and typographical variety give the designer many options in the organization. This is all the more needed for the magazine to grab the reader's attention and thus to sell, the shelf life being very less. Though the layout may vary from page to page, the underlying grid is the same in all pages.**

Text and headlines in Serif,  
page heading and news source  
in Sans serif.

Type size of the headline  
denotes its relative importance.

Use of Drop initials to attract  
the reader's eye.

Headlines are condensed to fit  
in the column space and  
sometimes to create white  
margins as well.

Leading varied to fit copy text.

Multi column, box justification  
to help in reading.

The newspaper has lesser number of variables at its disposal, so the hierarchy of information is displayed by typography only. The point size of the headline, its density, the number of columns it occupies all show its relative importance. Otherwise, the news is all set in the same style.

A page from the History Textbook  
for Class 8 reproduced as a part  
of a page from a Newspaper.

THE DAILY NEWSPAPER, JANUARY 3, 1920 3

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INTERNATIONAL

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# Renaissance in Europe

## Why the Rebirth of the past?

**Reuters**  
January 3

The ancient Greeks were motivated by a desire to live a good and happy life. The new thinkers of Europe were reminded of this great tradition.

There was an immediate cause for remembering the Greeks. In 1453, Constantinople was captured by the Turks. As the result, many Greek scholars and artists came to stay in European States. They went to Italy, France, Germany and England and established new centres of learning. They started teaching in the universities in these countries. The universities of Oxford and Cambridge which were established in the 12th and 13th centuries participated in these intellectual movements.

The scholars of these universities participated in these intellectual movements. The scholars of these universities were in the foreground of the Renaissance. They established new traditions in the fields of art, literature, science and political thought.

**Special Correspondant**  
Europe

During the period between the 13th and the 16th centuries there were many peasant uprisings in Europe. These uprisings were revolts against Feudalism. An uprising took place in England under the leadership of John Wall. The nobleman used to call John 'mad'. But the peasants of England considered him their leader.

'How has it been decided that these noblemen are superior to us? Who gave them this superiority?'

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### New Creations

COPENHAGEN,  
January 2

The geographical discoveries opened up new lands for trade and commerce. In reality, all these people were searching for new knowledge. New land routes, new science of navigation, emergence of the idea of nation-states and abolition of slavery were some of the new things that were coming up.

Because of this, the period is called the period of rebirth of knowledge. As a matter of fact this was a new creation.

## Principles of Bacon

CAMBRIDGE, January 2

These uprisings had an impact on social thinking. Earlier, man, in his efforts to enrich his life, was controlled by nature and its forces. He had not been able to conquer the forces of nature. Under these circumstances he could not do anything except trust his fate.

Developments in the science of navigation, new geographical discoveries and revolts against the feudal laws were some of the happenings which led to an increase in the self confidence of the people. They also prepared the people for social awakening.

A statement of Roger Bacon is symbolic of this new attitude. Bacon used to say, that no statement must be accepted, only because it is divine. It must appeal to our intelligence.

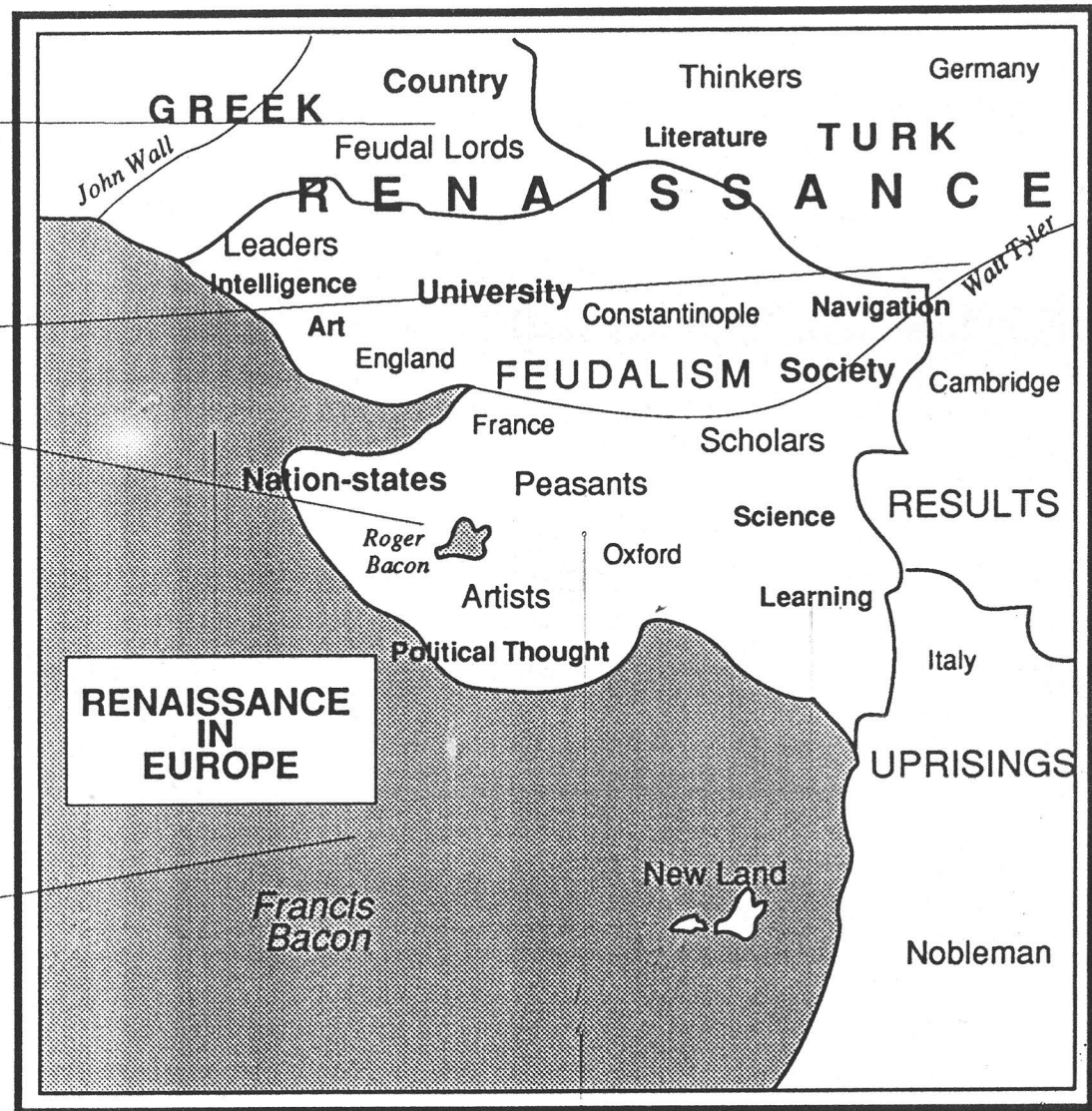
..... Continued on Page 5

Hierarchy of information is shown by means of the size, weight and spacing of the typeface. Usually a Sans-serif typeface is used for naming places.

The only instance of semantic association in the organization of text is by the way river names are aligned to the geographical contours of the rivers for which Italic serifs This is so for mountains, lakes as well.

As a whole, a map is like a newspaper, different pieces of information scattered around. But unlike a newspaper, these pieces of information have invariable positions. This further reduces the variables at one's disposal. Notice the range of type sizes and the variety obtained within this range by varying the letter spacing.

Seas and oceans also receive a different treatment, they are set in Sans serif Oblique typefaces.



A page from the History Textbook for Class 8 reproduced as a map.

Vertical and horizontal orientation and angular positioning of the signboards gives variety albeit causing visual chaos.

യൂറോപ്യൻ  
 പുരസ്കാരം  
 മാറ്റം  
 ഉണ്ടാക്കി

Street Signs are in a way like a newspaper. Different pieces of information randomly put in space (here it is a 3D space rather than the 2D area in a newspaper). But colour, typefaces, orientation, and perspective add more interest.

Centre justification, Full capitals, and variety of typefaces are most noticeable

A page from the History textbook of Class 8 reproduced as Street signs.

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# *Appendix*

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Calculation of Character Width of  
typefaces

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	Packing Factor
AvantGarde-Book	The quick brown fox jumps over the lazy dog															107
AvantGarde-BookOblique	<i>The quick brown fox jumps over the lazy dog</i>															107
AvantGarde-Demi	<b>The quick brown fox jumps over the lazy dog</b>															107
AvantGarde-DemiOblique	<b><i>The quick brown fox jumps over the lazy dog</i></b>															107
Bookman-Demi	<b>The quick brown fox jumps over the lazy dog</b>															117
Bookman-Demiltalic	<b><i>The quick brown fox jumps over the lazy dog</i></b>															119
Bookman-Light	The quick brown fox jumps over the lazy dog															108
Bookman-LightItalic	<i>The quick brown fox jumps over the lazy dog</i>															105
Helvetica	The quick brown fox jumps over the lazy dog															97
Helvetica-Bold	<b>The quick brown fox jumps over the lazy dog</b>															105
Helvetica-BoldOblique	<b><i>The quick brown fox jumps over the lazy dog</i></b>															105
Helvetica-Narrow	The quick brown fox jumps over the lazy dog															80
Helvetica-NarrowBold	<b>The quick brown fox jumps over the lazy dog</b>															87
Helvetica-NarrowBoldOblique	<b><i>The quick brown fox jumps over the lazy dog</i></b>															87
Helvetica-NarrowOblique	<i>The quick brown fox jumps over the lazy dog</i>															80
Helvetica-Oblique	<i>The quick brown fox jumps over the lazy dog</i>															97

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	Packing Factor
NewCenturySchlbk-Bold	The quick brown fox jumps over the lazy dog															116
NewCenturySchlbk-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															112
NewCenturySchlbk-Italic	<i>The quick brown fox jumps over the lazy dog</i>															100
NewCenturySchlbk-Roman	The quick brown fox jumps over the lazy dog															101
Palatino-Bold	The quick brown fox jumps over the lazy dog															102
Palatino-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															98
Palatino-Italic	<i>The quick brown fox jumps over the lazy dog</i>															88
Palatino-Roman	The quick brown fox jumps over the lazy dog															99
Times-Bold	The quick brown fox jumps over the lazy dog															95
Times-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															91
Times-Italic	<i>The quick brown fox jumps over the lazy dog</i>															88
Times-Roman	The quick brown fox jumps over the lazy dog															100
ZapfChancery-MediumItalic	<i>The quick brown fox jumps over the lazy dog</i>															78
BernardModern-Roman	The quick brown fox jumps over the lazy dog															88
Melior-Bold	The quick brown fox jumps over the lazy dog															103
Melior-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															106
Melior-Italic	<i>The quick brown fox jumps over the lazy dog</i>															102
Melior	The quick brown fox jumps over the lazy dog															102

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	Packing Factor
Galliard-Bold	The quick brown fox jumps over the lazy dog															103
Galliard-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															93
Galliard-Italic	<i>The quick brown fox jumps over the lazy dog</i>															90
Galliard-Roman	The quick brown fox jumps over the lazy dog															97
Tiffany-Heavy	<b>The quick brown fox jumps over the lazy dog</b>															129
Tiffany-HeavyItalic	<b><i>The quick brown fox jumps over the lazy dog</i></b>															131
Tiffany-Demi	The quick brown fox jumps over the lazy dog															108
Tiffany-DemiItalic	<i>The quick brown fox jumps over the lazy dog</i>															107
BrushScript	<i>The quick brown fox jumps over the lazy dog</i>															86
Futura-Light	The quick brown fox jumps over the lazy dog															92
Futura-LightOblique	<i>The quick brown fox jumps over the lazy dog</i>															92
Futura-Book	The quick brown fox jumps over the lazy dog															97
Futura-Condensed	The quick brown fox jumps over the lazy dog															68
Futura-CondensedBold	<b>The quick brown fox jumps over the lazy dog</b>															80
Futura-CondensedOblique	<i>The quick brown fox jumps over the lazy dog</i>															68
Futura-Heavy	<b>The quick brown fox jumps over the lazy dog</b>															97
Futura-HeavyOblique	<b><i>The quick brown fox jumps over the lazy dog</i></b>															97
Futura-Oblique	<i>The quick brown fox jumps over the lazy dog</i>															94

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	Packing Factor
Garamond-Bold	The quick brown fox jumps over the lazy dog															107
Garamond-BoldItalic	<i>The quick brown fox jumps over the lazy dog</i>															108
GaramondLight-Italic	<i>The quick brown fox jumps over the lazy dog</i>															94
Garamond-Light	The quick brown fox jumps over the lazy dog															98
Optima-Bold	The quick brown fox jumps over the lazy dog															97
Optima-BoldOblique	<i>The quick brown fox jumps over the lazy dog</i>															97
Optima-Oblique	<i>The quick brown fox jumps over the lazy dog</i>															97
Optima-Regular	The quick brown fox jumps over the lazy dog															97

**Note:** Here only fonts available on Macintosh based DTP systems have been analysed. Characteristics of fonts reproduced above may vary from design to design, and from vendor to vendor.

VTMSR-  
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