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Why is Information Design important? Explore how Information Design helps to shape the world around us as well as our understanding of it.

Information design is all around us in our daily lives, from the airbag symbols in our cars, to the instructions for building flatpack furniture, to the signs in our supermarkets telling us to wear our masks and sanitize our hands. Information design is a form of visual communication which can be used to relay information and data and allows us to interpret it quickly. The ways in which information design has embedded itself into our lives can be seen everywhere. The methods in which information design can be made are vast and can take the forms of posters, charts, maps, signs, infographics and many more. The visual impact may vary in different cultures and societies, but they all have one thing in common – communication.

In current times information design is often associated with technology. We are living in what is commonly referred to as the Information Age; a period in which information has become more widely available and accessible following the growth of technology in the late twentieth century (Merriam-Webster, 2021). If we want to find information, the easiest way to do this is to type a few key words into an internet search engine. It has often been said that we are inundated with information, often referred to as information overload, a term first used by Bertram Gross in 1964 in his work *The Managing Organizations: The Administrative Struggle*, vol 2 2. (Norman, 2004-2021). In their article *The Concept of Information Overload - A Review of Literature from Organization Science, Accounting, Marketing, MIS, and Related Disciplines*, Eppler and Mengis explain the term 'Information Overload' as 'the simple notion of receiving too much information.' (Eppler & Mengis, 2004, pp 1-20).

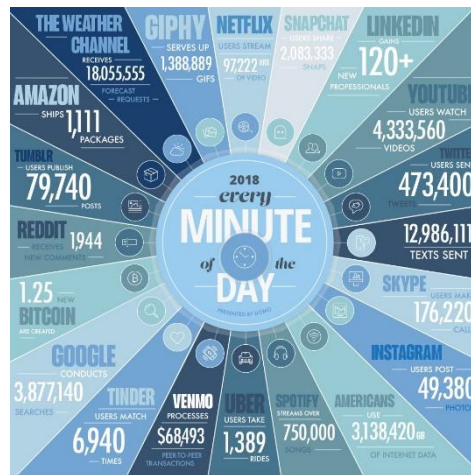


Fig. 1: Domo.com (2017)

However, it could be argued that we have been inundated with information for centuries using information design, but the speed in which technology has been developed has also developed our awareness of it.

In this essay I am going to discuss why information design is important and how it has helped shape the world around us and our understanding of it. I will discuss the origins and evolvement of information design and how it has developed alongside humanity. I will explore key components of information design: colour, image, shape, spacing, typography, language and symbols and discuss why there is a fundamental need for humans to communicate with each other, why the need for understanding the world around us is important and how information design has been developed to align with the human brain processing functions and psychology.

When we think of information design, we may automatically think about it in relation to modernity, 'the self-definition of a generation about its own technological innovation, governance, and socioeconomics (Snyder, 2021), and relate it to posters on public display or infographics on a website, showing a combination of illustrations, shapes and words, providing instructions or information. However, information design can be traced back, in what is thought to be its earliest form, to prehistoric times with the discovery of petroglyphs, symbols carved into rock (Visocky O'Grady, 2008, p. 28). The symbols include signifiers of animals, humans and spears. We can't know the meaning of all the symbolism for certain, but we can interpret some as tribal or society markers

(National Park Service, 2018). The carvings are early indicators of the need for humans to communicate information with one another. The semantics of the symbols and images convey messages such as which animals can be hunted and with what tool in that location. One of the reasons that communication within the human species is so important is because humans are social animals.

During the pandemic lockdowns of 2020, many people reported feeling lonely. The Opinions and Lifestyle survey reported levels of loneliness in the UK rising from 5% between 3 April and 5 May 2020, to 7.2% between October 2020 and February 2021 (Office for National Statistics, 2021). Humans are part of the primates group, meaning there is a need for social interaction (Frankel, 2020). With a high level of social interaction and living in groups, there is a need for order and understanding which needs to be communicated to each other to ensure survival in society.

Petroglyphs are thought to have been in existence as a form of communication for about 30,000 years before evidence of writing was discovered around 3000 BCE (Visocky O'Grady, 2008, p. 28). The use of symbology continued to develop as humanity developed, from petroglyphs to pictograms such as those developed in Sumer, Mesopotamia (Visocky O'Grady, 2008, p.29), hieroglyphics in Egypt and symbols denoting different global cultures, such as adinkra symbols in West Africa and Celtic symbols in Europe.



(Clockwise from top-left) Fig 2: Lyke (Year unknown); Fig 3: Artist unknown (2018); Fig 4: Ameyaw-AKumfi (2013); Fig 5: Artist unknown (year unknown)

As alphabets and writing were developed, information design evolved to incorporate both symbols and language with images. A major example of this evolution would be cartography, the creation of maps. Even though cartography can be traced back to preliteracy times (Visocky O'Grady, 2008, p. 30), it developed to include language alongside symbols and pictures and provided further information for the navigation of land and sea and provide an understanding of the sky by way of constellation maps. This was important as an ever-increasing global population meant a need for moving around to find habitable spaces big enough to allow high numbers of people to live in and survive by.



Fig.6: Ptolomaeus (150C)

In Ptolomaeus' painting entitled *Typus Universalis* (Ptolomaeus, 150C), is an early representation of a map of the world, an attempt to show where different countries were located geographically. In this painting there can be seen a combination of images, language, colours and longitude and latitude lines, a concept he invented and which is still used in modern maps with the purpose of pinpointing every area location on the earth (Quist, 2011). His painting depicts the earth as flat, which was a commonly held belief at the time. Later advances in science and technology have proven the earth is round, as can be seen in later depictions. In short, this an emergence of an early signify of how information is to be developed to reflect the changing world.



(L-R) Fig. 7: Artist Unknown (2017); Fig. 8: Artist Unknown (2019)

This will now lead us to look at areas frequently seen in information design which are processed by the human brain in ways we may not be conscious of, such as with the use of colours, shapes and pictures.

As mentioned in the introduction, we are surrounded by information in our daily lives. The human brain is constantly processing the information around us, but there is only so much capacity to store the information. It will either use the information immediately, store it for later or discard it.

Information designed graphically can have an influential effect on commandeering our attention and taking in the message on display; it can 'reinforce key concepts' (Pappas, 2016). Gestalt theory notes a structure or unity which is

'functionally greater than the sum of its parts and cannot be understood by analysing its constituent elements' (Macey, 2000, p. 160).

Information design will use an assortment of methods to get a person's attention and to have its message seen and understood. In the images below I have found four examples of different types of information design which will be further discussed.



(Clockwise from top left) Fig 9: Harding (2020); Fig 10: Google Maps (2021); Fig 11: Calvert (1965); Fig 12: Artist unknown (2020)

Each example shown above is relaying information to the viewer using a combination of colours, shapes and illustrations to support the overall message.



Fig 9: Harding (2020)

Fig. 9 is an infographic (Harding, 2020), produced to document the engagement success of a collective named the Guerrilla Archaeologists. The visual provides an array of information using illustration, pictograms, different sized font and just three colours. The infographic can be used to

provide information in a visual and time-efficient way. In the article *The Mind's Eye* (Hagen, 2012), David Williams remarks

‘More than 50 percent of the cortex, the surface of the brain, is devoted to processing visual information’ (Hagen, 2012).

The brain also uses other signals to make sense of visual indicators (Hagen, 2012) depicted in the infographic, such as memory association. The outline of a country will draw a memory to a map or an atlas or a visual weather forecast for example and enable the individual to identify the country and from that understand the information is pertaining to that country. The use of illustration draws attention to the written fact it denotes. A fact about the pop-up shop is symbolised with a shopping basket, a widely used symbol at supermarkets and online shopping websites. An hourglass signifies time spent by volunteers assisting with the collective’s work. In essence the infographic is providing several pieces of information at once in an easy-to-understand way that allows the brain to make fast connections.

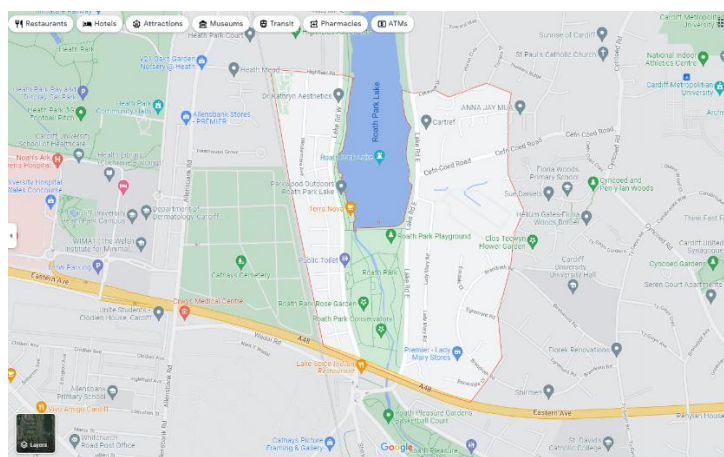


Fig. 10: Google Maps (2021)

Fig. 10 is a modern digital map (Google Maps, 2021) depicting a park in Cardiff and the surrounding area. The shapes signify the shape of the area, with green signifying grass areas, blue signifying the lake, yellow used to signify a major road and white to signify smaller roads. The areas of grey represent the areas which have been deemed as less important to detail, in order not to detract

from the main area of the lake. The text is scarce and only key roads and areas have been detailed by text. This makes the map uncomplicated and therefore easier for the viewer to process quickly. The human eye can view the map quickly to process the information but may become confused by too large a quantity of information to process (Freant, 2013).

The volume of information displayed in the infographic (Harding, 2020) may appear to contradict the need to tone down the amount of information shown on the map (Google Maps, 2021), but each design is using just the right amount of information to suit their respective viewers. A viewer of the infographic (Harding, 2020) may have an interest in the topic and wish to spend more time taking in the information, whereas a viewer of the map (Google Maps, 2021), may have less time to take in a high level of information and so only be focused on the information relevant to them at that time. In these respects, both designs have been made with their audience in mind and have met their purpose.

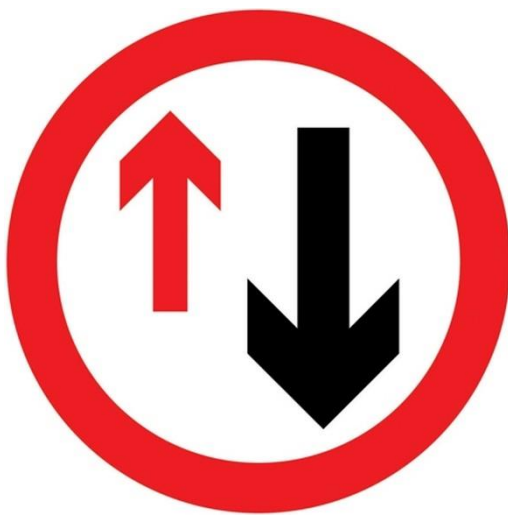


Fig.11 Calvert, 1965)

Moving on to Fig. 11, a UK road sign (Calvert, 1965) and Fig. 12. a government information poster regarding preventative measures for covid-19, (artist unknown, 2020), we can see the information is presented in a far more simplified manner, making good use of bold colours and simple shapes. In both designs we see the use of the shape of a circle A circle has many

conceptions associated with it, such as a signifier of unity, completeness and containment (Lima, 2016, p.35). It could also be argued that a circle is infinite and has no beginning and no end and therefore cannot be penetrated nor release its contents. In each design the main pictures appear in the form of icons, symbols representing the meaning of the messages. Looking first at Fig. 11

(Calvert, 1965), the circle has a thick red border surrounding a smaller red arrow pointing upwards and a larger black arrow pointing downwards on a white background. A driver must be able to interpret a road sign in seconds (Koole, 2008). In an interview with the BBC News Magazine, Michael Wolff, Chairman of the Sign Design Society, said

‘The design of a sign must be got down to the simplest possible level. The fundamental words in sign design are clarity, consistency and simplicity.’ (Koole, 2008).

The design is consistent and simple, although its clarity has been disputed (Koole, 2008). The arrow on the left represents the driver on the left-hand side of the road and the arrow represents the oncoming driver. The size of the arrows signifies the hierarchy of the drivers, as in which driver has the right of way. The larger arrow is connotated as being the dominant driver and will signal this to the viewer. (Meggs, 1992, p.17). The colour black is also a signifier of power (Olesen, 2021), therefore emphasising which driver has the right of way. Meanwhile the colour red shown in the circle and smaller arrow acts to draw our attention and is used to signify alertness and danger (Olesen, 2021). It is a striking colour which can catch the eye easily.

In the final example of the public information poster (artist unknown, 2020), just two colours have been used, white icons in circles on a solid blue background.



Fig. 12: Artist unknown (2020)

In using just two colours in the design, this means there is little for the eye to be distracted. Instead, the viewer's attention is immediately drawn the row of icons encapsulated in circles, centred in the poster with equal spacing. The brain likes symmetry as it is familiar and associates it with order (Ros, 2021). The colour blue can represent harmony, but in this case, it could also be referencing the National Health Service, which use a white and blue logo (Fig 13. Welsh, year unknown) and therefore inducing a familiarity. 'It reflects the trust and security of the NHS brand' (NHS Digital, 2021). The white of the icons, circles and text stand out well from the blue and so are drawing the viewer's attention to the message in a simple but effective way.



Fig. 13: Welsh (year unknown)

The message is instant and breaks down the government guidelines about personal safety in the pandemic into a simplified form. By using a single word placed below the illustration, the brain makes the association with the message that has been widely shared in the media. The word 'Hands' placed below the image of hands with circles above them gives the immediate message of sanitizing hands to reduce the risk of carrying and transmitting the virus. The sans serif font is bold yet approachable (Lavine. 2020) and so signifies it is inclusive of the whole population.

The final features of information design which will be discussed are graphs, charts and hierarchy.

Data, where sets of information in the form of facts, figures and statistics are collected (Cambridge Dictionary, 2021), analysed and presented as proof or evidence to strengthen an argument, can be overwhelming to read and process in just written form, and so graphs and charts are often used to demonstrate the data in visual form.

By translating the data into a visual form, it is advantageous to the viewer, as the brain has evolved to detect patterns and pattern discrepancies rapidly (Cairo, 2016, p. 123). See Fig. 14 (Bowker, 2008) below as an example of this.

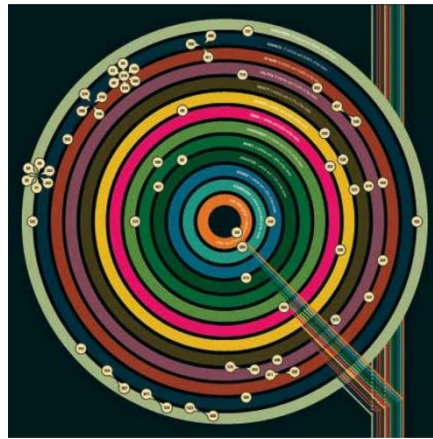


Fig 14: Bowker, D (2008)

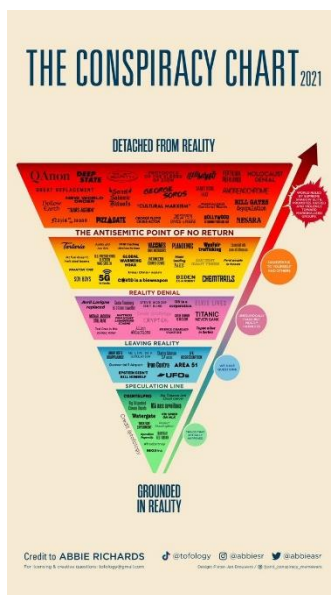


Fig. 15: Brouwers (2021)

In conclusion I have discussed several areas of information design, taking in symbiology, colour, spacing, typography and hierarchy, and looked at how it has helped us shape the world around us from thousands of years ago right up to current times.

With regards to Fig 9: Harding (2020); Fig 10: Google Maps (2021); Fig 11: Calvert (1965); Fig 12: Artist unknown (2020), I wanted to look at a range of information design and analyse the diversity in projecting different messages (statistics, location, instruction and safety). Information design

constitutes the need to condense data to a manageable size to relay the information whilst remaining relevant, clear and time efficient to enable the human brain to process the message(s).

The need for information design has been shown to be formed from the human need for connection, communication and understanding. In pairing this need to the ways in which the brain processes, interprets and understands information and the world around us, information design has played a key role and continues to do so.

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