

Interpreting History Visually:

Representations of Crathes Castle from its initial construction to the present day.

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Contents

1.	Introduction	1
2.	Main Text	
2.1	Postcards from the past Evaluate the historical implications of the images compiled for the visual timeline. Also to consider their significance in the context of the period they were created, their validity and purpose.	3
2.2	Understanding history through information graphics Demonstrate how 'Information Graphics' has been used over the last 500 years to explain complex information.	18
2.3	Presenting accurate data Assess how accurate the information being presented through information graphics is. Also to question whether or not it helps to present complex information visually.	28
2.4	Comparing the old and new National Trust for Scotland Consider how financial restrictions have affected the approach The National Trust for Scotland takes in presenting historical information and compares the latest NTS exhibition facility with an established facilities, to see how the new and old present visual and educational information to the public.	37
3.	Conclusion	44
4.	References	50
5.	Bibliography	52
6.	Illustrations	53
7.	Appendices	55

1. Introduction:

Historical buildings and the people who have lived in them have had their histories documented and published in the written word as a matter of course since time began. These publications by academics and historians, in the main are researched and investigated using written and spoken words in order to investigate the facts.

Yet there is another rich untapped source of material, which does not generally warrant the same level of attention - the visual records of a property. Its history and how it has changed over the years as shown in etchings, lithographs, paintings, sketches, photographs and publishing amongst others, provide an invaluable and significant source of historical information on buildings. Utilising these types of images to create a visual timeline, arranged in chronological order, can serve to generate a new body of research.

Neil Oliver ⁽¹⁾ states: "The biggest mistake is to imagine that only academics have a say in recording and commenting upon the story of this land and its people." This is not to say that academics or historians are wrong in how they research history, but more, when visual information can be evaluated and aligned with both the written and spoken word, this new information can enrich our understanding of the subject matter.

This concept has created an opportunity for this project to focus on this uncharted area of visual documentation, through research into the visual history and current interpretation of Crathes Castle, a NTS (National Trust for Scotland) managed site, which is based just outside Banchory, Aberdeenshire.

The overall research aim for this project is to evaluate the way that previous artists, photographers and architects have visually documented Crathes Castle since it was first built in relation to its cultural heritage.

The individual research objectives covered in the following chapters are broken down into the following:

- An evaluation of the historical implications of the images compiled for the visual timeline. Also to consider their significance in the context of the period they were created, their validity and purpose.
- A demonstration of how 'Information Graphics' has been used over the last
 500 years to explain complex information.
- An assessment of how accurate the information being presented through information graphics is. Also to question whether or not it helps to present complex information visually.
- Consideration of how financial restrictions have affected the approach The
 National Trust for Scotland takes in presenting historical information and
 compares the latest NTS exhibition facility with an established facilities, to see
 how the new and old present visual and educational information to the
 public.

By achieving these objectives, findings allowed my research to reveal untapped historical findings, which have been long lost or not easily seen through the use of visual timelines, information graphics, time lapse movie, card models and portraits of staff for Crathes Castle.

2.1 Postcards from the past

Evaluate the historical implications of the images compiled for the visual timeline. Also to consider their significance in the context of the period they were created, their validity and purpose.

The following pages will evaluate a selection of images from the late 16th Century up to the current day, which have been selected from the Crathes Castle Visual Timeline (CCVT) and consider their significance in relation to the period that they were created and their validity and purpose at the time.



Figure 1

When attempting to align 'written' and 'visual' material, many anomalies and evidence of inconsistencies become apparent the further into the histories one goes.

The Marquis Curzon ⁽²⁾ wrote that: "A house, has to my mind, a history as enthralling as that of an individual. If an old house, it has a much longer existence, and it may be both beautiful and romantic, which an individual seldom is."

Crathes castle is all of the above and more. It is the seat of the ancient family of Burnett of Leys, near the River Dee, about two miles from Banchory. Before looking at the historical images it is helpful to have a brief historical understanding of the building and its construction.



Figure 2

The main tower is largely the work of the family of Master Masons known as the Bells, who lived and worked in the Aberdeen region and are believed to have built or upgraded other historical buildings in the region such as Castle Fraser, Midmar & Craigievar.

The Bells made sure their craftsmanship was exemplified in the finishing touches such as the rounded towers topped by conical roofs on each corner and decorations on the eaves and water cannons, which direct rain water away from the walls. The triple window on the South wall of the tower is a nineteenth century alteration, replacing a triple arched gothic window which itself replaces a much smaller single window from around 1845.

To the right of the tower is the restored east wing lost to a fire in 1966. This has been rebuilt to its original two-story scale, which is how it looked when it was first built in the early 19th century and not the later three story Queen Anne Wing which was lost to the fire.

From the CCVT research completed for this project the following selection of images provide a broad sweep of the material discovered and highlights a number of key historical points in the castles history. Sadly there is little visual information for the castle from the earliest period of its construction at the start of the 16th Century (figure 3) to the first item shown in the late 16th Century by Timothy Pont (figure 5).

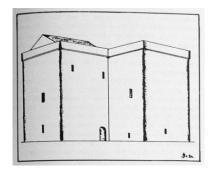


Figure 3

The historian Ian B.D. Bryce attempted to suggest how the castle may have looked at its earliest point in the above image (figure 3) which is from the Deeside Field in 1952 and was also the first images to be discovered for the visual timeline.

[MA 0001] The Pont Manuscripts - Late 16th Century

The Pont manuscripts are the earliest surviving maps to document Scotland. Created over seventy-seven separate maps on thirty-eight sheets of paper and chart all major cities, town, villages and fortifications in the late 16th century.



Figure 4

It is thought that Timothy Pont worked on this huge project by himself from 1583-1596. The reasons why he personally took on such a huge challenge are unknown but there are records to show this was no easy task. Samuel Smiles ⁽³⁾, Scottish

author and reformer wrote: "He persevered to the end of the task through every kind of difficulty; exploring all the islands with the zeal of a missionary, though often pillaged and stripped of everything by the barbarous inhabitants"

On completion of his mapping project, Pont went on to became the minister of Dunnet Parish Church in the very north of Scotland between 1601 and 1610, and he is believed to have died some time before 1614.

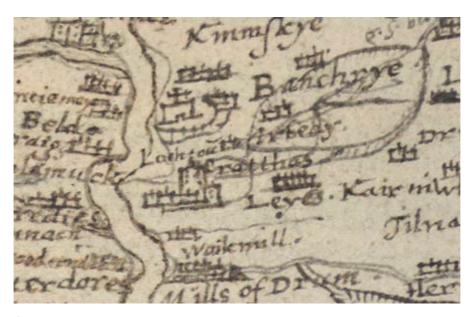


Figure 5

The Pont maps are orientated with west at the top, Banchory (Banchrye) and Crathes Castle (Cratthes) are shown on the north side of the River Dee flowing from top to bottom. Most importantly the tower house of Crathes is shown with a possible fortified wall around it, which is the only illustration that suggests this existed. Ponts maps went on to became the main basis for the first map of Scotland published in Amsterdam in 1654 in Volume 5 of Blaeu's Atlas Novus.

[HI 0012] Crathes Castle by R.W. Billings. Date: 1845

Robert William Billings was a London-born Victorian painter and architect who travelled Scotland studying its castles. Billings was one of the first people to suggest that the lower level of the tower could have been built earlier than the decorative baronial upper levels.







Figure 6

His publications "The Baronial and Ecclesiastical Antiquities of Scotland" was originally published in four volumes between 1845-1852, featuring 240 engravings, revealing a unique Scotlish architecture to the well to do rich upper classes of Scotland and England.

The Edinburgh architect, Sir Robert Rowand Anderson ⁽⁴⁾ wrote in 1901 for the introduction to a reprint of the first volume that this publication was "in the front rank of Architectural publications, and from this position it has yet to be displaced." He later states in the introduction "When these works were published draughtsmanship was at a very low ebb, so all the views given in them are more or less inaccurate". Anderson holds Billings work in very high regard although sadly there were faults to be found.



Figure 7

This engraving shows Crathes Castle from the side onto which the 17th century mansion was built. As this engraving was made at some point between 1840-45 this is long after the extension was built around 1800. Jennifer Melville, Head Curator, Aberdeen Art Gallery (Appendix A) explains "Artist of the time were using a formula or a picturesque formula so they would certainly prettified views, compositions and landscapes as well as buildings so if there was a new extensions or something that ruined the composition and balance they would certainly remove it with out any compunction."



Figure 8

Another inaccuracy is found in the illustration 'Gable Ends of Crathes Castle' which would not have been spotted without the CCVT which has documented the twenty-seven water cannons at the Castle. In the Illustration by Bryce a number of water cannons are actually shown in the wrong place to where they are in current day. Melville, (Appendix A) explains "It may have been months before Bryce actually produced the final illustration so its possible his notes did not show the correct positions of each cannon." (Appendix B shows the research for the water cannons findings).

[HI 0001] The Castellated and Domestic Architecture of Scotland by MacGibbon and Ross Vol.2 Date: 1887

Scottish architects, MacGibbon and Ross established their practice in 1872 and continued until 1914. They are best known for their detailed surveys of Scotland's architectural heritage.

These survey's were compiled into five volumes of "The Castellated and Domestic Architecture of Scotland" and published between 1887-92. These publications are still considered definitive today, and provide a comprehensive survey of Scottish architecture prior to the Restoration.



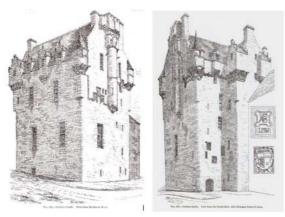


Figure 9

MacGibbon and Ross ⁽⁵⁾ state that: "Our sketches are not intended to imitate or rival the beautiful and artistic etchings of some of our Scottish edifices which have from time to time been published, but simply to represent the ARCHITECTURE in what appeared to us the most intelligible and effective manner".

MacGibbon and Ross also disagreed with the findings of R.W.Billings with regard to the construction date for Crathes Castle. They argue that Crathes was built during one period of construction with a start date of 1553 as specified by the date stone on the outer wall. As they were seen to be the authoritative "Scottish Architectural Historians" of their time, their version was preferred to the theories of the English artist Billings thirty years earlier.



Figure 10

Interestingly the Crathes Castle section of this book also inspired another famous architect of the time, Charles Rennie Mackintosh. James MacAulay⁽⁶⁾ states that: "The massing of Hill House is analogous to Crathes Castle, Kincardineshire. It has been noted that Mackintosh studied the illustrations in "Domestic and Castellated Architecture of Scotland" for influence. He "borrows" elements such as the low residential wing from Crathes Castle. It was also inspirational for the subtle relationship of wall planes, especially at the southeast corner of the garden front where the layering of planes is enhanced by the coat of harling".

[HI 0003] Crathes Castle from the North West – C. Hullmandel Date: Circa 1840

Charles Joseph Hullmandel was born in London on the 15th June 1789, where he maintained a lithographic company from about 1819 until his death on the 15th November 1850.

Hullmandel was one of the most important figures in the development of British lithography in the first half of the 19th century and his name appears on the imprints of thousands of lithographic prints.



Figure 11

An original copy of Hillmandell's lithograph 'Crathes Castle from the North West' is held at Aberdeen Art Gallery and on viewing sadly bears no date.

As stated earlier in this chapter MacGibbon & Ross visit Crathes Castle at or around 1887 when their book is published. They draw one window on the front face of the tower but Hullmandell's illustration shows a later version of the castle with a triple arched gothic window. As Hullmandell dies in November 1850 some thirty-seven years prior to MacGibbon & Ross visit-how is this possible? At this point there is no answer to this puzzle which, without the use of a visual timeline may never have been spotted.

[PH 0001] Crathes Castle Photographed by George

Washington Wilson. Date: Circa 1853-1908

George Washington Wilson was a pioneering Scottish photographer who returned to his native city of Aberdeen in 1849 after studying art in Edinburgh and London. Wilson set up a business taking photographs for the wealthy families of the North East of Scotland but after little success he decided to concentrate on portrait photography. He gained a contract to photograph the Royal Family and document the building of Balmoral Castle between 1854-1855.

By the time he had passed away in 1893 he had already handed over the business to his sons, Charles, Louis and John Hay Wilson in 1888. The firm employed forty staff and was one of the largest publishers of photographic prints in the world. The business lasted until 1908, when it was eventually sold at auction.



Figure 14

The image above of Crathes Castle is from the University of Aberdeen Library & Historic Collection and is credited to George Washington Wilson and Co. dated 1853-1908. Through the use of the 'Crathes Castle Visual Timeline' we know that this style of window does not appear until at least 1895 when the first illustration of this new window style appears in the book "Deeside" (Figure 15) by Alex Inkson McConnockie.



Figure 15

As Wilson passed away in 1893, two years before the illustration, it is impossible for him to have been the photographer. The answer to this is provided in the book "By Royal Appointment: Aberdeen's pioneer photographer, George Washington Wilson, 1823-1893", by Aberdeen University Library⁽⁷⁾ which states that for photographs relating to Wilson from after about 1870 his company relied increasingly on others to add to his stock. "Thus all of the Mediterranean views and many of the English and Scottish series are the work of staff photographers, or were commissioned by the company from photographic firms elsewhere in the UK"

[PC 0043] Lady Burnett of Leys with the model of the Santo Maria. Date: 1928

This postcard (Figure 16) from 1928 is one of only two that feature the Brig General Sir James and Lady Burnett of Leys from the collection of sixty-three collected for this masters project. The postcard shows Lady Burnett with a model ship that the Queen has sent as a prize for a fete that was held at Crathes Castle on the 18th of August to raise funds for a village hall. This event was a huge success and had 2000 visitors according to the newspaper coverage in the Scotsman 20th August 1928 (Figure 17).



Figure 16

CRATHES CASTLE FETE.

OPENED BY LADY COWDRAY

2000 AT DEESIDE FUNCTION.

Over 2000 people attended a fête hold by permission of Sir James and Lady Burnett of Loys at Crathes Castle on Saturday, in order to raise funds for a village hall at Orathes.

tunds for a village hall at Crathes.

The fâte was opened by Viscountess Cowdray, who was accompanied on the platform by Sir James and Lady Burnett of Leys, Viscount and Viscountess Arbuthnott, the Bishop of Aberdeen and Orkney, Lord Carnegie, Miss Ella Smith, Mr J. C. F. Dunbar, and Mr Charles Hunter.

The good of such an institute as a village hall was known to them all, said Lady Cowdray. In these country districts it was necessary that people should be able to meet in pleasant surroundings. In the organising of the fâte she saw already

Figure 17

[HI 0020] Crathes Castle by Mathew Monk. Date: 1941

Although perhaps not quite as well illustrated as some of the previous illustrations in this chapter, this drawing by Mathew Monk (Figure 19) is none the less just as important as it tells an individual story from the castle and gives us some details for a period of the castles history that there is very little information on when it was used a military hospital.

Margaret Davidson (Appendix C) who is now a retired tour guide for the castle explains, "Lady Burnett opened up the Great Hall and the kitchens to recovering military soldiers and the military brought in medical staff and kitchen staff to look after the wounded. The hall was cleared out to just have one refectory table and

beds so the room could be used as a Hospital dormitory and it remained this way till the end of the war so there was always people convalescing there. "

Monk No: 3133692 was a 25 year old soldier of D company, 5th battalion of the Black Watch. He drew the picture of Crathes Castle in ink as something to do while recuperating from an illness at the castle which at the time was a military hospital.





Figure 19

Monk went on to become an Intelligence Officer and was killed in action by shrapnel whilst mapping enemy positions during military action at El Alamein. He died on the 29th October 1942 just a year after his stay at Crathes Castle.

[M 0001] Illustrated London News: Date 1952

The Illustrated London News was the world's first fully illustrated weekly newspaper. Initial print runs started around 1842 with sales of about 26,000. It soon became hugely popular with the middle classes and by the late 20th Century its print run exceeded 200,000.



Figure 20

Seth Cayley ⁽⁸⁾ publisher of media history at Cengage Learning, which has digitised the ILN archive states "In one sense, people didn't know before then what the rest of the world really looked like. ILN was the strongest paper of its sort and helped shape the middle class."

Photographs were not used until the end of the 19th century and the page shown above (Figure 20) is a classic example of why the paper was so popular. Crathes Castle is shown on the day it is handed over to The National Trust but you are also able to quickly scan for other events around the world from the June 7th 1952 edition. This access to fast information from around the world began the change in how information could become accessible for everyone rather than only the well off few.

[TG 0004] NTS Crathes Castle first NTS guide book. Date: 1959

The first official tour guide produced by the National Trust for Crathes Castle was in 1959. It was illustrated and designed by George Mackie, head of the Graphic Design Department at Gray's School of Art at the time.

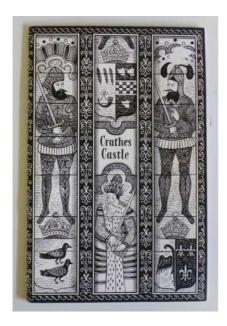


Figure 21

Whilst teaching Mackie also took on a number of commercial jobs of which the Crathes Castle guide was the first of two publications created for the National Trust. He also worked as a Typographic Consultant for Edinburgh University press and earned a RDI (Royal Designer for Industry) award later in his career. He retired in 1980 and currently lives in England.

2.2 Understanding history through Information Graphics.

Demonstrate how 'Information Graphics' has been used over the last 500 years to explain complex information.

Over the last few years "Information Graphics", which for most graphic designers was the domain of technical manuals and flat pack constructions guides has become the en vogue design technique to explain nearly every aspect of modern day life.

The giant leap in interest for this design style should not really be a huge surprise for us. We live in a time where information overload is the norm and it is easy to discover data on all kinds of subjects at the touch of a button. Our phones can provides us with our exact location through global positioning systems, the web provides us with a deluge of data on any subject we can think of and news channels can provide almost instant updates on the events on the other side of the planet.

Today's graphic designers have never had it so easy extracting data and converting it into over stylised diagrams, but for a long time graphic designers stayed away from this design style as they believed they could only make visuals for the consumer market and they did not want their work to be "too technical". Traditionally information graphics were the domain of scientists who used complex visuals to communicate their findings although these were really intended for other scientists to understand and not the average layperson.

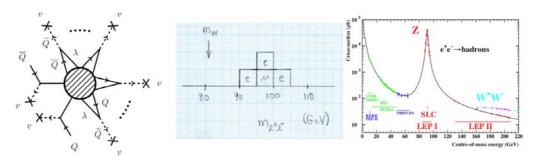


Figure 22

Erik Spiekermann ⁽⁹⁾ a German Typographer states that: " If you make something look pretty it means you're lying. If you want something true its got to hurt."

This is a very 1980's view of design and academics such as Edward Tufte who taught political science and statistics at Yale from 1977 to 1999 have worked hard to destroy this myth. Through his lectures and publications discussing historical examples of Information graphics he is keen to show that you do not need to be a statistician to work with data. However there are rules as Tufte ⁽¹⁰⁾ states in his most current publication "Beautiful Evidence", published 2006: "Analytical presentation ultimately stands or falls depending on the quality, relevance, and integrity of their content."

Something that many modern day designers seem to be overlooking in their work is that we now find studies of our beer consumption on a Friday night out or the most resent "tweets" of wanabee TV stars on Twitter presented as information graphics. Is this visualisation for visualisations sake? It would seem a poor state of affairs for a design technique, which can trace its roots back to the earliest depictions of information.

"Information Graphics" has been used to present clear historical data through out recorded time and can show its roots in the earliest man made markings such as the Chauvet cave paintings ⁽¹¹⁾. "The Chauvet-Pont-d'Arc Cave is a cave in the Ardeche region of southern France that contains the earliest known cave paintings dated to around 18,000–10,000 BP". The image shown is a study of a group of horses depicting, from left to right, calmness, aggression, sleep and grazing.

What highlights these particular cave markings is that the hunter who created this had intentionally chosen to provide the viewer with a very specific range of information about the animals rather than drawing random images of things that were hunted on a particular day over 30,000 years ago. This is a well documented visual of the time which can also be termed as information graphics as we know it today.



Figure 23

By 3300 BCE the Sumerian nation was one of the first to develop a writing system using a combination of tokens and pictographic images pressed into clay to record information such as the example shown below which shows a male figure hunting dogs and boars.



Figure 24

The Chauvet cave paintings and the Sumerian writing system are two very strong examples of information design but to make a link with what we understand as information graphics today we need to jump forward in time to the 18th century to a man who is generally referred to as the inventor of data visualisation, William Playfair.

Playfair was a Scottish engineer born in 1759 during the period known as the "Enlightment" in Scotland, the golden age of science, arts, industry and commerce in the country. Playfair created the first "bar chart", which appeared in his publication "Commercial and Political Atlas", printed in 1786. This showed the exports and imports of Scotland to and from different countries for one year.

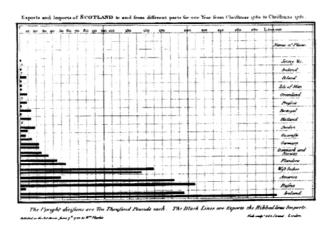


Figure 25

Beniger and Robyn ⁽¹²⁾ state in their book "Quantitative graphics in statistics: A brief history", that: "This bar chart was the first quantitative graphical form that did not locate data either in space, as had coordinates and tables, or time, as had Priestley's timelines. It constitutes a pure solution to the problem of discrete quantitative comparison".

Playfair continued to use this visual technique in his other work arguing that his charts provided a clearer method of understanding than a table of data. He went on to produce a further book "The Statistical Breviary" in 1801 in which he is also credited for creating the first pie chart.

After the pioneering work of Playfair came another statistician Joseph Minard. Minard created "Carte figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813", a flow map published in 1869 detailing the disastrous Russian campaign by Napoleon in 1812.

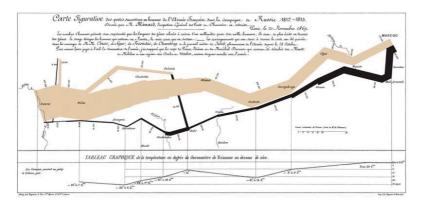


Figure 26

The wide brown line in figure 5 shows from the left the start of Napolean's march to Russia where his army numbered 422,000 troops. As the brown line moves across the page towards Moscow it grows thinner as the troops die due to extreme weather conditions and skirmishes with the Russian army. By the time the line reaches Moscow there are only 100,000 troops left. The black line then shows the retreat back to France as even more troops are lost. This illustration cleverly shows multiple variables such as the period of time the battle takes place over, how units were split up, low temperatures during the retreats and large losses of troops such as those at the crossing of the Berezina River. This is not the only story it tells Tufte⁽¹³⁾ explains at a lecture: "Minard made this because he hated war, the map wasn't about Napoleon, the war's surviving hero, who is mentioned nowhere on the page, but of the quiet, anonymous misery of tens of thousands of French soldiers. This was meant as an anti-war poster."

As with any great art or design, Minard's deep understanding of the subject and his passion and care for the subject adds extra layers of meaning that can only be found in significant analytical graphics which lifts this work to be a truly inspiring composition.

The 1800's proves to be a very innovative time within Europe for information graphics. One of the most aesthetically beautiful illustrations was created by a very famous but yet surprising source, Florence Nightingale.

More famous for her medical work, Nightingale exhibited a gift for mathematics from an early age and in her later life became a pioneer of statistical graphics. She developed the pie chart initially based on the early model by William Playfair, into what is now known as the first 'polar area diagram' during the Crimean war. This served as visual evidence and was sent back to the Ministry of War for consideration.

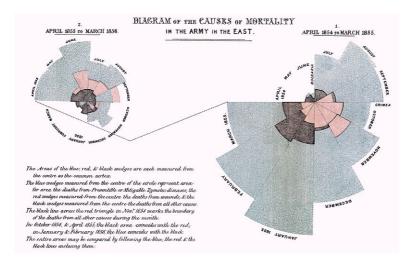


Figure 27

She realised that civil servants were unlikely to read or understand her statistical reports so she sent her polar area diagram to prove that more soldiers were dying due to poor hospitals and nursing than through front line injuries on the battlefield. Nightingales achievements are all the more impressive when you take into account the social restraints of women at that time.

Without doubt "Information Graphics" has a long and illustrious connection with historical data but it is apparent that many of its earliest creators had access to good education, money or were in a position to communicate directly to governments with the data they had sourced. Information graphics was not readily accessible to the common man. Now in modern times this has been transformed through our access to the web.

To consider this point further we need to look at modern day designers such as David McCandless who had just published "Information is Beautiful". McCandless has been working for a number of years for the Guardian and Wired magazine producing contemporary designs that present data in his own unique style.

McCandless⁽¹⁴⁾ states, "In a way, we're all visual now. Every day, every hour, maybe even every minute were looking for and absorbing information". McCandles works with a broad range of data about the world looking at society, politics, history, culture and art. He often works with substantial amounts of data and enjoys the challenge of finding ways to visualise this.



Figure 30

This information graphic through the use of scale and comparison presents the carbon use in tons of a variety of items. This is contrasted with an illustration of a tree (top left), which states that it can only absorb one ton in its lifetime. The viewer is immediately able to understand the data being displayed. This information graphic quickly and simply achieves its objective with out over-playing the visuals.

The second example is called "You Tube, Your Personal info online"

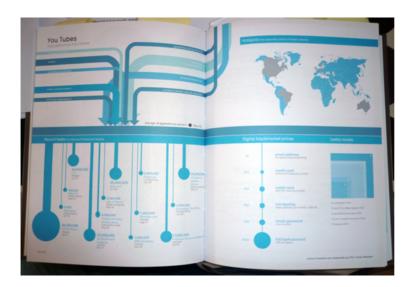


Figure 31

This information graphic attempts to explain how much of your personal information is online and how this can be stolen or lost through large corporate companies and where in the world this is most likely to happen. It also supplies the black market value for this kind of information and the routes that it can be lost in.

Through these examples Tufte⁽¹⁶⁾ reminds us to concentrate on the core issue "What are the content-reasoning tasks that this display is supposed to help with?", in other words what do we understand from the data displayed in the information graphic? This is the focal point of all the designs discussed in this chapter.

2.3 Presenting accurate data

Assess how accurate the information being presented through information graphics is. Also to question whether or not it helps to present complex information visually.

The previous chapter demonstrated that the data presented in any information graphic is the core element of any information graphic. There should be no doubt in the viewers mind as to what they are learning from the information being displayed.

This chapter will examine this criteria through a range of information graphics posters created for this masters project. The data collected over a two-year period, covering a wide range of outputs and historical dates, forms the backbone of this project. (Appendix I show's the 'Historical Data' for Crathes Castle.)

This research has been broken down into the following sections:

Tour Guides , Books , Magazines , Early Books , Newspapers , Adverts , Paintings ,

Stamps , Music , Photos , Postcards , Historical Images, Maps, Christmas Cards,

Technical Drawings & Other

Making sense of such a large body of material was challenging as each section was not in chronological order and there were large amounts of information with no dates. How could this be resolved? To answer this problem the first stage of structuring the data was to work out the order of how the castle had evolved since it was built in the early 16th Century. Concentrating on how the castle looked first and then using any material that had specific dates, a visual timeline of how the castle evolved over the years began to emerge. (Appendix E show's the 'Construction Timeline' for Crathes Castle.)

Knowing how the structure of the building has changed over its five hundred years gives the project a solid grounding. This allows further data without a date to be placed in a correct period by checking the 'Construction Timeline' for various alterations to the building.

With four hundred pieces of information this is still a major task so further research into methods of time-lining large amounts of data was undertaken. Two software applications were sourced that could potentially deal with the immense task and these were tested to see which would provide the best outcomes. (See appendix D)





Figure 32 & 33

After investigation Beedocs Timeline 3D was the best piece of software for the project and the long process of uploading the data into the application began. The initial results were truly amazing. Once the data began to build up on the time line in the correct chronological order for the first time, one realises that certain newspaper clippings lined up with photographs or that items that had no date could now be placed into the correct time zone the project and the story of the castle really came to life.



Figure 34

With a proper visual time line to work with and data now correctly placed in its time zones, data could then be extracted to allow information graphics posters to be created with the confidence that the information was correct and placed in the correct time zone.

At this point it is worth asking how accurate is the evidence being presented? As explained earlier the castle construction timeline relies on visual alterations for the building and items of data that come with a date to build an image of how it had been altered over the years. Of course there is no guarantee the dates supplied for some of the data are correct and it is possible that some have been given dates long after they were illustrated. Another issue to consider is 'cherry-picking'. Edward Tufte⁽¹⁸⁾ discusses this as: "the most widespread and serious obstacle to learning the truth from an evidence-based report is cherry-picking, as presenters pick and choose, select and reveal only the evidence that advances their point of view."

Certainly for this project it is easy to see whether or not there was an 'agenda' since information could be withheld from the final findings to control the outcomes but this project's main motivation is to discover and use all of the information.

When building the "visual timeline" most of the un-dated images or those that come with 'circa' dates do get moved around the timeline to points where the supplied possible date is way out of sink but the added knowledge of knowing the order in which the castle is altered safe guards against images being placed in the wrong time point ensuring the accuracy of information supplied for use in the information graphics.

The following pages examine four information graphic posters created using data from the CCVT and examines how they are created and how accurate this information is?

Example One – Construction

As a significant amount of work had been put into the initial research for the "Crathes Castle Construction Timeline" (see appendix E) it was an obvious place to start with a information graphic poster showing each stage of the castles evolution.



Figure 35

New information for this illustration is continually being discovered, for example after doing some research in the Times newspaper online database an article dated 1969 referred to evidence that the Victorian wing which was lost in a fire in 1966 was actually initially built as two stories. As there was no visual evidence for this it was fortunate to find such an old newspaper article that revealed this new evidence.

Another important piece of information was only recently discovered whilst talking to a tour guide for the castle. It emerged that there may have been excavations to the grounds around the castle in the 1980's with some evidence that the tower may have had a surrounding wall at its earliest stage. The Pont map discussed earlier (see Chapter 2.1) also provides some evidence for this as well.

At this point this new finding has not been added to the information graphic as there is not enough solid evidence based on clear visual facts but this may change in the future if more material is discovered.

The 'Construction' poster went on to win 'The National Trust for Scotland's Emerging Artist Award' in September 2011. The NTS⁽¹⁹⁾ press release for the competition described the work as: "lain has not only created an award—winning piece of art, but has also provided the National Trust for Scotland with a valuable visual record of the castle's development which the charity plans to use in its visitor information at the property in the future."

(See Appendix F for larger image of this information graphic)

Example Two – Artist Locations 1779 to 2010

This Information Graphic presents a visual map of the locations the artists have stood at over the years when they have created images of Crathes Castle.

The data presented in this Information graphic clearly and quickly indicates the location of thirty seven artists over a two hundred and thirty one year period.

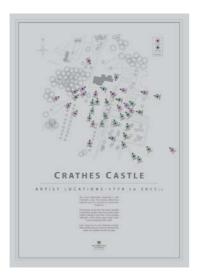


Figure 36

What is interesting about the outcome of this poster is the clustering of positions at four o'clock, six o'clock and eight o'clock around the castle. Only one artist has chosen to select a view at the eleven o'clock location.

As with many buildings and landscapes painted by artists there are always prime locations which will show a location to best effect but it is surprising that more artists and photographers have not made more of the North (rear) side of the building which, although not as elaborate as the frontage, does still present a bold image. Perhaps as this area was also where staff were based and worked this was not considered appropriate in the early years of the building's history.

What has also become apparent while documenting the locations, has been the extensive changes to the surrounding trees and bushes throughout its existence.

(See Appendix G for larger image of this information graphic)

Example Three – Water Cannons

These impressive sculptures of water cannons are actually visible in all of the images that have been collected for the CCVT, although most people are completely unaware of the protruding stone spouts as they are so high up.



Figure 37

After investigation there was not enough reference material within the collection to complete a set of images for the Water Canons at Crathes Castle. New illustrations were drawn up using binoculars and photography from the roof and windows to get enough information to illustrate the full set of twenty seven.

Strangely there is very limited information on water spouts, as they are more commonly known. It was only after finding a BBC news story from April 2011 regarding the find of a "Fertility" styled spout found at Craigievar Castle, further details of these amazing stone carvings became evident. The BBC ⁽²⁰⁾ report stated: "New cannons were made during the £1m restoration work by NTS to replace a number of missing original features."

lan M. Davidson⁽²¹⁾, Project manager for the repairs discussed the range of sculptures found on the remaining cannons: "They display related themes and, whilst some are beautiful and intricately carved, others are less ambitious, perhaps reflecting different hands at work within the group of masons at Craigievar.

These sculptures are an amazing legacy to the highly skilled craftsmen that worked on the building. Crathes is in the very fortunate situation to have nearly all of its water cannons in tact and at this time they are relatively recognisable. Craigievar Castle lost almost half of it water spouts and it was only after a huge investment by the NTS that the missing ones were replaced with new designs as the originals were lost to the elements. This only serves to emphasise that this information graphic may be of huge value in the future, as it may be the best record that the NTS have.

(See Appendix H for larger image of this information graphic)

Example Four – Windows

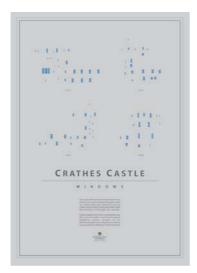


Figure 38

This information graphic allows you see the windows by themselves for the first time bringing into focus the patterns and positions without the restriction of the building to distract your eye as it has done for the last five hundred years. Revealing these hidden patterns fits well within this project as it continues the process of presenting lost information to the viewer, which has always been available, just never seen in this way before.





Figure 39

The information graphic shows the window layout on the North, East, South and West elevations of the building. Alterations to the internal structure of the building over the five hundred years have left some windows between floors and others such

as the main halls windows have been altered on numerous occasions due to the requirements of the owners of the day.

(See Appendix I for larger image of this information graphic)

The information graphics reviewed in the chapter all present accurate data of the building using simple illustrations to present a range of information covering a five hundred year period. In some cases there was not enough visual data available so onsite research has been completed to ensure the data presented is as accurate as possible. This level of attention to detail ensures the Information graphics validity and its educational worth.

2.4 Comparing the old and new National Trust for Scotland

Consider how financial restrictions have affected the approach The National Trust for Scotland takes in presenting historical information and compares the latest NTS exhibition facility with an established facilities, to see how the new and old present visual and educational information to the public.

The management of historical venues has never been under more scrutiny due to the current recession. The financial demands on facilities are at the forefront of policy decisions for presenting historical information. David Baker and Gill Chitty⁽²²⁾, consultants for English Heritage states: "Giving people what the professionals have identified as worthwhile for them to see and perception led demand - what people want from heritage - may only partly overlap with what is on offer, and may also include different agendas."

Finding new and innovative ways to present historical information and ensuring enough members of the public can be tempted through the front door when there are so many other options for entertainment has never been so important. This chapter will look at the NTS' latest exhibition space and one of its more established sites to consider whether there are overlaps in how they present themselves to the public.



Figure 40

The new "Robert Burns Birthplace Museum" project began back in January 2007 when it was awarded £5.5m in funding from the Scottish Executive and £5.8m from the Heritage Lottery Fund. A proposed new museum celebrating Robert Burns would replace an existing museum, which was in disrepair. The initial plan was to open the

new building in time for the 250th Anniversary on the 25th of January 2009 of Burns' birth.

Shonaig Macpherson⁽²³⁾, chairwoman of NTS at the time, stated that: "It is vitally important that the legacy of Robert Burns, which is celebrated around the world, is properly marked here in Scotland with a high quality museum that allows people of all interests and backgrounds to study and enjoy the bard's poetry, his songs and his life.



Figure 41

On The 21st January 2011 the Robert Burns Birthplace Museum opened. Built for a final sum of £21m and completed two years behind schedule the museum had managed to survive numerous delays, funding problems and a major crisis in the running of The National Trust itself. (Appendix J)

Kate Mavor⁽²⁴⁾, NTS chief executive, said "It is a world class visitor destination that will draw Burns enthusiasts from around the globe and it has set the standard for trust properties for the future."

The 1,600 sq metre site utilises innovative exhibits using a mixture of interactive works and interpretations of Burns poetry by artists. Amy Miller (Appendix K) who is the curator for the site states that: "The NTS interpretation strategy for the Burns centre is to be progressive, to show and not tell, so we want less text and to guide people to work out information for them selves, and allow them to make up their own mind and to make it fun and not as text heavy as some other exhibits might be."

Wandering around the space one can also hear readings from the actors Bill Paterson and Brian Cox and songs by Eddi Reader. There is a minimal use of information panels and the ones that are on view are printed in English and Scots, the dialect, used in Burns work.



Figure 42

The exhibits tell the story of Burns life from his childhood to his work and then his final impact on the world. The problem for any museum or historical building is how to connect visitors with Burns writing and not the myth.

The museum does a good job of presenting Burns as a normal working class man and does not fall into an 'Elvis/Graceland' hero worship trap although there are a few items in the shop which are tourist classics such as a fluffy tim'rous beastie.

Burns died quite young at 37 years old. For such a short life the museum has a surprising wealth of items originally owned by Burns and these are displayed in a simple and easy to see style. They also have a few digital displays with Burns first published collection called the 'Kilmarnock Edition' from 1786. The viewer can look through the pages of this digital book and interestingly this publication has a glossary for readers unfamiliar with Scots.



Figure 43

The museum also promotes an extensive education facility aimed at different levels of learning from primary to secondary schools visits, to college and university level access to the reference library which holds a large body of books and periodicals dating back to 1859.

Overall this is a very impressive, modern exhibition space, that presents the story of Burns in a clear, educational and fun manner without playing to the clichéd Scottish tourists model so many exhibits across Scotland often do. So how does this compare to the experience visitors get at Crathes Castle?

The first thing to take into account is that Crathes Castle is not a purpose built museum. It has been a family home for most of its 500 years and its only since the trust took it over in 1966 that the building has changed and adapted to meet the needs of the visitors that come to visit.

Entrance to the castle is through the Queen Anne Wing which was restored by Schomberg Scott with a beautifully imposing wood staircase dominating the welcoming entrance hall with the impressive paintings of Major–General Sir James Burnett and his wife Sybil looking down to welcome visitors to their house.



Figure 44

The castle has lost much of its original interiors from when the castle was donated to the Trust but the NTS have been careful to structure the rooms on the tour to allow visitors to see the building through different time periods to provide as wide an educational and interesting journey through out the building as possible. The interior of the tower was carefully re-planned after the Victorian wing was lost in 1966.

This is an important factor to consider for any historical building. The 'dressing' of rooms to present a range of time periods create a question of authenticity for the viewer? Dr Alison Hems⁽²⁵⁾ discusses this in her book Heritage Interpretation: Theory and Practice: "It is here that the supposed tension between preserving the historic environment and presenting a historic attraction becomes most apparent. It is here too that notions of authenticity begin to conflict however unintentionally, with the development of real understanding and appreciation."

This is resolved at Crathes Castle by the skills of the tour guides that take you though the building and provide further historical information as you move between the rooms and are able to offer in-depth knowledge on various elements of the furnishings and histories within each room. This knowledge is handed down through senior guide staff who train up the new guides to ensure continuity in the information conveyed.

Whilst on tour one is aware of the atmosphere that historic buildings have from the coldness of the stone walls to the enclosed nature of the castle's corridors. Like many historical buildings with tight staircases and clever trip steps leading to short doors designed to hurt the inattentive tourist head, one feels overly large in this type

of environment. Crathes does have a number of sizeable rooms, which are impressively furnished, and feature pictures of Burnetts from the last 500 years spread around the building to develop the family feeling within the building.



Figure 45

Financially Crathes Castle like every other historical building in Scotland has had a number of challenging years when visitor numbers have dropped and recessions have affected the running of the castle as well as the NTS itself. What is impressive about Crathes Castle is that it does not appear like many others to have stood still over the last ten years or so and has continually looked to expand and redevelop properties surrounding the castle to enhance and expand the experience for visitors.

Stable houses have been redeveloped to hold shops and restaurants and more recently, they have opened conference rooms with en-suite private dining rooms creating a more financially lucrative business market. Crathes Castle is also internationally known for its gardens and its 595 acres of estate also offer six separate trails for walkers and visitors wishing to see the varied wildlife.

A further new facility to the estate is "Go Ape" a tree top adventure wire walk, which sits just to the rear of the restaurant in the forest. The Castle also holds a range of festivals and concerts though out the year to utilise its grounds to optimal effect. It

also brings in a diverse range of visitors who may not have previously had an interest in the castle. Once they visit there, they will hopefully use other facilities on the site.

NTS financial director Lesley Watt⁽²⁶⁾ stated that: "We have to ensure that financial sustainability always goes hand-in-hand with conservation."

Crathes Castle walks the line between the old National Trust where the experience of visiting the castle has pretty much stayed the same since it was handed over to the NTS and the conservation of the building and its contents are of utmost importance. Outwith the castle the estate runs to the new modern NTS line where it has cleverly moved forward and provides modern resources and events for the visitor to compliment their visit to the castle.

Crathes Castle appears to be forging ahead of a number of other NTS venues and this will surely stand it in good stead in the years to come. In comparison, the Robert Burns Birthplace Museum works to a very different experience for the visitor in that Robert Burns is already part of the Scottish psyche enshrined in childhood education, Burns night celebrations and national pride. Visitors already have a preconceived idea of the man before they arrive so the centre has to work with this to provide fresh knowledge to its visitors. As a new venue this is still being tested. Time will tell if it has the capability to adapt to the present financial climate, as Crathes Castle has, in order to stay financially viable.

3. Conclusion

The Italian poet Cesare Pavese⁽¹⁾ said "We do not remember days, we remember moments. The richness of life lies in memories we have forgotten." This is no truer than when we look at the long forgotten imagery collected for the Crathes Castle visual timeline. Although these images are all made with different reasons, techniques, years and locations they have all been combined at this moment in time to tell a variety of long forgotten stories.

The people who produced images of Crathes Castle over the years have been rediscovered and illustrate countless stories of sacrifice and commitment to their practice that these artists, photographers and architects have shown whilst undertaking their work during the 16th to 21st Centuries. The visual history of Crathes Castle covers etchings, lithographs, paintings, sketches, photographs, and publishing amongst other things and shows the initiative and dedication of so many individuals.

This dissertation also looks at how these historical images can be interpreted and explained though the use of information graphics today. It also considered how the National Trust for Scotland displays and presents historical information and images in their latest exhibition centre, The Burns Birthplace Museum, and compares this centre with a more established site at Crathes Castle.

This masters project over a two year period has gathered many experts and local people to the project through a variety of methods such as interviews with retired staff from the castle earliest day such as Linda Whyte, Castle Manager, and Margaret Davidson, Senior Tour guide to current NTS experts such as Ian Gow who is Head of Collections and Archives and Library Services and Ian Riche, Archivist for the NTS in Edinburgh.

Historical images have been investigated with the help of Dr Jennifer Melville, Lead Curator at Aberdeen Art Gallery and Stewart Wilson a retired Head of School and local historian who is also a expert on Crathes Castle history.



Figure 46

Architectural expertise has also been provided through Prof. Richard Laing and Prof. Gokay Deveci at the School of Architecture, Construction and Surveying at RGU

The project has also been presented at pubic gatherings at Crathes Castle for a history weekend on 10th and 11th of July 2010 and as lectures with the Banchory Heritage Society on the 31st January 2011, and a second lecture held on the 14th April 2011 to a group of about 24 students at the School of Architecture, Construction and Surveying at RGU.

This eventually lead to a meeting with James Burnett of Leys who is the head of the Burnett family and the current Chief of the Burnett clan. Mr Burnett has been very supportive of the project and provided a wide range of images from his own personal collection for use in the Crathes Castle Visual Timeline.



Figure 47

This interaction with the public and experts has provided invaluable information and feedback, which has ensured the project has been investigated as widely and extensively as possible.

The overall research aim for this project is to investigate the cultural significance of the image of Crathes Castle and how it has been represented visually through the work of artists, photographers and architects since the castle was built.

The individual research objectives covered were broken down into the following four themes and the findings for these are as follows:

Chapter 2.1 discussed the historical implications of the images discovered for the visual timeline and considered their significance in context to the period they were created, their validity and purpose. The research has discovered a number of surprising issues with established historical images. In R.W. Billings work "The Baronial and Ecclesiastical Antiquities of Scotland." the research for this project uncovers errors in illustrations, which appear to have gone unnoticed since their creation but were probably not of importance to the artist as his agenda for the publication was to produce his vision of Scotland for the well of at the time. The Castellated and Domestic Architecture of Scotland by MacGibbon and Ross Vol.2 from 1887 also has a problem with their drawing as it shows a version of the castle in the wrong time period to where the book is produced. And finally, George Washington Wilson's photograph has also been shown not to be the work of Washington but more likely a staff photographer from his company.

Chapter 2.1 has been very exciting to investigate as it shows strong evidence of how a 'visual timeline' for a building like Crathes Castle alongside written material can very quickly highlight problems in currently highly regarded factual material. Although it cannot present answers to some of these issues it can highlight them for future historians to further research and investigate. So that the project could present clearly the large amount of data discovered for the Crathes Visual timeline it was necessary to find a suitable method to present the findings. Chapter 2.2

demonstrated how 'Information Graphics' has been used over the last 500 years to explain complex information and by sticking to a core theme of clearly evidencing the information without overly graphic imagery this style of illustration would be the best choice for this project.

Chapter 2.2 considered the work of William Playfair, Joseph Minard and Florence Nightingale. All of these people presented 'data' focused information graphics, to present clear and easy to understand information. Edward Tufte ⁽²⁾ refers to this as the defining quality of successful information graphic: "By giving the focus over to data rather than data-containers, these design strategies and self-effacing in character. Designs so good that they are invisible." In other words, let the data speak for itself. Don't hide its message behind over-elaborate graphics. This is the focal point of all the designs discussed in this chapter.

Chapter 2.3 assessed how accurate the information being presented through the information graphics for the project was and questioned whether or not it helps to present complex information visually. The structure of the timeline had to be investigated first and this was done by creating a visual timeline for the construction of Crathes Castle with further visual information was added to around the core images to build up a clear picture of the castles alterations since its construction. Once this was in place, a timeline application was used to place all of the data into a chronological order and for the first time one realises that certain images align to tell a long lost story of the castle. As with any historical information a new perspective on history may emerge over time but if the data at this time is as accurate as possible then this is the most important factor of any information graphic. Should there be any question to the integrity of the data being poor or flawed then this would weaken the overall image and render it useless from an educational perspective.

Chapter 2.3 then assessed the outcomes of four information graphics created for the project and looked at how they targeted different elements of the castle's history.

The accuracy of the data and the simplicity of design allowed a clear and informative

presentation of data thus demonstrating why information graphics provide the best solution for visualizing complex educational information for this project.

The final chapter 2.4 looked at how the NTS has had to make some extensive alterations to how it works and at certain points came under huge scrutiny for taking on the Burns Birthplace Museum as the cost rose well beyond initial forecasts. The NTS believe that this new type of exhibit could provide access to funds they would other wise not get access to and this may be a possible route for them in the future.

Where Crathes Castle differs from the Burns Museum and other NTS sites is in its use of grounds to develop other business ventures and other streams of revenue that support the whole site. This may be the only way forward for the NTS in the future so the success of the Burns Museum over the next few years will be critical to keeping this vision going.

The most valuable element of this Masters project as a designer has been found in creating a visual timeline and how this has clearly enriched my understanding and knowledge of the visual history of Crathes Castle. I believe that this method of investigation could be utilised at NTS facilities to enhance the understanding of the venues history. The main issue with regard to the initial gathering of data for this type of project is that it is time consuming. However the final outcome in conjunction with existing written material would easily outweigh this issue and create a very valuable historical document.

For the audience the use of information graphics present a new way to interpret information that they would other wise not see or appreciate. This also falls in line with the current NTS interpretation strategy which is making a move towards allowing the visitors to make up their own minds about what they see rather than guiding them every step of the way, which was discussed with Amy Miller, Curator of the Burns Birthplace Museum in Chapter 2.4.

With this clearer understanding of how the castle has evolved over five hundred years I believe this project has contributed new knowledge to the National Trust for Scotland, historical experts and members of the public. This has been visualised through the use of information graphics, which targets a range of key elements to the castle and presents these findings in a clear and more easily interpreted visual image.

The Masters project will eventually be a permanent exhibit at Crathes Castle and to know that this research and its outcomes will now find their way back to the castle becoming part of its future history clearly evidences the value of this work.

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