

Information In Motion.

Animated Infographics Blaze A Trail In Spain.

Información en movimiento.
La infografía animada se abre paso en España

Pedro Jiménez Mayordomo

Infografista en el periódico El Mundo y profesor asociado en la Universitat Politècnica de València
pedjima@hotmail.com

The infographic in movement is gaining more relevance in the network. Every time you see more and better animated graphics. More complete and better resolved. What were originally experiments, now are reality. This provides the user with a new way to obtain relevant information. Whether about an event, a product or a service offered by a company.

The animated or moving infographic appears before the need to explain content in new formats and for new devices.

The infographic in movement is a new vehicle to tell stories. In this article we go into the origins of the infographic in movement to understand its present and future.

La infografía en movimiento está ganando más relevancia en la red. Cada vez se ven más y mejores gráficos animados. Más completos y mejor resueltos. Lo que en un principio fueron experimentos, ahora son realidad. Esto aporta al usuario una nueva forma de obtener información relevante. Ya sea sobre un acontecimiento, un producto o un servicio ofrecido por una empresa.

La infografía animada o en movimiento, aparece ante la necesidad de explicar contenidos en nuevos formatos y para nuevos dispositivos.

La infografía en movimiento es un nuevo vehículo para contar historias. En este artículo nos adentramos en los orígenes de la infografía en movimiento para entender su presente y futuro.

Key words

Motion Infographics,
Animated Infographics,
Infographics, Animated
Graphics, Video Graphics,
Information

Palabras clave

Infografía en movimiento,
infografía animada,
infografía, gráficos animados,
vídeo gráficos, información

Full text available online:

<http://www.polipapers.upves/index.php/EME/>

<https://doi.org/10.4995/eme.2019.11352>

Motion infographics is becoming increasingly relevant online. We are seeing more and better animated graphics. They are more complete and better elaborated. What once were experiments, have become reality. This brings the user a new way to obtain relevant information on a events, products or services. What is driving the evolution of representation of traditional information to the motion information in the Spanish territory?

This text will tackle the reasons for that increased presence of motion infographics in the representation of information in the Spanish media.

Infographics or animated infographics appear with the need to explain contents in new formats and for new devices, according to Mg. Alaisa Pirela, PhD in Architecture by the Universidad del Zulia, Venezuela:

“It is undeniable that the increase in infographics as a technique, has evolved further thanks to the advancements in information technologies, the mental paradigm changes regarding information media, and above all, technology progress when it comes to software for image design and editing, the huge developments in hardware, as well as the search for an improvement of experiences in virtual spaces”

Motion infographics are a new vehicle to tell stories. More attractive, more dynamic, with the same aim as ever. Transmitting a set of facts or knowledge in a clear, visual way. That is how Jaime Serra defines it. Multi-discipline artist, writer and journalist, former Infographics and Illustration Director at newspaper La Vanguardia (2007-2018) in mosaic.ouc.edu (quotation 1): “Infographics are a highly precise communication tool” or Alberto Cairo (Visualisation Professor at the Universidad de Miami (University of Miami), former Infographics and Multi-Media Director at Editora Globo en Brasil (2011-2012) and Chief of Multimedia Infographics for elmundo.es (2000-2005) in makamo.es (quote 2) “it is a visual representation of information which main objective is to communicate information in a clear, deep way”.

As we are about to analyse, we can consider the need for a new form of representation of stories, that comes after an evolution of information consumption habits by the population, stemming from a technological evolution.

Infographics for journalism has evolved throughout the years, introducing new forms of representation adapted to new technologies and to the new ways of information consumption by the population. As animated or motion infographics have their origins in infographics for journalism, we must pay attention to their origins to understand such evolution.

If we look back to the first infographic published in Spanish press we would have to go back to the



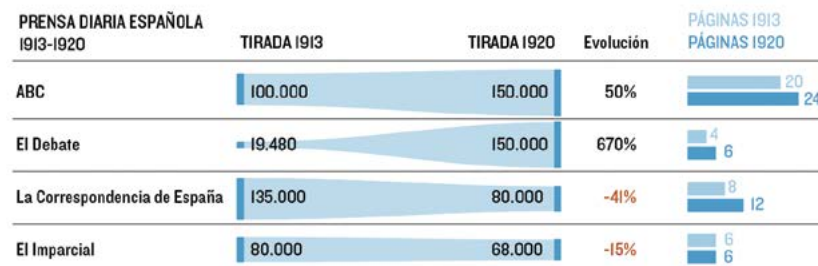
Figure 1. Map of a military column on page 7 of newspaper ABC of March 3rd, 1916.

year 1914. Spanish press was comprised by small newspapers, such as *La correspondencia de España* (1859-1925), *El imparcial* (1867-1933), *ABC* (1903) or *El Debate* (1910-1936).

Even before photographs were used, illustrations and maps with an explanation function could already be seen, as stated in the article ‘El cartógrafo que salvó un diario’ (The Map Maker that Saved a Newspaper) Libro Malofiej 22, page 58 (2014) : “Photography, which was invented in the 30s of the nineteenth century, was not published in press up until the very end of that century (in its 80s). However, maps and diagrams have always been there.” Particularly since they were easily reproduced through lithography.

The first maps published in the press were representations of the movements of troops in the First World War (1914-1918). In 1914, the newspaper ABC had already started to publish one or two-column maps, unsigned. (fig.1). These early maps do not show their scale, and their reading may be a bit confusing if the actual text of the piece of news was not read. As time went by and war continued, maps by Armando Guerra (1869-1937. Member of the Alto Estado Mayor [highest governing body] of the Spanish army would write the war chronicles, including maps, during the First World War) for the newspaper *El Debate* (1910-1936). In it, he started adding textures, reading keys and a hierarchy of elements, for better map comprehension, and of what was happening during the war. Such was the success of the graphic novelty, that it multiplied the run of the media in which they were published. (fig.2). Funnily, in 1916, and due to this great demand of visual information, the first map-making or infography department in the Spanish press is formed, in the newspaper *El Debate*, which included two permanent collaborators.

Figura 2. Evolution of the press runs of Spanish daily newspapers between the years 1913-1920. Infograph by the author.



FUENTE: Instituto Geográfico y Estadístico. Malofiej 22.

We could thus state that the beginnings of infographics in journalism were a response to the need that people had to understand the development of a worldwide conflict. This is to say, they required to understand what was happening in a clearer, simpler way. This is, as we have previously seen, the main function of infographics.

If we study the type of *mapping representations* used nowadays, we can still see many of these ways to explain events. Maps are a large portion of infographics in journalism, from location plans, routes, election results maps, or political maps comparing quantities in different regions.

A little earlier than Armando Guerra's maps, in 1845, French engineer Charles Joseph Minard (1781-1870) published a series of visualisations of information never seen before. These are some of the first examples of flow visualisations (fig. 3). They summarise passenger traffic between Dijon and Mulhouse, France. As Sandra Rendgen claims, author and editor of the article *Los cincuenta mapas de Minard (Minard's Fifty Maps)*, Libro Malofiej 22. Page 88 (2014): "Minard's specific objective was to transform statistics and their graphic representation into a tool for planning and administration of structures". It is yet another instance of an innovation to represent data with the aim of better communication, which also made easy the access to a large amount of information explained in a graphic, simple way.

It was also Minard who first invented *bar diagrams*, as we can see in 'Tabla figurativa de movimiento comercial del Canal del Centro, 1844-1845' (Commercial movement in Central Canal Chart). Libro Malofiej 22. Page 78 (2014) (fig. 4), which displays the number of passengers or goods that were transported on the canal route of Borgogne.

Therefore, it was more than one hundred years ago that this kind of representations were first used to explain events, statistics or to establish

comparisons. All of them are still in use. The most common are charts, evolution graphics, comparative bar charts, maps, complex data visualisations... These are the origins of infographics as we know them today. Nowadays we also find scientific illustrations detailing how an event or activity takes place, data visualisations, interactive infography, animated infography or even video infography. Each times have their own particularities when it comes to technology and the aims of transmitting information. As we have previously seen, infographics are used to explain any information that may require visualisation, to facilitate comprehension.

Moving forward in time, the first years of the 1990s are considered the golden age of infography in journalism in Spain. According to Ángela Santafé, BA in Journalism, co-ordinator of online and offline projects, in her article *Los infografistas españoles en el exilio (Spanish exiled infographers)*. There are three factors that contributed to these years of great development:

In the first place "the presence of a Californian consultant, Jeff Goertzen, in the newsroom of the newspaper *El Mundo*. He contributed graphic professionalism...". This meant a before and after in the way news were explained. Across newsrooms of different Spanish media, a more visual way of thinking began to develop.

In the second place "The agreement signed by newspaper *El Periódico de Catalunya*, the news agency Associated Press (AP) and the newspaper *El País*" to join forces and publish brilliant infographics on the Olympic Games of Barcelona '92.

And in the third place "The Gulf War (1991) with the very limited images that the conflict gave".

These three factors fostered an infographics boom, and granted Spain a place in the centre of infographics worldwide. This meant a before and after in the way information was visualised, and in the amount of resources and weight given to infography sections within national newspapers.

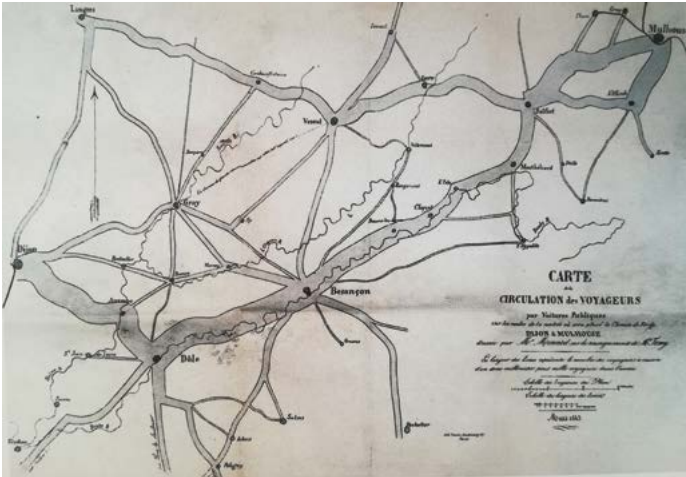


Figure 3. Passengers between Dijon and Mulhouse, circulation map. Charles Joseph Minard (1845).

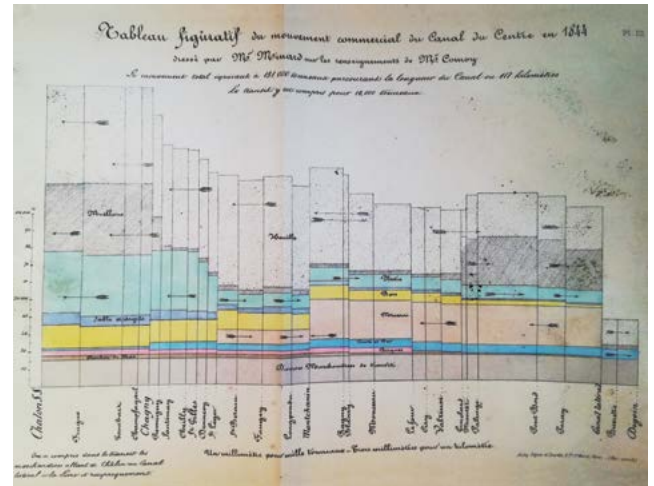


Figure 4. Commercial movement on the Borgogne Canal. Charles Joseph Minard (1845).

Evolution in representing information

If we analyse the mentioned contexts, we could highlight three factors that have affected the evolution of the ways information is represented. These are the technology employed to reproduce it, the information interests of people, and their habits of consumption of information. We will thus analyse those three items:

Technology in media. When progress of technology go through a phase of evolution, there are always repercussions in the way information is represented. As we have seen, the golden age of infography in Spain (from 1990), coincides with the introduction of vector drawings (Freehand 1988-2005) and some time later with the launch of the first Apple iMacs (1998), which meant a revolution in the way infographics were produced. Before this (in the press) infographics consisted mostly of maps, comparative charts and illustrations. All of it was made without computers. The change was rather spectacular. Where before the texts embedded in the infographics were handwritten, now they could be edited and distributed around the graphics, or the maps represented, and those texts could be in the same font, and read with the same clarity than the rest of text on the page.

Next appeared computer programs that allowed to make 3D representations (1990s-beginnings of 2000s. Softimage 3D (1990), 3D Studio Max (1990), LightWave 3D (1990), Cinema 4D (1990), Blender (1995), Autodesk Maya (1998), SketchUp (2005) were some of them.

Another boom in graphics representation took place when these 3D drawing programs appeared. Infographics is a discipline in constant experimentation, in order to best explain content. This new fashion to create spaces was quickly added to its repertoire. Pie charts and bar charts were represented now in 3D. This did not improve its legibility in no way. However, in other cases, like the representations of buildings, structures or complex elements this was a very significant improvement, before the possibility of representing them with no knowledge of drawing or perspective applied to drawing.

Between 1990-1996 Internet is introduced in Spain and we begin to find the first interactive graphics, mostly developed with the program Macromedia Flash (1997).

Nowadays there are a variety of programmes to edit infographics. The most common ones are Adobe Illustrator (1987, vector drawing), Adobe PhotoShop (1988) for digital editing and illustration (bitmap), 3D programmes (above listed), Dreamweaver (2007) to produce infographics adapted to the Internet, Hype (2010) and other, to develop interactive infographics in html5; and in the last few years video edition and animation programmes are being used, such as Adobe Premiere (2003) or After Effects (1993). In reference to videos and their importance for newsite vox.com, in the year 2015 Javier Zarracina, graphic editor at vox.com, former Graphics Director at The Boston Globe, who also worked at Los Angeles Times and El Correo in an interview in miquelpellicer.com (quote 3) stated:



Figure 5. Representation of the consequences of a hurricane. Weather Channel. EEUU. (2018).

“Graphics are one of the more searched and shared contents online. This is the time to experiment, establish relationships with other sections (video, photography, social, data) and prove to what extent infographics can contribute to the information offer of the newspaper”. In paragraph 19, “Also trending now are motion graphics, graphics in video format, which have enormous possibilities to narrate visual explanations.”

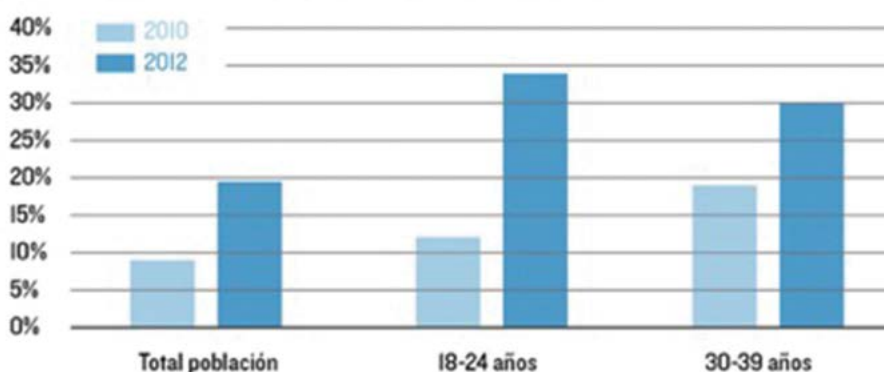
It is in the field of video where infographics can (as it is doing) get deeper into a brand new way to communicate contents in an interesting, novel way. One more time, a new tool appears, to explain the stories. This new option, added to the possibilities of communication by infographers (point of view, narrative, establishing a hierarchy of elements for its correct comprehension, and a powerful, attractive way to present data) makes its use very interesting, have muy interesante su uso. For some years now it is being used in powerful, interesting videographic media. An example of what can be seen today are the spectacular animated representations around the weather forecaster of the Weather Channel (US) (fig 5) explaining the potential damage that hurricane Florence could cause. There is no better way to compare the dimensions of a catastrophe than establishing a reference (presenter) that would serve as scale. With today's digital media, practically anything can be represented in video format. It may also be watched using a computer, television or a mobile, with no quality loss and in the same video format. From infographics with a classic animation structure to videographics, which combine video

sections with overlaid animated infographics. Not necessarily an infographic piece must have classic animation or an illustration. Its function is to transform complex information in something simple, for the reader, user or viewer to best comprehend it.

With regards to the other two items: ways to consume information and moment in history, they could be analysed together.

Before the Internet existed, the only ways to keep informed were the press, radio, and television. It is after Internet was first invented and developed that this model began to change, although not as much with tv and radio as it has changed with press. Since infographics come from the press, it has also been affected by these changes in information consumption habits. With the evolution of Internet itself, infographics have adapted themselves to the media that can transmit them. First came desktop computer versions, then smartphones. Since 2008, smartphones have clearly been at the root of deep changes. These smartphones arrived, conquered the market in a few years, and completely transformed it. They change the ways that people communicated with one another. Facebook (2004), Youtube (2005), Twitter (2006), WhatsApp (2009), Instagram (2010) arrived and changed the way people relate to one another. What first appeared as a new way to linw with people was transformed into a way to share information. The dossier ‘Google Consumer Barometer Report’ carried out by the Mountain View company, in collaboration with Kantar TNS (2017), proved it. In 2012, only a 41% of the Spanish population had a ‘smartphone’. In 2017, 81% of Spanish people use a ‘smartphone’. This represents a huge

PORCENTAJE DE GENTE QUE CONSULTA LAS REDES SOCIALES



FUENTE: Pew Research Center 2013 State of the news media.

Figure 6. Pew Research Center. State of the news media (2013). Infographic by the author.

increase in the ownership of this type of devices. According to the study, people under 25 have daily access to the Internet. 93% use search engines in their mobiles, for shopping. 29% searches for product information, and 2% searches for products or services weekly. When it comes to the use of videos, 83% sees 'online' videos using their smartphone, weekly.

This is key. Slowly but surely, users started to share and read information that before was only available through tv, radio, press and through press websites or specialised blogs.

When smartphones were still being introduced, the way information was explained was still not fully adapted to this new way to consume it. It could be said that the speed at which technology is being transformed, is considerably higher than the speed at which communication media are developing to continue reaching people directly. Nowadays it is not so common that people visit the website of a communication media directly, without going through google or social networks. These have transformed themselves into immediacy, express news, comments, photographs shared instants after being taken... All of this is the opposite of reading an opinion piece, or seeing a conventional infographic in a newspaper. According to the dossier published by PEW Research Center under the title "News Use Across Social Media Platforms 2017", carried out in the United States, 67% of participants keep informed through social media, with 20% getting frequent updates. In Spain, according to the DigitalNewsReport.es 2017, 60% of Spanish web users consult seven or more information brands within a week, in order to be informed. Of all the

possibilities, the most used are television channels, with a 77%, followed by social media with a 58%, newspapers websites or apps (53%) and print editions of newspapers (48%). Traditional media are still the main route of access to information for latest news.

With this in mind, we face again the need to adapt infographics to those new information consumption habits. The need to inform from those new media that readers use now is apparent, in order to reach them.

As described by Bárbara Yuste, journalist and lecturer in Universidad Carlos III (Carlos III University) of Madrid and in Universidad Camilo José Cela (University Camilo José Cela), in an article under the title 'New ways to consume information by young people' in *injuve.es*: "social networks take the first position among information media and they are used by 77,4% of survey participants. In the second place, television is used by 72,1% of young people." Another survey, such as the one published by Pew Reserch Center (2013) offered the same conclusion a few years earlier: that young people's first choice for information are social media. (fig6)

According to such data, it is even less probable that in the future, the same section of the population would go to the newsagent to buy a newspaper. The rules of the game have changed. That habit has changed. If the way information is consumed is not the same as 15 years ago, it is reasonable to think that the way to explain [events] and reach people must change too. This is where media are at now. The continuous process of reaching the reader and increasing their visits to their websites, while the sales of physical print editions keep reducing.

elmundo.es BÚSQUEDAS En Internet

60 segundos Edición Impresa Opinión Callejero Servicios Gráficos **Charlas** Tienda Juegos Loterías Clasificados

Un nuevo invento llamado avión
1903-2003 CENTENARIO DE LA AVIACIÓN
elmundo.es

1877 Todo empieza con un juguete
1896 ¿Puede el hombre volar?
➔ 1899 ¿Porqué han fallado otros?
1900 Cómo controlar el vuelo
1901 Avance y retroceso
1902 Volando voy...
1903 Potencia y control

1899 ¿Por qué han fallado otros?
Los Wright piensan que el resto de científicos fracasan por no considerar los éxitos relativos de otros y por que ninguno vió necesario el control de los tres ejes (algo imprescindible para los Wright). Los Wright deciden basar sus ideas sobre la sustentación en el aire en los experimentos del Lilienthal y concentrar sus esfuerzos en los métodos de control del vuelo.

AVANZAR

Prototipos anteriores a los Wright que no consideran los tres ejes de movimiento



Los anteriores proyectos de aparatos voladores no progresan en el terreno de la maniobrabilidad, se limitan a mantenerse unos segundos en el aire como lo hace un planeador.

Los tres ejes de movimiento

Los Wright intuyen que era imprescindible controlar estos tres ejes para hacer maniobrable al aparato.



Eje transversal (Cabeceo) **Eje vertical (Guiñada)** **Eje longitudinal (Balance)**

Gráfico: David Alameda | elmundo.es || Fuentes: wright-brothers.org | wright.nasa.gov | Smithsonian National air and space museum

© Mundinteractivos, S.A. [Política de privacidad](#)

GALERIA DE GRÁFICOS Si no tienes el plug-in de Macromedia Flash MX, consíguelo gratis [aquí](#)

Figure 7. Interactive graph for the centennial celebrations of aviation. David Alameda. elmundoes (2003)

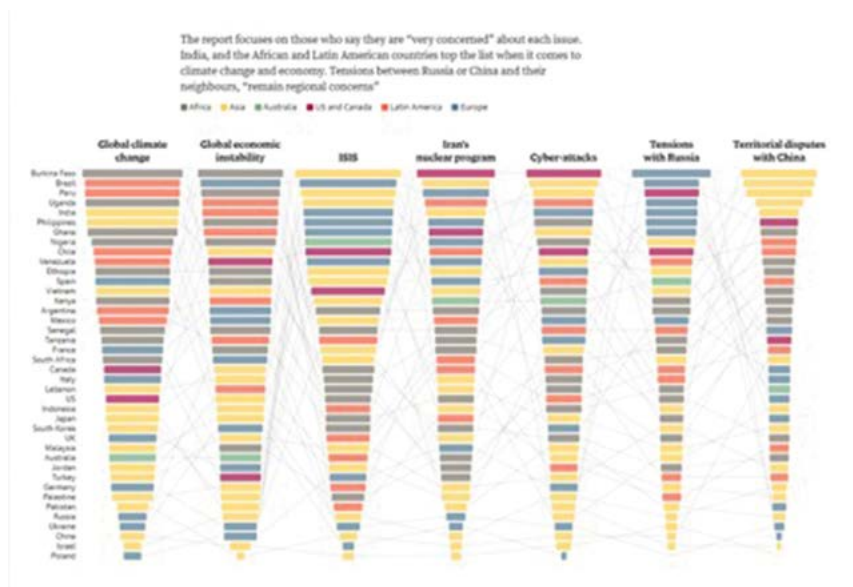
In the words of Jaime Serra in mosaicou.edu (quote 4):

“Given a sufficiently long span of time, the probabilities of survival of paper editions are 0%. The future -the present- are digital. The use of paper today corresponds to a cultural model, which is no minor argument, but from the point of view of technology or life habits, makes no sense; it completely belongs to the nineteenth century. It is only a matter of time that distribution is exclusively digital. However, the physical media and dissemination ways are not what is really important in journalism.”

The beginnings of online infographics

Around the decade of the 2000, the first interactive infographics in communication media appeared. They were actually developed only for desktop computers. As it happened previously, with the addition of new communication tools, during the research and creation process of the first online infographics, these were developed to prove interactivity rather than to improve a the comprehension of information. Let us remember that in those years, the Internet was not what it is now. In an interview with Alberto Cairo published in alzado.org (quote 5) he commented that in spite of the spread of broadband, around 2 million in Spain, the animations of interactive graphics were less than 200 Kb. He continued, Paragraph 15 (2004):

“We have recently gone beyond our own limits and we have uploaded some piece larger than 250k. If we overstep that limit, we subdivide the



Global Threat: What's the World Scared of: A Que Tiene Miedo El Mundo?. 2015. The Guardian: <https://www.theguardian.com/news/datablog/ng-interactive/2015/jul/17/interactive-whats-the-world-scared-of>

video in various 'movies' that open up on the user's demand only. However, we aim for graphics to be simple and, as far as we can, have them contained to one single file.

Such low limit is justified by a number of reasons. Mainly, we do not want to put potential readers off. Trying to open a one-megabyte graphic with a 56kb connection is a bad experience. A really bad one".

During these first leaps in interactive infographic representation, the process was one of trial and error, in newspapers infographic departments. The goal was not instant results in visits numbers. Rather, it was a labour of research, attempting to find the best way to represent information with the new tools.

The computer language used for animating the first objects was Javascript. The first animations were made with programs such as Adobe Flash (1996). At the beginning of the 2000s, the Infography Department of the newspaper El Mundo was one of the first in Spain to develop this type of graphics. They also researched the possibilities of this language, compatible with vector drawing, which had been developed in the previous years (1996). We were facing a new language, unknown by most, and which we were learning on the go. Although the results obtained were good when it came to easy design and complementary of programs to develop the infographics, these animations had a handicap. Their size was too large for the existing communications

network in Spain at the time. If today we can actually watch several 10 or 15Mb videos on our mobile phone, at the beginning of the 2000s, as we have seen, anything over 250k was problematic.

It did not help either when, in 2010, Steve Jobs (Apple) openly criticised the Adobe Flash application for not using hardware acceleration, not being open code, and for the battery performance in Apple computers. Thus it was not included in their devices. In the meantime, Google, that was the predominant Internet content [search engine] in Spain, launched HML5 (2014). Soon later programmes using this language began to spread. In 2015, Mozilla Firefox joined the critics of Flash problems. Today, html or html5 are the most used, due to their small size when it comes to interactive representations, and for being well regarded in the positioning algorithms of Google search engines.

Interactive infographics are still in use and they are highly valuable, however, as it happened after their initial 'boom', once novelty fades away, their use is stabilised, and they are only used whenever information does require their use for a better comprehension. As Cairo stated in an interview published by Universitat Pompeu Fabra (Pompeu Fabra University) (quote 6): "it is necessary to add interactivity when the possibility of using data, arranging them, filtering them, etc., may improve their comprehension. Interactivity is



Recording set. Nat Geo's Stop-Motion Team Animates History | National Geographic. 2015.

counterproductive, as it is any other tool, when its use is incorrect or unjustified”.

The process of creation of an infographic is not simple. First the information must be selected. Then a representation approach must be found, that allows explaining the data in the best possible way. Next, the design must be designed into the adequate dimensions. Up to this point, the process followed is the same as for static infographics on paper. A new element is then added, quite costly in some cases, which is writing the code Html, Java Script, CSS, etc, in order to make the piece interactive. It shall be mentioned that the infographer is using a new data processing language, learned on the go in order to implement it, always aiming at finding the best way to represent information. A great deal of resources and time goes into this.

Nowadays, they are being used to represent subjects that carry a great deal of information, and they are used in practically all communications media around the world.

Video

According to data from communications media company AOL, a corporation that simplifies Internet contact between consumers and content creators, global study ‘Mobile phone Use Increase’ (2017), consumption of videos through mobile phones has

steadily increased, since a 57% of users consume this type of content with their smartphone on a daily basis. They forecast that the consumption of videos on mobile phones will increase beyond the number of visualisations of videos in laptops or desktop computers. Also globally, 57% of consumers visualise videos in their mobile phones every day, while 58% do it from their personal computer. Around 77% of the survey participants declared not to be able to live without their mobile phones, and having them always at hand. The consumption of videos increases every year, particularly short videos, 42% of users watches everyday videos of a duration of one minute or less. When videos go beyond the 20-minute mark, the number of viewers decreases to 21%.

Video and its strength on the Internet deserves a special mention. Video contents online have always been of importance. However, it was not up until recently that they were clearly being promoted. Infographics in video format require an amount of time and a series of steps that are different from times and processes required for other types of infographics. Videos may be based upon illustrations, or icons, but also it may be based on stop-motion movies, or simply infographics backing a broadcaster that is explaining the message to us. What an animated infographic contributes, compared to static infographies is obvious; they have the possibility of explaining something longer and more complex, within the

same space. Within the same dimensions. Compared to interactive infographics, the designer chooses and displays the information in the order that they require. The user must only watch and listen. And they see at all times how long will it take for the video to finish playing. These are two key points to explain the success of videos on the Internet.

Therefore, it seems that video is the future, and it is on this field where great progress is being made. In representations that are animated, yet closed; this means they do not allow user interactivity. Incredible solutions are being devised, closer to film productions than to communication tools. Media such as National Geographic are already producing spectacular animated infographics in video format. They could be animation short films. This type of animated representations add a connecting thread to the speed that the designer wants to show. This format implies more responsibility when it comes to displaying information, since it directs it, puts it in order and it structures it in a clear, premeditated way. Its advantage is that with the evolution of data processing programs what before could only be made in Hollywood, now it can be made with your computer at home. Premiere, After Effects, Dragon Frame (Stop Motion), are some image representation languages that were first used in the film industry and are now adapting to communications media. In the last few years we have began to see stop-motion animation infographics, videographics, and even other combinations, that mix all types of representation languages. This has lended great quality to these representations. If you not only have a good piece of news to represent, but also you explain it in an attractive, innovative way that is impactful, then the social networks users will share and it may go viral.

In the field of Infography, forms of representation that are now 15 years old are still in use, such as bar graphs or evolution graphs. When a new way of representing information goes out of fashion, that way of representing information is only used when necessary. This is why maps, bar graphs, static infographics and animated infographics are still in use and will continue to be used. Technology progress offers a gamut of options to represent information.

Corporations

Nowadays, infographics are spreading beyond communication media. Not so much animation infographics as traditional infographics. With the expansion of social networks, companies have realised that they are finding it difficult to reach their

future customers, and are beginning to offer their products in a more visual, near style. What were brilliant advertising campaigns in television, radio, press and outdoors banners is not enough. It seems that advertising online is not taking off, and it is the users own contents that make people decide to share or buy a product. This does not happen through ad banners.

This is why in the last few years companies are beginning to rely on infographics. They started with static infographics, in order to distribute through marketing emails or blogs. It must be said these were rather a collection of loose data gathered through graphic design than infographics. This is to say, they did not explain their products, they only designed the same advertising content under the appearance of an infograph. As Cairo explained in the same Universitat Pompeu Fabra (Pompeu Fabra University) (quote 7):

“the difference between viral, marketing infographs and classic infographs is a similar thing to the difference between a press release (or a promotional article) and a true reporting article. The challenge is that, in the mind of editors with little knowledge of visual communications, a viral graph is the same as an informative graph”.

In the beginning it seemed that they did not understand the potential of infography as a vehicle to explain their virtues as compared to those of their competition. However, they were on vogue and the fashion was reaching the Internet and corporations. There are now a great deal of infographs to explain benefits of products or services offered by different companies. Sometimes they do this successfully, sometimes it is still treating as something trendy. What seems obvious now is that companies are increasingly using the Internet to look for their potential customers, and they are integrating infography as a tool to explain their virtues as compared to their competition.

Present and future

As we have previously seen, for some time now videos are spreading online. This is happening for two reasons. On the one hand, technology allows for it, with edition programs that are more complete, powerful and simple; on the other hand, the evolution of information consumption by people. This has caused the very mobile companies updating their offers, with more gigas every time in their promotions, in order to gain more clients. About five years ago, you would have to choose which videos to visualise (download) in certain places, due to

600 AÑOS DEL PALAU DE LA GENERALITAT

Es un edificio de estilo gótico valenciano con intervenciones renacentistas que data del siglo XV. En 1418 se crea una comisión delegada de las Cortes Valencianas encargada de administrar un nuevo impuesto llamado 'generalitats'. Actualmente es la sede de la Generalitat Valenciana.

LA EVOLUCIÓN DEL PALACIO



Los nuevos diputados necesitan una sede para sus reuniones periódicas, comienzan alquilando al notario Jaime Desplá una sala en la C/ Caballeros. Al año siguiente se compra todo el edificio

1481



En 1481 compran la casa contigua a la sede. Se realizan distintas reformas hasta 1511 como una capilla, retablo o la portada de piedra del estudio

1511



Cambia por completo el edificio y se emplea la piedra de la Gran S...

TORRE NUEVA

Construida en 1953. Se utilizaron piedras de la misma cantera que la construcción original



El edificio original no disponía de estos techados de cristal (se instalaron en 1982)

Piedra exterior de Godella y Rocafort

AGUA DE LLUVIA

El agua entraba por estos patios y se filtraba al pozo instalado en el Patio de Caballeros

Pozo

TORRE VIEJA

Construida en el año 1...

SALÓN DE REYES

Recibe este nombre por la serie de retratos de todos los reyes que gobernaron el Reino de Valencia. También dispone de una capilla (recubierta con bandas de seda) y de un retablo de tres cuerpos

PRIMERA SEDE

Esta es la única sala que se conserva de la primera sede de los diputados

Entrada principal al Palacio se realiza por un portalón de medio punto con dovelas de sillería

Sala Nova

Sala Daurada

Planta semisótano donde en sus orígenes las cuevas servidumbre

ELEMENTOS DESTACADOS

Chimenea "El infierno de Dante"

La escultura realizada en bronce por Mariano Benlliure en 1899. Se encuentra en el Palau de la Generalitat desde el año 1947, cuando la adquiere la Diputación de Valencia



En 1895 Mariano Benlliure recibió un encargo del banquero Gustavo Bauer para realizar una chimenea para un palacete familiar (Madrid). Nunca llegó a utilizarse ya que el banquero rechazó la obra. Benlliure decidió quedarse con la obra y la presentó a la Exposición Universal de París de 1900, donde ganó la Medalla de Oro en la sección de Escultura



Más de 350 diseños distintos en puertas y ventanas

No se repite ninguno en todo el edificio. Tres generaciones de la familia Linares de Orihuela fueron los encargados de realizar los artesonados, puertas y ventanas del Palau. Se utiliza pino rojo mediterráneo



1-1515



plero la distribución del
eza a parecer al que se
tualidad. Se construye
Sala y la Capilla

1516-1520



Tras adquirir dos viviendas más, en 1513 empiezan las obras de la primera torre. En 1520 ya está construida la Sala Daurada y el Retret Daurat. Pero en ese mismo año las obras se detienen

1593-1600



Tras unos retrasos en las finalizaciones de las obras se da por terminada la primera torre

1600-1700



Se producen varias reformas en puertas de la fachada y de la Sala Nova

1942-1953



Se construye la segunda torre y se amplía el cuerpo central



1982

Pasa a ser sede de la Presidencia de la Generalitat Valenciana y se cubren los patios. En los próximos años se realizan diversas rehabilitaciones y mantenimiento

1600

Balcón de hierro perimetral

Retret menut

de la Capilla

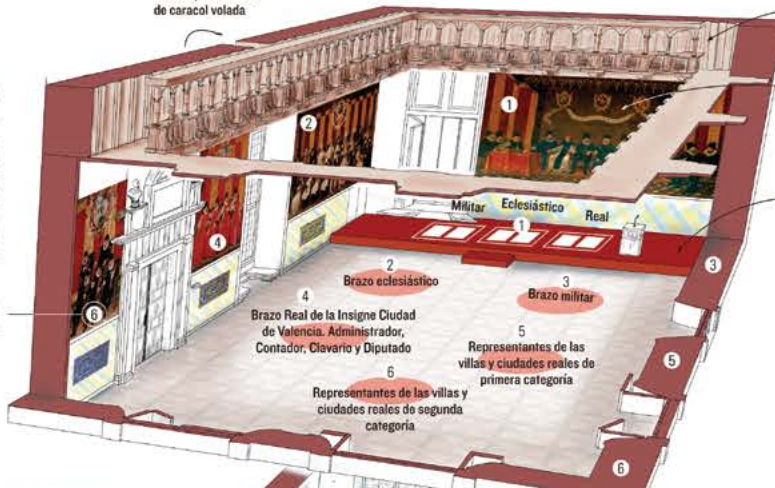
de se ubicaban andras y

EL SALA NOVA

También llamada salón de Cortes. Aquí se reunía una comisión reducida que se llamaba "Sitiades de la Generalitat". 6 representantes de cada brazo de las Cortes y los 4 de la ciudad de Valencia

Los números indican la ubicación de los frescos que adornan las paredes

Acceso por escalera de caracol volada



Techumbre con una galería perimetral donde se ubicaban los invitados

Los frescos que la adornan muestran a todos los representantes que acudían a los plenos

Actual escenario para actos institucionales

Representación de los poderes

Militar Ecclesiástico Real



Están representados los tres estamentos y los representantes de las Villas Reales y los contadores del Brazo Real

RETRET MENUT

Construida entre 1517 y 1538. Tenía la función de sala de reuniones de invierno

SALA DAURADA O RETRET DAURAT

Construida entre 1517 y 1538. Tenía la función de sala de reuniones de verano

'El Tribunal de las Aigües'. De Bernardo Ferrándiz

Hay 35 casetones cuadrados en el artesonado de esta sala

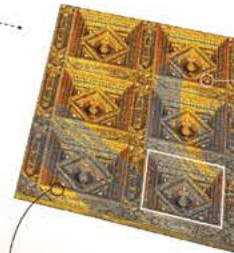


El pavimento de esta sala es el original. Todos los pavimentos están realizados con cerámica de Manises y Paterna



TECHO RETRET MENUT

Esta sala tiene el mismo acabado, pero se alternan octógonos con cuadrados



Detalles cristianos (ángeles)



TECHO SALA DAURADA

El elemento más característico de esta sala es este techo dispuesto con formas geométricas, gusto mudéjar y con motivos renacentista, hecho de madera policromada dorada con oro

La procedencia del oro de la Sala Daurada

Cristóbal Colón convence a Luis de Santángel para que le haga un préstamo a los Reyes Católicos con el que financiar su viaje a las Américas



Colón viaja a América y trae numerosas riquezas



Tras la vuelta de Colón, a Santángel le pagan el préstamo con oro de América



9 de octubre de 2018

EL MUNDO

FUENTE: Generalitat Valenciana y elaboración propia
INFOGRAFÍA: Pedro Jiménez

data restrictions in smartphones. If you went over your limit, you would have to pay an important supplementary amount in your phone bill. This, together with Google, which is still the prevailing online search engine, having positive consideration of videos, and the continuous growth of YouTube means that videos would probably have a good future online.

To confirm the importance and impact of video when it comes to the SEO of a website becoming relevant, world renowned telecommunications equipment company Cisco published (2017) a study that predicted that by 2021, 82% of all online traffic will have to do with video reproductions. The same study shows that it would take 5 million years for a person to watch the amount of videos that will be reproduced monthly during 2021. With regards to the impact of video to conquer search results, Marketo has published an article stating that 55% of all search results display at least one video.

This increase in the needs of users of videos, both in computers as in mobile phones, added to the strategies of telephone companies, has meant that videos would increase their size online. This shows that it is not that users did not like downloading videos before, they carefully chose what to download, due to data consumption restrictions established by their telephone companies. What we are beginning to see and that is coming is a massive increase in this informative elements, due to the reasons above.

Knowing clearly why information is evolving towards videos and animated infographics, communications media are trying to adapt and offer also these new types of information. However, it is

not easy to adapt to the new programs. Infographers have the same handicap as before: the difficulty to learn to use new technologies like video edition programs, knowledge of cameras, lighting, creation of scenes, characters or animation, among others.

A good storyboard is also necessary. Knowing clearly the media it is aimed at, therefore, its duration must be clear. A good script is thus necessary to explain whatever we want to communicate. Finally, the choice of music, sound effects, video effects and voice recording. Again, the aims are the same, to inform, explain, to narrate; the media changes again. We go from printed/digital to audiovisual.

Infography has already overcome all these obstacles in previous occasions. It has recovered from many changes and evolutions of technology, and it has adapted to the ways society obtains information. Infography is nothing but a vehicle to explain a story, a fact, or a product. There will always be people who need to know, who demand that knowledge. What is certain is that the media through which information is told will change. For now, we have time to enjoy the evolution and establishment of animated and motion infography. On the one hand, in newsrooms adapting themselves to new digital media such as mobile phones, where space limitations become important to explain a complex story in an interactive way or in a videographic format. On the other hand, in companies that would want to explain the benefits or features of their products and would like to reach a larger number of potential clients in a novel, attractive way through the digital media that are consumed daily.

Printed press of the newspaper El Mundo and its adaptation for mobile devices (fragment). Infograph by the author (2018).

600 años del Palau de la Generalitat Valenciana

Es un edificio de estilo gótico valenciano con intervenciones renacentistas que data del siglo XV. En 1418 se crea una comisión delegada de las Cortes Valencianas encargada de administrar un nuevo impuesto llamado 'generalitats'. Actualmente es la sede de la Generalitat Valenciana.

ASÍ FUE LA CONSTRUCCIÓN DEL PALACIO

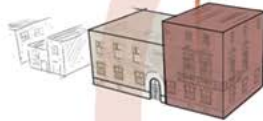


Los nuevos diputados necesitan una sede para sus reuniones periódicas, comienzan alquilando al notario Jaume Desplá una sala en la C/ Caballeros. Al año siguiente se compra todo el edificio



En 1481 compran la casa contigua a la sede. Se realizan distintas reformas hasta 1511 como una capilla, retablo o la portada de piedra del estudio

1516-1520



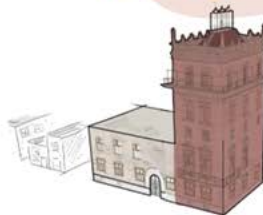
Tras adquirir dos viviendas más, en 1513 empiezan las obras de la primera torre. En 1520 ya está construida la Sala Daurada y el Retret Daurat. Pero en ese mismo año las obras se detienen

1511-1515



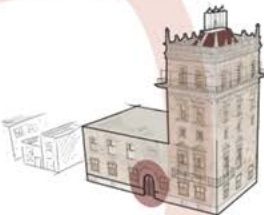
Cambia por completo la distribución del edificio y se empieza a parecer al que se conserva en la actualidad. Se construye la Gran Sala y la Capilla

1593-1600



Tras unos retrasos en las finalizaciones de las obras se da por terminada la primera torre

1600-1700



Se producen varias reformas en puertas de la fachada y de la Sala Nova

1982



Pasa a ser sede de la Presidencia de la Generalitat Valenciana y se cubren los patios. En los próximos años se realizan diversas rehabilitaciones y mantenimiento

1942-1953



Se construye la segunda torre y se amplía el cuerpo central

Bibliography

- ALAIISA PIRELA, MG. (2012). «Infografía en movimiento» en *De la infografía como fenómeno contemporáneo al Diseño Gráfico informativo*.
- CAIRO, A. (2008). *Infografía 2.0. Visualización interactiva de información en prensa*. Madrid: Alamut.
- CAIRO, A. (2011). *El arte funcional: Infografía y visualización de información*. Madrid: Alamut.
- CAIRO, A. (2012). *The Functional Art: An Introduction to Information Graphics and Visualization*. Berkeley: Peachpit Press.
- CAIRO, A. (2017). *The Truthful Art: Data, Charts, and Maps for Communication Art*. Berkeley: New Riders.
- CAIRO, A. (2019). *How Charts Lie: Getting Smarter about Visual Information*. EEUU.: W. W. Norton & Company Ltd.
- ESTEBAN, C. (2017). *La visualización de datos: Evolución de la infografía en el siglo XXI*. (Tesis doctoral) Universidad Complutense de Madrid.
- ERREA, J. (2015). *El diario o la vida: Una defensa a tiros de los periódicos y el periodismo*. Pamplona: Libros del Cuerno.
- PÉREZ CUADRADO, P; PUEBLA MARTÍNEZ, B; GONZÁLEZ DÍEZ, L (2015). «Armando Guerra, el cartógrafo que salvó un diario» en *Malofiej 22. Premios internacionales de infografía*. Pamplona: S.A. EUNSA. Ediciones Universidad de Navarra.
- RENDGEN, S (2015). «Los cincuenta mapas de Minard» en *Malofiej 23. Premios internacionales de infografía*. Pamplona: S.A. EUNSA. Ediciones Universidad de Navarra.
- SANTAFÉ, A (2014). «Los infografistas españoles en el exilio» en *Malofiej 22. Premios internacionales de infografía*. Pamplona: S.A. EUNSA. Ediciones Universidad de Navarra.
- TASCÓN, M. (2011). «Prodigious Volcano of Fire» en *Malofiej 18. Premios Internacionales de Infografía*. Pamplona: S.A. EUNSA. Ediciones Universidad de Navarra.
- VALERO SANCHO, J. L. (1999). *La infografía en la prensa diaria española. Criterios para una definición y evaluación*. (Tesis doctoral) Universitat Autònoma de Barcelona.
- YUSTE, B. (2015). «Las nuevas formas de consumir información de los jóvenes» en *Revista de Estudios de Juventud*, ISSN-e 0211-4364, Nº. 108, Injuve, pp. 179-191.

Pedro Jiménez Mayordomo

Infografista en el periódico El Mundo desde el año 2006. Doctorando especializado en infografía y profesor Asociado en la Universitat Politècnica de València, Facultat de Belles Arts desde el año 2017.