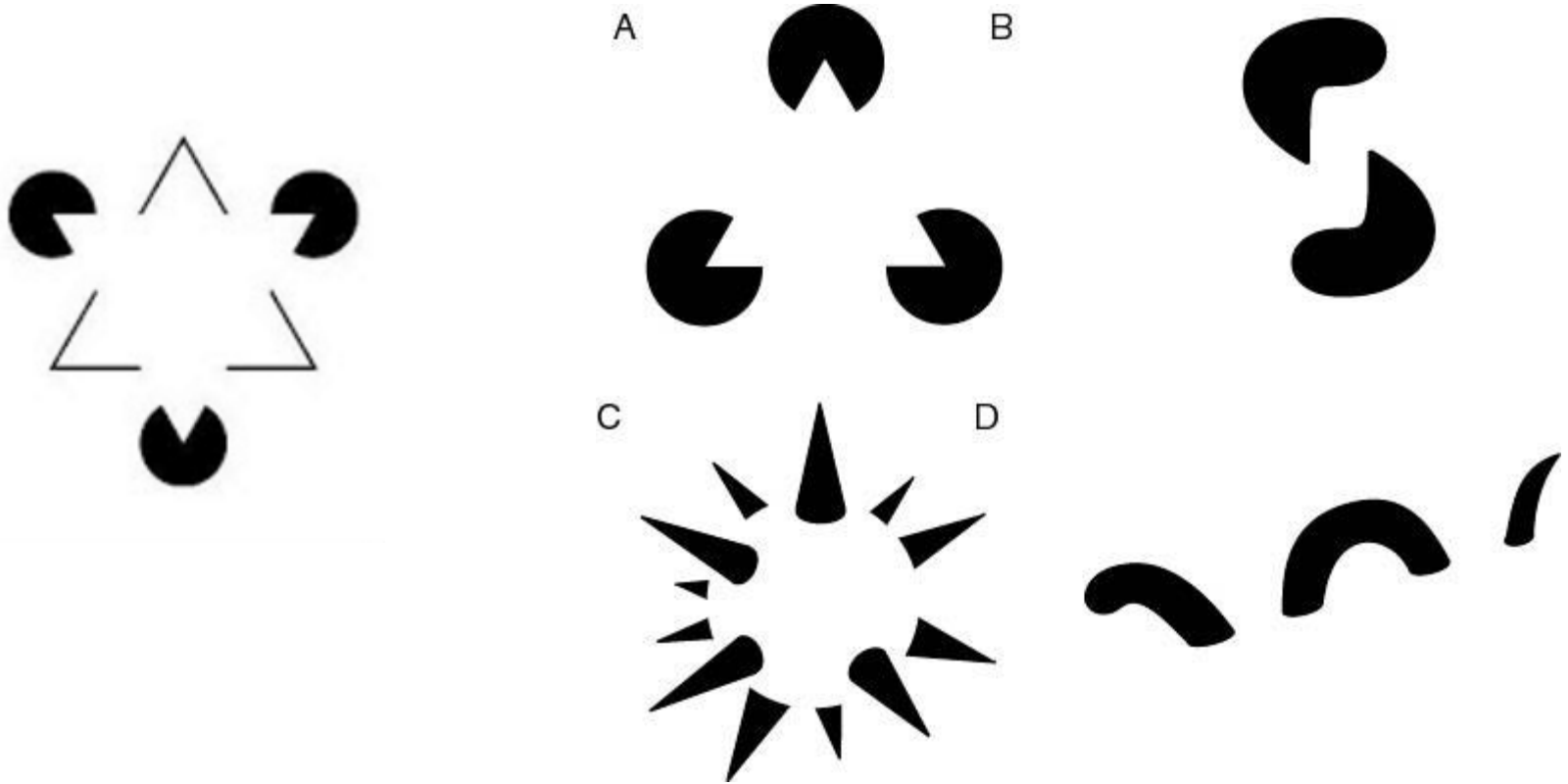# Principles of Graphic Design

Gestalt Principles

Gestalt psychology is an attempt to understand the laws behind our ability to acquire and maintain meaningful perceptions in an apparently chaotic world.
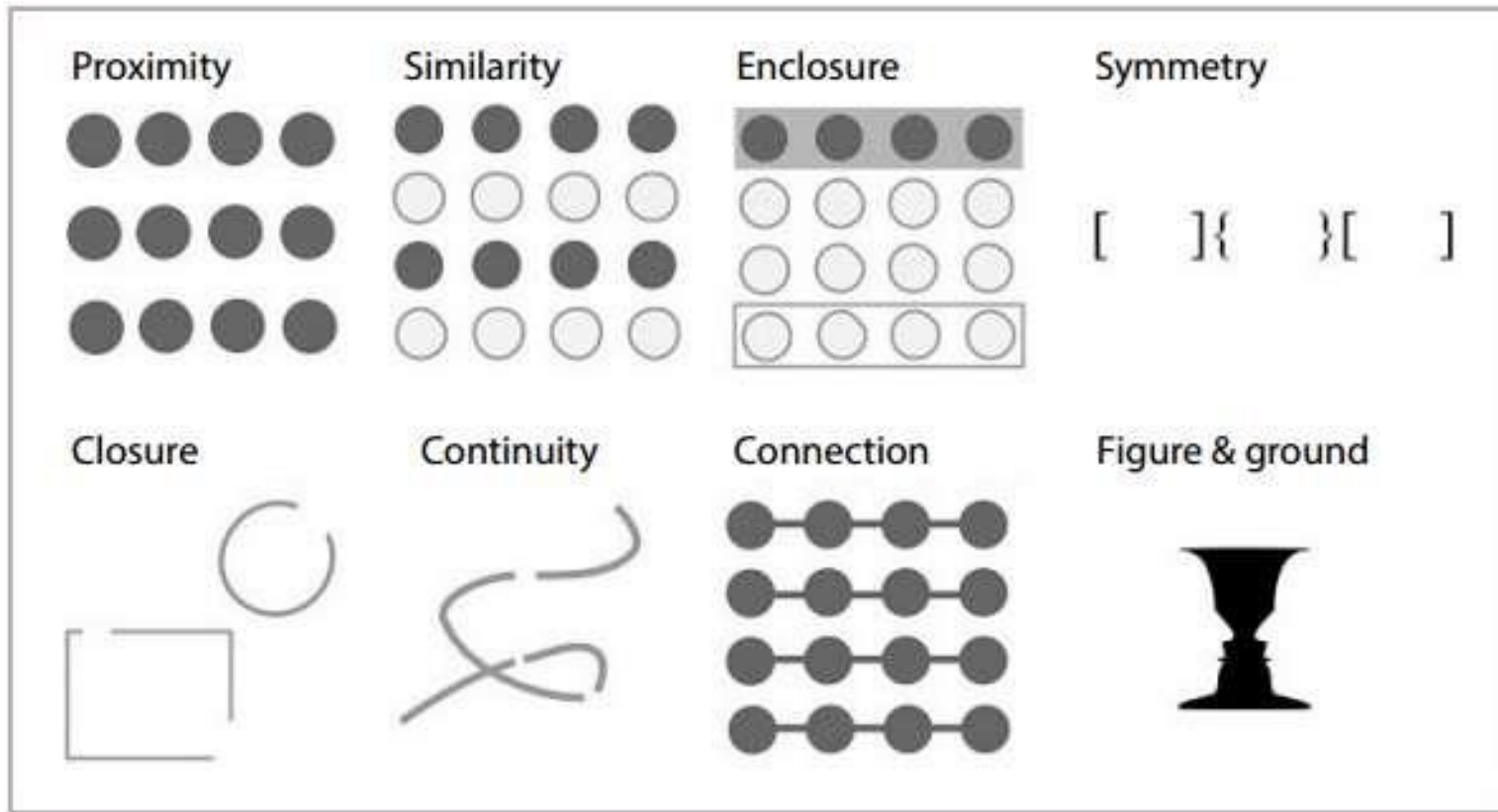
Seeing the whole instead of the individual parts.

Kurt Kofka: "The whole is *other* than the sum of the parts."
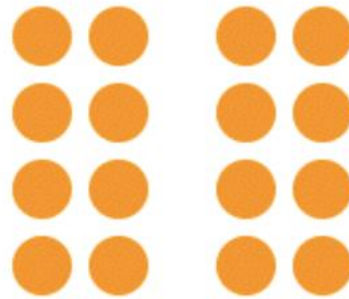
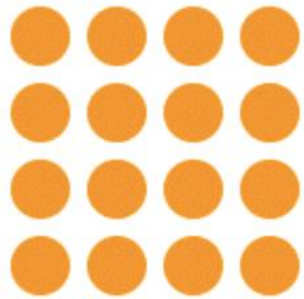Aimed to understand cognition, and still influences design.
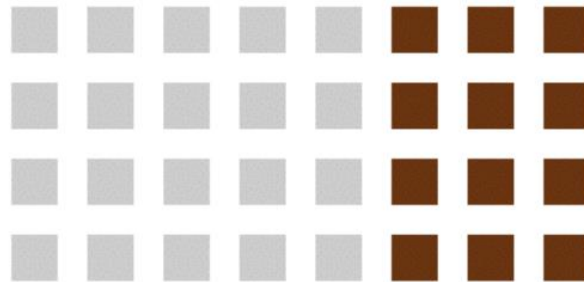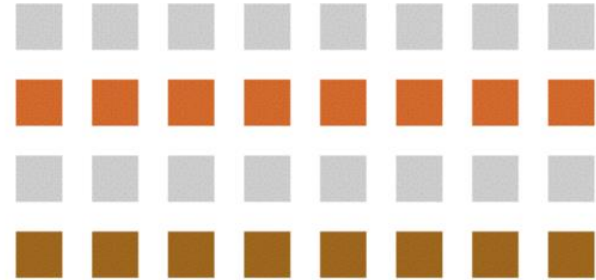
Gestalt = Pattern or Structure

Proximity · Similarity · Enclosure · Symmetry

Closure · Continuity · Connection · Figure & ground

Gestalt theories were based on a set of principles about how we see the world & how we group the things we see.

Proximity

Andy Rutledge, "Gestalt Principles of Perception"
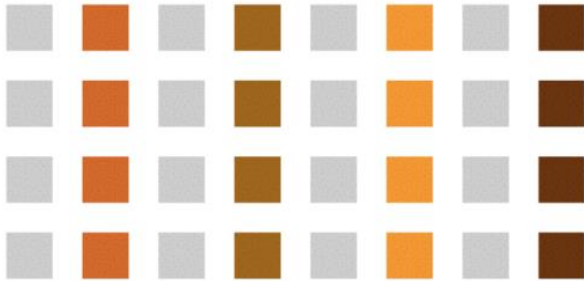
Similarity

Andy Rutledge, "Gestalt Principles of Perception"
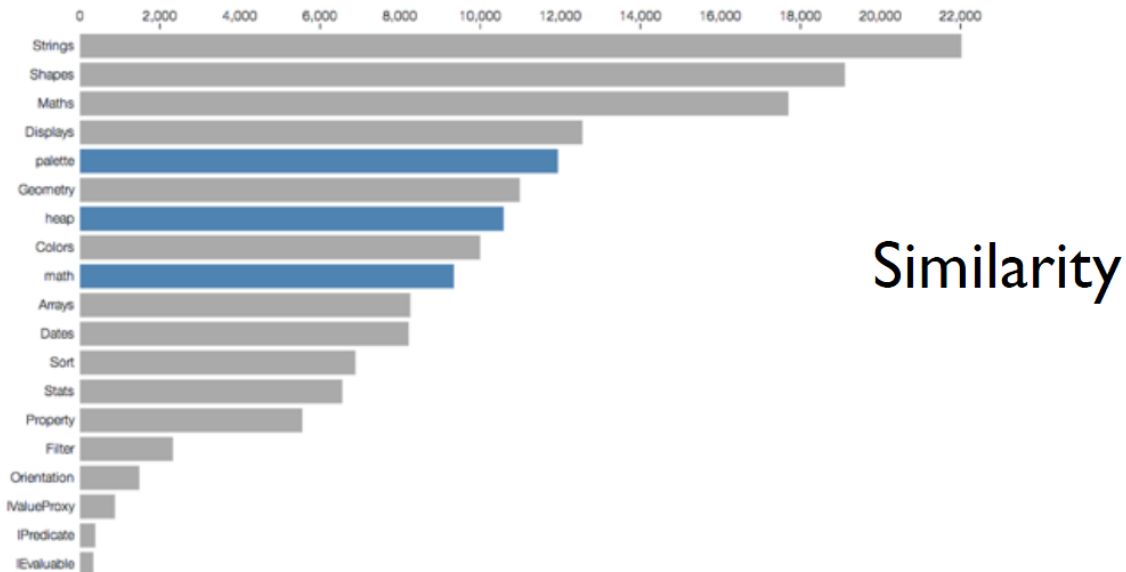
Proximity and Similarity

Proximity

Similarity

Connection

a vs. proximity

b vs. color

c vs. size

d vs. shape
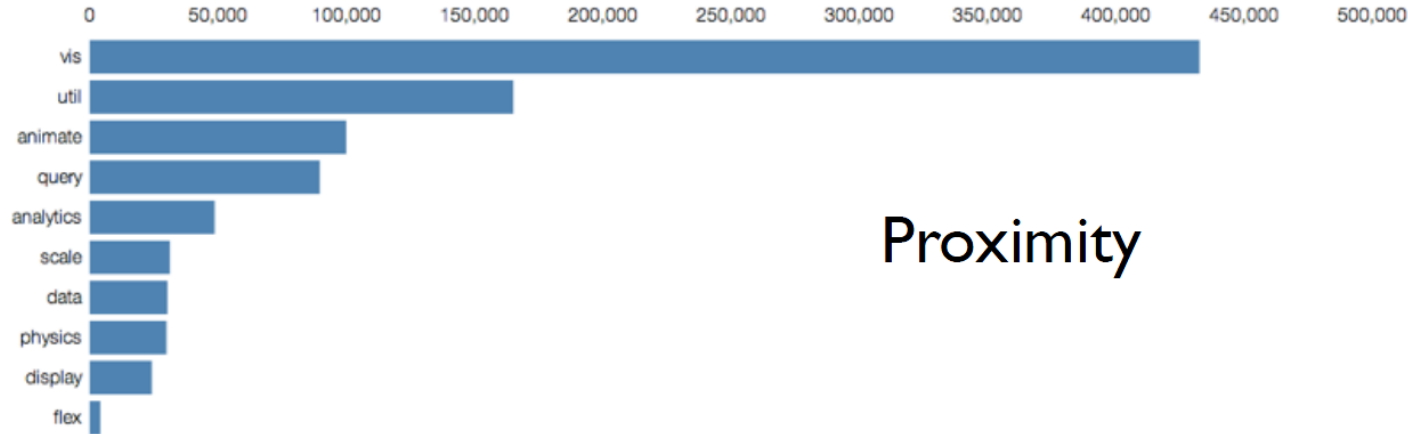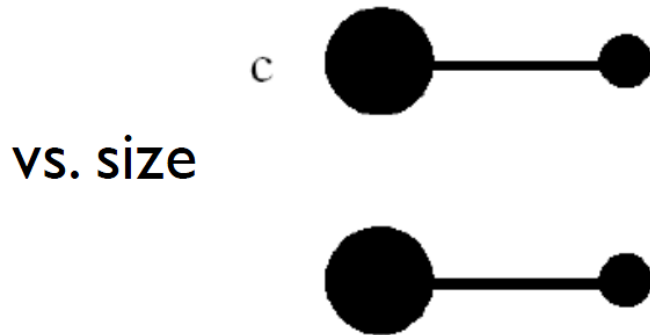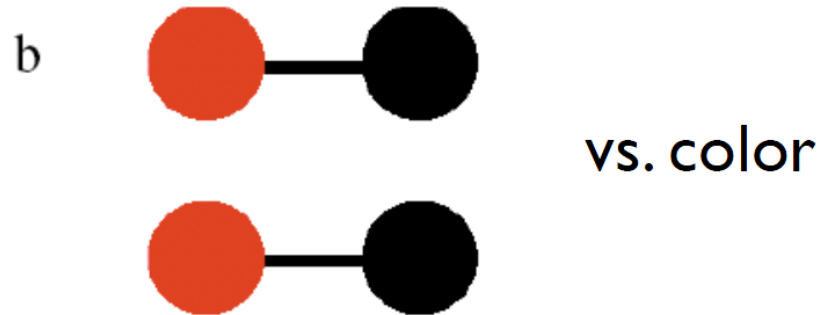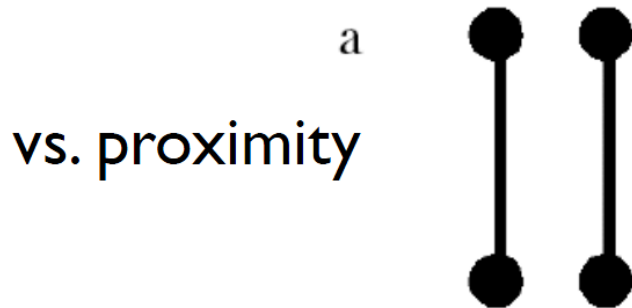
Connectivity is strong cue, over-riding other means of visually grouping items.

Ware, "Information Visualization"

Enclosure

Similarity
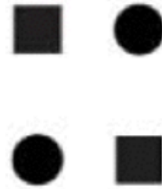
Connection
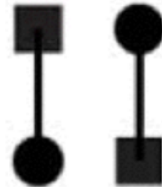
Enclosure

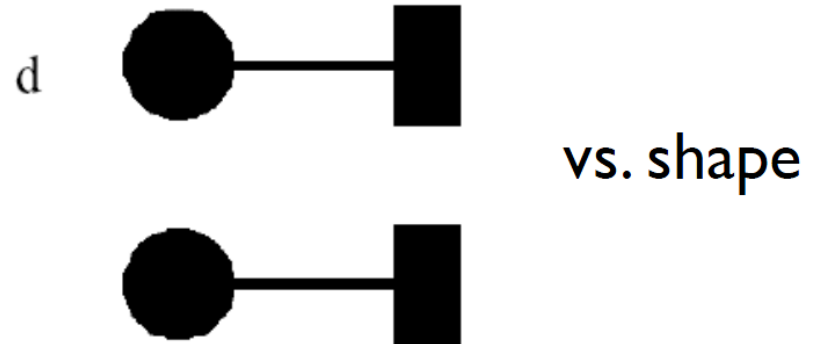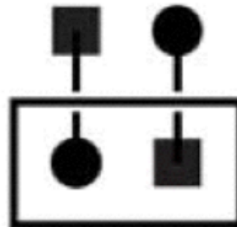Enclosure can override connectivity when grouping items.

Bang Wong, "Gestalt Principles, 1", Nature Methods
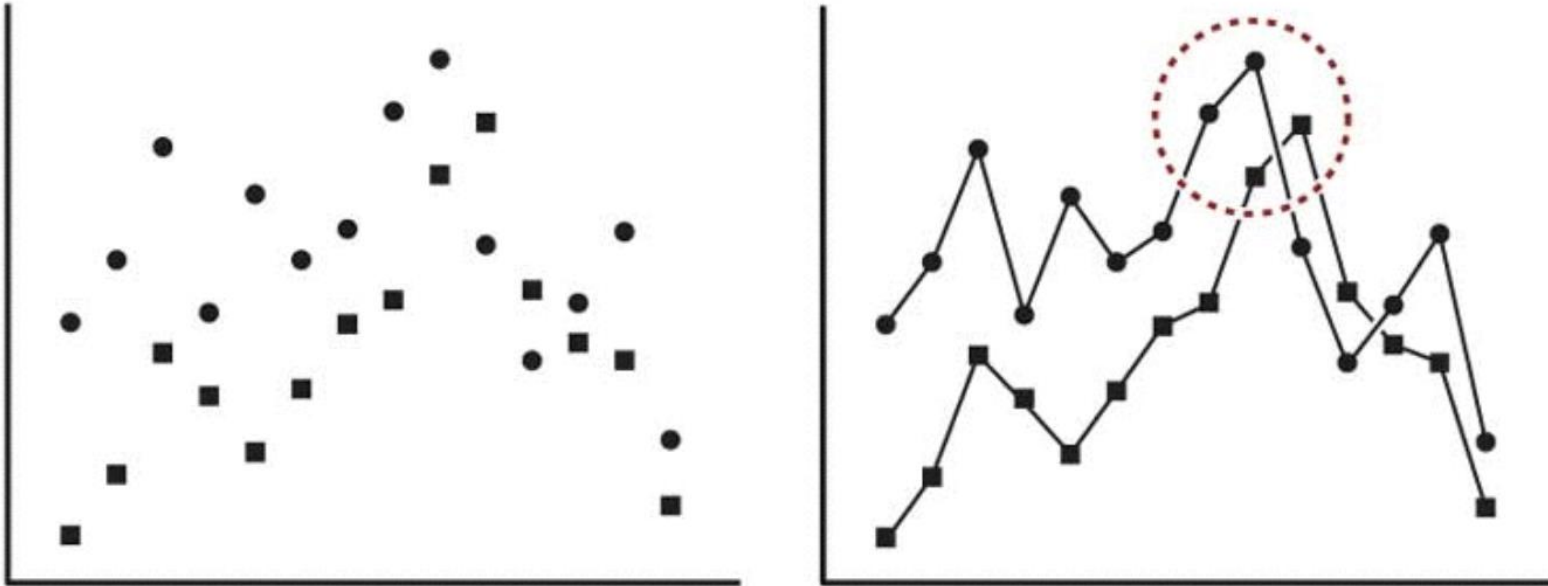
Enclosure example

Connectivity is very familiar in line graphs, giving connection and shape to the data.

Enclosure can be used to override connectivity when there is a need to further group items.

Grouping Examples
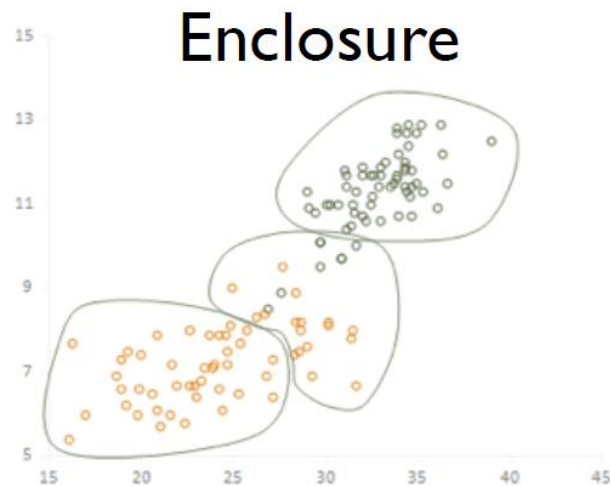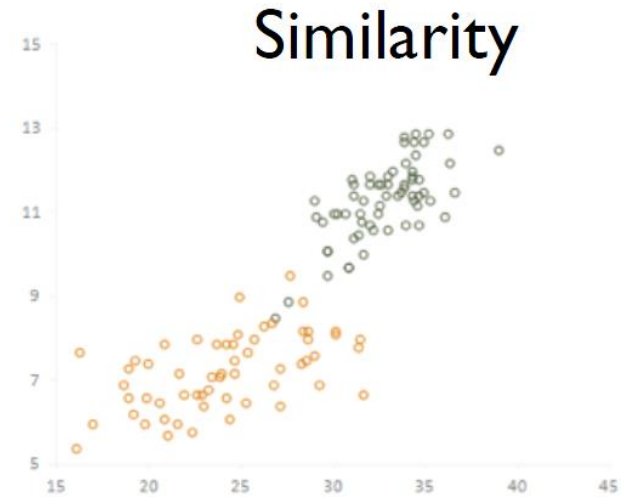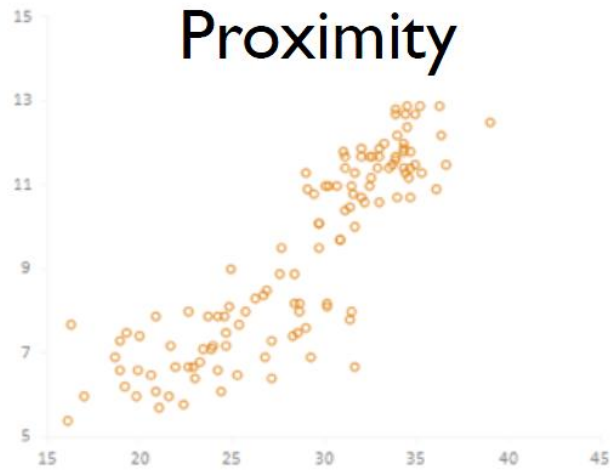
Figure Ground Perception
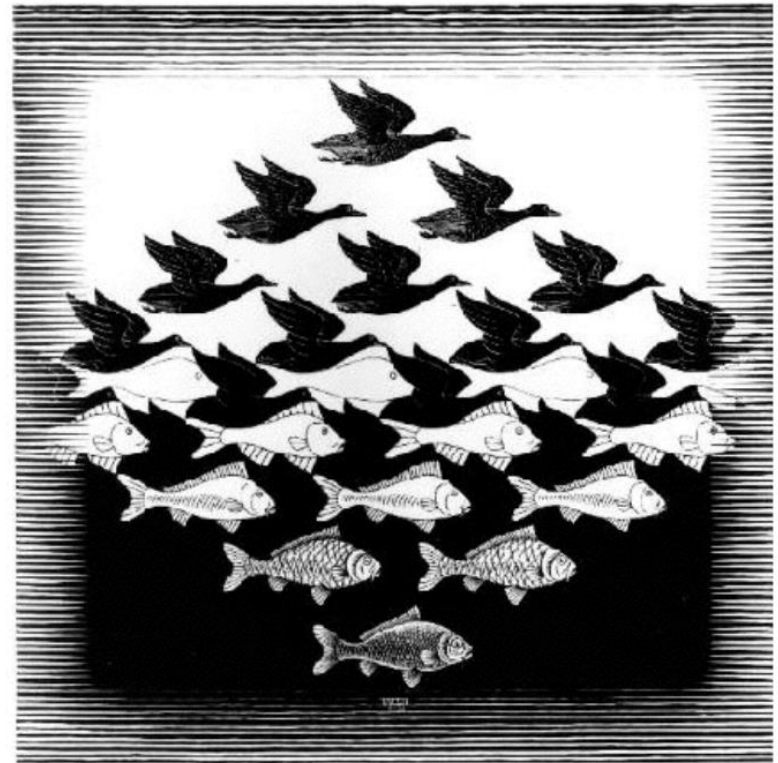
M.C. Escher: *Sky and Water I* 1938 woodcut

Figure Ground Perception

Common Fate
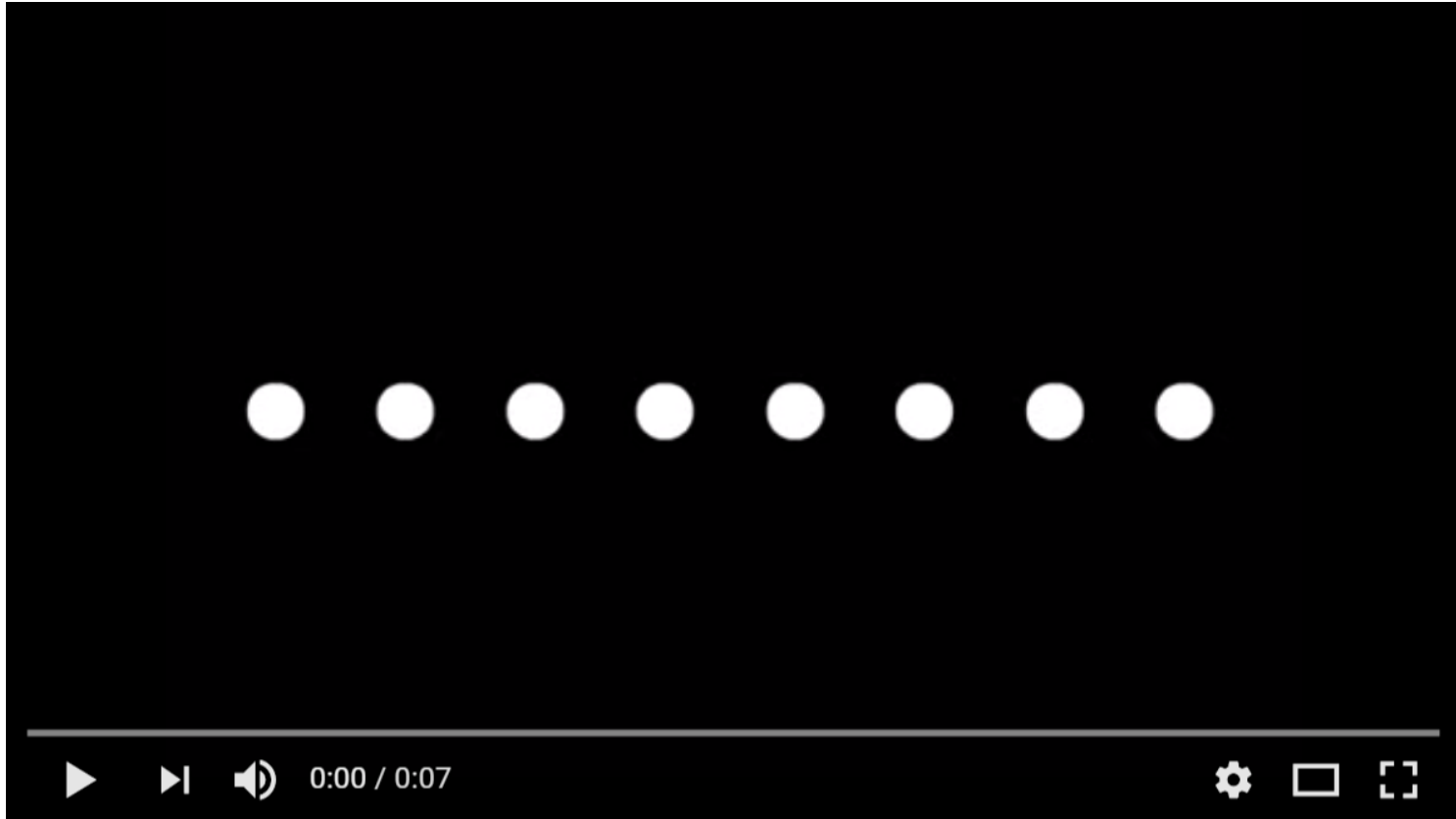
Common fate = grouping by similar motion – works best used with proximity too.

PARC design guidelines

Example: London Underground
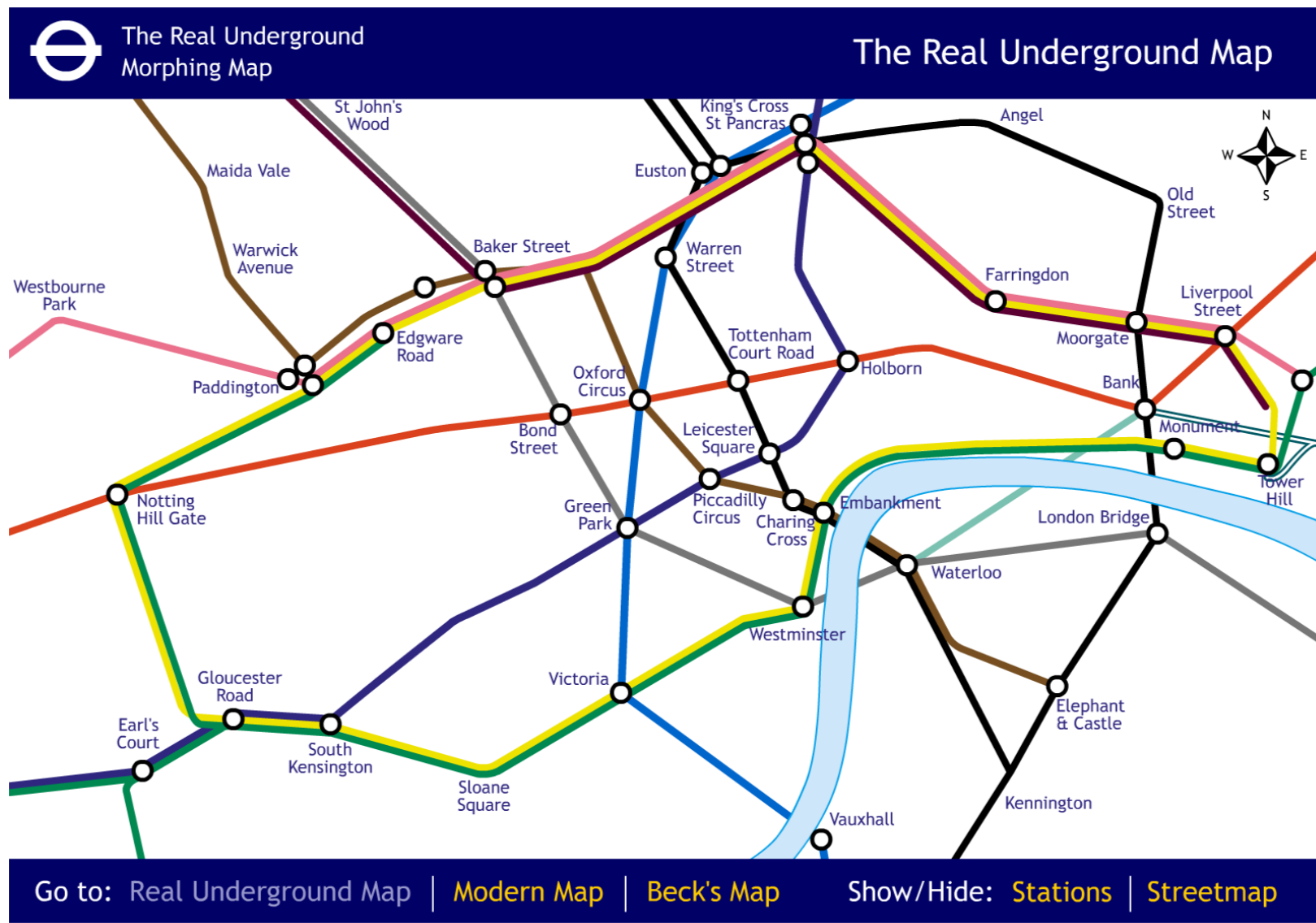
Design by Harry Beck
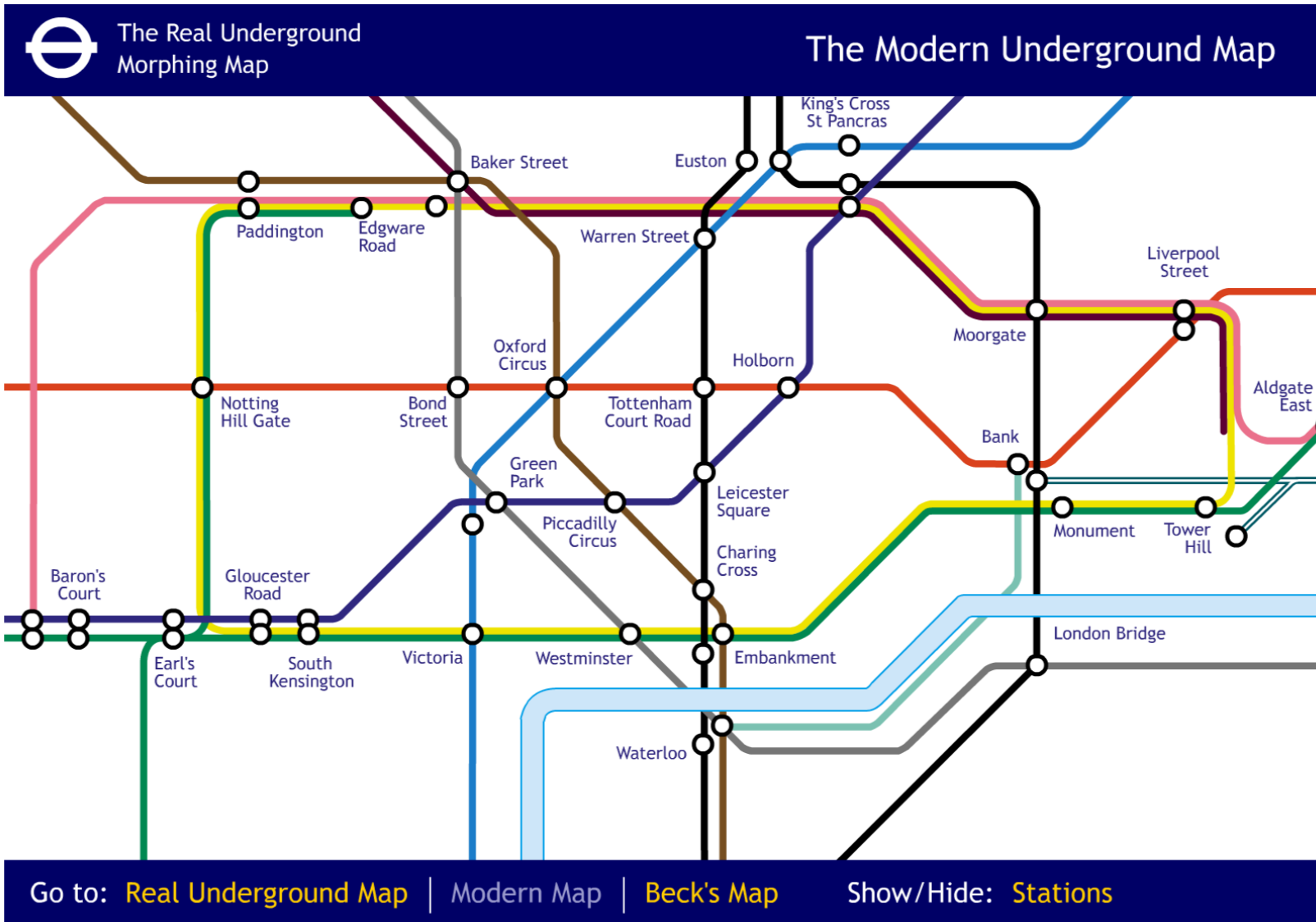
Design for non-designers

Anyone can (and does) make ugly diagrams.

Four simple design principles can avoid this:

Alignment, Proximity, Repetition, Contrast

These work for web pages, essays, power point presentations, letters, CV's, leaflets, business cards etc.

Will not make you into a professional designer….. but could make your visual communication clearer.

*from the book *The non-designer's design book,* Robin Williams, Peach Pit Press, 2014.

Proximity

Relationships between items on a page can also be expressed by their proximity.

The clarity of a page will be improved if:

related items are placed closer together.

unrelated items are placed further apart.

Proximity

Bag End   (717) 555-1212

Frodo Baggins

The Shire   *SH 2968*

What is important here and where is the address ?

❌

Frodo Baggins

Bag End
The Shire
SH 2968
(717) 555-1212

✔

Grouping the address information makes this easier to read.

Proximity

LINKS TO IMAGES	**Links to Images**
HOUSE	House
TREE	Tree
LINKS TO ESSAYS	**Links to Essays**
BUILDING	Building
BOTANY	Botany

Grouping related items can help improve lists.
Capitalising all text doesn't usually help readability.

Proximity

More things to try:

Make sure headlines are closer to the related text than to the text or graphics above them.
    (Use break <BR> not carriage return <CR>)

Make sure captions are close to their photographs.

Put space between unrelated things.

Ensure any hierarchy between the items on the page is represented in their spatial arrangement.

Alignment

Line things up with each other.

Choose one alignment and use it for the whole page.

Don't mix alignments
                                    It looks very odd
And can be difficult to read

                                                as well.

While you are doing this try and keep text away from the edge of the page to reduce the number of difficult to read long, long lines.

                            Here are some examples:

Alignment

Email

Contact Us

Degrees For Free

Solar Electricity

Alignment means introducing the same text alignment, eg flush left, for everything on the page.

It also means aligning buttons etc along edges to create visual connections.

Check this using grids or rulers.
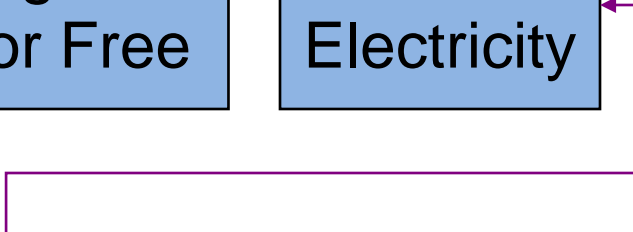
Email

Contact Us

Degrees For Free

Solar Electricity

Alignment - horizontal

| Email | Contact Us | Degrees For Free | Solar Electricity |

| Email | Contact Us | Degrees For Free | Solar Electricity |

Horizontal alignment is as important as vertical alignment.

Horizontal baseline alignment is a feature that can be controlled for tables in most web authoring packages.

Alignment – centred

Newcastle University

Digital Institute

Home

Email

Browse
Search

Software
The Basics

Support

Centred alignment can be a problem because it introduces an invisible line down the centre of objects.

Visually it can be stronger to flush left or right and makes the link between items clearer down the resulting vertical line.

Home

Email

Browse
Search

Software
The Basics

Support

Alignment

Red	Green
Blue	Orange
Pink	Yellow
Violet	Indigo

❌

Red	Green
Blue	Orange
Pink	Yellow
Violet	Indigo

✅

Turn table borders off and improve the text alignment.

It can often look better and be easier to read.

Tufte suggests this as the principle of minimising the non-data ink on a page.

The visual display of quantitative information, Edward Tufte, Graphics Press, 1983.
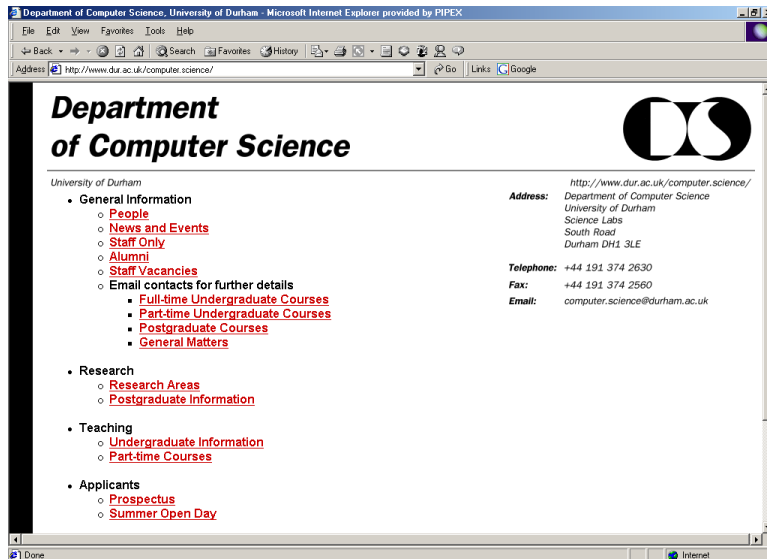
Repetition

Repeating elements tie together all parts of a web site. It should be clear that all the pages belong to the same site simply by looking at them.

Repeating navigation buttons on every page is one example and means visitors do not need to learn their way around again on every page they visit.

Probably you do this by consistently creating titles in the same font.

Extend this and consciously push further to create a visual key that ties your design together.
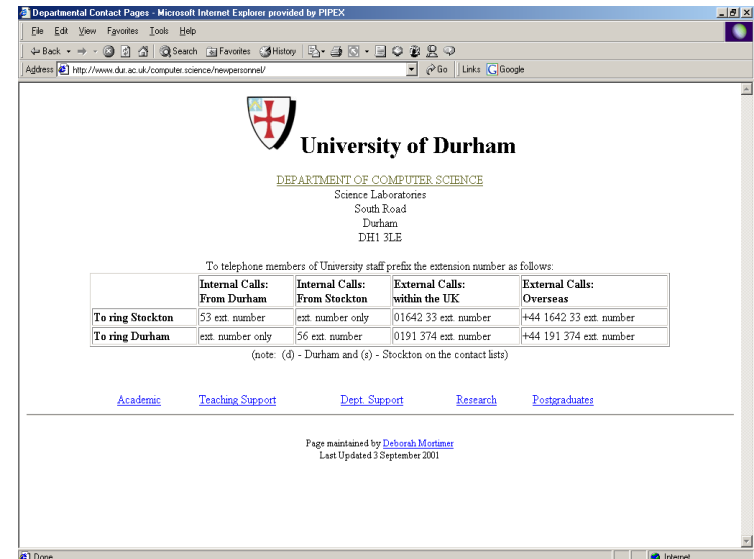
Repetition

CS department pages.

Do these look as though belong to the same department ?
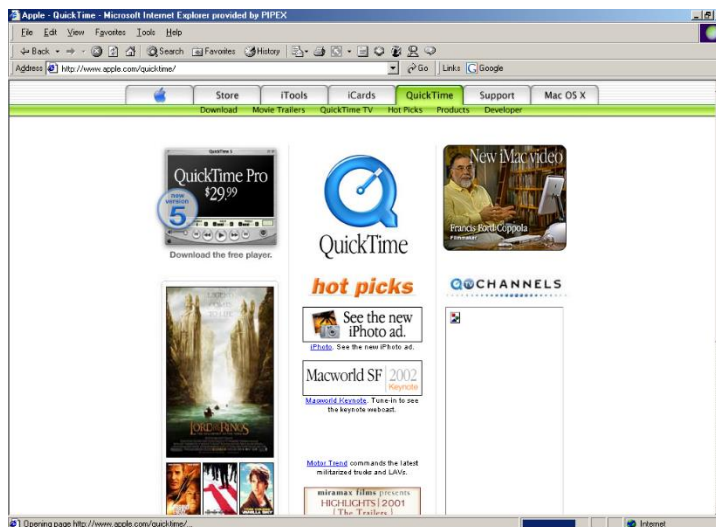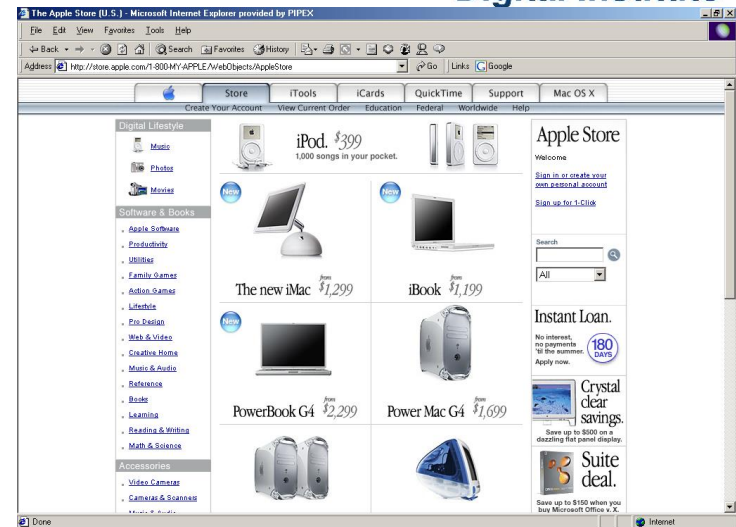
Repetition

www.apple.com pages.

Unified by navigation bar and the choice of font. Buttons repeat the style. Also link to the product.

Repetition
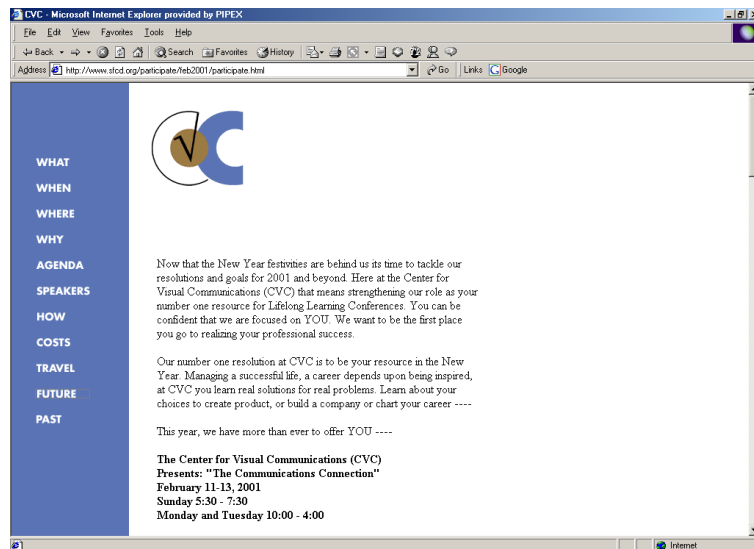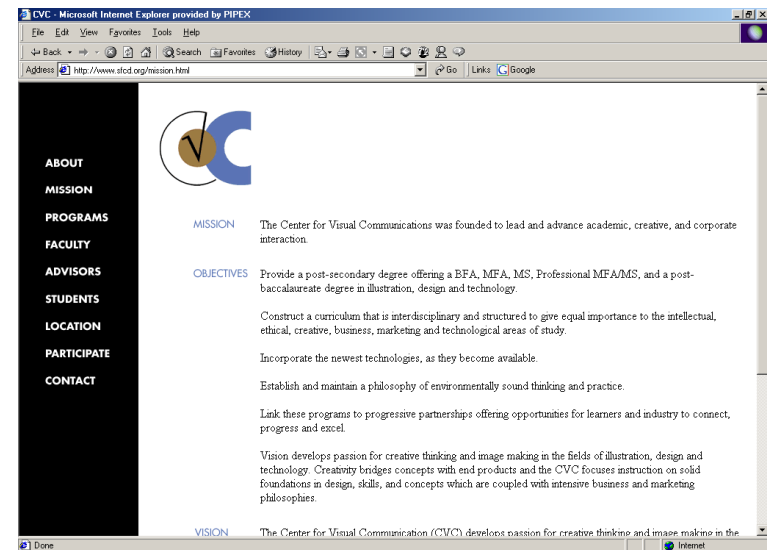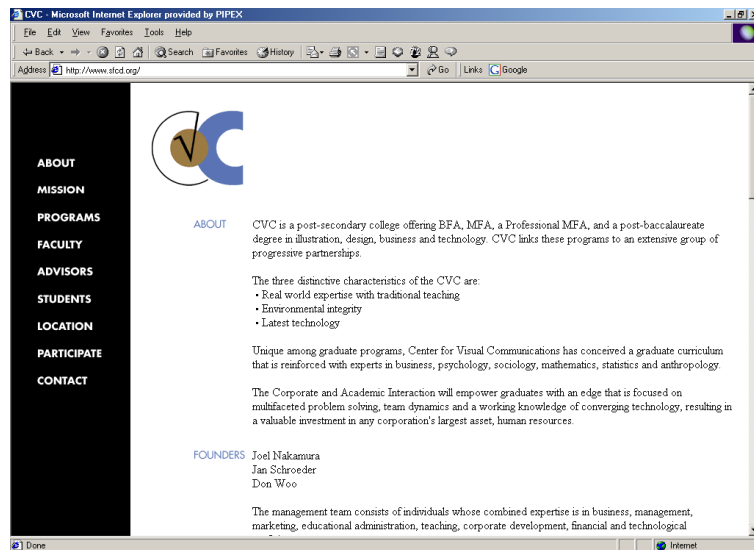
www.sfcd.org pages.

Simple design can be work well.

Contrast

Contrast draws your eye to something.

It can be used to indicate hierarchy and relationships.

Contrast needs to do what it says on the tin. If something is not the same make it very **DIFFERENT**.

Contrast can be between: font, bold, style, colour, images, spatial arrangement.

Contrast

Create a focal point on a page with the other elements related to it in a hierarchy.

A focal point can be created using contrast.

Simple example is to use font size to make the most important item stand out.

Frodo Baggins Bag End The Shire SH 2968 (717) 555-1212	**Frodo Baggins** Bag End The Shire SH 2968 (717) 555-1212

Contrast and Repetition

Frodo Baggins

Bag End
The Shire
SH 2968
(717) 555-1212

Frodo Baggins

Bag End
The Shire
SH 2968
(717) 555-1212

Repeat the font and bold type of the first line on the last line.

Where does your eye go?

Contrast and Repetition

Similar lines in the left table, intentional or a mistake?

The Rules of Life

Your attitude is your life.

Maximise your options.

Never take anything too seriously

Don't let the seeds stop you enjoying the watermelon.

Be nice.

The Rules of Life

Your attitude is your life.

Maximise your options.

Never take anything too seriously

Don't let the seeds stop you enjoying the watermelon.

Be nice.

Contrasting lines in the right table seem clearer.

Graphic Design Key Points

Learn principles rather than a library of designs.

Copy good design ideas using your own text and graphics.

Don't take design too seriously but combine the four basic principles to create exciting, good looking documents:

Proximity, Alignment, Repetition, Contrast

Remember spellang and grammar checker's exist