AC/E DIGITAL CULTURE ANNUAL REPORT

Focus 2014:
The Use of New Technologies in the Performing Arts

AC/E ACCIÓN CULTURAL ESPAÑOLA

With this *AC/E Digital Culture Annual Report*, Acción Cultural Española (AC/E) is initiating a series of publications whose aim is to equip both professionals and the public with the information necessary to assess the impact the new technologies are having on the arts. It is the outcome of a period of internal deliberation which began a year ago, on how to incorporate the digital dimension into the aims of AC/E and our work in support of the cultural industries.

On the basis of essays by a group of experts, this project analyses digital trends: how digital technology is changing the way culture is designed, produced and exhibited in our country. It is, furthermore, a barometer for predicting trends in the very near future. It is, therefore, a publication that brings together information about the arts and culture that is not readily accessible and which is often only to be found in a very scattered form.

Every edition of the *AC/E Digital Culture Annual Report* will include a specific section that collates best practice at home and abroad on digital technology in a particular discipline. In this first edition we are focussing on the performing arts where, during the course of their work, the researchers have found a wealth of richly varied data that has far surpassed our initial expectations.

People working in the field of culture are immersed in a transformational process that implies the progressive adoption of technological innovations to meet the demands of the market and the public. This has led to major changes that have made it necessary to reassess the cultural industries, their role in society and their relationship with it. The application of advances based on technological innovation has brought about a revolution in the ways solutions are found to such questions as production, exhibition and services to the public. At the same time, this revolution has ushered in new technical challenges as well as establishing a new definition of the function of the cultural industries, a function that is both broader and more inclusive.

At AC/E we feel we should showcase the creativity of the cultural industries in recent years as they have endeavoured to take advantage of the advances that have been made in digital technology, and disseminate this information amongst researchers, the general public and all those who work in the field of culture. We feel sure that everyone will be interested in what we have had to say and that it will inspire new ways of experiencing culture.

Teresa Lizaranzu
President
Acción Cultural Española (AC/E)

Establishing a serene dialogue between the world of culture and the new world of the Internet means, first of all, breaking down a series of prejudices that exist on both sides, and secondly, having the ability to analyse the transformations that are taking place in the medium to long term. The AC/E Digital Culture Annual Report is being launched with the aim of making progress in both of these spheres by analysing the impact of the Internet and that of the cultural world's transition to the digital world, to help those working in the cultural industries to better understand how, where and when their organisations should incorporate the new technologies.

Theatres, museums, bookshops, libraries and art galleries have been far from oblivious of the way in which the new technologies have been playing a growing role in the way people search for, and find, all kinds of cultural content, information and leisure.

The rapid expansion of third generation technologies within the cultural industries, technologies such as face recognition, intelligent sensors, recommendation systems based on real satisfaction, interactive applications for mobile devices, amongst other novelties, provides cultural organisations with an impressive array of new opportunities for enriching people's experiences during the three phases in which they have direct contact with them:

- the discovery phase, prior to visiting
- the direct experience phase, during the visit
- the experience-sharing phase, after the visit

AC/E, whose aim is to facilitate the promotion, development and internationalisation of the Spanish creative and cultural industries, will undertake an annual analysis of the main technological tendencies which cultural administrators should bear in mind over the coming years in order to gradually incorporate them into these three phases. In the digital era cultural administrators need to determine how, where and when to integrate tools such as QR codes, geolocation and augmented reality, amongst other possibilities, to develop new services that will enable cultural organisations to create on-line experiences that meet the expectations of 21st-century users.

It is with this aim in mind that the wide-ranging contents of this Annual Report have been divided into two large sections, so as to facilitate access to them by different target audiences. On one hand, the Annual Report contains nine opinion pieces which analyse the main technological trends from a very transversal viewpoint. That is to say, they contain something for everyone working in, or with an interest in, the cultural industries because their contents are applicable to every kind of cultural organisation. The transversal technological tendencies under scrutiny this year range from the impact the new concepts of gamification, transmedia storytelling and crowdfunding are having on the cultural industries, to such highly topical issues as culture in the cloud, how to sell culture through the Internet, and the role of the social media in the promotion of culture.

On the other hand, each year AC/E will analyse the impact the Internet is having on a specific cultural sector in order to gain a deeper knowledge of what is happening there. This first Annual Report focuses on the world of the performing arts (theatre, opera, dance, ballet, etc.). We have analysed the incorporation of new technologies in many fields within these disciplines, from production and promotion to creation, stage setting, distribution and so forth. To do this we have identified and studied successful cases and examples of good practice in Spain and abroad, the better to help those working in the performing arts to realise the possibilities the new technologies can offer their organisations and appreciate the importance of giving digital trends due consideration over the coming years.

The AC/E Annual Report aspires to become a permanent consultation and reference manual for cultural administrators who wish to discover the advantages the new technologies can offer to the world of culture. To facilitate access and consultation it is being published under a Creative Commons license that allows readers to copy and distribute it by any means, as long as the authors and the AC/E are credited, no commercial use is made of the work, and no modifications are made to it.

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THEME 1

Tensions and trends in digital culture

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It is the observation and analysis of the cultural tensions that are appearing today as a result of digital technology that can help detect the gaps from where will spring the trends of the profound evolution which the world of culture is undergoing.

In this article, therefore, I intend to identify the tensions I consider to be most significant, and to discuss the scope they may have.

REAL VS. VIRTUAL

A first of these tensions is the one that is appearing between what we consider to be real and what we consider to be virtual.

Digital technology has led to the appearance of a new virtual space. The Net is much more than a network of equipment and cables, it is the emergence of a virtual space. This means that on the other side of the screen there are properties that are different to those on this side of it. This side of it being the one we consider to be reality.

A disturbing property that is immediately evident is that of ubiquity. The Net is a space with no places. There is no distance and no delay. As a network it is planetary, it surrounds us and every node, every item of equipment, occupies a place. But as a space, everything it takes in becomes ubiquitous. Thus, if there are no places, neither are there any distances and therefore, neither are there any delays. The Net tends to be an Aleph which, while it surrounds us, fits onto the tiny screen of a smartphone, like Borges's Aleph in "a small iridescent sphere": *multum in parvo.*

It is difficult to resist the attraction of migrating to this space with no places, no distances, no delays. Words, images, sounds... they do not need to be transported by being fixed to a material support to take them from one place to another. Will the specific containers for such transport—such as books, discs, tapes—disappear? Will libraries, exhibition, concert and conference halls be emptied along with museums, cinemas, theatres where the material objects are to be found that support words, images and sound? Will migration depopulate these places?

That the virtual have a place

The first and unstoppable trend is the migration of objects and activities to the virtual world on the other side of the screen, to a space with no places. And this produces disorientation about what will happen to the terrain inhabited by the real, and what will we do with the places occupied by material and tangible objects. And it is at this moment of confusion when a glimpse can be caught of a contrariwise tendency that brings the virtual world into the real one.

There are various indications, various manifestations, of this tendency.

One of them is to make the virtual "take place" in our real world. "Take place" is synonymous with "happen"; "occur". And something that happens always happens in a place and at a time and can therefore be witnessed. The social movements there have been in recent years in a number of countries have shown this very clearly: discontent was floating on the Net, in the social networks, and downloaded from the virtual world to the real one in the form of concentrations of people in the squares or streets of a geographical place. The event springs into being in a specific place and specific time. Cultural spaces either dry up because they are emptied by digital migration or they tend to become resonant spaces where events happen that can be witnessed (being in a place at a time).

It could be argued that such cultural events have always happened. Quite so, but today, because of the contiguity of the virtual world, it seems that places in the real world will not withstand if they do not make the most of what they have of presence (that things take place, which is to say that they have a time and a place) while at the same time being associated with the virtual world as inseparably as one side of the mirror with the other. Cultural events acquire vital importance and become the heartbeat of cultural venues. That having been accepted, the key issue is the search for, and interpretation of, the multiple forms in which a cultural event may make itself manifest. A much more extensive conception than the one we now have.

Specular duality

I have just mentioned that the contiguity between the real and virtual worlds is like that between the two sides of a mirror. Virtual worlds (dream, memory, foresight—or imagination to plan the future—the beyond) are specular, as is the digital world that has just emerged. They are mirrors which, to a greater or lesser degree, deform the contiguous reality. When people look at themselves in a mirror the image does not leave them indifferent, which is to say the image influences them and they try to intervene in it by adjusting their posture to achieve an image that is more to their taste. The resonance between the virtual, and therefore also the digital, world and the real world is produced in the same way.

Equally perturbing is a mirror in which the objects that surround us are reflected but in which, for example, we do not appear despite being next to them, like another mirror in which the image of some object or other does not have its corresponding original on this side.

This consideration of the real/virtual duality is fundamental to understanding the broad relationship there is in digital culture between the space without places and the space in which things take place. A resonating relationship, in constant vibration between one side and the other. When this digital space did not exist, an object existed in a place which contained it and that is where it was to be found. But now that this mirror exists this object exists because it is reflected, because it is also virtually on the other side. In the same way, an object on the other side of the mirror becomes present when it takes place amongst us, which is not the same as saying "takes a place" amongst us. "To take place" implies that something happens at a time and in a place and that to witness it you must be in that place at that time. It is vital to stress the importance of the interpretation—yet to be explored and tested—of the cultural event as a way in which the virtual takes place. And, as a consequence of that, the role played, a non-exclusive role, by the cultural venues, that is to say places, for this event: ("happen: vb 1 (intr) (of an event in time) to come about or take place; occur").

The Net is a kind of Aleph which, while it surrounds us, fits onto the tiny screen of a smartphone

The digital Aleph, which fits in the hand, like Borges's in a crack in the a stairs, gives us a world without distances and without delays. At the same

time its presence, its immersion, amongst us can be achieved making it take place. How this can happen (cultural happening) is one of the keys to digital culture which includes a reinterpretation of cultural venues, places. In the same way, what happens here, what is here, in our real world has to migrate to the virtual side of the mirror for the necessary duality to obtain which the recent but imperious existence of a new virtuality—digitality—demands and which is, because it is contiguous, as if we were surrounded by a mirror: if there is something real in what is set before it then it must have its corresponding virtual image. Knowing how to achieve this other virtual existence is also a challenge for digital culture.

The digital world is a black hole which absorbs everything in the real world, but in turn, the virtual is continuously penetrating the real

If the digital world is a black hole that absorbs everything in the real world, we are also seeing that tendencies are appearing in the opposite direction such as make the virtual penetrate the real.

Augmented Reality parasitises our reality's places

One of the phenomena is that the virtual world takes place in the real one. And another, which is already suggesting itself very convincingly, is that of "giving place" so that the virtual can be seen in the real world. It is the phenomenon of Augmented Reality. AR parasitises places in our reality. It occupies objects' places, superimposing itself on them. With AR the virtual lives amongst us and in this way it achieves the immersion effect that provides presence. It stops being in a space with no places, like spirits, contained in an Aleph where there are neither distances nor delays, to become located in some place that is occupied by a material object. When there is interaction with this object somehow, by looking at it, for example, it is substituted by the virtuality that it parasitises. They are apparitions on the stage of the real that were formerly reserved for the spirits of the virtual world, of the beyond: hallucinations, ways of dreaming whilst awake. All of them phenomena in which one of the virtual worlds we have is filtered by the gaps in reality and becomes installed there... and confuses it.

Today we are witnessing the first filtering of the virtual into the real. They are only brief shadows of convincing apparitions that will eventually become installed in reality's places until virtuality, confused with reality, lives amongst us.

Two opposite tendencies, confinement and bursting forth, create the fracture whence will spring the phenomena that will create the stage for cultural changes in the coming years. The confinement of a virtual world, the black hole of reality, in a digital Aleph that is ever more astonishing; and the bursting forth of virtuality throughout the places of the real world.

BIG VS. SMALL

In principle it would seem that the Net, because of its planetary reach, favours the big. There are obvious demonstrations of the empire of the big in the virtual world that perhaps even exceed those there may be on this side of reality, on the ground. But this magnitude conceals the effervescence of the small that is bubbling out in the digital world. A number of gigantic creations prevent a clear view of the uncountable shoots springing up from the small.

What is it that makes the Net disposed to the small? Well, the fact that it is a space without places. When there are distances going from one place to another means transporting whatever it is that has to change place. This journey implies a delay. The further the distance to be covered and the more time it takes, the larger the quantity to be transported has to be because that is the only way to compensate for the time waiting and the work involved in the dispatch. If a handwritten letter took days to arrive at its destination full advantage was taken of the sheet of paper so that it contained a text and information that merited the act of sending it. The speaker at a

conference and the audience have to travel and spend time getting to the conference venue so the speaker's address will have to last an hour to make it worthwhile attending. The same thing applies to a roll of celluloid with a film, a work meeting, the printed words transported in a book or an album of music contained on a disc. And this observation applies not only to the transmission of the information and access to it, but to any form of transport. When there are no distances nor delays in either transport or access, when everything is in a digital Aleph and can be held in the hand, the size of the packets of information are smaller. In the same way, it is possible, when people are together in the same place and at the same time, to have a conversation on the basis of exchanging short messages but it is impossible to have these short exchanges of information, which constitute a conversation, between an astronaut travelling close to Saturn and his control base on Earth (the delay in the transmission of each message is one hour and ten minutes). So both the astronaut and the control base must keep in contact with larger packets of information. It would be absurd to send a greeting and wait for another one in reply followed up by a brief phrase and so on continuously.

We associate big with extensive, which is a way of getting over the problem of distance. And we associate small with reduced, that is to say, constrained by distance. When there are no distances big or small are not determining factors for a beneficial installation in this space.

A world in parts

A space without places helps bring about another order of things. The phenomenon that can then be observed is the granularity of the Net; a tendency towards the small. And its interpretation poses another challenge for exploiting the properties of digital space.

Growing granularity runs the risk of crumbling apart and this will happen if what is small is as closed as marbles. These marbles may be made of coloured glass or clay, but they can only be together in a bag. It is different if granularity produces fragments since they can be fitted together to recompose the whole whence they came. But the most fruitful kind of granularity is that in which every grain, every unit, is a piece—a piece of Lego. Fitting them together one way or another they can be recombined to produce different shapes. Fragments only make recomposition possible while pieces make recombination possible. Fragments produce a single result, pieces produce multiple results.

With the analogy of pieces we can express the concept of the small and open as a building material in the digital world.

A space without places promotes the granularity of the Net where fragments, like pieces of Lego, are combined to obtain different compositions

In the space without places everything tends to crumble. The phenomenon of the small appears where it would be believed that there are only conditions for the big. On the basis of this granularity the challenge is in the conception and design of elements which, like pieces of Lego, can be recombined. Then the small achieves its potential for also being open. Small and open. In each case the interpretation of the concepts of small and open is key for the exploitation of this phenomenon of digital granularity. Escaping the crumbling away and fragmentation will be a creative task over the coming years. Objects or activities erode if we atomise them into small, closed units. Neither is it a solution if they are broken into fragments, although they can be used to recompose the original. The crucial thing is to conceive of pieces—small but open entities—that can be combined in many ways in which each combination produces a different composition.

Where will this tendency towards a digital world of uncountable pieces in continuous recombination lead? In principle it could be argued that it will lead to an intensification of interaction. People are going to find a digital world in bulk as well as digital

objects that can be taken apart, not fragmented (which entails breaking a unit). And people will choose the pieces in bulk and will extract others from these objects in pieces to make their own combinations with them. Formats of activities and closed, inalterable, preserved objects, will give way, either because of their own material condition or because of the protection of regulations, to works that, because of the way they are conceived, will be capable of having their pieces extracted and recombined amongst themselves or with others obtained from the bulk offerings.

This recombination will also propel cyberdiversity (when biodiversity on this side of the mirror is in decline). Until now distance fostered cultural diversity since it isolated communities in places distant from each other enabling them to have their own cultural evolution. The transport and communications revolution is ruining this way of producing cultural diversity. But, contrary to what has been believed, in the uniformity of the big in the space without places, of digital space, lumps of the small appear to be resistant and they alter the possible homogeneity. And because the small is also open the capacity for combinations of components has rocketed, components which, outside of the virtual space would have distance and delay as almost insuperable barriers to find each other and fit together.

The Net is fraying due to obsolescence and combats this with innovation, which in turn comes into competition with what has already become established

The duality created by the real world and the virtual world explains this constant resonance between both sides of the mirror. The small and open that emerges powerfully on the virtual side has repercussions on this side, the real, and this is what has led to formats and ways of doing things, which until now have been accepted, being changed for others which are in greater accord with what is happening on the other side of the mirror. In turn, the specular presence of a new virtual world amongst us, the digital world, leads to efforts by the real, the tangible, the material, all that is subject to distance and delay, that may be hundreds or even thousands of years old, to be reflected somehow in the virtual world. If that were not the case, the question would be asked how is it, being inevitably in front of the all encompassing mirror, that there is no reflection? So, knowing that the other side of the mirror has different properties, what will the virtual version of every real thing that migrates be like? It is a fascinating journey of discovery, only a short stretch of which has been covered.

Nothing stays still

Another experience with the small in this planetary space is similar to the 19th-century experiment carried out into pollen suspended in water by Robert Brown. While we may have the impression of the Net as an immense storeroom it can be seen that it is all in a constant flow of ones and zeros, in all senses and in all directions. A microscopic view of the apparent stillness of everything that migrates from the real world to become installed in the digital medium reveals great agitation. The Net is not a container where, like shelves, packets are stored or where books are kept as in a library, but is where the content, at the scale of ones and zeros, is suspended and subject to Brownian motion. If this motion ceases the ones and zeros become sedimentary dust. Information, the digital object, is not lost but becomes buried under this sediment and as time passes, like archaeological remains, its recovery becomes more improbable and difficult.

This state of suspension in the digital space, this Brownian motion, is achieved when things are accessed, shared, replicated, withdrawn, taken apart, recombined, if there is continuous activity with them. Only in this way can persistence in the digital world be understood because stationary conservation, such as is possible with material objects on this side of the mirror, is a vain hope that becomes buried under a sediment of ones and zeros.

The motion of digital entities is never ceasing because they can not find any place for repose, an impossible aspiration in a space without places.

Furthermore, there is another Net phenomenon which provokes this movement, even of that which is most inclined to remain stationary, the fact that the Net is fraying. The cause of this weakness in the mesh is obsolescence. It only seems like a weakness because it is due to the vitality of innovation. Hardware and software are starting to show malfunction, not because of wear and tear, but because of the appearance in the artificial ecosystem of innovations which are coming into competition with what has already been established, and in such a way that even that which has been maintained on the Net with the intention of storage and conservation has to move sooner or later under the threat of obsolescence, of being lost, clung to the Net's frayed threads.

Orality

A tendency can be detected in the digital space towards orality. It might be thought surprising that such a powerful technological medium, one that provides ubiquity to everything it contains, is incapable of guaranteeing its permanence. The strategies for digital persistence are similar to those of orality. The strings of ones and zeros are as fleeting as the air of the spoken word. In oral cultures the way to persist and create memory, the way to resist the passing of time, is repetition. Conveying again and again whatever is to be maintained—insistence as persistence. Something is transmitted orally and to prevent it from being lost it has to be said again or for whoever has heard it to communicate it to others in their own words. Repetition and reverberation are the safeguards of memory in oral cultures. Notice that oral communication is composed of pieces like the digital ones we see in digital communication. Discourse in oral culture is built from pieces each of which is repeated on later occasions under different circumstances, recombined or in combination with others, as other oral discourse. The same things are always told again in a different way. It is, therefore, a way of ensuring persistence through insistence. If the parts did not have this capacity for combination the only possibility would be to literally repeat what had originally been said. On the contrary, each part, each piece, which is not just a fragment, is saved from the passage of time by combination with others in a new situation and at another time. It is not plagiarism nor alteration, and neither is it fragmentation. The key to persistence in the digital world resides in everything being built from the small (pieces) and being open (recombinations). The challenge lies in the interpretation of this key for every specific case.

Expanded there and now

Presence implies a here and now; a space-time coincidence. When something artificial mediates, such as, for example, a sheet of paper in a letter, a page in a book, a canvas or celluloid, the perception of space and time becomes one of there and then. What we read, hear and see through a medium was produced in another place (there) and at another time (then).

The prints we leave behind in the digital space repeat themselves and recombine to trace an image of our personality which is like a reflection in a mirror

Electronic media can give us the experience of a there and now when there is live transmission. We are not in the place but it is happening at this moment in time. However, when we are surrounded by the mirror of digital space, things in the real world where we are, and we ourselves, find ourselves neither here nor there but somewhere in the middle, somewhere close, but on the other side of the mirror. We cross this barrier when we duplicate ourselves through the phenomenon of specularity: an image of ourselves, today still a blurred image but a recognisable one, appears on the other side of the mirror. We find the perception of our image there disturbing, just as our images in mirrors were that have inspired countless stories and myths in all cultures, or images captured by cameras which in some cultures even today lead people to cover their faces. Today it is the image that appears when we sit in front of a screen, the

digital space. It is a reflection, an inevitable duplication. Pretending that it is not there is like trying not to leave a footprint in the sand when walking on a beach. In the digital world the grains of sand are ones and zeros and any action of ours leaves a trail. In the same way that looking at the prints on the sand of a beach tells you something about the person who left them. This one was an athlete who has run the length of the beach; this one stayed stretched out and hardly moved; this one went swimming a lot; this one met up with other people, and so on. The prints we are constantly leaving in the sand of ones and zeros are what trace our image in the mirror. It is a phenomenon that will continue increasingly, and the mirror image will become sharp. This is the result of the evolution of the digital world itself because it is not possible for it to continue growing as a megalopolis without its districts becoming delimited at the same time; that is to say, those environments to where each people again see things and are themselves recognised. In this way the immense space becomes tailor made for people, it becomes an environment, it presents itself according to their needs and within their reach.

If we recognise ourselves on the other side of the mirror and other people consequently identify us, simulation will emerge as in any other social relationship on this side of the mirror where we are. A feeling of presence will arise—it can be felt already—in the virtual world, based on our image being there and things happening now in an expanded now. The ephemeral nature of the Net, the tendency towards orality in the digital world, make time seem like an expanded now, that is to say, something that is happening there, where our image also is, but which reverberates in digital space for as long as it is repeated, reconveyed, recombined.

NATURAL VS. ARTIFICIAL

We are *homo faber*, but we struggle to accept what we make. We are indefatigable builders of artefacts and with them (or because of them?) we evolve and they become indispensable because, without them we would find ourselves defencelessly naked.

Nevertheless, the artificial—that which leaves our hands connected to our brains, the result of something so human as imagination and abstraction, communication and memory (personal and collective memory, in other words, culture), without which it would not be possible to make even a biface hand axe—does not receive the appreciation it deserves. We continue with the myth of the return to Paradise, of believing that nakedness, the shedding of everything artificial, will lead us to a better state. We understand that the artificial is only a burden on the road to expulsion, but that, by nature we should be free of this artificial baggage. When another artefact arrives in our lives we look at it with suspicion, if not with contempt, as another intrusion that deprives us of another slice of our humanity.

Digital prostheses bond the virtual world to the real one, it is not a question of limiting their access to cultural venues, but of providing them with a good environment

Such convictions leave their mark even on our expressions, and so it is that we say that something or someone is natural, and we do so to emphasise a positive value, such as simplicity, the purity of things, sincerity, empathy with people. We value natural food. And we even construct arguments of moral rejection claiming that this behaviour or other is contrary to nature.

The artificial, however, is to culture as the body is to genes. Genes travel in time and space protected in constructions with proteins which are the bodies—countless machines in continuous evolution, innovation and obsolescence, of all shapes, the fruit of infinite trials—within which the genes live. Culture has a similarly close relationship with artefacts; they are its bodies made, not of proteins, but of stone, metal, plastic and so forth. All cultures produce their bodies, that is to say, their artefacts, and they are inseparable from each of them. And if human beings have always maintained this opposition, the source of religions, between spirit and body, and the hope that the spirit be liberated from the bonds of the

body, in the same way they see their nature suffocated by the artificial, which they produce.

The passage of time is the way by which something artificial acquires the category of something natural, just as immigrants or their descendants can, with time, be regarded as natives of a country. We forget the artificial origin of something that forms part of our lives so that it seems natural. We speak of natural food, without chemical fertilisers, preservatives and nontransgenic produce when agriculture itself is the artificial intervention of humans in nature, but one that took place thousands of years ago. It seems natural to us to read from a book, but we have struggled to accept that reading from an electronic screen is too. In a technological culture, with inflationary innovation, the artificial avalanche heightens the sensation of unease and disorientation.

In spite of everything, the dissolving of the border between the natural and the artificial is speeding up on account of the ebb and flow produced in the human being. There is a continuous extraversion of our nature in artificial creations. It is a tide that has been taking anatomical functions away from us such as punching with the fist, scraping with the nails, piercing with the teeth, ever since we made a biface hand axe, a scraper or a punch. We have passed over to machines the expenditure of energy required to accomplish tasks which previously consumed our calories. And we have passed on our skills to robots, from the mechanical loom to the industrial robot. Memory we have passed from the written word to the Net and we are trying to give computers intelligence and feelings. In the opposite direction the artificial enters the realm of the natural, the body, in the form, and this throughout the ages and in all cultures, of tattoo ink and also piercings, prostheses, implants, transplants, chemicals in medicines, stem cells. So we have a *homo extraversus* and a *homo proteticus*.

Homo proteticus

The evolution in computing has been, and continues to be, astonishing. Just seventy years separate the smartphone from Colossus and the ENIAC. A whole room to house a calculating machine and the palm of a hand to hold a digital Aleph. And that is where we come from, via a breathtaking cultural and technological evolution. Implosive miniaturisation (a quotient between features and volume), ergonomics, consistency (the absence of special maintenance), the cost of acquisition, all these confer the invisibility and adherence of a prosthesis. The digital world, the virtual, specular world, is already a prosthesis. The cultural consequences are obvious, and this is just the beginning.

We have been asking here how the representation of a digital world as an all encompassing mirror of our reality would make itself manifest. With the concept of prosthesis that question is resolved. The tablet, the smartphone or the phablet, or folding screens, spectacles, bracelets and other forms of prosthetic device mean that the two worlds, the virtual and the real, have the contiguity of the two sides of the mirror and that the view from one to the other vibrates constantly. We look at the world on this side of the mirror, and do so without interruption on the other side, and then back again to this side, and so on continuously resonating. A duality is thereby established in these prosthetic beings that must be borne in mind when arranging and showing the material world, and also with regard to prohibitions. Following former criteria of preservation, how can limiting access to cultural venues or places for these prosthetic beings be accepted? How can an environment be provided for these beings who are equipped with this ability for perception, this ability to interact, this duality so that they do not feel as if it is a fossilised stage, something alien and strange, and take refuge on the other side of the mirror?

Explosion: the digital world that is emerging is an impressive display of the extraversion of the natural capacities of human beings in an artificial world and of its ensuing amplifications. Implosion: and at the same time a contraction of this world to the point of becoming a prosthesis.

BIBLIOGRAPHY

Bautista, Susana S. (2013). *Museums in the Digital Age. Changing Meanings of Place, Community, and Culture*. Lanham (MD): AltaMira Press

Berry, David M. (2014). *Critical Theory and the Digital*. Londres-Nueva York: Bloomsbury

Broncano, Fernando (2012). *La estrategia del simbionte. Cultura material para nuevas humanidades*. Salamanca: Delirio

Burdick, Anne; Drucker, Johanna; Lunenfeld, Peter; Presner, Todd; Schnapp, Jeffrey (2012). *Digital_Humanities*. Cambridge (MSS): The MIT Press

Coleman, Beth (2011). *Hello Avatar. Rise of the Networked Generation*. Cambridge (MSS): The MIT Press

Collectif Panic (2011). *Culture numérique. Regards sur les industries créatives*. París: Éditions Le Manuscrit

Doueihi, Milad (2011). *Digital Cultures*. Cambridge (MSS): Harvard University Press

Miller, Vincent (2011). *Understanding Digital Culture*. Londres: SAGE

Ortega, Felipe; Rodríguez, Joaquín (2011). *El potlatch digital. Wikipedia y el triunfo del procomún y el conocimiento compartido*. Madrid: Cátedra

Pons, Anaclet (2013). *El desorden digital*. Madrid: Siglo XXI de España Editores

Shifman, Limor (2014). *Memes in Digital Culture*. Cambridge (MSS): The MIT Press

Tisseron, Serge (2012). *Rêver, fantasmer, virtualiser: Du virtuel psychique au virtuel numérique*. París: Dunod

VV.AA. (2014). *Les territoires du virtuel*. París: Éditions L'Harmattan

Zallo, Ramón (2011). *Estructuras de la comunicación y la cultura. Políticas para la era digital*. Barcelona: Gedisa

WEB SITES

http://www.digitalculture.la

http://www.digicult.it

http://telos.fundaciontelefonica.com/DYC/TELOS/

http://gsadigitalculture.wordpress.com/digitalculture/

http://www.ardelash.es

http://tiscar.com

http://www.digitalculture.org

http://www.dcrc.org.uk

http://www.digitalmeetsculture.net

http://medialab-prado.es

THEME 2

Crowdsourcing: shared culture

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PARTICIPATIVE CULTURE ON THE NET

The ability to share any everyday experience through the use of mobile devices and social networks has also given rise to new kinds of cultural consumption, mixing the codes of professionals and amateurs and changing forever the meaning of a musical event or a visit to a museum.

Going through an experience is not enough if one cannot say in real time that you are doing so and say so not just to groups close to you, but also other sectors of the public, unknown and potentially massive. These days it is hard to imagine a TV programme or an exhibition that does not have a label or "hashtag" in the corner calling for comment from the networks, a call to action that connects you in a moment to the whole of the social flux that we are just one click away from sharing the experience with. The strength of the power for viralisation that the Internet possesses through the content that circulates on it, the contamination of ideas and user-produced material on it make up what Delia Rodríguez (2013) recently called "memecracy", which she defines as a new social revolution.

This set of new tools for network collaboration has given rise to user behaviours that the American researcher Henry Jenkins dubbed several years ago "participative culture", with the following characteristics:

1. It imposes scarcely any barriers on artistic expression or public commitment.
2. Strong support is perceived to make and share personal creations with others.
3. A sort of informal tutelage is offered by which the knowledge of the more expert is passed on to the less experienced.
4. The members believe that their contributions are valued.
5. The members feel some sort of social connection with each other (in which at least account is taken of what other people think of what has been created).
6. Not all members need contribute, but at least they all feel free to contribute when they are ready, in the confidence that their contribution will be valued appropriately.

Isaac Mao coined the term "sharism" to refer to participative culture from another viewpoint. For Mao, it is a mental state that drives us to share knowledge through an innate property of our brains which is always ready to establish neuronal relations and participate in creative processes:

> *The more open and strongly connected our social neurons are, the better the sharing environment will be for all people. The more collective our intelligence, the wiser our actions will be. People have always found better solutions through conversations. Now we can put it all online.*

WHAT IS CROWDSOURCING?

To answer this question let us begin with a source that is unconfirmed, whose author is unknown, and yet is regarded as one of the most useful reference

tools of the present day. It is not backed by a grand academic institution, nor does it guarantee a system of ongoing revision by experts. On the contrary, it has millions of contributors, who are not recruited on the basis of any particular criterion, but who feel motivated to contribute, improve and filter the content without anyone receiving any kind of payment. We are talking about Wikipedia, an experiment that had scarcely taken its first steps as the Twin Towers fell and which served, together with globalisation, to bring in the 21st century. In this case, the change of era on the Web catalogued on the self-written or social Web.

Wikipedia is, undoubtedly, the greatest exponent of what we call crowdsourcing. In it, we can find the definition that has been consensualised within its community:

> *Crowdsourcing is the practice of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, and especially from an online community, rather than from traditional employees or suppliers. This process is often used to subdivide tedious work or to fund-raise startup companies and charities, and can also occur offline. It combines the efforts of numerous self-identified volunteers or part-time workers, where each contributor of their own initiative adds a small portion to the greater result. The term "crowdsourcing" is a portmanteau of "crowd" and "outsourcing"; it is distinguished from outsourcing in that the work comes from an undefined public rather than being commissioned from a specific, named group.*

The first recorded use of the term crowdsourcing was in an article by Jeff Howe in the journal *Wired* in 2006. As can be observed, the term arrived years after its manifestation in practice, since Wikipedia, repeatedly cited as the paradigmatic example, had already been in existence for some time.

In fact, Wikipedia was not the first to use crowdsourcing as such. The practice of massive collaboration, externalised and with open entry, is not exclusive to the 21st century, because in human history, as anthropology makes clear, we could find many examples of this sort of practice. What is new and differentiating at the start of this new century is the role of digital technology, the Internet as a whole, networks and personal digital assistants and the growing connectivity that favours the creation of interest groups, their internal organisation and the distribution of tasks between members.

The philosophical and scientific basis that underlies crowdsourcing is the recognition that the aggregated value of a critical mass is potentially greater, for basically statistical reasons, than a limited system. To this is added the benefit arising from the fact that it is open systems that offer the opportunity to participate in a group not subject to prior control, which also increases the success factor. Digital tools act as catalysts and enablers of these major properties: the scale effect and the accessibility effect.

Crowdsourcing is the practice of massive, externalised collaboration through the use of an open call for solutions

Inspired by this affirmation, in recent years dozens of books have been published that tend to confirm this thesis, such as *The Wisdom of Crowds,* by James Surowiecki (2004), *Collective Intelligence,* by Pierre Lévy (2004), *Wikinomics,* by Don Tapscott and Anthony Williams (2006), *The Alchemy of Crowds,* by Francis Pisani and Dominique Piotet (2009) and, more recently, *Manifiesto Crowd,* by Juan Freire and Antonio Gutiérrez Rubí (2013).

One way of looking at crowdsourcing is to examine it from the point of view of the trigger: the one that provokes an action, which designs the community and which handles the products that are generated. The most classic view of crowdsourcing, but also the one that has most popularised the term, is the one based on the company as a way of reducing costs, ensuring profits and getting closer to customers.

There are many books, experts and success stories that have documented crowdsourcing in the corporate sphere, normally set within what has also

been called "open innovation": to open up the processes of internal decision-making, product design or problem-solving so that it is a community of participants who contribute a diversity of ideas, knowledge and visions to help achieve the company's objectives. The experience of the Lego groups, the Lilly pharmaceutical communities or the designs of Opel, IBM and Ikea supply the most popular examples that typify the most basic crowdsourcing: maximise the involvement of the customer at various points in the value chain of the company's processes.

TYPES OF CROWDSOURCING

Crowdsourcing is broad enough and flexible enough to inspire and harbour a great many experiments that have adopted new forms to resolve concrete problems. This practice takes from Web 2.0 the involvement of cooperation and participation by the users in multiple aspects of the processes of production and distribution of knowledge in which they are involved. These processes vary in scope: from the conclusion of the acceptance process (crowdvoting) to the intermediate production process (crowdcreating), to the origin of the idea itself (crowdwisdom) or financial sustainability (crowdfunding).

In their book *Manifiesto Crowd*, Juan Freire and Antonio Gutiérrez Rubí extend this classification and identify several other settings in which to the key factor of "crowd" ("crowd" being "multitude" rather than "mass") is added the cooperative spirit. The authors distinguish this constellation of crowd manifestations on a matrix according to whether collaboration occurs fundamentally to create or produce the project (crowdthinking, crowdcreating and crowdworking) or whether it is to fund it or market it (crowdfunding, crowdplanning, crowdcuration, crowdvoting and crowdbuying). At this point it is worth observing that crowdsourcing is not a synonym for any collective practice. At a basic level, we could say that the simple voting of videos on YouTube, which is certainly the outcome of an action by multiple users who generate a certain knowledge through their aggregated actions, is not an instance of crowdsourcing in the strict sense, since it lacks the following characteristics:

1. Planning or direction by a group, company or institution with the aim of obtaining certain results through the cooperation of a large number of users.
2. The existence of a group or potential community of users with a certain willingness to take part.
3. That there be a distribution of tasks so that participants can deal with some part of them in a conscious and deliberate way.
4. That there be a desired calendar of work, with a beginning and an end. Hence also it is common to talk about crowdsourcing "campaigns" or "projects".
5. That the greater resulting benefit redounds fundamentally to the goal planned in advance by the group, person, company or institution that launches the crowdsourcing project.

Although not essential, it is usual that the system of recompense, profit or payment for participants is clearly defined from the start. These may take a variety of forms: material, with a financial return; or intangible, such as social reputation, personal achievement, learning, etc.

CROWDSOURCING IN ART AND CULTURE

Although crowdsourcing is largely known thanks to big companies, the essence of participation by users and amateurs, in terms of open, distributed collaboration, is found in many other sectors of society: ranging from science, with distributed genome research, to politics, such as the Obama campaign in 2008, or the public activism of the 15-M Movement or the "opendata" journalism of Wikileaks.

Art too has seen in the facility for network collaboration offered by the Internet a way of creating works in which the public's contribution is the main element of the experience. The public's artistic participation may take a great variety of forms, one that is closer to traditional passive reception, or one that is more nuclear, intervening in the design and production of the work itself. It is not accidental that Net Art began to take up the technology right from the early days of the Internet, exploring the limits of multimedia and of interactive and hypertextual language.

The fusion of participative culture with technology has enabled the creation of major artistic works based on crowdsourcing, as Aaron Koblin has shown throughout his career, becoming an indisputable leader in the production of visual and audio projects with thousands of on-line contributions. Notable amongst Koblin's crowdsourcing projects is the animated wood in *Exquisite Forest*, a videoclip of Johnny Cash with thousands of drawn stills, the composition with 10,000 sheep in *The Sheep Market*, the $100 bill made from 10,000 drawings and the song for 2,000 voices in *The Bicycle Built for Two Thousand*. Precisely in many of these works, which have even been exhibited in major museums, Koblin has used the services of Mechanical Turk from Amazon, a platform designed explicitly to commission tasks from a massive public and manage their micropayments for doing them.

Other works of this kind are the virtual choir for which the musician Eric Whitacre has been composing with thousands of on-line singers (which has been through several editions), the platform SwarmSketch, which each week proposes a sketch to be drawn collectively, the Trailer Mash portal, which invites users to create new trailers for well-known films, or the PostSecret Web site, which for years has been publishing physical postcards in which the senders share a secret anonymously.

In the field of re-mix or *mashup*, so typical of digital culture, major artists have capitalised on the interest of their fans to share their creativity with them. Probably the best known of these was George Lucas in the project *Star Wars Uncut*, but there are other directors such as Lars Von Trier in the film *Gesamt*, Tim Burton and his collective story created on Twitter, Radiohead offering tracks from their songs to be remixed and *Plan B* by Carlos Jean in Spain, which collected 4,000 contributions and managed to put a collaborative song at Number One in the Top Forty.[1]

Its essential feature is the participation of users and amateurs who can intervene in both the design and the production of the work

Practices of this sort necessarily involve a substantial change in the notions of creativity, authorship and aesthetic meaning which canonically have been a mark of art during recent centuries. Each collective work possesses unique differences. A work that accepts all contributions on equal terms is not the same as one in which there is a selection by the principle coordinator. Neither is a work in which all the participants are aware throughout the process the same as one in which contributions are diluted in the end result. In this regard, the researcher Ioana Literat (2012) proposes an analysis of crowdsourcing participation projects in art in terms of several parameters: the importance attributed in each project to the medium (visual, acoustic or literary), the more or less directive, controlling role of the artist who brings the action about, the transparent or opaque nature of the overall result as perceived by participants, the degree of dialogic or independent interrelation between the contributions, the synthetic or multiple dimension of the final product and possible recompense for contributions.

Nonetheless, not all crowdsourcing projects are initiated by artists. Cultural institutions have also seen in these dynamics a means to mobilise interested members of the public and generate greater participation in the causes they pursue. The Horizon 2013 report, devoted specifically to museums' relationship with technology, cited crowdsourcing, together with BYOD (*bring your own*

device) initiatives, as one of the trends to be adopted in a generalised way in the short term. Some who have already walked this road are the 36 initiatives identified by Carletti, Giannachi, Price and McAuley (2013), who note in their analysis two great trends in formulas for involving the public: contributing to existing works or generating new ones.

In the first group, habitual tasks are the curation, review and localisation of works. Notable here are the Brooklyn and Steve museums in the United States and the Kröller-Müller in Holland, which invited their communities to label, document and review their collections.

Cultural institutions can involve their publics by inviting them to contribute to existing works or by creating new ones

Libraries have also adopted this practice, as in the case of the University of Alabama with a plan to involve volunteers in the labelling of old photographs. University College London has transcribed more than 7,000 manuscripts by Jeremy Bentham by means of a wiki, while the Citizen Archivist Dashboard Project of the US National Archive has a call permanently open for the transcription of Greek papyri in the project *Ancient Lives* and WW II meteorological manuscripts in *Old Weather*.

Other platforms contribute to this "librarianship" project, although not initiated by major libraries. The Flickr image portal has an agreement with a large number of public archives and invites the cataloguing of historic photos from the macrocollection Commons on its Web-site. In Spain, the Bookcamping network shares books with CC licences, and in the United States, but with global intent, the incipient Hypothes.is proposes the massive collaborative labelling of all on-line knowledge.

On the other hand, there are many projects that arise precisely from the material contributed by the public that becomes part of the historical heritage, such as home videos in the documentary *Life in a Day*, that compiled 80,000 contributions on YouTube, the pieces from the legendary programme *StoryCorps* in the United States, the private documents related with wars or the contributions to collaborative maps in acoustic maps such as Soundmap by the British Library.

CROWDSOURCING, A FIELD OF RESEARCH

The analysis of all this gargantuan volume of data that users are contributing through networking on the Net, together with the new methodologies that digital tools bring to academic research, has created a new scientific discipline, Digital Humanities. This area of knowledge opens up new fields of cultural exploration which, without the intervention of the Net, the participative culture, crowdsourcing and information technologies, would be unimaginable.

Within this field, Antonio Lafuente and Alberto Corsín (2010) have researched into the culture of public ability and science on a historic and anthropological level, connecting the roots of the procommon (common assets) with the new riches and heritage the digital society is generating. One example of all this is free software, whose communities, also called "recursive publics" by Chris Kelty in his book *Two Bits* (2010), represent new procommons that build, manage and produce on the bases of collaboration, shared knowledge and distributed participation.

Creating networks for the exchange of knowledge and best practices is a key factor in a globalised society. Cultural entities are more and more aware of the need to build links with their interest groups by organising a variety of formulae for participation, but also realise that in a world that is so globalised and competitive their survival and sustainability requires the cultivation of peer cooperation. An example of this is the SLIC project that the Medialab-Prado has been stitching together since 2008 with cultural institutions within its ambit to

share resources and knowledge of the use of free software applied to archiving and access to digital content:

> *The purpose of these contacts is to work on a project aimed at bringing together cultural institutions to share resources and knowledge on the problem of archiving and accessing digital cultural content, in order to meet their needs as entities at the service of the public. The most immediate aim consists of creating a system or platform that enables the sharing of content produced by the different cultural entities, in such a way that users can access it and download it simply, freely and without charge.*

COLLABORATION IN THE PHYSICAL AS AN EXPONENT OF THE VIRTUAL

As we have been seeing, libraries, museums and cultural institutions in general are finding new challenges in their mission to serve the public with the advances of technology, but at the same time digital culture itself is provoking a transformation of physical spaces, leading them to reinvent themselves with respect to their main functions. Instead of being leisure facilities to entertain and arouse the love of culture, they are becoming laboratories to produce and generate direct participation by members of the public as cultural actors. Notable are the practices known as DIY (Do It Yourself), which with time are transcending their individual character and becoming enriched by group participation in dynamics also known as DIWO, or Do It With Others.

This new culture of the prototype and of collective making has been reflected by Chris Anderson in his book *Makers: the New Industrial Revolution* (2012), where he draws attention to the opportunity for this type of urban space as meeting-points for the exchange of ideas and the creation of practices. Thus, we are finding more and more examples of libraries and museums that are incorporating the participative culture of the makers, bringing the virtual to the physical, melding the spirit of crowdsourcing and online collaboration with the creative synergies that are produced by sharing space.

CROWDFUNDING, A NEW COLLABORATIVE WAY OF CONTRIBUTING TO A PROJECT BY FUNDING IT

Of all the evolutions of crowdsourcing, there are two that are attaining a high degree of maturity. The first of these is *crowdworking*, better known as *coworking*, a practice in which Spain is positioned third in Europe and which consists of sharing workplaces in communal spaces. The benefit of coworking, used a great deal by social and cultural entrepreneurs, is not so much as a way of cutting costs as a way of enjoying an ecosystem which is favourable to the creation of interdisciplinary synergies.

The second is *crowdfunding*, a system of managing microfunding for projects whose main aim is to collect enough economic resources to make them viable and sustainable. In general terms we could say that while in crowdsourcing campaigns a commitment of talent or time is generated, those more specifically of crowdfunding contribute basically money, turning the collaborator into a "partner", "investor" or "sponsor".

It is true that crowdfunding is as old as making donations or volunteership in the cultural world. Nonetheless, what is unique about initiatives of this sort, and at the same time their driving force, is the application of digital tools for the management, viability and transparency of the system of participation. As a result of this, recent years have seen the appearance of specialised platforms which support crowdfunding campaigns in such a way that it becomes easy and accessible to collaborate in the funding of a specific project, and which have the traceability required for the monitoring of the

process and its results. Amongst them we could cite some of the most popular, such as Kickstarter in English-speaking countries and Goteo and Verkami in Spain.

Just as we find major examples of crowdsourcing campaigns on the idea of innovation that is open and closely linked to large companies in which the problem is not financing, but rather gathering information from, or strengthening links with, the customers, crowdfunding is consubstantial with projects that emanate from small companies, groups or individuals who wish to develop an idea but do not have the necessary resources to do so.

Here the sharing of tasks is not so critical. The main thing is to contribute to the incubation of the project and to its sustainability in order to make it a reality. Hence, while in the case of the former, the tendency of crowdsourcing as open innovation, the projects tend to be top to bottom, more corporative and institutional, seeking enrichment and diversity in the dedication of volunteers, in the latter case of crowdfunding the projects are bottom to top, more related with social settings where the benefits are not usually financial, that incorporate a tradition of self-financing and which furthermore are suffering from the reduction of public funding: cultural, scientific, environmental, educational, etc. It is not surprising, therefore, that most of the projects we find on Kickstarter, Verkami and Goteo are of this sort.

According to a study by Infocrowdsourcing, the amount obtained in 2012 from crowdfunding in Spain was 9.7 million euros. Furthermore, in the field that concerns us here, of the 62 platforms identified in Spain and y Latin America, 16% are devoted to solidarity projects, 13% to artistic projects, 10% to musical and 5% to scientific ones.

It is a sign of the maturity of the system that three out of four crowdfunding projects raise the amount requested. An analysis of activity on Verkami in 2012[2] indicated that 75.3% of campaigns launched on the platform attained their financing aims. In the sphere of culture, the sectors with the highest success rates were publishing projects in first place, followed by musical and thirdly social ones.

It is also interesting to note that the amount of money requested for projects is inversely related to their success rate, so that projects whose target amount is greater than €5,000 to €10,000 have more chance of achieving it than those with lower targets.

There is no better way to get an overview of the growth of this practice than to browse through the crowdfunding platforms of Performing Arts, Dance, Theater, Publishing, Music, Photography, Film, Design, Art, Comics, Science and Craft to discover the hundreds of projects that are cofinanced on microdonations.

Crowdfunding springs from small companies, collectives or private individuals who are seeking the financial resources to bring an idea to fruition

It is surprising to look at the figures for the projects that have raised most money. On Kickstarter, in the USA, we find amounts ranging from the $600,000 raised by artist Marina Abramovic for her Institute and the $175,000 raised to conserve a classic cinema, or the more than $45,000 raised for a dance performance. In Spain the numbers are more modest, but there are still examples from the performing arts, such as the home performance by Latung La La with €14,000, the more than €40,000 for the concert #Primaveravalenciana, the €50,000 for the comic *Brigada,* the €60,000 for the scientific submarine ICTINEU 3 and the record €350,000 raised for the documentary *L'Endemà* (The Day After).

COLLABORATIVE CONSUMPTION AS A FORM OF CULTURE

The culture of participation also modifies how we buy, eat and travel, to the point of making "collaborative consumption" a cultural form in itself.

Within the so-called *sharing economy* of which it forms part, user participation does not seek to contribute to a third-party project but rather to have a direct effect on the practice of consumption, a consumption which in turn is shared within a community. It is a way of embodying certain values such as sustainability and respect for the environment, while still generating savings by eliminating the intermediary role of traditional economic agents and substituting them with shared-interest communities.

According to a study by Cetelem (2013), 52% of Europeans will opt for mutual help or interchange in the coming years, 75% are prepared to buy directly from producers and more than half are seduced by the idea of barter. From travelling exchanging sofas or sharing a car, to creating environment-friendly purchase groups to buy directly from producers or forming networks for the loan or exchange of clothing, books or DIY tools, collaborative consumption as a way of life is not just a way of confronting the economic crisis, but also has social implications such as the change from a property culture to one of efficient use. It is the public itself that sees in digital technology and social networks the capacities for self-organisation, transaction management—and not necessarily economic transactions—and creating links of confidence with the design of new systems for transparency.

The Net questions the role of traditional intermediaries in the distribution of information and becomes an ideal platform to create new markets under new rules. For cultural producers, whether professionals or amateurs, designers, musicians, photographers or artisans, the Internet is also a place to offer your work and build a public without the intervention of publishers, record companies, producers or agents. Thus, platforms such as Etsy, Threadless and Creativemarket provide a virtual shop for artisans and designers who otherwise would not be able to sell their creations.

KEYS FOR THE DEVELOPMENT OF CROWDSOURCING PRACTICES

So far we have looked at all manner of advantages in setting up crowdsourcing campaigns for companies, artists, institutions and groups. However, we must not ignore the many dilemmas faced by those who wish to do so and who need strategies to ensure success and satisfaction for all those taking part.

One matter is the need to regulate the fact that involvement implies the acquisition of author's rights to users' contributions, be they originals or the modifications of prior works, and the responsibility that both parties have for them. This necessitates the design of a system of guarantees that validates the rights in a way that is sufficiently flexible in a context of digital culture.

Another is that it is also necessary to take account of the influence of the voluntary nature of the work—which being unrewarded financially may also call forth less commitment—on the quality of the results and the time-scale for execution.

The practice of shared consumption through the Net is an ideal platform for creating new markets with new rules

Also, from the point of view of the company, group or institution that is considering a crowdsourcing campaign it is essential to devote the necessary resources to ensure the success of the project—resources which might be material (support for technology or remuneration) or human (community stimulators, managers with negotiation skills, etc.). This goes hand in hand with the costs of organisation and coordination (a community does not arise spontaneously, but needs to be cared for and fed, guided and mobilised) and the ability to assume risks in terms of the quality of the results,

access to privileged information and the possible dependence that might be generated with respect to the collaborators.

To sum up, in order for a crowdsourcing campaign to be successful it is fundamental that there is already an organisation able to deal with a number of critical issues. Notable amongst these are the following:

- Identify tasks well. Number the various phases of the project and break it up into tasks taking account of how accessible these are.
- Propose a diversity of tasks. Make it so that everyone can find just the task that attracts them and connects with their abilities and interests, so that they can give the best of themselves.
- Design a time chart. Mark milestones and provide periodical information on the attainment of intermediate goals so that the community always knows what point has been reached.
- Design the recompense. Consider the different motivations that might mobilise participants. These may be extrinsic (material payment or social recognition) or intrinsic (the learning or entertainment deriving from the process or the satisfaction of collaborating as part of a group with a common aim).
- Use simple, intuitive technology. Use tools and technologies that impose no technical barriers but rather facilitate the process for the development of contributions.

- Stimulate the community. Establish fluid channels of communication, build links of confidence to avoid people feeling isolated in the development of their task.

BY WAY OF CONCLUSION

Institutional bodies, as agents at the service of the public, as well as the artists, musicians, writers, etc., themselves, as cultural producers, whether professional or amateur, have new technological tools available to them to connect with their public and to build links of confidence and commitment through collaboration and distributed participation. Crowdsourcing practices offer ways to tackle ambitious projects that would benefit from the contributions of thousands of volunteers, whether through donations or the exchange or loan of time, talent, goods or money. The Net provides the technology to channel, stimulate and sustain the system of collaboration, but also, and this is very important, provides the participative culture that has emanated from the social practices of users with relation to the Internet, mobile devices and connectivity.

A community is not created spontaneously, it needs to be cared for, nourished, guided and mobilised

To take advantage of this synergy of abilities, technologies, creativity and goodwill is a great opportunity but also incurs responsibility on the part of any cultural entity, agent or producer who wishes to pursue their mission in today's digital society. A digital society which, as recent years have shown, wants, needs and demands first-hand, collaborative participation in cultural processes.

NOTES

1 In this regard, the book *The Power of Open* (http://thepowerofopen.org/), published under Creative Commons and also available for free dowload in Spanish provides dozens of experiences in which the liberation of content in open source has been key for the involvement of communities in the consumption

2 "¿Funciona el *crowdfunding* cultural en España?". Data display at http://lab.rtve.es/crowdfunding-espana/

CULTURAL PROJECTS

Institutions, archives and libraries

Citizen Archivist:
http://www.archives.gov/citizen-archivist/
Flickr Commons:
http://www.flickr.com/commons/institutions/
Alabama University Library:
http://www.lib.ua.edu/crowdsourcing/
Transcribe Bentham:
http://www.transcribe-bentham.da.ulcc.ac.uk/td/Transcribe_Bentham
Bookcamping:
http://bookcamping.cc/
Ancient Lives:
http://ancientlives.org/transcribe
Old Weather:
http://www.oldweather.org/why_scientists_need_you
Life in a day:
http://www.youtube.com/user/lifeinaday
StoryCorps:
http://storycorps.org/
SoundMaps:
http://sounds.bl.uk/Sound-Maps/UK-Soundmap

Artistic

Exquisite Forest:
http://www.exquisiteforest.com/
The Johnny Cash Project:
http://www.thejohnnycashproject.com
The Sheep Market:
http://www.thesheepmarket.com
The Ten Thousand Cents:
http://www.tenthousandcents.com
The Bicycle Built for Two Thousand:
http://www.bicyclebuiltfortwothousand.com
The Virtual Choir:
http://ericwhitacre.com/the-virtual-choir
SwarmSketch:
http://swarmsketch.com
The Trailer Mash:
http://www.thetrailermash.com
PostSecret:
http://postsecret.com
StarWars Uncut:
http://www.starwarsuncut.com

CROWDFUNDING PLATFORMS

Kickstarter:
http://www.kickstarter.com/
Goteo:
http://goteo.org/
Verkami:
http://www.verkami.com/

GENERAL INFORMATION
Infocrowdsourcing:
http://www.infocrowdsourcing.com/
Cultural crowdfunding in Spain:
http://lab.rtve.es/crowdfunding-espana/

Twitter
@Crowdsourcing_
@icrowdsourcing

THEME 3

Gamification, generating commitment to culture

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THE CRISIS OF PARTICIPATION

At the present time we live surrounded by a generalised crisis in participation in society as a consequence of the economic climate that has prevailed over recent years. In general, people in society feel disillusioned and unmotivated, not just because of economic considerations in themselves, but also as a result of the changes that are taking place in this new scenario.

This crisis in participation can be seen in low levels of commitment in response to proposals made by organisations and institutions in the form of projects, products and services and this has led to a stagnation in consumption that affects the contraction in the markets of various industries and sectors of activity.

As a result of this complex situation really innovative projects are emerging which generate value for society, but which fail to connect with the publics for which they were devised.

Thus, in the cultural sector, for example, we can see how we are consuming less music, visiting cultural spaces such as libraries and museums less often, devoting less time to reading and visiting cinemas and this, together with other problems specific to each subsector has led to concerns for the future of our culture.

The main cause underlying this complex scenario is probably that people are devoting less of their incomes to this kind of activity, but there are also some underlying intangibles related to disillusion and lack of motivation, and it is here that innovation can provide a catalyst to turn the situation around.

It is precisely in this context that, for some years, there has been an industry that has not ceased to grow in market size and which, furthermore, was considered in 2009 to be part of our culture—the video game. This fact leads us to considerations in two directions.

On one hand, it would seem that we are trying to flee from this difficult situation by searching for other kinds of experience based on emotion and amusement. But, on the other hand, and more importantly, we are also prepared to pay for this. That is how the videogame industry has become the largest of the interactive audiovisual leisure industries, even in our country. It has become the main support for entertainment and pastimes, its key mission being to generate business and attract ever more people to play these exciting and amusing games.

With the appearance of new technologies and platforms and the explosion of social networks as a new form of interaction, and in the current context of the generalised crisis in participation in various aspects of society, why not use the same elements that videogames employ—and that people never stop playing with—but to achieve participation in our cultural proposals?

GAME THINKING AND MECHANICS

Gamification, as the term is understood in Spanish, consists of the use of game thinking and mechanics to solve problems in non-game contexts.

The concept arose in the USA towards the end of 2010 but, despite quickly reaching Spain, it would take another couple of years before it became a tendency causing great excitement, being adopted in areas such as customer commitment, employee performance, personal development, learning and innovation.

This new discipline aims to take the best ideas employed in the world of games to encourage desirable behaviours in organisations and institutions, thereby achieving people's participation.

While it is true that, to begin with, gamification was mainly associated with the accumulation of points, medals and positions on classification tables in non-game contexts, it has now generally been accepted as a tendency that aims to use games to solve problems.

In this it is like previous concepts related to games in other contexts such as serious games or advergaming, the question is whether they belong or not to this new sphere.

Above and beyond the various opinions raised by those involved in this new discipline, the market is adopting gamification as the name of the tendency to use games for problem solving regardless of the greater or lesser number of characteristics inherited from the game and video game industries and the solutions achieved.

Whatever the case, the important thing to understand is that gamification is a tool to encourage desired and necessary behaviour towards our proposals to generate participation and commitment amongst the publics for whom it was devised.

But what is behaviour? Behaviour is how people interact with the medium so some examples of behaviour in the cultural sector could be to consume music, visit cultural spaces such as libraries and museums, devote more time to reading or go to the cinema. Or even to recommend or invite friends to participate in these activities through social networks.

Gamification consists of using game thinking and mechanics in non-game environments to encourage people's participation

The main idea in gamification is to use elements incorporated in games which entice people to play, and not stop playing, to enthuse and motivate the public at large to adopt these other behaviours that our culture needs.

Gamification is certainly a very transversal tool and can be applied in very different environments, from a company's customer loyalty programme to platforms encouraging the sustainable use of energy resources. And why not? So that people make known, consume and participate in our cultural activities.

While the present time is one of great expectation throughout the world for gamification, it is also now that the first applications and results are appearing of applying game techniques in these non-game environments, something that is generally done as a project in innovation.

CAPTURING NEW AUDIENCES

One of the main challenges in the cultural sector is to attract new audiences to the various proposals there may be. Capturing the attention of new audiences and making them participate in the

activities of our libraries and museums by creating experiences based on games is possible and has been demonstrated in the USA with cases such as Find The Future.

Find The Future was the name given to a pioneering experience in the library field to revive the interest of the youngest public in the New York Public Library.

The library created an experience based on games involving various missions combining the virtual world with its own facilities and inviting people to discover history through a hundred words included in its collection.

Find The Future was launched in 2011 as part of the events to mark the library's centenary with an event called Write All Night that took place in the Stephen A. Schwarzman building itself.

The interaction of users in a virtual environment through a game system makes it possible to develop new kinds of behaviour

Five hundred players explored the building using their laptop computers and mobile phones to follow clues about original works and to collaboratively produce an account of personal histories about the future.

After this event was launched, and since then, Find The Future has been played by people visiting the library but who want to do so in a different way, and through an experience that combines the use of their mobile phones.

INTERACTIVE EXPERIENCES 1.0

A large part of the success of gamification as a tool to encourage people to participate resides in transferring the users' interaction to a virtual or imaginary environment with the impact of a game.

It is precisely in a series of books published in the 1980s that we find the creation of these interactive experiences to encourage users to become involved with reading.

The series of books *Choose Your Own Adventure* was created for a young readership and in them the reader can vary the course of the story by making choices that can be simple, sensible, reckless or dangerous, each of which leads to a different outcome.

Narrated in the second person, the protagonist is the reader, this series of books captivated a public that was thought disinclined to reading. It was one of the most popular series of books for children and young readers in the 1980s and 1990s. More than 260 million books were sold and they were translated into more than 40 languages.

With literature, without technology and with something as simple as being able to construct your own story, it was shown that participative experiences make it possible to develop the behaviour of, and even the habit of reading amongst, a public initially thought to be resistant to the idea.

But what will happen if we make use of technology?

TECHNOLOGY IN THE CREATION OF EXPERIENCES

The use of games in non-game settings to stimulate people's involvement is not really anything new. Neither is it technology, but rather the technique of creating a participative game experience in both contexts.

Obviously games appeared in the history of humanity long before the advent of technology and it is true that it is possible to influence people's behaviour or to educate them through games

without technology, but technology is there, and it is there to help us.

Technology means developing more sophisticated, not more complex, game experiences in a way that enables the effectiveness of the experience to be enhanced. Some technologies, such as those found today in mobile telephones, make it possible to suggest new proposals to attract the public's attention and get people involved.

Thus there are campaigns, such as *The Witness* in Germany by Universal for the Street 13 TV station, in which, in essence we find what was achieved in the *Choose Your Own Adventure* books.

Street 13 announced the launch of *The Witness* by inviting people from all over the world to register on a Web site to participate in a game experience in the streets of Berlin on the occasion of the launch of the station in Germany.

The Witness is an interactive cinema project in which the setting of the game is Berlin. Participants had to download an application to their mobile phone and were called to meet at a hotel in the city. Once there someone gave them the key to a room in the hotel which they had to go to.

The new technologies make it possible to develop participative game experiences to capture the attention of audiences and to achieve their participation

Once they were there, and only when they were there, could they reproduce the first scene of the film by scanning the room with their mobile phone. The scene of a crime by the Russian mafia called the player to action leading them to navigate their way to various locations in Berlin and not just reproduce the scenes where the events had occurred on their phones, but to make decisions that affected the course of the story.

The Witness was presented as the first immersive film in which, through augmented reality and GPS, it was possible to live through a truly transmedia experience, the aim being that people would talk about the launch of Street 13 with a narrative akin to the station's content.

Are you the hero, or the next victim?

PROVIDING READERS WITH MOTIVES

Gamification is a tool that can be used to inspire people to adopt forms of behaviour that are desirable and necessary for given projects. Motivating people does not mean encouraging them to carry on participating, but rather it means giving them motives to participate.

So, if we return to books, for example, we find there are many people who do not have the habit of reading and who need additional motives to seek out knowledge or to adopt reading as a pastime.

By transferring elements of games to reading we can introduce certain components that enable people who do not habitually read as a hobby to do so, to share their progress and viralise books through social networks.

To this end, there are projects and platforms throughout the world that attempt to reinvent the reading of books by using gamification as a base.

This is the case with ReadSocialApp, a book-reading platform that makes it possible to create social communities around books and which enables readers to contact the authors directly to discuss issues raised by the book and to gain a deeper understanding.

This platform adopts components borrowed from videogames to provide feedback as well as instant satisfaction as the reader progresses through the work. Furthermore, it establishes tasks to unlock the work's exclusive content.

Again, the combination of the offline and digital worlds through the Internet and mobile phones makes it possible to create participative experiences in settings with low levels of interaction to gain access to new kinds of users.

SHOW ME YOU ARE MY BEST FAN

Another field in which gamification is being used as a technique for stimulating user commitment is music and the way appreciation of it is enhanced by the artists themselves through communities of their most faithful fans.

Some artists and record labels are employing game thinking and mechanics to encourage people to share news about tours, viralise news about the artist, learn about the latest music videos and share all this content through the social media with the aim of reaching a wider public and selling more copies of their discs.

Universal Music Group's Interscope in the USA was a pioneer in using this technique to increase the commitment of the fans of artists such as LMFAO, Lady Gaga and Robin Thicke and through them, make their musical offerings available to more people.

Universal uses Web sites to support its gamification strategy by asking the fans of these artists to show that they really are their fans by incorporating challenges, generally to viralise content, and demonstrating their achievements through classification tables.

Gamification not only tries to create amusing and moving experiences but also to use elements of games to stimulate players, as may be the case through perceived status whereby people throughout the world compete to show these artists that they are their best fans to improve their positioning while increasing appreciation of the music.

GENERATING INTERACTION THROUGH THE SECOND SCREEN

The adoption of technology and the social media in our lives has changed certain of our habits when consuming content through mass media such as television. In fact, it is well known that people are increasingly combining time devoted to television with access to the Internet via devices such as mobile phones and tablets.

These changes in behaviour are affecting the impact of content generated through television such as films, series or programmes in terms of television audience levels.

This has given rise to the concept of the 'second screen' understood as the place where interaction is produced, mainly social interaction, concerning the content generated through television.

Thus, producers are becoming obliged to create new formats for this second screen with the aim of maximising the attention of users and hence the profitability of the content generated for this platform.

Despite various attempts being made in the social networks to capture this kind of interaction by television viewers while they are watching TV, some of the efforts are already employing gamification in this second screen to lead users again to the content being transmitted at the time.

Specifically, in Spain we have seen some uses of this technique such as the project by Canal + on the occasion of the launching of the second series of *Game of Thrones.*

Canal + launched a multimedia application for mobile phones to interact with viewers of the series, mainly young people, digital natives and accustomed to the immediacy and interaction of the Internet.

With this application the station created an interactive space based on challenges to demonstrate that you were watching the series and sharing what was happening in it at the time with friends, as well as offering exclusive prizes, such a trip to Dubrovnik, where a large part of the series had been shot.

In this way *Game of Thrones* reached people it would not have reached through traditional methods, creating new followers for the series, increasing interest in it and loyalty towards it. It is an example of how the second screen, in combination with gamification, can be used as a strategy for cheaper and more effective communication, advertising and interaction.

CULTURAL LOYALTY PROGRAMMES

Putting aside the cultural interest that might be generated by an exhibition or a museum, it is certainly the case that one of the great challenges faced by such cultural spaces, in addition to capturing new publics, is maintaining the frequency of visits.

It is very often the case that museums keep their content fresh and up to date with exhibitions that rotate in time as a way, not just of attracting visitors but of encouraging visitors to return again and again.

In this respect, marketing that adopts gaming techniques can be employed to build highly participative loyalty programmes that recognise their most constant and loyal users and which attempt to convert anyone who comes along at least once into this kind of visitor.

One of the pioneers of this at the international level is the Dallas Museum of Art (DMA) which has combined the concept of loyalty programmes with gaming techniques. DMA Friends is a free program that enables people to win badges and points that are used to unlock special rewards when visiting the museum.

The basic principle is that every time a person visits the museum, or interacts with the exhibits, points are accumulated that can be used to redeem special prizes. But the DMA additionally recognises the function of the program's users in viralising the museum's offerings and attracting new visitors to the museum through its current visitors' network of contacts.

GAMING AS A VIRALISATION TOOL

Gaming as a communication and viralisation tool has been used in numerous settings, especially in the company environment where it has produced good results by generating expectation around the launch of products.

The application of game techniques enables very participative fidelity programmes to be devised that will maintain the frequency of visits to cultural venues

It has also been used for some cinema productions, but in such cases it has been used to generate transmedia experiences that enable the viralisation of this expectation via the Internet and social media.

One of the most representative recent cases was the campaign organised around the premiere of the Batman film *The Dark Knight Rises*. The campaign consisted of inviting users, via a Web site, to participate in a game experience that involved access to exclusive reports from the police department to find the 'anonymous vigilante' Batman. Participants were offered the opportunity to start their own investigation, an investigation that was integrated into the film's narrative itself.

Users of the Web site played the role of police officers in the city of Gotham and they were asked

to send photographs of scenes they found elsewhere in which there were indications that Batman had been there.

And all this in order to be able to unlock and view one of the film's trailers and viralise it via the Internet before the premiere.

In this way the creation of game experiences can be used to create settings for interaction that contribute to user participation in order to enhance the impact of film premieres.

MAIN CHALLENGES FOR GAMIFICATION

Despite the fact that highly participative applications are being achieved and gamification may become a tool to encourage the participation of audiences in the cultural sector, certain challenges remain in the use of this kind of technique.

One of the obstacles remaining to be resolved in gamification is that some of the challenges of participation, such as going to the cinema or to museums on a regular basis, do not tend to have, or must not have, an ending.

In a game the long-term aims are generally clear. Players know that, having achieved these aims they have fulfilled their task in the game, such as rescuing a princess, winning a war or becoming a Formula 1 world champion. At any given moment players know that the experience of the game has a final objective and that they must overcome all the obstacles in their way to achieve that objective.

In contrast with this, in the cultural world, and with the exception of certain settings such as a grand launch campaign or the reading of books, the aim is to maintain the users' long-term commitment in the absence of a foreseen ending or a clear final aim.

Maintaining the player's concentration and tension or recourse to a made-to-measure content strategy may be key ways of bolstering gamification's effectiveness in our proposals.

On the other hand, and despite the fact that play is something innate in human beings, it is true that there are certain people who show a measure of apathy when faced with a fictitious environment generated by game mechanics.

In general, and for most of the applications, the percentage of such people is small, but it must be borne in mind because we are not interested in these people failing to participate because they can see that it is only a game and that there is no extrinsic high-value recompense in it for them.

That is why game-based experiences should be created that bear in mind the future player's scope and profile in function of the application's setting. Consequently, it would not be the same to use this kind of technique to capture new segments of the public as it would be to promote a more adult public's commitment to visit museums.

In the cultural environment, maintaining the players' concentration and tension is key for attaining their long-term commitment

Some large projects within this new discipline provide users with options that deactivate this layer of game throughout the whole process, making it an optional extra and they have done so with spectacular results.

Trial and error in this kind of project, above all at the present time when the discipline is taking shape, is something that must be accepted. Finding the solution or magic potion for a cultural proposal will not be the result of investing large quantities of money in the conception or modelling of these game experiences, but of introducing the minimum amount of gamification that can feasibly produce results, from which point there will be a process of evaluation and continuous improvement.

The creation of game experiences passes through the phases of conception and design, but more important still is the attempt to find viable solutions to the challenges posed.

For this reason continuous attention to the project in the medium and long terms is very important for improving the system itself and for nourishing the user's experience, and this means investing time and effort systematically in the initiative.

GAMIFICATION, GENERATING COMMITMENT TO CULTURE

In a complex and changing context for culture's various subsectors on account of the general crisis in participation, and one that is not affecting just this sphere, the tools for generating commitment need to be specially considered.

Gamification can be seen as the tool for introducing game thinking and mechanics to non-game settings precisely to this end: the generation of people's commitment when faced with tasks they consider boring or which they are reluctant to participate in.

Gamification is a tendency that is certainly being used to generate customer loyalty, increase the performance of employees in organisations, create applications that improve personal development, involve people in the learning process and generate further innovation.

In these settings gamification is proving itself to be an innovative technique with which results are being achieved on the basis of increasing people's participation.

If we consider the main challenges facing culture we find that a large part of the lost commitment is precisely here: people do not actively participate in our proposals.

The use of gamification in the cultural sector represents an opportunity for changing this tendency and achieving in this sector results that it is producing in other settings.

Implementing the best ideas to be found in games and videogames so that, instead of playing and never stopping playing, people participate instead in the cultural offerings of our museums, cinemas, libraries, theatres and books, seems like a good opportunity that should not be missed, even more so when we see cases in this field where they have been implemented and have met with success.

Nevertheless, it should be stressed that designing this kind of experience is not usually either easy or direct, and neither is it in the field of game design. In the field of game design there are only a few that manage to generate commitment to their games, and the same thing will happen with gamification projects in the field of culture.

Gamification encourages people's participation in tasks that might be considered boring, or which people might be reluctant to participate in

Some critical aspects need to be borne in mind, such as what kind of player the users of our culture are and what behaviours can be aligned with them to generate this desire to participate in our cultural proposals, consume them and act as ambassadors for them.

Once all this has been borne in mind the moment has come to get down to work: let us use game thinking and mechanics to reinvent our cultural proposals and thereby stimulate the commitment of our public.

NEWS AND WEB SITES OF INTEREST

Europa Press: "Los videojuegos ya son cultura en España" . http://www.europapress.es/tecnologia/videojuegos-00447/noticia-videojuegos-ya-son-cultura-espana-20090330223332.html

Fundeu: *Ludificación*, mejor que *gamificación* como traducción de *gamification*. http://www.fundeu.es/recomendacion/ludificacion-mejor-que-gamificacion-como-traduccion-de-gamification-1390/

NYPL: Find the Future. http://exhibitions.nypl.org/100/digital_fun/play_the_game

CYOA: Choose your own adventure. http://www.cyoa.com

Visual News: The Witness, a First Interactive Film with Augmented Reality. http://www.visualnews.com/2011/03/15/the-first-interactive-film-with-augmented-reality/

Read Social App: A revolutionary way to read. http://readsocialapp.com

Dallas Museum of Art: DMA Friends. http://www.dm-art.org/visit/dma-friends

Badge Culture: Promoviendo la participación ciudadana con la cultura. https://sites.google.com/site/badgeculturepublico/elproyecto

Game Marketing: http://www.gamkt.com

Game On! Lab: http://www.gameonlab.com

TWEETERS

http://twitter.com/gzicherm
http://twitter.com/mherger
http://twitter.com/daverage
http://twitter.com/gamkt
http://twitter.com/badgeculture

THEME 4

Culture in the cloud

by **Isabel Fernández Peñuelas**
http://netfictions.wordpress.com/author/indiaman/

Let's begin at the end, anticipating in an idea where this article is gong to end: the future of the Web, or the Web of the future, can be glimpsed today in the so-called *Internet of Things* (IoT).

Internet technology has become much more tangible, it is beginning to infiltrate every space, and for several years it has been slipping in through the cracks in our houses, it is adhering to our bodies and soon it will adhere to our minds.

The time is still some way off when sensors embedded in our brains send signals to the pianist in the room about the emotional effect his art is having on the public who are listening, or so that the pedals of his piano are adjusted automatically to set different rhythms, the result of ultra-fast decisions based on the real-time analysis of the mountains of data received from the brains of other audiences in other countries and at other times, but in fact the questions we should be asking ourselves are: How long will it be? What will pianists of the future be like? Will they study solfa or mathematics?

According to mobile Internet analysts, 2013 was the year of responsive design and the boom of wearable devices, that is, ones you wear on your wrist, on your head or even in your skin, and which connect you and let you interact with other things, always using Internet technology to achieve this.

A highly relevant datum from the latest study by Google Research on consumption at Christmas 2013–2014 is that searches for the term *wearable* underwent a 100% increase since January the previous year, particularly on the West Coast of the United States and the technology Meccas of New York and California.

But before describing these technologies, it is worth examining the concept of augmented reality, since many of the new mobile devices use it. "Wearables" are part of a broader equation that is already having a great impact on industries in the cultural sector and will probably have much more.

AUGMENTED REALITY, MIXED REALITY

Augmented reality (AR) technologies are a key factor in the success of wearables. But what do they consist of? Of the many definitions, I like the one that described AR as "an improved view of the real world". But watch out! Augmented reality must not be confused with virtual reality.

Virtual reality creates worlds that are completely different from the real one and its maximum exponent was Second Life. Although this platform aroused great expectations, even possible benefits for companies and institutions, the fact is that so far it has demonstrated its applicability to gaming, the film industry and leisure, with the failure of many of the business ventures that set out to exploit it. It may be recalled that at one time banks, shops and embassies set out to create their own spaces, but the fact is that at the moment it has not met expectations.

Augmented reality, on the other hand, is a much more recent phenomenon that mixes experience of the real world with the virtual one, enabling a different sort of interaction with the exterior. The term was coined in 1992 by the Boeing researcher Tom Caudell.

This is one of the cases in which literature and film have been ahead of reality. In his 1993 novel *Virtual Light*, William Gibson described some glasses that are quite similar to what we now understand as augmented reality. "Whoever wore them could see notes and additional details that were attached to each object in the physical reality before them. They were often used by artists and neurosurgeons. In the frame and lenses there were electromagnetic contacts that acted directly on the optic nerve." In another passage from the book, in an empty room one of the characters (Rydell) puts on some virtual light glasses that have been lent to him by a policeman, after which he can see in the same room a three-dimensional image of the scene of a crime that had happened some time before. Also, in *Minority Report*, a film by Steven Spielberg starring Tom Cruise, there are a number of gestural interfaces to plan the future that are not too different from some of the products that are already on the market.

Augmented reality technologies (AR) introduce the virtual into the real world in order to improve it

A wearable AR device always requires some form of display that can be located on the head or on the retina, for example; there are no limits. To mix in the images of the real world a camera is required. The device usually offers Internet browsing, GPS services, address search, photography, videocalls and ticket sales, to mention some services. Smartphones have many of the elements needed for augmented reality applications, making them potential augmented reality devices.

It is calculated that by 2014 there will be 864 million AR telephones and that approximately 103 million cars will use AR by 2020, enabling users for example to receive traffic statistics via their glasses while they wait anxiously in a traffic jam, as described in this article in the online digital technology site Digital Trends on AR applications for iPhone:

Expectations of its impact in coming years have been raised in all sectors and have taken a firm grip in medicine, architecture, tourism and the automobile industry, to mention a few, and the cultural sector could also become an area for application, as for instance in digital television, educational content and virtual exhibitions. One example that can be mentioned is an attempt by the British Museum to improve visitors' experience through an educational project based on AR launched in 2011.

A number of museums such as the Streetmuseum and the London Museum have created an AR application based on the use of historic photographs combined with localisation, allowing visitors to see what the city looked like at some time in the past. The Centro Nacional de Arte of Mexico was a pioneer in using them within the museum, placing children in front of a mirror with digital augmentation. The children could wear various simple clothes and hats as AR markers. Depending on the markers they wore, they would see a projected image of themselves wearing historic garments over their own.

In the 2011 British Museum project *Passport to the Afterlife*, children used mobile phones provided by the Museum to scan markers that showed 3D images of objects from ancient Egypt. Augmented reality markers must not be confused with QR markers. The basic use of QR is to send the user to a Web site, while an AR marker makes it possible to show three-dimensional objects. In her excellent article, Shelley Mannion, the Museum's director for digital education, also explains how artists, aware of the potential of the technology, are using it to produce virtual exhibitions, where and how they like, anywhere in the city or in its artistic spaces. For example, on 9 October 2010, Sander Veenhof and Mark Skwarek invaded the MoMA creating an AR

application that projected their works inside the galleries.

Although most of the instances of the use of this technology have so far been in museums, it has also been suggested that augmented reality could replace the manuals used by technicians in many sectors of industry, such as car repair, and so the same might happen in the field of education in general, with a consequent impact on the book industry.

CULTURE SEEN WITH OTHER EYES

Google Glass was the star launch from Google in 2012, the first commercial augmented reality product, which inaugurated a new generation of wearable devices. Its promotional video shows a modern version of Leonardo's bird man and it transports us to a land where its users control their experience in the world while barely grazing it, with the utmost lightness and freedom.

The glasses show significant information on a little screen located in the corner of your eyes, making it possible, among other things, to take photos and shoot videos. They are voice-sensitive. The user orders *Glass take a picture!* and the glasses obediently snap your sky-diving experience. The world seen from above, at your feet, without needing your hands to press any button. *Glass record a video!,* you could go on, or *Glass share this!,* and the device, that is, the pair of glasses you are wearing, records and shares the unique, interactive experience you are having with the world around you. The glasses elegantly superimpose all manner of useful or commercial information on the images of the real world, and as though that were not enough, last month Google announced that it would add the possibility of controlling music with the glasses.

The experiments by museums to develop AR applications for mobile devices will soon be improved by equivalent applications for *Glasses* so that there will be no need to use your hands. The mobile devices we are used to are beginning to turn into rather old-fashioned devices. The media are also pioneers in using the glasses, for example the Google Glass application for the New York Times or for CNN News.

The tourist industry has been amongst the first to see the potential of Google's new invention and the Glasses are spoken of as being the tourist guides of the future. The use of augmented reality, which enables users of the glasses to magnify what they are seeing down to the tiniest detail and to see real-time indications based on maps, will make future applications for cultural tourism extremely valuable, both for the tourist and for museums, libraries, theatres or exhibition galleries or cinemas who wish to reach a localised, more attractive public. Probably one of the most interesting uses of this technology will be the ability to record and share one's personal experiences. By way of example we might cite this experience of a visit to the Metropolitan Museum using it. Who would not like to repeat the experience of Vargas Llosa on a visit to the Prado?

Wearable devices are clothes and accessories that incorporate electronic or computerised technology

Although still very expensive—they will cost about €1,500—they will not be on sale until 2014 and probably we will see more applications for Google's invention as the price goes down, driven by amongst other things the competition of new suppliers such as Apple, who have already announced their version of augmented reality glasses, presumably in white to give continuity to the company's trade-mark colour.

WEARABLE DEVICES IN ALL SIZES

As well as the glasses, which have rapidly become popular, closely followed by the SmartWatch launched by Sony, other tactile devices also exist or are under development, smart wigs, tattoos and bracelets, while sensors are being embedded in sports shoes and even in underwear.

i-Air Touch (iAT) technology, for example, offers projectors of virtual images that can be "touched" and seen through special glasses. The camera is activated when it detects the user's fingers a certain distance away, although unlike the Glasses it does not respond to voice commands. Devices of this kind are better classified amongst the tactiles. In the meantime, Disney is developing facilities that will not need any physical contact to achieve a Feel it in the Air effect. "A time will come," says a Disney researcher, "when we will use telephones not just for seeing and hearing, but also for feeling".

The smart watches from Sony, Samsung and Qualcomm represent another new type of device to which we must accustom ourselves. Apple is not being left behind: it has announced that it will soon launch the Apple iWatch on the market and it has patented a new type of flexible display, the iCuff. We do not know whether this is intended to be used with the iWatch or in a new type of iPhone. Also, in November 2013 another maker of smart watches, Pebble, had already sold more than 250,000 units of a model able to receive calls and messages and to control music. Pebble has already announced that it will soon be capable of supporting popular applications such as Foursquare.

Motorola Mobility has announced a tattoo that acts as a microphone, which achieves perfect clarity of sound, and not only enables wireless communication with a mobile device but also acts as a lie-detector.

Finally, Sony has patented a new, radical type of wearable that consists of a wig with a laser pointer and GPS able to control other gadgets. The patent states that the wig is built to connect wirelessly to other devices and will be controlled entirely by head movements. Sony asserts that in comparison with the Glasses or smart watches the wig will have the advantage of being more discrete. While not denying that the patent is highly innovative, I confess I have my doubts as to this latter point!

OPTIMISATION OF MOBILE CONTENT, MOBILE APPLICATIONS AND MOBILITY TECHNOLOGIES

I stated at the beginning of this article that 2013 had also been the year of Responsive Design—and not by chance, but because of the proliferation of devices. We do not know how people are accessing, in our case, culture on the Internet, which may be from a browser, a mobile phone, a tablet, a watch or a pair of glasses, making the management of the content that is to be presented to the user a very complex matter. The so-called adaptive mobility technologies are a response to this problem.

New demands have been generated for the storage, transformation and presentation of content, particularly when it comes to designing experiences that will work well both from a desk-top browser and from a mobile device. Should I make a specific version of my site for mobiles? Or would it be better to develop a mobile app? These are the questions that publishers, museums and online music companies are asking themselves every day. Another question it seems logical to ask is, "How is this new generation of devices going to affect existing technology?" and, what is more important, "In what form will it be used every day by the specialists who produce, manage and exploit digital content?".

There are, as usual, many answers: it may be that the best thing is for the website accessed from a mobile to be different from the one accessed from a

browser running on a desktop machine, not just because the screen size is different, but because the visitor's mindset and context are different. For example, on a website selling books, one consideration is to determine at which point in the sale cycle the user is accessing the site from a mobile device—something that usually happens once or twice, particularly at the start of the purchase process—and offer only the necessary information on the mobile version of the website. In general, mobile-friendly browsing requires a simpler design than a desktop website, avoiding, for example, the use of scrollbars or making the user enter text.

Consequently, the technological problem arising from having to develop applications different from the website for different mobile operating systems must not be confused with what is really intended and what is good for business. The fact that the new responsive design technologies make it possible to resolve this problem by developing a single version of the website that can be seen well on all devices does not necessarily mean that we have to develop the same version of the website for all of them. This is probably not what we want. Mobility is a question of options that implies understanding the cycle of the user, in our case the consumer of cultural products, in order to choose the best option at any given moment.

One of the advantages of responsive design is that it makes it possible to optimise the design for several devices without the need to create different versions of the website, and indeed use the same URL, by detecting the device which is being used for access. On the other hand, one of the main drawbacks of using native mobile applications is the need to develop multiple versions of the software to be compatible with the operating system of the device in each case. Today's trend is towards hybrid applications of which a single version is developed. That is, applications that run on the device but which use the same mobile web technology as the website.

In 2009 a specialist in mobile technologies called Luke Wroblewski summarised his ideas on good practice for design for mobiles in an article that created a great impact. The title of the article, which was followed by a book, was "Mobile First", and the underlying idea, the "call to action", if you prefer, was the need to simplify designs for mobiles and focus on the important things in view of the limitations of their displays. In the same article he called for the abandonment of desk-top browser design mentality in order to take best advantage of the features that smart phones of the period offered: localisation, multi-touch, tactile interface, accelerometer, camera, etc.

Adaptive mobility technologies make it possible for a single version of a Web site to be viewed well on all devices

Luke Wroblewski's ideas made a huge impact, and even though very soon afterwards new Internet browsers began to incorporate many of the features of mobile devices, reducing the distance between them, as a consequence of the popularisation of mobile web technologies in comparison with the mobile applications that Wroblewski had originally called for, the central idea that it is necessary to design for the mobile first still holds sway and is very important, to the point where it is common to speak of "mobile first responsive design".

HTML5 is one of the technologies incorporated into new browsers and has made possible the old technological dream of a single version of a site for all devices. So how does HTML5 differ from HTML4 or HTML3? Firstly, HTML5's new labels make it possible to do many more elegant, interactive things than the previous versions of the standard. One example is the famous page that emerged as one of the demonstrations of its functionality that reproduces the credits for Star Wars; for example, with HTML5 it is possible to render 3-D objects.

Another difference with respect to earlier versions of the standard are the new semantic labels it

incorporates and which could have such a major impact on issues that are highly relevant to the cultural sector, such as the protection of digital rights, although this leads us away form the subject of this article. But what makes HTML5 particularly suited for managing mobility are its new application programming interfaces (APIs) which make it possible to provide a functionality equivalent to what could before only be achieved by direct calls to the various mobile operating systems.

Other technologies that underlie responsive design are the so-called media queries, that are able to recognise the device on which the browser is running, and the CSS3 standard for cascading style sheets, which makes it possible to define shared styles and create specific styles for big displays using relative units that make "fluid design" possible, both in terms of column width (fluid grids) and image size (fluid images).

Responsive Web sites resize and adapt to all of the devices used to access them

At the moment there are very few websites that could be regarded as fully responsive, but the Web world is rushing to achieve this. For example, the website dconstruct.org, which describes itself as a meeting point for people at the intersection of culture and technology, applies this sort of technology. If you access it in a desktop browser and reduce or increase the window size you will see how different objects on the page are resized in consequence, and similarly the site will adapt to whatever device is being used for access. Another example is the website www.omusicawards.com. A responsive website to which a visit is recommended is Smashing Magazine, specialised in the "user experience", a new sort of specialisation that proves to be essential to properly analyse and design the user's navigation through various interfaces. In the words of MIT researcher Don Norman, one of the fathers and driving forces behind the concept, "It's not complexity that's the problem, it's bad design. Bad design complicates things unnecessarily and confuses us. Good design can tame complexity"[1].

By way of a summary, if one makes a comparative analysis of mobile web technologies and the development of mobile applications, it can be said in favour of the former that the service can be found through a search-engine or link, but with the disadvantages of having to be connected to the Internet and the limited use made of some of the devices' most advanced features. Until recently it was said in favour of mobile apps that they would make better use of the features of the device (push notifications, GPS localisation, camera, NFC payments, biometric security), and that they would work without a network connection, but as already mentioned this distance is becoming shorter and shorter thanks to the evolution of browsers.

The good news in the face of this dilemma is that mobile applications may not only be native, that is, run exclusively by means of calls on the mobile operating system, but also hybrid, and these are re-usable on different types of mobiles. Applications of this type do not need a network connection and achieve the goal of "build once, run everywhere" through the use of standard Web development technologies (Java, HTML5...) and a specific "container" for the device. For the user this is transparent, since they have the same look and feel and functionality as those available in the App Store. In April 2012, the Gartner consultancy predicted that by 2015, 80% of all applications developed will be hybrid, or "mobile web". It seems then that mobile applications come quite close to being the best of both worlds.

All mobile applications, be they hybrid or native, have the peculiarity that they can be downloaded from big distributors such as Apple's App Store, Google Play, Win Phone Marketplace or Blackberry World. Although it is difficult and costly to assess what proportion of mobile apps on these sites are related to digital culture, the book industry, games and education clearly have the largest presence. For example, in the Apple App Store alone one can count 26% games and entertainment, 11%

education and 10% books, amongst the more than eight hundred thousand apps available for download.

CULTURAL SENTIMENT ANALYSIS

With all the digital devices we are carrying or wearing, the quantity of data we produce is enormous. To this has been added the flood of data from social networks, and it is estimated that a further flood will come from the connected devices we shall discuss below. Furthermore, all this data is collected and analysed. There can be no doubt as to the existence of what has been called Big Data, nor can there any longer be any doubt as to the usefulness for our lives of exploiting it in real time, although there were some doubts at the beginning. The highly respected scientist Lázsló Barabási, for example, author of the influential book *Linked,* which describes the functioning of the networks with reference to the irreversibility of Big Data, predicts that its impact on our lives will be equivalent to that of connection to the Internet.

From a technological point of view, Big Data involves the use of specific hardware for the storage and recovery of large volumes of information: modern No-SQL databases; real-time event processing systems and a new generation of advanced tools for statistical analysis.

The problem is that as human beings our capacity to understand and consume Big Data is limited, so we need new solutions to resolve the problem and take advantage of the opportunity. Sentiment Analysis systems can analyse and exploit the enormous volumes of data generated by users of the social media and can support different business decisions on the basis of trends in consumption or intention to purchase, for example.

The real-time use and exploitation of large volumes of data for the taking of major decisions is a factor affecting competitiveness in any industry, including the cultural industry. For example, Big Data technologies are often used to segment marketing offers and this also applies to the marketing of books, exhibitions, films, photography, music, etc.—something which is becoming more and more necessary in view of the hyperabundance of data that afflicts us.

An ever greater impact is expected from the use and real time exploitation of Big Data with advanced tools

The value of this type of analysis in public health, global warming problems or financial turbulence is plainly accepted; nonetheless, analysis of its impact in the cultural arena is advancing only lackadaisically. At least at first sight it seems that the IoT and the Big Data phenomenon have not left much mark on the statistics for the cultural sector, although one of the hypotheses of this article is that data on creativity industries lie hidden under headings such as distribution or entertainment, while detailed analysis and case studies do reveal a greater impact than the statistics would suggest at first sight. It must be said, nonetheless, that according to an analysis by McKensey these technologies will affect all sectors, but some more than others. According to this report, in 2009 there were already 269 petabytes of education data stored in the United States and 717 petabytes of communications and media, facts which lead the consultancy to conclude that in the cultural industry, those that can most benefit are the education and entertainment sectors.

DIGITAL IDENTITY OF CULTURAL OBJECTS

Another major trend to come that has the Cloud at its epicentre is the "Internet of Things". This phrase refers to a level of the Net in which a series of intelligent things are connected together, using IP to facilitate interoperability. Furthermore, it calls for

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the use of the lightweight communications protocols that are popular in social networking, such as REST, to control devices in view precisely of its nature as a stateless protocol, that is, asynchronous and not awaiting a response. This makes it very useful in these scenarios.

A sensor is a device that detects a certain physical quantity and returns a mechanical or electrical response. They are found in every field, including electronics, mechanics and industry. The sensor picks up the signal produced by the device. Machine To Machine (M2M) technologies are part of the Internet of Things concept and the term refers to communication between two remote machines. The device or sensor connected to the machine being monitored normally possesses some degree of processing capacity and sends the information to a remote server where it is intelligently stored and analysed.

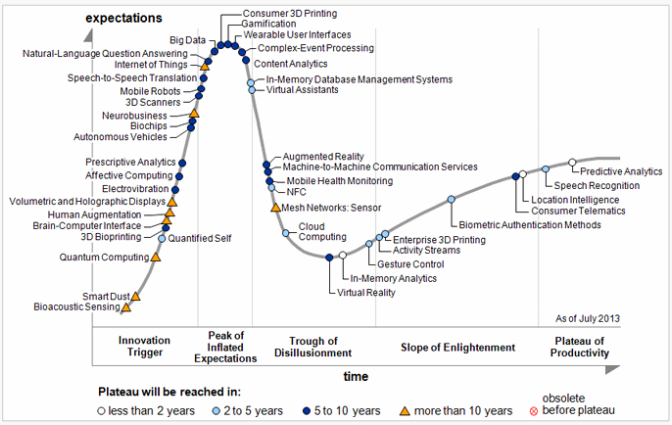
M2M has been successfully applied in such diverse fields as safety in the home and monitoring the health of dairy herds. If a cow becomes ill, the information is sent immediately to the farmer, who no longer has to spend nights awake. Modern photocopiers fitted with an M2M module can automatically request more toner or paper or alert the maintenance company of parts that have gone wrong. Nor do its applications end there.

Deutsche Telekom's M2M Competence Center estimates that there are more than 100 million vehicles, fire alarm systems and dispensing machines connected. According to Cisco, connected cars too are already a reality, and the European Union has mandated that beginning in 2015 all the new cars that are registered must have an automatic emergency call system.

But while in the fields of health and industrial products its utility is obvious, exploitation of it in the creativity industries seems to have been much more timid. Nonetheless, pictures, books and sculptures can also be identified and tracked using the smart tagging technologies. QR codes have become essential in museums, but there are many more possibilities for using labels and sensors on the art-work that can add value for the institution or company that conserves it and/or markets it, for the artist and for the person who enjoys it.

Each cultural object could be uniquely identified in the future through these technologies, a fact that opens up interesting perspectives for marketing, loaning and above all artistic and trans-media co-creation, themes which are dealt with in other articles in this Annual. We can approach an object to obtain more information by reading a QR label, but beyond this the IoT technologies combined with third-generation mobile devices can offer us new ways to experience art, helping us to have more visual and more tactile experiences.

The future of the technology points to the combination of data emitted in real time by the artistic and/or cultural objects with the information residing in business databases or in the Cloud, about me and about the tastes of others whom I might resemble, linked to new solutions for high-speed data analysis (Fast Data). Its use or exploitation is transversal across the processes of marketing, sales, loans, storage and exhibition. This could be really interesting, from my point of view, in the



GARTNER HYPE GRAPH

transformation of the artistic experience itself, as the figure tries to show in a very simplified way.

HORIZON 2020

The technology consultants Gartner annually publish their famous Gartner Hype graph of technology evolution. To understand it, it is important to pay attention to the horizontal axis, which represents a very well-known model developed by this consultancy to explain the curve of technology adoption. According to Gartner, in the most optimistic scenario technologies begin with a "technology trigger", reach a "peak of inflated expectations", pass through the "trough of disillusionment", progress to a stage of "recognition of utility" and finally some of them are consolidated and "stabilised", while others are left by the wayside and slide into the abyss as they descend into the trough of disillusionment.

With the modesty that any prediction demands, and in reverse order of appearance, probably those that will have the greatest impact on the cultural sector have already been mentioned in this article, and they are virtual and augmented reality, the NFC technologies used in mobile payments, the new wearable user interfaces, Big Data, gamification and the Internet of things we have just discussed.

According to a report by Jupiter Research, today only 60 million people use augmented reality applications regularly, although is calculated that there will be 333% growth by 2018 in the use of smart phones and smart glasses that involve augmented reality. It is also expected that by then they will have slipped out of their gaming stronghold and invaded daily life. By 2018 the same consultancy estimates that there will be 200 million users of augmented reality mobile applications. Regarding the evolution of the IoT, analysts disagree; Morgan Stanley predicts there will be 75 billion devices connected to the Internet of Things by 2020 and a market analysis by Berg Insight predicts a growth of 360 million by 2016.

CONCLUSION: DIGITAL CULTURE AT THE FRONTIER BETWEEN ART AND TECHNOLOGY

The study *Digital Culture*[2] by Aleksandra Uzelac and Biserka Cvjeticanin, published by UNESCO, begins with the following idea:

> *Digital culture is a new and complex notion [...] The new possibilities created by communication and information technologies—global connectivity and network growth—challenge our traditional way of understanding culture, extending it towards digital culture too. So that culture today must be understood as an open, dynamic process based on communication and interactivity, and we must not think of it as a closed system that turns us into a cultural mosaic in comparison with other, similar or different, cultures.*

The benefit for society of the new technological possibilities, in terms of the elimination of cultural frontiers and the cultural inclusion of the most disadvantaged societies, is clear. But not everything is positive: there is also the risk of a growth of the digital divide as the new technologies involve more complex and costly technologies[3]. Although access to the first Internet has been cheap, the world that is emerging around it is already not so cheap. Concerns over the use of Big Data to avoid our entering a truly hellish technological empire are not trivial. In this regard, in his article "Reinventing

society in the wake of big data", MIT professor Alex Pentland poses the question, "For whom is this new data-ruled world and what will it be like? [...] it is true that this new world might make George Orwell seem like a third-rate player with little imagination and that we need to think about serious issues such as privacy and the property of data". Cultural institutions and companies are the repositories of a large amount of data of enormous value from the point of view of heritage and of business and they must investigate how the new technologies can help them with their task while not ignoring the problems their use poses for society.

On the other hand, although the benefits of investment in technology in the cultural industry are clear, there must also be awareness that investment in technology does not have an immediate impact on development until management processes are adapted to the new changes. In the study Big Data: The Next Frontier for Innovation, Competition, and Productivity, by the McKinsey Global Institute, the consultancy clearly relates investment in technology with economic development through the various stages of the technological revolution, but warns that "there is a delay between investment in technology and the management innovation needed to accelerate productive growth".

Investment in technology in the cultural industries also entails the adaptation of management processes in order to generate profits

IoT and Big Data technologies may help towards better conservation of works of art and enable better use to be made of exhibition spaces, and may also contribute to achieving better exploitation and marketing of cultural products (books, photographs, music, etc.) based on the analysis of the new, valuable data available about the public's preferences and behaviour. The new wearable devices and augmented reality may help generate experiences that imply greater involvement of the senses—touch, sight and hearing—with the art object. Equally motivating, the possibility of communicating remotely with different art objects thanks to IoT technologies could catapult artistic production into places we have yet to imagine, so that cultural spaces are transcended and become new, entirely digital spaces, where the artist can generate new artistic experiences beyond a specific physical space or object.

Something like this must have passed through the mind of André Malraux when, at the height of the Second World War he described his imaginary museum as a place without bounds nor special restrictions nor temporal limits, made to measure for each person, where what one has seen there and elsewhere, what one is and what others are, are all mixed and are transformed into a world where, as he says at the beginning of the work, "a Romanesque crucifix was not originally a sculpture, the *Madonna* by Cimabue was not a painting, neither was *Palas Atenea* by Fidias a statue". Do not be led astray: no matter that a work of art is digitalised and completely at our disposition through the Net, Malraux's dream has still not been fulfilled.

NOTES

1 Donald A. Norman (2010). *Living with Complexity*. Cambridge, MA: The MIT Press.

2 Aleksandra Uzelac y Biserka Cvjeticanin (2008). *Digital Culture: The Changing Dynamics*. Unesco.

3 Google Glass Exclusion Problem. Artículo de Lauren Hockenson en GigaOM.

REFERENCES

Malraux, André (1951). *Le musée imaginaire*. Paris: Gallimard.

Uzelac, Aleksandra y Cvjeticanin, Biserka (eds.) (2008). *Digital Culture: The Changing Dynamics.* Unesco.

Wroblewski, Luke (2011). *Mobile First.* A Book Apart.

RECOMMENDED READING

Bruner, J. (2013). *Industrial Internet: The Machines Are Talking.* O´Reilly Media.

Domingo, C. (2013). *El viaje de la innovación.* PlanetadeLibros.

Marcotte, E. (2011). *Responsive Web Design.* A Book Apart.

Norman, D. y Nielsen, J. (2010). *Gestural interfaces: a step backward in usability.* The MIT Press.

Steimle, J. & al (2013). "Displays Take New Shape: An Agenda for Future Interactive Surfaces". *CHI'13 Extended Abstracts on Human Factors in Computing.* ACM Press.

Swan Jones, L. (1999). *Art information and the internet*, Arizona: Oryx Press

Weyl, E. (2013). *Mobile HTML5.* O'Reilly Media.

LINKS

Google Research: 2013 Holiday Shopper Intentions

Google Glass will expand its features into music

Seeing
the Methropolitan Museum Through Glass

British Museum - Augmented Reality: Beyond the Hype

Creating a Mobile-First Responsive Web Design
Museum becomes fully accessible to deaf people

La irreversibilidad del Big Data - Lázsló Barabási
Reinventing Society in the Wake of Big Data
Gartner Hype 2013

The Next Frontier for Innovation, Competition, and Productivity by the McKinsey Global Institute

Smart Phones, Smart Glasses and Augmented Reality to Jump 333% by 2018

Google Glasss Exclusion Problem

The Language of Content Strategy

Tedxmoncloa 2012: La evolución de las interfaces - J. Freire

The Role of IoT in China 12 years plan

World Internet Usage Stats

KPBC 2013 Internet Trends

EIU The Internet of Things Business Index

SITES OF INTEREST

www.w3.org
www.interaction-design.org
www.wearablesdevcon.com
www.mypebblefaces.com
www.sxsw.com/interactive
www.webofthings.org
www.internet-of-things.eu
www.technologyreview.com
www.fluid.media.mit.edu
www.smashingmagazine.com
www.medialab-prado.es
www.centrodeinnovacionbbva.com

THEME 5

Cultural sector marketing and consumption through digital technology

by **Esteban Trigos**
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What's new is no longer digital. What attracts attention isn't the latest model of smartphone launched a couple of weeks ago and neither is it the millions of people using a social network every day. Neither is it the application that tells you where you've parked the car, nor is it the latest thing in delivering your on-line shopping purchases as fast as possible.

The real event is the digitally everyday and the habitually digital. It is no longer newsworthy that you can buy theatre tickets via the Internet, or via your mobile phone while sitting on a bus having just seen a poster that's made you get your phone out of your pocket. The most normal thing is to ask your friends on Facebook if it's worthwhile going to see this play while at the same time receiving a reply on Twitter from one of the actors.

The important thing these days, tumultuous for some, full of opportunities for others, is to make these opportunities, these advances, help us understand the new scenario which is already here.

As Álex de la Iglesia said in his speech at the 2010 Goya Awards ceremony, "The rules of the game have changed (...) the Internet—and all the opportunities—are not the future, they are the present". It is not now a question of theorising about the "when" because that "when" is now.

The question is to define what the processes are going to be like; the platforms; the experiences; the relationship between a cultural context—of whatever sort—and an increasingly mass environment of "attention seekers", consumers—readers, concert-goers, visitors to exhibitions and so forth—who are more and more connected with each other and who are more and better informed with the power of the word that transcends their anonymity and who are capable of trashing a work with their comments and opinions.

Technological advances, above all the way they are used, have had a transforming effect in all ways: socially, in business models and, of course, in the field of culture. It should not be forgotten that technology has always been a key element. It has enabled and facilitated the creative processes and the exchange and preservation of our cultural memory. "Without some sort of recording technology, (tablets, paper, wax, electronic and analogue mechanical printing and so on) none of the cultures in which we live would exist." (Lister et al., 2009).

Over and above all of these advances there are two questions that we might regard as the supporting pillars on which the new times we are living through rest. The first is the total accessibility of the digital world, at any time, place and from any kind of device (everywhere, everytime). It is no longer

strange to see someone on the Metro watching a TED conference or 'attending' a concert via streaming whilst enjoying a day out in the countryside. It might sound futuristic, but we already know that it isn't.

The second pillar is the creation of digital spaces for conversation, interchange, and interaction between users, brands, institutions and so on as places in which opinions, about the cultural sphere amongst others, are gathered and published. Some experts call them "village squares", places where people come together spontaneously to talk about matters worldly and divine.

Cultural organisations need to consider and adapt to changes in the way cultural content is consumed on the Internet

Appearing under these platforms are communities consisting of thousands, or millions, of members who are connected and mobilised by a topic of interest. They are the people who can, in the last instance and because of their prescriptive power, say what you should read, see and listen to.

The cultural sector can not avert its view from all these changes. Users have changed their habits, their expectations and their behaviour with regard to the consumption of cultural content and so cultural institutions and organisations must also adjust to the connected workings of the Net. Many have already done so, and they are important beacons for those who are still doubting.

Taking advantage of this digital setting to reach the public does not simply mean advertising cultural events through a newsletter or creating a Facebook page—which would, perhaps, soon not be kept up to date—but improving people's cultural experiences outside the Net as well (on/off integration) and disseminating cultural content through the various formats that people use on a daily basis via the Net (tweets, instagram photos, pinboards on Pinterest, etc.).

In this article we will review some of the technological opportunities that are giving shape to this new context, where the cultural sector also resides, and whose aim is the marketing and consumption of cultural content.

We will consider who the new consumers of cultural content and experiences are, and how they go about it. All these interrelated questions and considerations provide a view of how, within the context of the cultural industries, it is becoming necessary to evolve and to take the initiative so as to adapt the cultural offerings, their content and the experience of them to the new model of entertainment that we are witnessing.

If people participate in cultural activities, in any of their expressions, as moments of leisure and relaxation, we must also recognise that we are immersed in a society in which the provision of entertainment is growing considerably.

The decision to read a book, go to the theatre, to watch a play or go to see an exhibition is in direct competition with other alternatives such as watching a film, playing with a video console or browsing the Net with no particular aim in mind. The number of different options available obliges the actors who form part of the process of cultural creation to be more innovative and creative than ever before and to differentiate themselves from, and adapt to, the requirements of ever more demanding cultural consumers if they are to succeed in attracting their attention.

On the other hand, neither is it a question of suddenly making everything digital, of converting everything into bits without previous consideration, but rather of understanding each content, each experience and reflecting on the value "the digital" provides in this cultural content, this experience and of placing it in a current context so that participation and consumption are completely natural, something that forms part of daily life.

The economist, frequent contributor to *The New York Times* and three times winner of the Pulitzer

Prize, Thomas Friedman, discusses the idea of "flatteners" in his magnificent book, *The World is Flat*.

With this term he describes the various sociological and technological events which have made physical borders almost disappear (the collapse of the Berlin wall, Netscape going public on the stock exchange, outsourcing, free access to information and so forth) and that globalisation makes itself felt through the most everyday actions.

In this article I propose to provide a similar exercise in identifying some of the "flattening" challenges that can help us to understand how the cultural industries are evolving.

A selection has been made, by no means a complete one, of the most important opportunities for making cultural content and experiences evolve at the same pace, something that they are already doing in the current context and, above all, the public to which they are addressed.

In the question that concerns us here none of the actors who form part of the cultural industry—an industry that is so necessary not only for personal growth but also for the intellectual wealth of the country—are immune from the threats that loom over it.

Mike Shatzkin (a publishing expert and digital change analyst) has said, "Everything that can be digital will cease to be physical". In many ways and in many different sectors we are already seeing that this is the case (music, films, shopping, etc.). But this evolution should not be seen as a threat but as a set of opportunities with the clear aim of strengthening and enriching cultural content and experiences.

There is no unique and decisive magic wand for going ahead successfully, what there is is an important recommendation: look around and define a strategy.

TELL ME WHICH BLOGS YOU READ AND I'LL TELL YOU WHO YOU ARE

The only true aim in creating cultural content and experiences, be they the publication of the simplest story; a play performed on the tiniest of stages; installations and shows such as those of the Cirque du Soleil or art exhibitions that have people queuing round the gallery and down the street to get in; is that the public, the readers, the visitors should enjoy themselves and escape from reality for a while, and that everything they see, hear and feel should make them question themselves about what they know and believe. That they should imagine themselves to be in a different time and place and forget who they are and where they are and let themselves be carried away by the moment. That they enjoy the experience and enjoy themselves. In large measure Stendhal's syndrome is an accurate diagnosis of these sensations.

The changes are not threats, but opportunities for enriching the cultural experience by observing the environment and defining strategies

Wanting to know every detail about consumers seems to be something that has flourished only recently, but it is not as new as people think. In 1967 the advertising executive Lester Wunderman, he of the well-known advertising agency of the same name, was already working on a methodology which today we know as direct marketing. It was founded on the idea of having very detailed knowledge about people's purchasing habits in order to adapt supply to their real needs.

Formerly, sociological studies concerning an objective public that would be impacted by an advertising or commercial message, or in other words, purchasers of a product, were carried out under sociodemographic criteria which gave as a result the most heterogeneous groups such as men

between the ages of 25 and 35. It didn't make any difference whether they smoked, took part in sport, or watched television at night.

Nowadays, we have completely segmented and diversified publics who, even if they have things in common between them, are totally different, not so much for what they are, but for what they do in their lives. The fragmentation of these groups can be as wide as the "digital" segmentation criteria used.

What media (digital ones, of course) do these users consume? Where? Do they read blogs, if so, which ones? Do they share their photos on Instragram or on Pinterest? Do they prefer to talk to their friends and family through WhatsApp or Facebook Messenger? And even, what's their attitude to downloading content? Do they prefer to use methods of dubious legality, or do they prefer to pay a sum of money in order to ensure that they have paid for what they want to see? Do they read books published on paper or on an e-Reader, or both? If the latter is the case, what are their criteria for buying one book made of paper and another one in digital format? Do they find all the details of the works they will find in exhibitions they intend to visit through blogs, Web sites and social media or do they prefer to leave it all to chance? What applications have they got on their smartphone? Do they use it to generate content and publish it on their social profiles? And so on and so on, broadening knowledge about the consumers of cultural content as detailed as the segmentation criteria adopted.

It is the digital consumers, guided by the use of technology, who are transforming the business models

At the present time it is digital consumers, through their behaviour guided by the use of technology, who are transforming business models. They are not content with what they have in reach of their hand or mouse and they feel motivated and prepared to go in search of new cultural content and experiences that will satisfy their need to know what's new, guided in the vast majority of cases by the recommendations of their closest circle.

We can put to one side the classical typology of users: digital natives (under 35 years of age), those who have adapted (between 35 and 55 years of age) and the reticent (over 55 years of age). What we find are consumers who want to form part of a cultural experience who, without doubt, know that it is in the digital space where they will find the whole value chain (information, e-commerce, criticism, recommendations, new things, opinion and so forth). People may be more or less agile in having access to these resources but there can be no doubt that it is here that all the potential for creating this bond, this connection between the content and the consumer, resides and that is the case for any of their cultural expressions.

Everything revolves around the idea of being customer-centric in which the key issue is the process of getting to know the users and their behaviour. It is a question of placing the consumers in the middle of the marketing plans and of understanding them as the key link in the whole of the value chain. It is in this way that the model that was in use is evolving and being rectified because within it there were no powerful arguments for considering the consumer as just another link, and in the vast majority of cases, one that was found at the very end of the process. Marketing tended to take for granted that the consumer would always be there, loyal, docile, and receptive to any action or message. Events are confirming that this is no longer the case.

Customer-centric models are based on strategies whose main aim is to align the conceptualisation, development, and marketing of content—and the brand behind it, be it personal or commercial—with the needs and wants of the customers who are most valuable, active or who even have the greatest prescriptive power.

In an excellent article in *Forbes* magazine Martin Zwilling said that there are four key factors for defining a customer-based marketing strategy for products or services:

1. Accept that all customers are not the same. To this end, and with prior knowledge, a selection must be made of those on whom attention is to be focussed (young people, for example, *Harry Potter*; women, for example, *50 shades of Grey*; freaks, for example, *Game of Thrones…*). An accurate selection can make it possible to create clearly different forms of content.
2. Customers with a track record. It is not a question of having one hit but of cultivating and enchanting a public that could plant the seeds from which a loyal community could grow. Think of them as companions on a long and enriching journey.
3. The cost of a new customer. A very expensive creation in terms both of time and money. It might not be the best offer for the kind of customer who is looking for more superficial, more immediate and more readily consumed content.
4. Personalisation as a good move. If a formula for success exists it is this: give customers what they want, adapt—insofar as possible—the creation and the content to their tastes and expectations. If this is the case, they will feel they are being listened to and recognised, and furthermore they will share their gratitude with their followers.

If there is somewhere, a digital space, that complies with all these recommendations while also giving a voice to users, thereby strengthening the customer-centric concept, then that space is occupied by the social media. In any of their forms (generic, for photographs, messages, etc.) they are places for meeting and participation where the lives of the users take place. It is not even possible to talk of "another life" or their "2.0" life. It is the same life, the same day-to-day life, told in timeline format.

Their profiles show where they have been through geolocation applications, what they have had for lunch through photos of the dishes they have eaten, what music they have been listening to, what links they have shared and what they think about the day's news.

And they will, of course, have had time to give a "like" to the amusing photos posted by friends and reply, in private, to their girl or boyfriend about the weekend away that they are planning. Additionally, they will at last have received a reply from the airline company with which they wish to book a flight telling them how much it will cost to take their bicycle with them and, since they will have had a few spare moments, they will have used them to make a note of the reference number they have noticed on their favourite complementary items Web site of the new backpack that want to carry their laptop computer in.

In a scenario of connected consumers, it is important to be where the users are, listening and contributing, but without invading their space

Some experts call this lifestreaming and it refers to the retransmission in digital format of the stream of events in daily life. For most people it is a behaviour that verges on the narcissistic and superfluous since it shares information that is not at all relevant to the rest of the community. For others it is an absolutely daily activity.

Such behaviour, totally natural in most cases, represents the opportunity that presents itself to those who administer cultural content and experiences to reinforce the bonds with users, to get to know them more and better. The strategy consists of being where the users are, listening, helping, collaborating, accompanying, contributing, but, above all, not encroaching on them, not invading their space.

Publications whose usefulness is beyond doubt, recommendations for a book or author about a topic that is becoming the centre of debate, an invitation to see a contemporary art exhibition because it is

known that this user is keen on art, these are small actions that generate big responses.

To this should be added the fact that an opinion published about a work or a book, or feedback about an exhibition that has been visited, becomes an interaction of enormous value since it comes from the right context and is intimately related to the cultural discipline in question.

To sum up, the idea is to exceed users' expectations, to understand that their activities and behaviour in the digital conversational space is providing clues, leaving a trail of crumbs along the way, through which to participate in their conversations and offer content and information of value.

Becoming part, always in a natural way, of users' digital lives, with presence but without insistence, is the natural evolution that actors in the cultural industries must adopt.

With the tools available it can be determined when the presence of a publisher or curator of an exhibition is necessary and opportune and when it is better to stay listening, waiting for the opportunity to intervene.

WHAT YOU SAY SOUNDS FAMILIAR, DO YOU COME HERE OFTEN?

There are, within this new setting of permanently connected consumers, two core aspects when it comes to learning who the consumers are who interact and participate in cultural experiences. The first is the massive participation of users in all the spaces for digital conversation (be they on general topics, or private areas), and more specifically in the social networks. Secondly, companies' and institutions' capacity to monitor, listen and filter all the conversations, opinions, references and so forth published by means of them.

Furthermore, we should not forget that almost 80% of Internet users habitually use the social networks (*Estudio 2012 del Uso de Redes Sociales en España,* IAB) [2012 Study on the use of social networks in Spain, Interactive Advertising Bureau - IAB]. In our country 8 of every 10 Internet users between the ages of 18 and 55 years of age use the social networks and devote more than eight hours a week of their time to interacting with the content and with the friends they encounter there.

This combination has all the elements needed to provide rich opportunities for defining plans for establishing contact. These plans should work in two ways, firstly they should aim to broaden and strengthen communication with consumers, and secondly they should create an ever more relevant brand image for the institution or company concerned.

The arrival of 2.0 tools, and more specifically that of the social networks, makes it possible to be watching, listening and observing what is going on in the cultural sector to see who is talking, and what they are saying about the last book they read, what they thought of their last visit to the International Contemporary Art Fair (ARCO), what their opinion was as they were leaving a concert at the auditorium. They make it possible to scrutinise customer behaviour, and in great detail. It is also possible, something that is almost *de rigueur*, to identify who the incluencers and prescribers are, these are the people who use cultural content as the basis for their publications and who, to a great degree, stimulate and interact with this sector, bringing thousands of followers along with them. To sum up, it is necessary to know who is out there and how relevant they are within the community.

If we talk about getting to know our public then, logically, we must talk about Customer Relations Management, or CRM-based strategies whose aim is to typify and segment each user on the basis of three kinds of information. On one hand, socio-demographic data (age, sex, level of education, city of residence, etc.) and on the other hand, data that are more based on behaviour in relation to the

industry or brand that give body to this strategy such as how many and what kind of books people read, if they go to exhibitions, if they often go to the theatre, their musical preferences, where and how they buy their tickets, etc.

But now, due to the intensive use of social platforms, there is a third criterion for achieving this segmentation, and that is the level of relation and interaction of users within the social networks. What is their activity like, is it sporadic or frequent? Do they interact with specific groups? Do they habitually share content of interest? Are they considered to be prescriptors, opinion leaders, or are they users who are interested in specific topics? How many followers have they got? What kind of followers are they? Are they producers capable of generating content, or are they just dispatchers who distribute what they receive? Do they regularly update a blog with cultural information? Do they establish links with other followers? And so on.

Social CRM consists of identifying and actively listening to users via the social media

In the world of marketing special attention and large resources have always been devoted to creating CRM models and setting up solutions that help the brands to identify the users who relate with them, and get to know them more and better. The aim of seeking this broad relationship is no other than to learn about their behaviour and to create a more personalised communication strategy, one that is more closely based on fulfilling their expectations and that is completely adapted to their tastes and preferences.

Now, with the arrival of digital spaces for relation and conversation we are faced with a new model that is key for learning more about users: the Social CRM.

Three starting points can be observed. Firstly, according to a study carried out by The Cocktail Analysis consultancy (4th wave) 65% of users on Facebook have relations with brands and 32% on Twitter. Here we have our first conclusion, namely, the greatest engagement between brands and users is on Facebook, advantage being taken of the fact that there is no limitation to the length of the message to be published and there is the possibility of adding support material such as a photo or a video. Furthermore, any other user following this profile can leave a message or simply say they like the content. It is important to remember that in some cases, this can mark the point where a more profound conversation or reflection can commence.

Secondly, a report by the CMO Council in December 2011 indicated that 80% of consumers say they are more likely to try new products and services when they receive recommendations for them from friends in social networks.

And finally, a report from the McKinsey consultancy in June 2009 stated that two of every three information points influencing purchasing decisions were not generated by the companies involved but by other consumers. That is to say, it is the community itself that determines and defines the behaviour of the members of the group with regard to recommending purchases.

Everyone knows that a recommendation to visit an exhibition that comes from a member of the family or a close friend is always more important to us than one that can be read in a Sunday cultural supplement section of a newspaper. When speaking of "the power of the recommendation", the credibility and trust in the source of that recommendation counts for everything.

With this data we can say that in today's digital spaces a philosophy and a strategy are being created and designed to link customers to collaborative conversations in pursuit of mutual benefit: customer loyalty with regard to the cultural content they demand and, from the company's perspective, knowing, better than ever before, what consumers want with regard to content, timing and form.

As well as the advantages already mentioned there is one which stands out from all the others on account of the results it achieves, results that have been confirmed by companies that have already taken these steps. That is, direct contact customer care, without intermediaries and without telephone calls on hold waiting for an answer.

If a reader wants to ask a publishing company about the date of publication of a book or when it will be available as an e-book, or if someone wants to know if a particular work of art is to be included in an exhibition, or even if they want to ask the author of a work something specific about their work, they do not need to be listening interminably to music played down the telephone while they think about how expensive the call is going to be. It is likely they will receive an almost immediate response through a contact that is totally personal and direct.

Apart from technological questions such as platforms and tools, which are obviously not without importance, the cultural industries are facing the great challenge and, at the same time, have the great advantage of defining, together with the users who consume their content, what the next years are going to be like. There is no excuse for a large publishing company or a small theatre group not identifying their audience, their public, and establishing a broad relationship with them in which both parties will always benefit.

Of course there must be some aims, to increase sales, the launch of a new title, to promote an exhibition, but what is more important than all this is to strengthen the social and participative aspect. These are collaborative spaces in which, in many cases "persuasive" tactics are not totally rejected. In this regard, there are four points that define what social consumers who actively participate in these spaces are like.

1. Social consumers are consumers of information. According to a study carried out by Nielsen, 70% of Internet users trust the comments and opinions made by other consumers via online media.
2. Social consumers produce information. These kinds of users immediately share their experience. Consumers who are the passive receivers of messages are disappearing; new consumers consider themselves to be active, they want to be recognised for publishing and generating content of interest for the entire community.
3. Social consumers are mobile. The apps and social networks connect the consumer to groups that are akin, even at the moment of purchase. They have access to the information they need before making the decision to buy.
4. Social consumers want mutually beneficial relationships. They want to be treated on equal terms and do not want to be accosted or pursued by advertising, superfluous promotions or commercial messages. They want their questions and doubts to be answered honestly and they want those answers to provide solutions.

One of the greatest benefits of adopting a Social CRM is the creation of a new point of contact with the customer, and in this case, one of great value. Until now communication was very unidirectional, both nodes sent messages, but there was nowhere for them to connect. Now, with the social media, customers know that there is somewhere where they can have greater contact with the cultural content they demand.

In the words of Molly Barton, global strategy director for the Penguin publishing company, the publishing industry must achieve a greater level of collaboration with their readers via the social media.

There are advantages for both parties. There are advantages for companies and institutions because they can avail themselves of a space for promotion, information and debate that is ordered chronologically and with tools that enable them to learn about the behaviour of their audience (what they like, when they read their publications, what country they are in when they seek access and so forth) and there are advantages for consumers

because they find a place where they can resolve their doubts and keep up to date.

In fact, any CRM strategy is based on two principles: on one hand, actively identifying and listening to users, consumers, readers and creators and on the other hand, using this information in a logical and astute manner.

At the present time any brand can, with conversation administration tools in the social media space, analyse the tone and feeling of this conversation, find out what a particular consumer needs or resolve any specific issue that might crop up. They can, and should, participate in these conversations through their Community Management teams in order to make their point of view known and, above all, provide real value to the conversations.

Adopting a plan for use or a strategy in the field of Social CRM is key for defining what aims are to be achieved.

All the considerations made can be resumed in aims to be achieved in any Social CRM plan.

Here are some of the most important ones:

1. To increase the engagement and prescription marketing ratios.
2. To increase online and offline channel conversations.
3. To increase the utility of customer care responses.
4. To integrate marketing, sales and customer care.
5. To improve customer knowledge.
6. To strengthen the digital reputation of the brand or institution heading the strategy.
7. To place the user at the centre of the strategy. All actions must start and finish with the user, that is to say, they must be customer centric.

In the coming years there will be more people who, through their participation in the digital conversation space, will volunteer their data, profiles, and preferences to groups in a totally spontaneous and natural way to give shape to new products and services.

By means of social networks, stories, electronic commerce and infinite lists of reading matter, videos and music, connected consumers are going to create extensive profiles and trails of data that will encompass information from their cultural preferences to their daily movements.

This means that the people connected will mature through the tendency towards crowdshaping: new products and services being defined by the aggregate preferences and behaviour of groups of consumers, large and small, as expressed by their data. Furthermore, the technologies that enable the creation and passive comparison of these data flows will become even more omnipresent.

Connected consumers are going to create extensive profiles and data trails that will make it possible to assess their activities and relevance

At this point it will be the communities themselves that, through their natural behaviour, will be sending the message about what cultural content they want to consume and enjoy. And that, without doubt, will be an important statement of information because nothing and nobody will be able to prevent them from taking up the challenge of creating it themselves if they have not got it.

Users already participate in the social networks in a natural way by interacting with their friends, family and colleagues. They comment on daily events, share news and content, publish their personal photos and so on thereby making these spaces an extension of their "analogue" lives. Of course, they are also spaces where they ask for recommendations when it comes to making a decision within the cultural sphere. Is this exhibition worth visiting? Is Arturo Pérez-Reverte's latest book as good as they say it is? Is that going to be an unrepeatable concert at the auditorium?

The initiative taken by the administrators of these spaces on behalf of brands, publishers and institutions is the key to giving an enriching service to these communities. When a user converses or publishes news about the economic crisis a publisher should participate and add a reference to one of its new titles on the economy; when someone comments about the light at dusk in a published photograph the organisers of an exhibition can recommend one of the works on display. An opportunity can always be found for communication that promotes and boosts a cultural content.

It is a question of social participation, but by adding value, having knowledge about who this user is (CRM), their activities and behaviour, how influential they are within their community and how relevant they are within it. Having identified this group of relevant users, many brands offer them the possibility of becoming a kind of ambassador for this activity or cultural content.

ON AND OFF. UNITED FOR EVER

If we have to define the great challenge, and of course it is also a great opportunity, facing cultural activities and content, it is the integration of their traditional activities, let us call them offline activities, with the new opportunities that exist in the digital sphere.

Events, launches, marketing actions and *mise-en-scène*, need to be reinvented and those behind all these processes need to exercise themselves about how to make their tasks meld with the new setting. The protagonists of the acts of creation, production and marketing must bear a new factor in mind, a new element which is of extreme importance since it defines everything: the digital is becoming the "glue" that is binding everything together.

Although it might be thought that all these changes appeared from one day to the next, if we pause to look to the past we can see that in the 1950s the cultural sector also had to evolve.

After the end of the Second World War the market for paperback books began to expand noticeably. During the war the historian and scholar Philip Van Doren Stern carried out a project for the US Army with the aim of making cheap paperback books available to soldiers. The important thing was not elegant binding or typesetting, but that the book should weigh as little as possible and be manageable enough to go in a soldier's backpack.

After the war mass publishing expanded greatly. The large publishers of the day (Ballantine, Bantam, Signet and so on) started their activities during these years. The key to the mass market was distribution through the network of wholesalers that placed magazines in newspaper stands and small shops, often chemists, throughout the entire US.

The great challenge is the integration of traditional activities with new opportunities provided by the digital world

In contrast with traditional books distributed to bookshops which required a special agreement between the publisher and the bookshop before a book could be displayed on the shelves, the "mass markets" were allocated by the publishers to the wholesaler who, in turn, distributed books to the points of sale controlled by them.

This method had obvious advantages. It enabled thousands of copies to be distributed to a host of places with much lower distribution costs and this system meant that tens of thousands of points of sale were available throughout the country while there were bookshops in only a couple of thousand locations.

The result was revolutionary. The greater availability of these titles, in combination with their much lower prices, created legions of new readers, and therefore consumers, who were completely enthused with these products.
In this case the publishers' association had to adapt

to circumstances and devise a new way of getting their books to readers. This new product made them realise that there was a different way of distributing them by taking advantage of a wider commercial network. It is quite probable that this was one of the first evolutionary processes an industry had to embark upon in order to survive.

The threats facing all the actors who intervene in the generation and distribution of cultural content mean that the future will consist of integrating their initiatives within the digital ecosystem we live in. To the processes we can already see occurring, the success of which nobody doubts, must be added a new layer to add the value demanded by the present-day consumer, the same consumer that moves in an entirely online environment.

Models are needed that integrate the digital consumer with experiences in a physical place and which turn the digital into a consequence of the physical

According to Antonio Mías, an expert in the cultural industries, bookshops start off from a very disadvantageous position for two main reasons, overproduction of titles and the shortening of the life cycle of the products. Personally, I would venture to say furthermore that in many cases their sales conform to the Pareto principle (80/20) in which 80% of their sales can be accounted to 20% of the titles which, in the vast majority of cases, are of bestsellers. They could be regarded as seasonal sales associated with particular dates such as Christmas time and the occasions for launching bestsellers.

Frequent readers are becoming more divorced from bookshops. They are no longer the place to spend hours leafing through books searching for something new or a rarity. There is no longer time for customers to chat with booksellers and listen to the recommendations they make in the knowledge that the customer will leave the shop with a couple of books tucked under their arm. People hardly even order any books from bookshops. Any bookshop on the Internet is bound to have it, and it will hardly even take a couple of days to arrive.

The ROPO effect is happening in the retail sector, that is to say Research Online, Purchase Offline, but the other way round. People prefer to look in shops, touch things, leaf trough them, look at them and end up buying them on the Internet, taking advantage of all the convenience of having things delivered in almost 24 hours. In the first pages of the book *Crossumer. Claves para entender al consumidor de nueva generación*, Víctor Gil and Felipe Romero provide a detailed analysis of this new purchasing habit.

It is certainly the case that this phenomenon is occurring in all fields such as fashion, electronics, travel and so forth because consumers still want to know, touch, smell what it is that they are buying.

This effect is also generating a very unfavourable situation for bookshops because they have to assume a whole series of costs for shop rental, employees' wages and so on just to stay open as a showcase for their products, but without putting any money in the till. The customer then goes home and makes the purchase from there.

Putting price policy and customer experience to one side, what is needed is the definition of a model that integrates the new digital consumer with experiences in a physical point of sale—the bookshop—that connects the purchasing process with new reading habits. It is sufficient to say, for example, that only 36.6% of bookshops have their own Web site, so there is still a long way to go.

Some studies recommend measures such as giving customers a digital copy of the book for free or at a symbolic price when they buy the paper version. Others propose recovering bookshops' role as meeting places, places for debate and the exchange of ideas, giving importance once again to the idea of the face to face meeting, the warm glow of conversation and the chat over a coffee.

Another recommendation is to convert the

bookshop into a co-working model, a place people can go to work, read their e-mails, participate in talks about literature or reading groups and so forth while they leaf through and comment on publishers' latest offerings and, of course, buy books. An outstanding example is the case of the Tipos Infames bookshop which defines itself as "a bookshop specialised in fictional literature that also offers other services including a café, wine cellar and exhibitions". This bookshop, located in the centre of Madrid, has known how to reinvent itself, above all, as a meeting place, and as a beacon.

It goes without saying that the physical experience, what really happens in a bookshop, is something that can never be digitally substituted. And it is here, in redefining the customer's experience, in creating new values, that the digital withdraws into the background where it forms just part of the new model of bookshop.

We are faced with the reinvention of bookshops, museums and cultural spaces in all shapes and forms. In the cultural industries there is much at stake in the process as they seek to find these points of contact between customers and the content of any of the existing spaces and settings.

The aim is to live and participate in cultural content and experiences, where they originate is no longer of any great importance.

According to Javier Celaya, one of the leading experts on the cultural industries in our country, "There will be booksellers who want to stay in business and they will do everything possible to keep up to date and maintain their position, and to do this they will transform themselves gradually according to the changes that take place. There will be others who are not interested in the new model of bookshop because it does not conform to the idea of what a bookshop should be which they have had all their lives and they will allow their bookshops to bid farewell along with their careers as booksellers".

It is the eternal debate about how a totally analogue sector (atoms) is to adapt to the new digital environment (bits) and one that already has an antecedent in the music sector between record shops and platforms such as Spotify.

Last August the US edition of the *Huffington Post* published an interesting article proposing 28 ideas to "save" the bookshops based on proposals that some bookshops had already decided to implement. The majority of them have a point in common: to create and strengthen the greatest bond with the community of readers/customers using every available channel such as social media, the sending of newsletters, etc.

On the other hand, we can not, and do not want, to forget the "romantic" side that books have as one of the objects most evocative of thought and memory. Few "attainable" pleasures exist such as that of entering a bookshop with its heady smell of paper, ink, of books waiting to be opened, the recommendations of the bookseller, who knows you, the joy of collecting this book that at last has been published after weeks of waiting.

According to this study 62% of young people between 16 and 24, the so-called digital natives, prefer to buy books made of paper rather than ebooks

The strangest thing is that the paper book is not as dead as some would have people believe. According to a survey carried out by *The Guardian* newspaper on 25 November 2013 amongst students in the United Kingdom, 62% of young people between the ages of 16 and 24 years of age, the so-called digital natives, prefer to buy books made of paper rather than ones in digital format. The study suggests two reasons for such a result.

The first is that the perception of value is greater in the case of a paper book on account of its being a tangible object. Many people, 28% of them, think that the cost of e-books is expensive while only 8% think their cost is correct. The second reason is that the paper version is attractive because of the way it

feels, the way it smells and the fact that, once read, it can be sold and part of its original purchase price recouped. Furthermore, people say it is easier to lend to someone else.

The study also publishes some of the comments made by those interviewed such as, "Books are status symbols, you can't really see what someone has read on their Kindle".

These are crucial days for the cultural sector in which a determined effort must be made to get ahead. In many cases a "paralysis of analysis" can be observed in which nobody makes a move until they see what other people are doing and so on successively. Meanwhile, the "great digital protagonists" are forging ahead, occupying ever more of the terrain once held by bookshops.

All the people involved, authors, publishers, bookshops, have to realise that they are obliged to understand each other with the aim of evolving towards a model that is sustainable and comfortable for readers.

One of the consequences of this integration between the two environments is the disappearance of intermediaries. Authors, working in any format, no longer need the whole administrative chain of publishers, curators, distributors and marketing, etc., to make their work known throughout the world. There are hundreds of initiatives, mostly quite significant ones, that enable any artist to publish and make their work known via the Internet.

Today's authors participate very actively in marketing actions to make their works known. They themselves keep their profiles up to date in the social networks, replying to followers and generating interaction through the content they publish to achieve greater exposure for their works and their creative process.

They are the ones who converse with, encourage and stimulate their audiences with various events to make their work known. They even venture to join movements and groups that support the enterprising, the ones that can decide to unleash a veritable army of departments, assuming a loss of security in return for the gain of liberty.

They are the creators and administrators of culture with a digital frame of mind, they are hybrids between the physical and the virtual, with flexible time and space.

To borrow an idea from Ludwig Wittgenstein, who said that the limits of the world were the limits of language, it can be acknowledged that technology offers a concept of culture that can be extended to limits that are hard to imagine.

The language that has been spoken for some years now, is digital. It has its own codes and behaviours. It redefines what is understood by participation, conversation and even collaboration.

MICROTHEATRE. WHAT'S NEW IS ON THE INTERNET

The question of what the model for integration between the digital and the traditional might be like is not confined to the world of books. All the other cultural expressions are living with the same doubts, and the same passion, about how to embark on new paths that will enable them to regain their balance and become beacons for others in the way they bring value to the cultural experience.

An outstanding and curious case is that of Microteatro por Dinero. It is curious because of the concept behind it and because of the form in which its content has been propagated through the social networks, from mouth to mouth, causing a resonance in the media that would otherwise have been impossible from the financial point of view.

In a venue formerly used for having a drink and "other things", and taking advantage of the layout of small rooms, the authors have reinvented the concept of theatre through the performance of micro-works lasting no more than 15 minutes, for an

audience of a maximum of 15 people that is integrated in the work, in a room no more than 15 square metres. According to its creators, "Microteatro por Dinero is much more. It is a multifunctional space in the centre of Madrid where there is also children's microtheatre, micromagic, art exhibitions and so on".

Such has been the success that it has attracted the attention of producers of shows and musicals *(The Lion King, Mamma Mia!)* and preparations are already underway for "Microtheatre for a micromusical". Meanwhile, international expansion has spread to countries such as Mexico.

When talking about online/offline integration strategies the social networks offer low-cost solutions, but with great impact

The idea Miguel Alcantud had for Microteatro por Dinero is the best example of how the use of digital channels (practically without cost) together with a strategy based on building one's own audience/public through the proposal of a different model, is one of the solutions that the cultural sector needs and, above all, it provides confirmation that the union of the traditional (offline) and the digital (online) has a great future in store for it.

When talking about online/offline integration strategies it is not necessary to think about large and costly actions. In many cases creativity and imagination by far make up for any excess of financial resources. If the question is taking the initiative with simple and very low cost actions the #Thyssen140 initiative by the Museo Thyssen is an interesting example. It is carried out by the artistic director of the gallery himself, Guillermo Solana, and it consists of him presenting and explaining the works held by the gallery to the followers of his profile on Twitter, by means of tweets. Brief explanations are given during the course of the day about one specific work in order that followers might discover more details about it. It is certainly an original and curious way of bringing art closer to the public.

At this point it would be irrelevant to fall into a facile debate about whether the offline world is better than the online one if one of them provides certain experiences which the other one is incapable of even approaching. It is much more important to realise that both worlds must work and be understood together, because it is possible.

(MICRO) INVESTS IN THE CULTURAL

Until some years ago the cultural content that was consumed was, more or less, established. It might be said that it was one-way intellectual communication whereby creators of works showed the results of their labours and left it to consumers to enjoy them. The spectators or the readers had not participated at any time in either the conception nor the creation. They were simply there, contemplating the work with all possible admiration.

We have constructed our cultural references, in any of their artistic expressions, and independently of the preferred places for them, through experiences in which we have found a kindred spirit, or not. The sense of curiosity, desire for beauty, our concerns, the need to know, the urge to live through a different story are some of the motives that connect consumers to works of art.

The arrival of crowdfunding, also known as crowd-sourced fundraising, has given the consumers of culture the opportunity to decide about which content they want to leave their personal mark on, feeling part of it, making it their own. This movement has become an inspiration for establishing a source of alternative funding within the cultural sector.

In Spain most of the projects funded through crowdfunding today are cultural ones related to the audiovisual world, music, cinema, the performing arts and literature. Many of the 60 platforms that can now be found in our country are focussed on

culture, from general interest where culturally themed projects of all kinds can be found, to the specific, such as the crowdfunding platforms focussed exclusively on books, music or audiovisual content.

Various promoters of cultural projects are opting for crowdfunding to bring their projects to fruition. The decision to do so is the moment of truth. Will they raise enough funding to go ahead?

The aim is to put creators in touch with patrons through these online platforms so that they can explain all the details of the kind of work they want to create, the ways and means of doing so, and the kind of collaboration they are seeking. In most cases this collaboration is financial, obviously, but there are other kinds of sponsorship such as the provision of technical equipment and the like.

It is very important to state the kind of recompense the patron will obtain as a result of this microsupport. On one hand, it is tacitly understood that it will be the enjoyment of the work, be it a book, a documentary, an exhibition or whatever. But there are other benefits of greater value such as meetings with the artist, exclusive access to the opening, meetings with the authors, unpublished extra material or even exclusive editions, differentiated from the versions produced for the mainstream public.

Financing a project of any kind through crowdfunding is a very intense task before, during and after the specific time during which financial assistance is being sought. At any given moment the viability of the project depends on a goal there is no certainty of achieving. But once that goal has been achieved it shows that the creative effort can be equated to the effort of searching for the means to make it a reality.

Crowdfunding was, without doubt, the buzz word of 2013. It became known through attempts to raise support for what were basically technological projects with a grand vision of disruptive innovation. The idea has only been around in the cultural world for a few years. Many people call it a strategy for survival while others prefer to speak of it as the way in which new collaborative dynamics are appearing between agents and consumers who wish to have a greater involvement in the processes of cultural creation.

This new way of raising sufficient funds to create and publish the proposed work makes it possible for people who are passionate about culture to fulfil one of their dreams, namely, to be able to participate and decide if a work, a literary creation, stage set and so forth, deserves to be brought into existence and be shared with the public, and more especially, with the people who made it possible.

According to the *Crowdfunding Industry Report* drawn up by the Massolution agency which evaluates the use and evolution of crowdfunding, the figures for 2012 can only confirm this tendency. This kind of funding moved no less than US$2,700 million throughout the world through more than a million campaigns. The as yet unconfirmed figure for 2013 is likely to have been in the region of US$5,100 million.

Through crowdfunding institutions can mobilise art and culture lovers so that they participate and become committed

In our country the most representative example of this was the full-length feature film *El cosmonauta,* the making of which was an example of how it is possible to make high-quality audiovisual content through this kind of collaboration.

The project was conceived in 2008 as a short. By the beginning of 2009 it was decided to fund it collectively through crowdfunding at which point it became a project for a full-length film.

May 2011 was the project's most difficult moment when the Russian producer who was committed to funding part of the investment decided to pull out. The people in charge of the project asked for extra

efforts to be made to raise the necessary €40,000. The "Save The Cosmonaut" initiative managed to raise €130,000.

Finally, on 14 May 2013 the film was premiered with three sound tracks, 80 minutes of feature film and 80 minutes of transmedia material.

These four years of struggle represent the largest collective funding project in Spain. Of its budget of €860,000, by the end of 2012 half had been raised through crowdfunding in which 598 investors and more than 4,000 producers (on a private basis) had participated.

The project was also innovative in terms of its distribution because it was premiered at the same time in cinemas, on television and on-demand video platforms. Needless to say, since the day it was released, it has been available on the Web.

At the other end of the scale in terms of project size is the case of Garrido Barroso who wanted to fulfil his dream of publishing 500 copies of his own comic of 48 pages in an always elegant black and white. It tells the story of a zombie who isn't a zombie. Of course, he achieved his aim. Called *Solo,* Garrido's comic went on sale in 2011. Its author saw his dream come true and comic lovers could enjoy an almost exclusive publication.

Crowdfunding is a movement that is gaining ever more acceptance in our country, where finding funding for cultural projects is not easy. In part this is due to the quality and definition of the projects for which funds are being sought and in part it is due to the natural selection carried out by the "micropatrons" as they decide where to put their contributions.

The Verkami, Goteo and Lánzanos platforms and La Tahona Cultural, a portal specialised in connecting patrons and creators for cultural projects, have become key instruments because they gather together all the projects for which funding is being sought, all the information concerning the project and, above all, information concerning the benefits to be obtained by those making a contribution.

In other cases it is the institutions themselves that publish requests for collaboration with the aim of mobilising art and culture lovers so that their commitment goes beyond mere attendance. The world-famous Musée Louvre in Paris has used this collaborative movement with the aim of raising funds to restore some of its most outstanding works, such as the sculpture, the *Winged Victory of Samothrace,* the restoration of which should commence in 2014. As in all fund-raising campaigns, to achieve a high degree of resonance and success a powerful and evocative slogan is required, a promise of compensation for the donor, and a motivation. The slogan chosen by the Louvre for this campaign was "We are all patrons" and those who collaborate will obtain, amongst other benefits, recognition on the part of the museum and admittance in private visits.

As Jose Ramón I. Alba, the collaborator in Ediciones Simbióticas and head of #ThinkZAC has said, "In Network society merit does not lie in what we are assumed to be, but in what we are worth through the contribution of ideas, what we participate in, our real knowledge. (...) Physical and hierarchical intermediaries disappear, a structural change for the new models of local culture: the filter through the networks of creation. Collective intelligence is what constitutes culture."

BIBLIOGRAPHY

ABC. "Microteatro por dinero". 29/03/2013. http://www.abc.es/20120329/local-madrid/abci-microteatro-dinero-cuando-duracion-201203281659.html

Alsina, Pau (coord.). "De la digitalización de la cultura a la cultura digital". *DIGITHUM. Las humanidades en la era digital*. UOC. Mayo de 2010.

Celaya, Javier. *La empresa en la web 2.0*. Gestión 2000, 2011.

Dans, Enrique. *Todo va a cambiar*. Deusto, 2010.

El País. "La revolución del microteatro se consolida en México". 27/09/2013 http://cultura.elpais.com/cultura/2013/09/27/actualidad/1380241371_359048.html

Friedman, Thomas. *La tierra es plana*. Martínez Roca, 2006.

Gil, Víctor and Romero, Felipe. *Crossumer. Claves para entender al consumidor español de nueva generación*. Gestión 2000, 2008.

Lister, Martin et. al. *New Media: A Critical Introduction*. London, Routledge, 2009.

Mías, Antonio. Articles. 2010-2013. Antoniomias.com

Polo, Fernando. *Social CRM. Definición, retos y oportunidades*. Slideshare. January 2013.

Polo, Juan Luis and Polo, Fernando. *#Socialholic*. Gestión 2000. January 2011.

Santos Redondo, Manuel (coord.). *Economía de las industrias culturales en español*. Ariel and Fundación Telefónica, 2011.

The Guardian. "Young adult readers 'prefer printed to ebooks'". 25/11/2013 http://www.theguardian.com/books/2013/nov/25/young-adult-readers-prefer-printed-ebooks

VV AA. Articles 2009-2013. Dosdoce.com

Waelder, Paul. *Arte y culturaldigital. Del museo ubicuo al museo portátil: coleccionar y difundir arte digital*. 06/10/2010. http://laboralcentrodearte.uoc.edu/?p=495

Wired. "What books will become". 15/04/2011 http://kk.org/thetechnium/archives/2011/04/what_books_will.php

WEB SITES

Actualidad editorial
http://www.actualidadeditorial.com/
Good Ereader
http://goodereader.com/
Jeff Jarvis
http://buzzmachine.com/
The Guardian | Publishing
http://www.theguardian.com/books/publishing
PSFK
http://www.psfk.com
The Idea Logical Company
http://www.idealog.com/
Arts Journal
http://www.artsjournal.com/
Texturas
http://www.revistatexturas.blogspot.com.es/
LecturaLab.org
http://www.lecturalab.org/
Los futuros del libro
http://futurosdellibro.com/

RECOMMENDED READING

¿Funciona el *crowdfunding* cultural en España?
http://www.rtve.es/noticias/20121009/crowdfunding-cultural-espana/568606.shtml

La industria editorial en 2013: cuando Amazon se convirtió en el lobo feroz
http://www.eldiario.es/turing/industria_editorial/Amazon-convirtio-lobo-feroz_0_209279658.html

Digital publishing: the experts' view of what's next
http://www.theguardian.com/books/2014/jan/10/digital-publishing-next-industry-revolution

Que viene Amazon
http://www.jotdown.es/2013/12/que-viene-amazon/

Todo lo que pueda ser digital, dejará de ser físico
http://www.lanacion.com.ar/1585324-mike-shatzkin-todo-lo-que-pueda-ser-digital-dejara-de-ser-fisico

The Culture and Commerce of Publishing in the 21st Century
http://www.amazon.com/Culture-Commerce-Publishing-Stanford-Business/dp/0804750319

¿Qué traerá 2014 a la industria editorial?
http://www.media-tics.com/noticia/4316/Internet/Que-traera-2014-a-la-industria-editorial?.html

Los museos en la era digital
http://www.dosdoce.com/articulo/estudios/3820/museos-en-la-era-digital/

Nuevos modelos de negocio en la distribución de contenidos audiovisuales: el caso Netflix
http://www.revistacomunicacion.org/pdf/n10/mesa1/015.Nuevos_modelos_de_negocio_en_la_distribucion_de_contenidos_audiovisuales-el_caso_de_Netflix.pdf

La era de los contenidos digitales desde una triple perspectiva: industria, cultura y comunicación
http://www.encuentros-multidisciplinares.org/Revistan%BA35/Fernando%20Gallardo%20Olmedo.pdf

THEME 6

Transmedia storytelling: new ways of communicating in the digital age

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Analysis of recent developments in the way stories are told in order to consider audience consumption habits more precisely through the delivery of independent stories which, while independent, are linked through multiple media platforms. Analysis of the new creative possibilities given the access to new sources of revenue and the promotion of deeper levels of audience participation and loyalty.

INTRODUCTION

Let us imagine a Museum of Storytelling, organised as if it were itself a story. The first hall would be devoted to forms of oral expression. Let's imagine a dimly lit space with sounds that emerge from the walls, from the first most guttural expressions to complex stories of love and war, or even better of love and war, that are repeated from generation to generation. The second hall would be devoted to forms of graphic storytelling, from the most ancestral (Altamira cave paintings), to the most contemporary (the graphic novels sold in the bookshops of our cities along with beautiful volumes devoted to design and architecture). One hall, without doubt the largest of all the halls in the museum, would be devoted to the written narrative. In this great hall visitors would be able to see original texts in low-lit display cabinets: the *Epic of Gilgamesh* carved on clay tablets, the papyri telling the story of the short life of Nibhurrereya, better known as Tutankhamun, until they reached a volume printed in the workshop of Juan de la Cuesta towards the end of 1604: El ingenioso hidalgo don Quijote de la Mancha. The last halls of our imaginary storytelling museum wouldn't have walls, but screens. Cinema screens, television screens, interactive screens, each of them telling a story in their own way. On one screen *Citizen Kane*, and on another, *Breaking Bad* and, on the threshold of the hall, *Grand Theft Auto V.* The hall I have just described would be on the ground floor of the Museum of Storytelling and it would be open 24/7. Every day of the year. We can't stop telling stories.

But the Museum of Storytelling wouldn't end there. The first floor would be in the form of a large balcony overlooking the halls on the ground floor. A stroll around this floor would enable visitors to lean over to see all the story-telling experiences in the history of humanity and to unify them in a virtual tour linking the cinema screen and the book, the television screen and the graphic novels. There would have to be a poster informing visitors that this second-floor balcony is devoted to transmedia storytelling.

WHAT IS TRANSMEDIA STORYTELLING?

The term "transmedia storytelling" was coined by the US researcher Henry Jenkins in an article published in 2003. What is a transmedia story? A transmedia story has two main characteristics. Firstly, it is a story that is told through multiple media and platforms. The story begins in a comic, continues in a television cartoon series, it expands into a full-length feature film and ends (ends?) by incorporating new interactive adventures in videogames. An example of this is *Superman*, a story that began in a comic, moved onto radio and television in the 1940s, and ended up being shown on the big screen for the first time in the 1970s. But transmedia stories also have another characteristic: some of the receivers do not limit themselves to consuming cultural products, but take up the task of adding to the story with new texts. A brief survey of YouTube or Fanfiction.net will show how there are all kinds of stories about the American superhero that have been created by his fans, from parodies to crossovers with other characters such as Tintin and Sherlock Holmes.

If we were to describe transmedia storytelling as a formula, it would be the following one:

MI + PUC = TS

where;
MI: Media industry
CPU: Participative user culture
TS: Transmedia storytelling

An anthropologist of communication inspired by Michel de Certau, might propose another formula based on the opposition between "strategies" and "tactics":

IS + UT = TS

where;
IS: Industry strategy
UT: User tactics
TS: Transmedia storytelling

A researcher into storytelling might propose the following alternative, one that arises from the tension that exists between official texts, the so-called canon, and those produced by fans ("fandom"):

Cn + Fn = TS

Cn: Canon
Fn: Fandom
TS: Transmedia storytelling

Apart from the possible formulas, which are more or less economic, more or less narrative or more or less anthropological, it is clear that transmedia storytelling is here amongst us. In less than ten years these new ways of telling a story have ceased being the object of academic debate to become central to the cultural industries' development strategies. At the present time there are hardly any actors in the field of communication that are not thinking about their production in transmedia terms: from fiction to documentary, journalism and advertising to political communication.

WHY DOES STORYTELLING BECOME TRANSMEDIA STORYTELLING?

In the 1980s, with the expansion of cable television and the appearance of the first satellite dishes on roofs and balconies, people started to talk about the fragmentation of TV audiences. Umberto Eco called this increase in the number of TV channels the transition between *paleotelevision* (with only a handful of channels available) to the channel surfing or "*zapping*" of *neotelevision* (which enables TV viewers to choose from dozens of options). More channels, more specific content (news channels, popular music, etc.) and the greater fragmentation of the audience.

The arrival of the World Wide Web and the spread of new forms of digital, interactive communication—from videogames to communication through mobile

devices—led to further fragmentation in the field of communication. Time spent on Twitter, Facebook or playing *FIFA 2014* is time stolen from television, cinema or reading books. Perhaps the term "fragmentation" is no longer sufficient and we should instead be talking about the "atomisation" of the audience.

The atomisation of the audience and the experience of media consumption is not simply a cultural phenomenon. It implies an attack that goes to the heart of the cultural industries' business model. The television and cinema industries worked because millions of people consumed their products. If these consumers now spend their time experiencing media reception in different ways, how is the market to be maintained? Transmedia storytelling, in this context, presents itself as a possible solution, and surely not the only one, for confronting audience atomisation. As has already been said, transmedia storytelling proposes a common experience that encompasses various media and devices, all united by a narrative link. (Scolari, 2013).

In transmedia storytelling the story expands from one medium to another and can count on active user participation

We are unlikely ever to return to the days of millions of TV viewers all watching the same programme at the same time. This form of broadcasting will probably be limited to events with a planetary reach such as the final of the football World Cup or the election of a new Pope. But transmedia storytelling makes it possible to regroup the audience around a story. If audiences were previously media-centred, now they tend to be narrative-centred.

Transmedia storytelling is spreading from one end of the media ecosystem to the other, taking old and new media in its stride. And it also spans different types of communication so there is transmedia storytelling in fiction, in journalism, in documentaries and in advertising. Political, scientific, religious and educational discourse is also becoming transmediated. In this article we shall review some of the transmedia productions and strategies that might be considered paradigmatic in the Spanish market. Like the *Mona Lisa* for the Louvre or *Las Meninas* for the Prado, here we present some of the transmedia jewels in the Museum of Storytelling.

TRANSMEDIA FICTION

When talking about transmedia storytelling, some works always crop up, as examples which, undeniably, the researcher or producer must cite, namely: *Star Trek, Star Wars, The Matrix, Pirates of the Caribbean, Harry Potter, Lost, The Walking Dead,* and so on. That is to say, we can already say there is a canon of transmedia work. All these works have something in common: they all tell a story that expands from one medium to another and their fans actively participate in this expansion. As can be seen, a transmedia world can be born from a book such as *Harry Potter*, a feature film like *Star Wars* or *The Matrix*, a TV series such as *Star Trek* or *Lost*, a comic like *The Walking Dead* or an attraction in a theme park such as *Pirates of the Caribbean*. Any text has the potential to become the subject of transmedia storytelling.

User participation in this expansion is such that it is impossible to know where a transmedia story ends. For example, the official story of *Harry Potter*—the canon—is over. However, there are hundreds of thousands of stories written by fans that are circulating on the networks and which are expanding the *Harry Potter* universe, through fandom. You know where a transmedia narrative world begins, but never where it might end.

What is the situation with transmedia production in Spain? The results of a study carried out in Barcelona (Scolari *et al.*, 2012) might, to a large extent, be extrapolated to Spain as a whole. Amongst the main conclusions of this study we might mention the fact that Spanish transmedia productions are nascent and limited, especially if we

compare them to works produced for the US market. Sometimes the works are presented as adaptations and it is rare for them to opt for narrative expansion that might include new characters or situations.

In large measure, transmedia production in this context is seen as an experiment that separates communication companies from their core business. For a TV producer or a film director, producing content for other media (from video games to comics) is, to a certain extent, a traumatic process of transition. Those trained in the traditional formats of production find it difficult to think in "transmedia terms". For them, transmedia storytelling is often a secondary, non-strategic activity, and one that is not really productive.

Nevertheless, little by little, things are beginning to change. Amongst the most outstanding transmedia works in Spain we might mention *Águila Roja* (Spanish Radio and Television (RTVE) -Globomedia). This narrative world has expanded beyond the small screen to embrace videogames and comics. According to Francisco Asensi, director of RTVE Interactive Development, *Águila Roja* was the first complete extended universe generated by RTVE:

> *We started by setting up a Web site containing all the episodes of the series so that people could watch them whenever they wanted. Later on, together with Globomedia, we brought in new elements, and in this way we were able to build up a community of fans (...). In the world of the social networks there are fora, official Facebook pages and other, independent communities. To a certain extent you lose control over the story and viewers create their own products. Someone even managed to create an Águila Roja madelman which many people thought was an official product." (Asensi, 2013: 162).*

The *Águila Roja* videogame shows the potential of transmedia storytelling. More than 140,000 people participated in the first version. According to Asensi,

> *The nice thing about the game is that it was aligned with the series. That means there were tasks to complete every week and they were resolved in the episode that was broadcast the following week. The idea behind all this is to attract an audience and to change the kind of relationship we have with that audience. At the present time the series is no longer being broadcast, nevertheless, the community is very active. We have launched the second version of the videogame, it is not aligned with any series because there isn't one, but fans are still hooked up to the videogame, and are active on the community's fora." (Asensi, 2013: 163).*

This narrative world has also experimented with the creation of applications for the second screen such as a card game, and videogame matches have been organised at Campus Party and the FesTVal in Vitoria.

Amongst the most notable Spanish transmedia stories is *Águila Roja* for which the narrative world expanded to include videogames and comics

Other TV formats that have implemented transmedia expansions are reality shows (*Operación Triunfo*), late night shows (*Buenafuente*) and satire (*Polónia*). The case of *Chikilicuatre*—the famous character born of the "El Terrat" factory within the *Buenafuente* programme—is a good example of the transmedia exploitation of a character. To a large extent, in the examples mentioned transmedia storytelling is not the result of careful planning (strategic transmedia), but rather, it is presented as a narrative extension dictated by the favourable conditions of the media ecosystem; in other words, producers react to the environmental inputs and expand the story towards the media and platforms that are the most convenient (tactical transmedia).

In the specific case of works for cinema it is, perhaps, the experience of *El cosmonauta* (directed by Nicolás Alcalá, 2012) that has been the most outstanding in Spain. As well as being one of the first audiovisual productions financed through crowdfunding, this narrative world expanded to incorporate a series of textual components that complemented the story in the film. In *El cosmonauta* the transmedia storytelling was not just

a narrative resource, it was also used to sell extra content and contribute to the funding of the project (the full-length feature film can be seen free on line).

Some successful children's productions such as *Las tres mellizas,* translated into 35 languages and seen in more than 150 countries, can, to all effects, be considered transmedia storytelling. This narrative world appeared during the early 1980s and was based on the books by Roser Capdevila. During the following decade it expanded to the worlds of television, cinema, the digital environment, theatre and countless games and merchandising products. *Las tres mellizas* is one of the most important transmedia products to have been generated by the Spanish cultural industries.

Devices should be created to facilitate users' production, to disseminate it and enrich the transmedia storytelling created by them

With regard to content generated by users, Spanish fans can hardly be differentiated from those of other countries. While it may be true to say that the quantity of user-generated textual production does not reach the levels of that of the large, global market blockbusters, the level of creativity in their works has nothing to fear through any comparison with that of other communities of fans. Local productions such as, for example, *Amar en tiempos revueltos,* and foreign production such as *Fringe* or *Lost,* have inspired a vast amount of fanfiction from Spanish fans. When the storytelling is good, the fans do not let the opportunity of contributing their texts to the transmedia story escape them.

Unfortunately, the users' textual production is hardly ever utilised by the creators of narrative worlds since the latter often do not inhabit spaces in which they might interact with the fans. Little by little, however, Spanish producers are beginning to understand that they should never underestimate the content generated by users and that, on the contrary, they should create ways of promoting this kind of production, disseminating it and thereby enrich the transmedia storytelling thus created.

The lack of legislation covering these new realities often tends to cause a short circuit between users and producers, or indeed, between producers and distributors. In the case of users and producers what is needed is legislation that covers the not-for-profit textual appropriations of users. In this respect, the various Creative Commons licenses could be of great use for dealing with these works which have no commercial purpose. Relations between producers and distributors tend to be no less complex and are expressed, for example, through the administration of the on-line space for a specific work. It can be said that the legislation covering audiovisual production is still, in large measure, "monomedia" legislation and does not contemplate situations created by transmedia storytelling.

From an industrial point of view, it could be said that traditional communication companies find it difficult to adapt to transmedia productions and that they are what we might call "monomedia companies". With respect to the large multimedia groups, these would apparently fulfil all the conditions necessary to create transmedia works (there are groups that include TV studios, book-publishing companies and so forth), but they often find it very complicated to combine the various productive units, which consequently continue to operate in an individual and independent way. Finally, for the small companies that have been established over the last decade only a small effort is required to design and develop transmedia storytelling worlds. These companies, often founded by young professional people, have a transmedia DNA written into them; they are native transmedia companies.

To sum up, we could say that it is only recently that transmedia storytelling has been taking its first steps in Spain. It is not proving easy, especially for traditional monomedia companies, to "think in transmedia terms". But, the fact can not be ignored: we are faced with an irreversible transformation process. Companies and other actors in the communication world are going to be obliged to

adapt to the new media ecosystem if they want to survive. In this context, the transmedia landscape is a fundamental component of this adaptive process. While this article might be focussed on the situation in Spain, we might ask ourselves, given the porous nature of the audiovisual markets, what is happening in Latin America? What is the reaction to transmedia production in the field of fiction? In some countries transmedia production practice is being consolidated through soap operas, Latin American production companies' audiovisual product *par excellence.* For example, for several years the Brazilian conglomerate Globo has had an internal unit devoted to the transmedia articulation and expansion of its soap operas, above all in the social media, and in this way an eminently TV product has been brought into line with consumers' new dynamics and the media ecosystem. However, it should be pointed out that this kind of initiative is still an incipient one in the context of Latin America.

It is not just in the field of fiction, the news media also invite their audience to send contributions to expand the information they provide

In conclusion to this section we should mention research being carried out into transmedia storytelling in the field of fiction. As in other places, this subject became the object of attention for Spanish researchers during the mid-2000s. The translation of Henry Jenkins' book *Convergence Culture* into Spanish, published in 2006, accelerated the concept of transmedia narrative or transmedia storytelling and led to the first investigative works (Guarinos, 2007; Grandio, 2009; Scolari, 2008, 2009). Not surprisingly, the study of transmedia storytelling brought together researchers from various disciplines and fields of research, from experts in the new media to scholars of television, from sociologists to anthropologists interested in the behaviour of communities of fans.

Spanish research also has a presence on the international stage either through scientific publications or through conferences and round table discussions. Activities focussed on professionals in the field are also a sign of frenetic activity in this context. In May 2012 the Transmedia Living Lab was held in Madrid, with Henry Jenkins attending. For the last week of October 2014 the group Storycode Barcelona has proposed to hold a Transmedia Week, an open platform focussing, during the course of the week, on events related to transmedia storytelling being organised all around the world.

BEYOND FICTION

As we have noted, transmedia storytelling goes beyond fiction. It could be said that journalism has always had a transmedia character, even before the emergence of the World Wide Web: even then the news expanded from radio to television and from there to newspapers and periodicals. Users, despite the lack of social networks could provide their contributions by calling the radio stations and writing letters to the editors of newspapers. This process obviously entered a new dimension with the proliferation of new media and 2.0 communication platforms. At the present time there are no informative media, be they written of audiovisual, that do not invite their receivers to send information, photographs, videos or text that enables the telling of news to be expanded.

In Spain, the news media have been progressively accepting the logic of transmedia storytelling, the hotbed of many debates and critical situations which are far from over. For example, debates about so-called "citizen journalism" or "journalism 3.0", or the creation of content by users, can be considered to result from the tensions generated by the transmediatisation of news discourse. Other phenomena that cut across contemporary journalistic debates—from the fusion of digital and traditional composition or editing to the growing use of infographics—can also be considered to be linked to the management and development of transmedia journalism.

With regard to interactive documentaries, amongst the most recent works we find *Las voces de la memoria,* (The voices of memory) a production by

Spanish Radio and Television - RTVE in tandem with the Association of the Families of Alzheimer Sufferers. This work consists of a series of audiovisual productions (available online), an application for mobile devices and a channel on YouTube. Additionally the experimental productions of RTVE.es Lab are a good example of the exploration of new territory marked by interaction, data journalism and the convergence of languages. It should be pointed out that, in the case of interactive documentaries, we are not dealing with an explosion of media and user-generated content, as is the case with fiction, but rather that we are witnessing the confluence of systems of meaning in a digital, interactive environment. Nevertheless, the idea can not be completely dismissed of documentaries also adopting the distinctive traits of transmedia fiction. The productions of *National Geographic,* for example, point in this direction.

Research is starting in Spain into transmedia news production. While there are important studies into cyberjournalism—Spain was a pioneer in Latin America in this branch of study (see, for example, Armañanzas, Díaz Noci and Meso, 1996)—over the last few years the first works have started to appear on journalism and documentaries as stories that expand in many media and that incorporate user participation (for example, Cebrián and Flores, 2011; Flores and Salinas, 2012; Renó and Flores, 2012; Gifreu, 2012).

A TRANSMEDIA CULTURAL UNIVERSE

Transmedia experiences are not, however, limited to fictional and non-fictional narratives; we also find them in other cultural spheres such as theatre and music. How can transmedia storytelling be part of theatre? It can, for example, form part of the media network (theatre is also a means of communication!) and contribute to the expansion of stories that have their origins in cinema or television. During Gaudí Year (2002), the children's TV series *Las tres mellizas* included two episodes devoted to the great Catalan architect (*El taller de Gaudí / Los fantasmas de la Pedrera*). This story spanned various books, online videogames, and a play in Catalan (*Les Tres Bessones i l'enigmàtic senyor Gaudí*) in which there were new situations and characters.

On other occasions plays are at the core of a transmedia storytelling world that expands to the Internet. Over recent years numerous theatre companies have opted to use the social networks. For example, in 2010 together with the Muldark agency, the Royal Shakespeare Company developed the *Such Tweet Sorrow* project, a contemporary version of *Romeo and Juliet* that took place over the course of five weeks on Twitter. Other theatre companies such as New Paradise Laboratories and Waterwell have also experimented with social networks and the transmission of their performances via the Internet (Carter, 2011).

It is ever more the case that theatrical works are the centre of a transmedia storytelling world that expands to the Internet through the social media

In Spain, a theatre group like La Fura dels Baus could not be left on the sidelines of this kind of experimentation. Their work *Afrodita y el juicio de Paris* became this group's first viral show. People could follow the whole process, from rehearsals, the preparing of stage sets, the work of participants and the final result of the macroshow through the main social media by following the hashtag #AfroditaCanarias. The production of plays conceived for streaming is also emerging in Spain thanks to projects such as Teatron and Interteatro. Teatron is a portal that brings together initiatives such as PlayDramaturgia, devoted precisely to the creation of specific theatre events for live retransmission via the networks. Interteatro, on the other hand, devises shows which combine varying formats of retransmission via the Internet, video and live performance (Hernando, 2013). Most of these theatre-based projects are still far from transmedia expansion or fans' activities to which audiovisual fiction has made us accustomed. There is still a long and exciting way to go in the construction of a new transmedia theatre.

When we talk of the possible points in common between music and transmedia we are immediately faced with the concept of *Gesamtkunstwerk*, which might be translated as "total work of art". Attributed to Richard Wagner, this term refers to artistic works that combine music, theatre and the visual arts. In the case of transmedia music, rather than being combined in a work itself, such as an opera, the sound narrative tends to be distributed via various media and platforms.

In transmedia music the sound-story is distributed in various media and platforms that go beyond sound itself

In the sphere of music, there are already transmedia initiatives of great scope, such as the launch of the record *Year Zero* by the band Nine Inch Nails, in 2007. On that occasion this industrial rock band organised an international Alternate Reality Game (ARG) which included various textual components distributed during the tour. The information needed to progress in the game—a game based on a apocalyptic fantasy story—was disseminated via T-shirts, USB memory sticks, videos on the Web, lithographs, advertising brochures and the like. In 2012 the band The Bullits also experimented with a multiplatform musical narrative using Twitter, YouTube, the Web and the graphic novel. According to their leader, Jeymes Samuel, "All media, be they for recorded music, video, or Facebook are canvasses for telling wider stories. [...] I want film directors and musicians to embrace technological devices much more. Imagine the Beatles still existed and the narrative for a new album started as a feed on Twitter". (Cheshire, 2012).

Some Spanish bands are already experimenting with transmedia storytelling. For example, the metal band The YTriple Corporation has just launched their first record accompanied by a novel (everyone who downloads the album can enjoy a couple of free chapters). According to their leader, Salva Rubio,

"Everything started from my intention to create a concept behind the band that would act as a narrative vehicle to tell a story (each record being a "film" and every song a "scene"). The moment came when I realised that this story could be understood much better as a complementary text that explained it and from there it was but a short step to thinking about writing the novel. This made us realise that this concept could go much further, to video clips, short films and so on. Time and resources will determine how far we get with this concept." (Mautor, 2013).

The crisis affecting the music market can not do other than encourage this kind of initiative. If, two decades ago, the videoclip burst onto the musical marketing scene with force, today it is the social networks and their viral content that are charged with taking songs beyond sound.

NOTES REGARDING THE FUTURE

By now, as the reader will have realised, the adjective "transmedia" has become the ideal accompaniment for all kinds of cultural or communicative activities. Over recent years it has not been strange to hear colleagues talking about transmedia branding, transmedia education, transmedia politics and so on. The transmedia concept is currently fashionable. Just as happened with multimedia in the 1990s, many companies now package their communication products under this label, even the ones that are not transmedia! Nevertheless, we should be clear about two things:

- The transmedia concept might cease to be fashionable, as happened with multimedia, but the logic of transmedia storytelling is here to stay. In the face of audience fragmentation transmedia storytelling offers a possible strategy to reconstruct an audience niche around a narrative world.
- If those working in the world of communication should ever replace the transmedia concept for another one, the

scientific community will continue to use it because it has already been sufficiently analysed and theorised to justify its survival in academic discourse.

Beyond semantic debates the development of transmedia storytelling in Spain depends, in large measure, on the vitality and capacity for innovation of its actors, both great and small. Paco Rodríguez, director of Media Training & Consulting, warns that the small size of the Spanish market is a limitation for embarking on transmedia projects of an international dimension:

> *In Spain, both in cinema and in television, we have a lower level and act in a market of lower value. We always try to go from the simple to the complex, from the smaller to the greater. For example, we could make a local or national transmedia and leave it at that, within our environment or market, without the intention of going further than that. But if we want to reach across our borders then the following thoughts should be considered. Is it my intention, right from the beginning, to create a world-wide transmedia? Or, shall I start at a local level and then attempt to extrapolate it and sell it by adapting it with international partners? They are premises that, from the start, you should consider in accordance with the size and dimension of your company.(Rodríguez, p. 182).*

Some professionals in the field, such as Fernando Carrión, who has a great deal of experience in the coordination of audiovisual and transmedia projects, point to the need to modernise company structures in order to confront the challenges of transmedia storytelling.

> *At the company level, a key point is the evolution of the producers' mentality. The "military" structure of traditional producers has to change. We are talking about a concept of co-creation. At the present time the work of various experts complements that of others, such as the creators, the social network managers and so on. It is because of this that we must find something that is much more organic, more honest, more operational, indeed more holistic where everything, somehow, is more strictly organised. (Carrión, 2013: 29).*

In the study quoted at the beginning of this article (Scolari et al., 2012) two kinds of company were identified: large traditional producers characterised by being monomedia, and the new, productive ones with a transmedia profile. The challenge facing the cultural industries is a double one: on one hand, the big players have to transition from monomedia to transmedia, and it is quite possible that, as has already happened in other markets such as the United States, they are unable to manage this transition with their own means and find themselves obliged to seek assistance from specialised professionals, the transmedia producers. Small, native transmedia companies, on the other hand, face the challenge of venturing beyond local niches to conquer international markets. Beyond their influence in the Spanish market, the successes of some TV products such as *Las tres mellizas,* and the international interest that has been demonstrated in cinema projects such as *El cosmonauta,* show the possible ways forward for transmedia productions.

And so concludes our visit to the Museum of Storytelling. We have visited the main exhibition rooms, some of them crowded with visitors, others not so easy to find but where new forms of narrative expression are being born. But, as is the case with all great museums, one visit is not enough. There will always be another room where a work awaits us that will change our way of understanding the process of creation. Or there will a corner somewhere with a masterpiece that defines a period and which everyone will try to imitate. Like all transmedia stories worthy of the name, the Museum of Storytelling knows where the story started but never knows where it will end.

REFERENCES

Armañanzas, E.; Díaz Noci, J. and Meso, K. (1996). *El periodismo electrónico. Información y servicios multimedia en la era del ciberespacio*. Barcelona: Ariel.

Asensi, F. (2013). "El caso de éxito del transmedia de las series españolas: iRTVE". In Fundación Audiovisual de Andalucía (ed.), *Profesionales audiovisuales ante el nuevo escenario transmedia*, pp. 151-178. Seville: Fundación Audiovisual de Andalucía.

Carrión, F. (2013). "El productor transmedia: hacia la experiencia de entretenimiento total". In Fundación Audiovisual de Andalucía (ed.), *Profesionales audiovisuales ante el nuevo escenario transmedia*, pp. 17-31. Seville: Fundación Audiovisual de Andalucía.

Carter, J. (2011). *What If... Theatre Embraced Transmedia?* In the blog Theatre Communications Group (TGC) Circle. http://www.tcgcircle.org/2011/04/what-if-theatre-embraced-transmedia/

Cebrián, M. and Flores, J. (2011). *Periodismo en la telefonía móvil*. Madrid: Fragua.

Cheshire, T. (2012). "Metamedia storyteller: Jeymes Samuel's debut is too big for one platform". *Wired*, 30 May 2012. http://www.wired.co.uk/magazine/archive/2012/06/play/metamedia-storyteller

Flores, J. and Salinas, C. (2012). *Sinergias en la construcción del Nuevo Periodismo derivadas del Data Journalism y el Transmedia Journalism*. Paper given at the 3rd International Communication 3.0 Congress, Salamanca, 10-11 October 2012.

Gifreu, A. (2012). *El documental interactiu com a nou gènere audiovisual. Estudi de l'aparició del nou gènere, aproximació a la seva definició i proposta de taxonomia i d'un model d'anàlisi a efectes d'avaluació, disseny i producció.* Doctoral thesis presented at the Communication Department, Universitat Pompeu Fabra.

Grandio, M. (2009). *Audiencia, fenómeno fan y ficción televisiva. El caso de* Friends. Buenos Aires: Libros en Red.

Guarinos, V. (2007). "Transmediales, el signo de nuestro tiempo". *Comunicación*, 5, 2007, pp. 17-22.

Hernando, S. (2013). "Un escenario llamado Internet". *El País*, 21 February 2013. http://cultura.elpais.com/cultura/2013/02/20/actualidad/1361381042_453502.html

Mautor, A. (2013). "Entrevistamos a The YTriple Corporation". In the blog *Nos gusta la música.com.* http://metal.nosgustalamusica.com/entrevistamos-a-the-ytriple-corporation/

Renó, D. and Flores, J. (2012). *Periodismo transmedia. Reflexiones y técnicas para el ciberperiodista desde los laboratorios de medios interactivos.* Madrid: Fragua.

Rodríguez, P. (2013). Planes de internacionalización para producciones transmedia. In Fundación Audiovisual de Andalucía (ed.), *Profesionales audiovisuales ante el nuevo escenario transmedia*, pp. 179-200. Seville: Fundación Audiovisual de Andalucía.

Scolari, C. A.; Fernández de Azcárate, S.; Garín, M.; Guerrero, M.; Jiménez, M.; Martos, A.; Obradors, M.; Oliva, M.; Pérez, O. and Pujadas, E. (2012). *Narrativas transmediáticas, convergencia audiovisual y nuevas estrategias de comunicación.* http://www.cac.cat/pfw_files/cma/recerca/quaderns_cac/Q38_scolari_et_al_ES.pdf

Scolari, C. A. (2008). *Hipermediaciones. Elementos para una teoría de la comunicación digital interactiva*. Barcelona: Gedisa.

Scolari, C. A. (2009). "Transmedia Storytelling: Implicit Consumers, Narrative Worlds, and Branding in Contemporary Media Production". *International Journal of Communication*, vol. 3 (2013), pp. 586-606. http://ijoc.org/index.php/ijoc/article/view/477

Scolari, C. A. (2013). *Transmedia storytelling. Cuando todos los medios cuentan*. Barcelona: Deusto.

TRANSMEDIA STORYTELLING RESOURCES

10 texts on transmedia storytelling

Bernardo, N. (2011). *The Producers Guide to Transmedia: How to Develop, Fund, Produce and Distribute Compelling Stories Across Multiple Platforms*. London: CR Entertainment Ltd.

Bruns, A. (2008). Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage. New York, NY: Peter Lang.

Davidson, D. (2010). *Cross-Media Communications: an Introduction to the Art of Creating Integrated Media Experiences.* Pittsburgh, PA: Carnegie Mellon University. http://repository.cmu.edu/etcpress/6/

Harrigan, P. and Wardrip-Fruin, N. (2009). *Third Person: Authoring and Exploring Vast Narratives.* Cambridge, MA: MIT Press.

Jenkins, H. (2006). *Convergence Culture. Where Old and New Media Collide.* New York, NY: New York University Press.

Jenkins, H. (2006). *Fans, Bloggers, and Gamers: Media Consumers in a Digital Age*. New York, NY: New York University Press.

Jenkins, H. and Deuze, M. (eds.) (2008). "Convergence Culture". Special issue of *Convergence* 14 (1).

Jenkins, H.; Ford, S. and Green, J. (2013). *Spreadable Media. Value, Meaning & Network Culture.* New York, NY: New York University Press.

Ryan, M. L. (2004). *Narrative across Media: The Languages of Storytelling*. Lincoln, NE: University of Nebraska Press.

Scolari, C. (2013). *Transmedia storytelling. Cuando todos los medios cuentan*. Barcelona: Deusto.

10 web sites

Alternate Reality Gaming Network: resources on Alternate Reality Games (http://www.argn.com/)

Comparative Media Studies (MIT): leading research centre (http://cmsw.mit.edu/)

Confessions of an Aca-Fan: Henry Jenkins' blog (http://henryjenkins.org/)

Cross-media: the Italian Web site of the Italian Max Giovagnoli (http://www.cross-media.it/)

Christy's Corner of the Universe: Christy Dena's blog (http://www.christydena.com/)

Hipermediaciones: Carlos A. Scolari's blog (http://hipermediaciones.com/)

Power to the Pixel: London think tank specialised in transmedia (http://powertothepixel.com/)

Storycode: organisation devoted to immersive storytelling (http://storycode.org/)

TEDx Transmedia: TED conferences focussed on transmedia (http://www.tedxtransmedia.com/)

Transmedia Week: platform for organising events about transmedia with world reach (http://www.transmediaweek.org)

10 tweeters

@christydena
@EduardoPradanos
@Enawebseriada
@HenryJenkins
@indioszurdos
@Jeff_Gomez
@librosybitios
@margrandio
@robpratten
@Transmedia_Week

THEME 7

The Web Archiving Life Cycle Model

by **Kristine Hanna**
Director of Archiving Services at the Internet Archive
https://archive.org/about/bios.php

INTRODUCTION

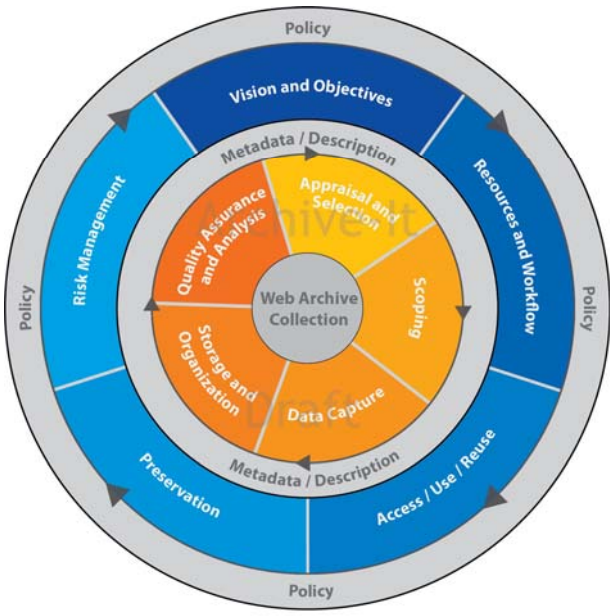
The technological tools for archiving the web have been evolving steadily for more than a decade. However, best practices and a common model of web archiving have yet to emerge. The Web Archiving Life Cycle Model is an attempt to incorporate the technological and programmatic arms of web archiving into a framework that will be relevant to any organization seeking to archive the web. Archive-It, the leading web archiving service in the community, developed the model based on its work with memory institutions around the world.

The Internet Archive has been archiving the web since 1996. In 2002, the Internet Archive released Heritirx, the open source web crawler. In 2009, the Heritrix crawler's file output, the WARC file, was adopted as an ISO standard for web archiving, demonstrating both the prevalence of active web archiving programs and the importance of the web crawler itself. In early 2006, the Internet Archive launched the Archive-It web archiving service (www.archive-it.org) with 13 pilot partner institutions. Archive-It is a subscription web archiving service that helps partner organizations harvest, build, and manage born digital collections. The partner base has steadily expanded since its launch, with 237 partners in 46 U.S. States and 15 countries, as of January 2013.

Despite growth in the number of web archiving programs, many institutions still struggle with developing best practices and methodologies to accomplish their goals. This difficulty partially stems from constantly evolving web technology, which can make it difficult to archive certain types of content effectively. Conflicting and evolving policy decisions from various stakeholders as well as shifting organizational structures and job responsibilities pose further obstacles to establishing best practices. Additionally, some organization stakeholders have not fully adopted the belief that web archiving is crucial to their digital preservation activities; and as a result, funding remains limited or non-existent.

Archive-It is a Web archive service that follows the Web Archiving Life Cycle Model

In order to address the lack of standard best practices and to increase awareness of the importance of web archiving as fundamental to digital preservation, the Archive-It team developed the Web Archiving Life Cycle Model (WALCM). This model is based on the team's experiences as well as lessons learned by countless partner institutions, including in-depth case studies from six of those institutions. The WALCM is an attempt to represent common workflows and create a measurable model for organizations to reference in order to create or improve their web archiving programs.



WEB ARCHIVING LIFE CYCLE MODEL

DEVELOPING THE WEB ARCHIVING LIFE CYCLE MODEL

The Archive-It team developed the model organically, using feedback and lessons learned from organizations archiving the web. The majority of these organizations use the Archive-It service to archive web content for their organization. These partner institutions provide feedback based on their use of the service, communicated to the Internet Archive through email, phone calls, and in-person conversations at conferences and partner meetings.

Additionally, more formal feedback comes through partner presentations at conferences, surveys designed by Archive-It staff, as well as partner presentations at conferences and documentation relating how they and their colleagues meet the challenges of web archiving.

The Archive-It team drafted the first iteration of the Web Archiving Life Cycle Model. This preliminary design was circulated to a subset of Archive-It partners who provided feedback on missing or superfluous elements and on the model's visual presentation. Next, the Archive-It team incorporated this input into a more graphically pleasing model that was sent to all Archive- It partners for general feedback. This feedback shaped a further re-design and the resulting version of the model discussed in this paper. The information in this paper is also based on in- depth email exchanges and phone interviews with six Archive-It partners between April and July 2012. These institutions are: Columbia University, University of Alberta, Montana State Library, State Library of North Carolina, State Archives of North Carolina and Creighton University. Information in this paper also comes from a survey of Archive-It partners conducted in August 2012.

THE MODEL EXPLAINED

The model is an attempt to distill the different steps and phases an institution experiences as they develop and manage their web archiving program. Although the model is broken down into individual steps, each action is not discrete. Archive-It considers the steps and phases to be related, with a significant amount of overlap between them.

The shape ofthe rnodel is circular to suggest the repetitive nature ofthe stepe inthe life cycle. As users move through each step, theyeventuallyfmd themselves back at the beginning, or repeating certain stepe, depending on their tasks. For example, the process can restar!when an institution adds new websites toan existing collection or ereatesan entirelynew collection. The rnodel includes circles within circles lo suggest these repetitive cycles within the bigger process.

The outermost level of the life cycle is the policy band. Almost every aspect of web archiving involves some sort of policy decision. These policy decisions may involve developing a new policy specific to web archiving or the adaptation of an existing policy to new situations. By encompassing the life cycle steps with a policy band, the model visually represents the ever- present nature of policy making. In a second band, the model similarly represents metadata and

description. Archive-It chose to incorporate metadata as a band rather than as a segment of the wheel to emphasize that creating, importing, and exporting metadata can be done as part of a number of other activities in the lifecycle.

The blue circle just inside the policy band represents the high-level decisions an institution faces as it sets up and manages its web archiving program. The individual steps are briefly defined as follows and will be discussed in more depth later in this paper.

- Vision and Objectives: here institutions clarify the goals of their web archiving program.
- Resources and Workflow: institutions review their available resources including financial, expertise, staffing, potential collaborators and others in order to determine how to proceed with developing or changing their web archiving program.
- Access / Use / Reuse: institutions make decisions about whether and how to provide access to their collections and monitor how the content is used by their patrons.
- Preservation: institutions make decisions about how they want to preserve the data they collect in their web archiving activities. This includes WARC files, metadata, and X.
- Risk Management: When institutions consider their approach to risk in creating a web archiving program, they look at copyright and permissions as well as access.

The inner orange circle describes the day-to-day tasks involved in the business of archiving the web. These tasks include the following.

- Appraisal and Selection: institutions decide specifically which websites they want to collect.
- Scoping: institutions may opt to archive portions of a website, whole sites, or even entire web domains.
- Data Capture: Here, institutions fine-tune how they want to capture their data through decisions about crawl frequency and types of files to archive or not archive. The scoping and data capture phases of the lifecycle often overlap as they involve similar activities and decisions.
- Storage and Organization: This step includes a temporary or long-term storage plan for the archived data. For some institutions, the storage and organization phase of the lifecycle might also constitute their preservation activities.
- Quality Assurance and Analysis: Here, institutions review what they have archived and the level to which the resulting collection satisfies the goals they set out at the beginning of the life cycle.

At the center of the lifecycle is the collection itself, the archived web content. This data is the end result of all preceding steps, and it is what will be preserved. Capturing and preserving collections of data is at the heart of all web archiving activities and is therefore the center of the model.

WEB ARCHIVING LIFE CYCLE MODEL: THE OUTER CIRCLE

1. The Outer Circle

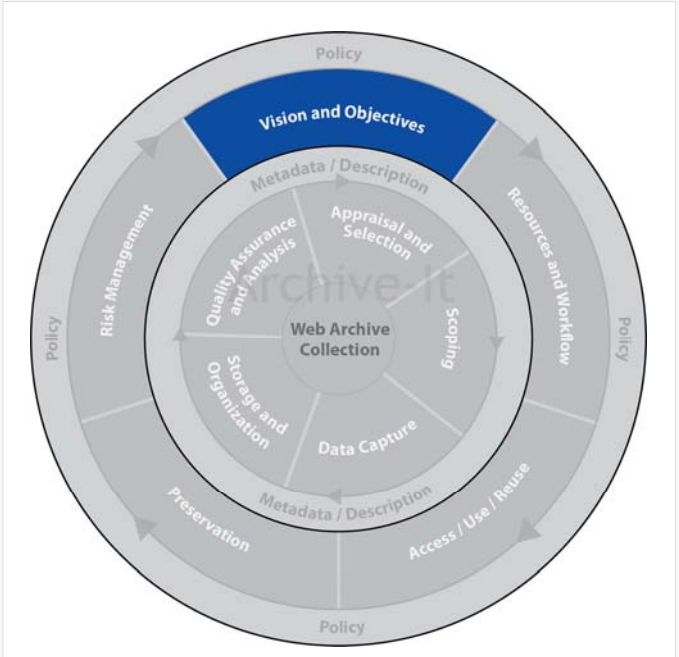
1a. Vision and Objectives

To determine a vision and objective for web archiving, an institution must ask itself why it is choosing to archive the web, what it wants to accomplish in

doing so, and how these steps relate to the institution's broader mission. This step in the cycle primarily occurs as institutions initially plan their program; however, institutions do tend to re-visit and re-define their web archiving objectives throughout the life of the program. These periods of re-examination may result from a specific stimulus, such as a change of resources, or may be an ongoing question considered along with and in relation to their other collection policies.

Memory institutions choose to archive the web for many different reasons, depending on their own institutional mandates as well as the objectives of their stakeholders. Some institutions choose to archive the web because they believe that specific web content is at risk of disappearing and therefore needs to be captured and kept accessible; particularly in the case of rapidly changing spontaneous events, like natural or manmade disasters, political uprisings, and memorials for public figures. Other institutions have mandates to archive specific publications that are only available in digital formats, such as university course catalogs or state agency reports and publications. Additionally, some institutions have legal mandates to archive all official records produced by the institution within their domain, constructing an historical record of their institution's web presence over time. Still other institutions view web archiving as an extension of their overarching collection development policy or their digital preservation programs, and they may archive web content that enhances or supplements the topics alfeady being emphasized in their traditional collecting activities. Researchers and academics realize the important of creating a thematic/topical web archive on a specific subject or topic that includes different perspectives and social commentary from the increasing influence of social media sites, including tweets, blogs, posts and comments. Some institutions have a set of different goals and as a result set up multiple collections to achieve each objective. Regardless of the specific vision for each web archiving program, this vision shapes many of the policies and decisions made in later steps of the web archiving lifecycle.

As one example, Columbia University Library has been working with Archive-It since 2008. The library collects web content in several areas. First, the library captures the Columbia University web domain in coordination with University Archives. Second, the library has several other collections built around specific themes and topics. These topics include global human rights, historic preservation and city planning, and New York City religious institutions. These born-digital collections complement and supplement the library's existing physical collecting activities. Columbia describes its overarching goal in web archiving as "believ[ing] that freely available web content [is] an increasingly important source of content necessary for current and future research that [is] not yet integrated into academic library collection development models." (personal correspondence with Alex Thurman and Tessa Fallon, May, 2012).



THE OUTER CIRCLE - VISION AND OBJECTIVES

Similar to Columbia University, University of Alberta also realized that the university was not capturing born-digital material and that it needed to include web archiving in its digital preservation strategy. However, the university did not start out with such a clear vision. Originally, the University of Alberta inherited over 80 websites from a non-profit organization that lost its funding. Realizing that hosting these websites would be resource intensive, the university took an "archiving" approach, which they felt would be a more sustainable way to take custody of the content. University of Alberta thus began using the Archive-It application to complete this project. Their first year with Archive-It (2009) was largely based on the websites inherited from the dissolved non-profit organization (personal correspondence and conversation with Geoff Harder, June 2012).

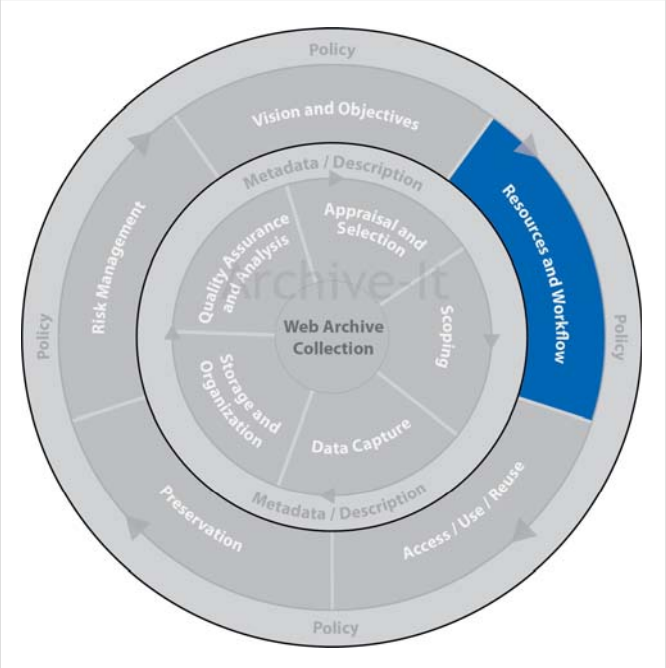
Starting in 2010, the University of Alberta began using Archive-It as a broader collection development tool. The development of national web archiving programs is not as strong in Canada as it is in some other countries. To help fill this gap, the university library has begun collecting in earnest in several areas, including but not limited to: Canadian prairie politics and economics, government documents, grey literature for business and health sciences, circumpolar studies, and provincial education curriculum materials. In this way, the vision of their Archive-It program matches their collection development policy for their non-digital collections. Two of their big issues moving forward relate to refining their discovery strategy and improving the visibility of their collections. They are particularly interested in out how to most effectively provide access to their web archives alongside other digital collections Because the university is concerned with digital scholarship, they want to make sure researchers are able to use their web archive collections just as they now use other resources (personal correspondence and conversation with Geoff Harder, June 2012).

Institutions archive Web content for many different reasons and aims according to their digital conservation strategy

Montana's state library offers an example of a different institutional vision. The Montana State Library (MSL) web archive seeks to archive state documents, which are now often only available online. Their objective is to "meet the information needs of state agency employees, provide permanent public access to state publications, support Montana libraries in delivering quality library content and services, work to strengthen Montana public libraries, and provide visually or physically handicapped Montanans access to library resources" (personal correspondence with Beth Downs, James Kammerer and Chris Stockwell, May, 2012). A Montana State Library staff summarizes the library's reasons for archiving the web: "With the precipitous decline in the submission rate for print publications and an inverse, exponential rise in the rate of web based publishing, Archive-It has completely supplanted the historic state depository library tradition of acquiring and distributing print state publications one at a time" (personal correspondence with Beth Downs, James Kammerer and Chris Stockwell, May, 2012). At the beginning of their subscription in 2007, Montana set up one policy to govern most aspects of their web archiving program, including selection criteria for what to archive, crawl frequency, and outreach. Interactions between Archive-It and MSL since 2007 indicate that this approach has been successful and is meeting the objectives of the state library.

1b. Resources and Workflow

The resources and workflow phase of the lifecycle can be interpreted in several ways. In the context of the model's outer circle, institutions examine the resources and workflows that can be leveraged to create or maintain an entire institution's web archiving program. In this way, resources and workflow can be considered similarly to "policy", as they can be applied in multiple areas of the web archiving life cycle model. Resources and workflow should also be considered as general program management terms that can be applied to each of the elements in the model's inner ring. In this context resources and workflow become part of the day-to- day activities



THE OUTER CIRCLE - RESOURCES AND WORKFLOW

of web archiving. For example, how much time can an institution spend reviewing their crawls or how many people should add websites to the Archive-It application? Subsequent sections of this paper will discuss specific management workflows in depth.

One of the key resources organizations have at their disposal is their staff. In-depth discussions with several Archive-It partners in the spring and summer of 2012, as well as a survey conducted by Marquette University reveal some comprehensive data regarding the staffing models in place at a wide range of Archive-It partner institutions (Sweetster, 2011).

Of the 37 institutions that responded to the Marquette survey, one-third have two or more individuals involved with Archive-It, and over 25% have four or more individuals involved. The survey also found that half of the responding institutions spend less than 1 hour per week working with their Archive-It accounts, and 44% spend 1-5 hours per week working with the application. The Marquette survey also asked respondents to describe the types of individuals working within Archive-It. Table 1 displays these findings; please note that respondents could select more than one staff grouping, so results do not sum to 100%.

Discussions with the six Archive-It partners highlighted in this paper revealed similar results to the Marquette survey. The partners provided details about their Archive-It staffing, including the number of staff and nature of their work. The results are summarized in Table 2. These results share another similarity with the Marquette survey results. Most of the staff tend to come from the library or archives (this author is inferring that subject specialists and metadata curators are part of a library staff), with additional involvement from information technology staff and students.

In addition to staffing, the resources and workflow in this model also encompass how institutions manage other resources. For example, Columbia uses an internal database to track any information that cannot be included in the Archive-It application, such as administrative information and permissions data from sites they have contacted. Another example is the decision to collaborate and divide management of the web archiving program between the State Library of North Carolina and the State Archives of North Carolina. The two institutions manage a single collection of state government agency websites. In dividing up the day-to-day work, the two agencies have several well-established workflows, which they have developed since they first began using Archive-It in 2005. The state library and archives alternate responsibility for conducting the crawls, and both institutions perform quality control of the data harvested. The individual staff members have turned over throughout the years; however, despite this

Archives Staff	64%
Library Staff	42%
Digital Projects Staff	30%
Information Technology Staff	8%
Other (such as students or "web team")	8%

TABLE 1:
Type of staff at an institution working with Archive-It

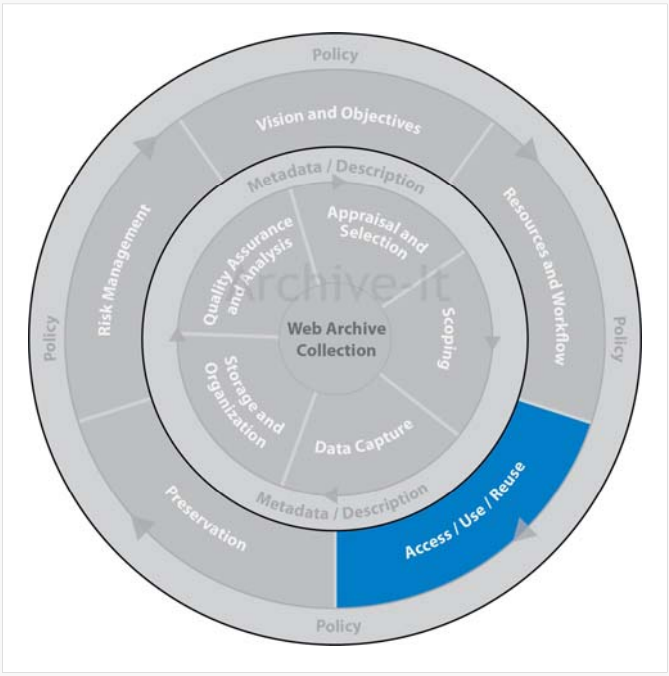
INSTITUTION	NUMBER OF STAFF INVOLVED	STAFFING DETAILS
Columbia University	1 + some involvement from other staff	Currently (2012) one web curator runs crawls, scopes seeds and manages the Archive-It account, although they have had two web curators in the past. Students, the metadata curators and web programmer also use different parts of the application on a more limited basis.
Creighton University	1	Creighton has one full-time Archivist, and one of his responsibilities is to administer Archive- It; he also gets a small amount of help from others at the Library
University of Alberta	1 lead technical person, with up to 40 people actively logging into the application	Alberta has a very large network of individuals actively using Archive-It, many of whom are subject specialists.
Montana State Library	3	The most active users are the state publications librarian (who oversees the program), the metadata cataloger, and the library systems programmer/analyst, who handles technical issues.
North Carolina State Library and Archives	4	Management of Archive-It is evenly split with two representatives from the state library and the state archives.

TABLE 2:
Number and type of staff working with Archive-It

turnover, the institutions have found that their partnership has been an "easy collaboration to maintain" (personal correspondence with Kelly Eubank, Lisa Gregory, Kathleen Kenney, and Rachel Trent, June 2012).

Of the six Archive-It institutions highlighted in this paper, the University of Alberta has the largest web archiving program in terms of staffing. Alberta began using Archive-It with a small team of several individuals in 2009, and the team has since grown to over 22 people actively contributing to the program. They have also incorporated a number of subject specialists into their work. Additionally, the team has a government documents librarian and a metadata librarian involved in the application. A representative from information technology supports these individuals and filters their questions to Archive-It staff at Internet Archive. At a higher level, the library has a "born digital working group" composed of staff from around the library. This group, composed mostly of individuals from collection development, helps shape web archiving policy in general and use of Archive-It in particular. Additionally, an Archive-It users group, which has a broad membership base, builds and shares knowledge about Archive-It.

Unlike the University of Alberta, Creighton University only has one archivist who manages the university's Archive-It subscription and also initially championed it as a necessary resource. David Crawford learned about Archive-It at the 2008 Society of American Archivists conference and worked to build support for setting up an Archive-It subscription at Creighton. Eventually, he received a donation from a board member to initiate their web archiving program by funding a subscription to Archive-It. Using a tool like Archive-It allows Crawford to accomplish his goal of archiving the university's web presence, which he would not have been able to do on his own due to a lack of in-house expertise (conversation with David Crawford, July, 2012). Crawford's experience of having to build support for web archiving on his own seems consistent with interactions Internet Archive has had with other small institutions like Creighton. Smaller institutions often take longer to get their program up and running due to fewer staffing and fiscal resources. Some smaller colleges and universities have formed consortiums to support their web archiving programs in order to expand their pool of resources for web archiving (see for example the Tri-College Consortium of Bryn Mawr, Swarthmore and Haverford http://www.archive-it.org/organizations/74) one of the original Archive-It pilot partners.



THE OUTER CIRCLE - ACCESS/USE/REUSE

1c. Access/Use/Reuse

Establishing access, use, and reuse policies is vital to a successful web archiving program. Institutions consider whether and how they want to provide open access to their web archives, if and how to promote the collections, as well as how to govern public use of the material. Managing these processes is the primary goal of the access / use / reuse phase of the web archiving lifecycle.

Part of the creation of an access policy will include choosing the specific technology or tool to provide access to the archived web pages. However, for the purposes of this model, we instead consider the higher level policy decisions around access. This is in part due to the fact that all of the individuals interviewed for this project access web archives using Wayback software, the open-source viewing tool that allows the public to browse archived web pages just as they would experience a live web page.

The majority of Archive-It partners have their archived content publicly available; although an increasing number are requiring some content to be kept restricted for a period of time – either a specific URL, an individual collection or their entire account with multiple collections. And the Archive-It team is starting to see more requests for content to be restricted by IP address to enable reading rooms in university libraries to have more flexibility around access. (Note: the service expects to have this capability in April2013).

Archive-It partners can refer their patrons to the Archive-It website for collection access http://www.archive-it.org or they can link to their collections from their own site through a search box or links to the Wayback software. Both approaches work for partners depending on

their access needs. For example, the State Library of North Carolina and the State Archives of North Carolina provide access to their Archive-It collections from their own website. They have created a robust portal, which provides information about web archives for the public and information professionals, as well as instructions for using the web archives (http://webarchives.ncdcr.gov/). Creighton University, on the other hand, has taken a different approach. They refer their patrons to the Archive-It website for access to the collections and do not provide access from their institutional website. In David Crawford's words, they prefer their patrons to be "self directed" (conversation with David Crawford, July, 2012).

Institutions need to analyse how to take advantage of their resources and funds to create or maintain their Web archiving programmes

Like the State Library of North Carolina and the State Archives of North Carolina, Montana's State Library also created a portal on their own website that provides access to their Archive-It collections (http://msl.mt.gov/For_State_Employees/connect/default.asp).In addition to providing access to data collected using the Archive-It service, Montana State Library extracted older web pages dating back to 1996 from the Internet Archive's general web archive. These web pages are accessible from the portal along with the Archive-It data, which dates back to 2006. The

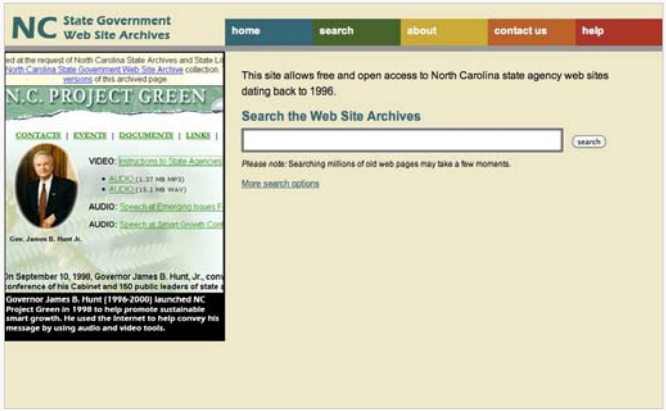


IMAGE 1:
Home Page of the NC State Government Web Site Archives, http://webarchives.ncdcr.gov/

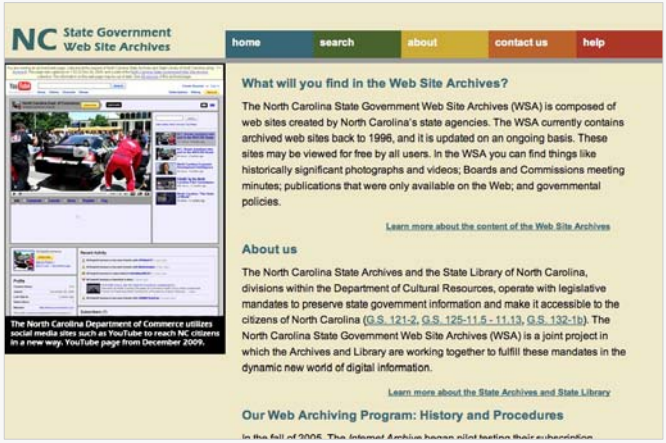


IMAGE 2:
"About" the NC state Government Web Site Archives, http://webarchives.ncdcr.gov/about.html

1d. Preservation

Data gathered in preparation for this paper suggests that preservation is an evolving issue for institutions that archive the web, which goes hand in hand with the evolving nature of digital preservation and the development of digital repositories. The Archive-It team found that their partners tend to employ several different preservation strategies. Many institutions that work with the Archive-It service rely on the Internet Archive for storage and preservation of their WARC files and associated metadata. There are several partners that also transfer their data to a local hard drive or download their WARC files directly from Internet Archive servers. A few partner institutions are working to incorporate WARC files into their local digital repository, although these projects are still in their infancy.

library's goal for providing access through their own website is to "create a single identifiable brand that will be associated with state government information" (personal correspondence with Beth Downs, James Kammerer and Chris Stockwell, May, 2012). Montana has also found other innovative ways to draw attention to their web archives. All Montana State Library webpages contain a "page history" link in the footer. These links direct visitors to archived versions of the web page so they can see how it has changed over time. For example the "page history" on the state library's home web page http://msl.mt.gov/[1] directs the visitor to a list of easy to browse capture dates for that web page: http://wayback.archive-it.org/499/query?type=urlquery&url=http://msl.mt.gov/&dates=

IMAGE 3:
Montana State Library borne page, http://rnsl.rnt.gov/

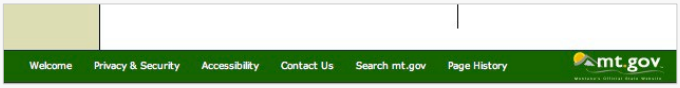
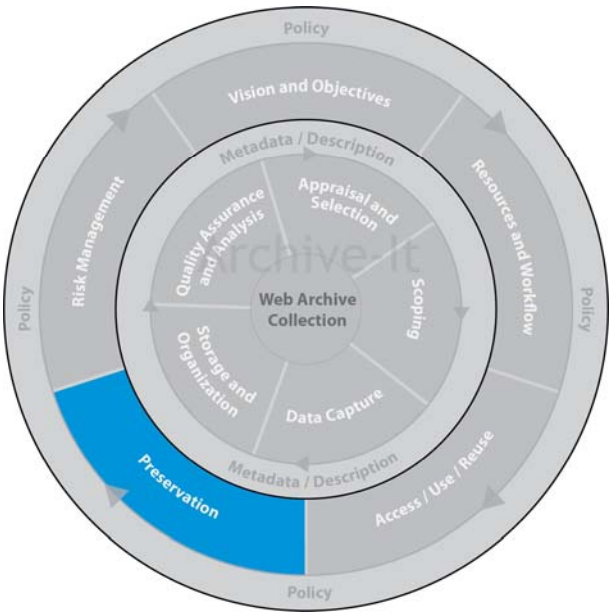


IMAGE 4:
Detail of Montana State Library borne page footer



THE OUTER CIRCLE - PRESERVATION

Based on a recent survey completed by Archive-It partners, partners do want to preserve their data and have multiple copies of their data in multiple locations. However, they are grappling with how to get there. In the survey, 56% of respondents answered that they would like to archive their data in their own local repository (regardless of the platform they use).

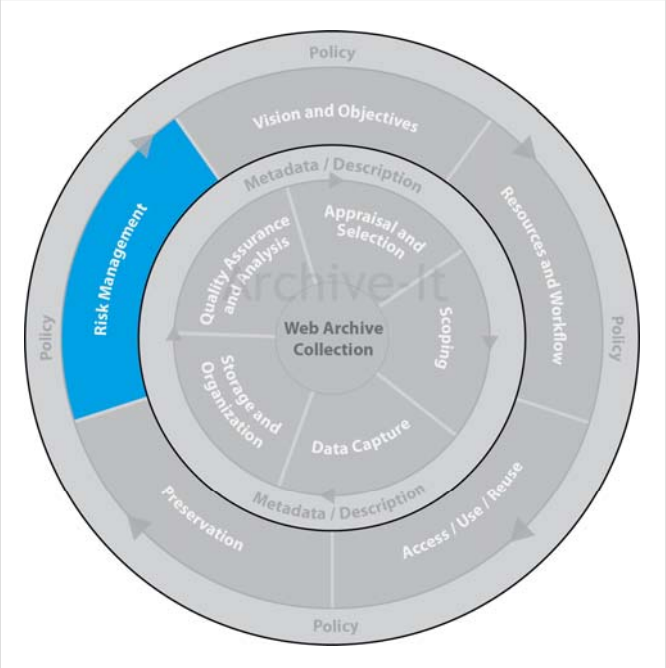
However, 31% of partners reported that they prefer to store their data at the Internet Archive, either because they are satisfied with that strategy or do not have the means to preserve the data elsewhere. Approximately 60% of respondents do not yet have a local digital repository. The two highest cited reasons for not having a repository are "unsure of our needs" and "weighing which system to choose". These results along with anecdotal information gathered over the years from Archive-It partners strongly suggest that partners are grappling with issues of how to preserve the data they collect from web archiving, and one can expect substantial developments in this area of the model in the coming years.

1e. Risk Management

In developing a web archiving program, many institutions consider the level of risk related to copyright they are willing to accept and how they will manage this risk. Whether and how institutions decide to seek permission from site owners before archiving is one of the clearest examples of risk management policy making in action. The Archive-It service has long used robots.txt (an easy-to-use technological solution) as a permissions management tool, which provides an automatic way for site owners to exclude their sites from the archiving process. In addition to the robots.txt protocol, Archive-It partners sometimes seek out website owners to get written permission before beginning to harvest.

For example Columbia University contacts site owners directly, and formally asks permission to archive websites before they begin their harvests. This is a multi-week process in which the site owner is contacted twice. If there is no response to the first contact after three weeks, the Columbia team sends a follow up message. If they still do not hear anything after an additional three weeks, they proceed with the harvest. Overall, Columbia's response rate is 52%: of 783 sites contacted, 400 responded and granted permission, 378 did not respond, and only 5 site owners have responded negatively asking that their sites not be archived (personal correspondence with Alex Thurman, February, 2013). Similarly, the University of Alberta selectively asks permission for sites they archive. This decision was based on discussions with their legal department who gave them a "risk threshold" to follow, and they ask permission when they feel the need to stay within this threshold (personal correspondence and conversation with Geoff Harder, June 27, 2012).

Risk management decisions can also be seen in the choices institutions make when deciding which sites to archive. Originally, the State Library of North Carolina and the State Archive of North Carolina collected only state agency websites. However, in 2009, they started collecting the feeds of state agencies on social networking sites like Facebook, Twitter and Flickr. Despite the fact that the content



THE OUTER CIRCLE - RISK MANAGEMENT

was on a third-party website and not controlled by a North Carolina state agency, the archivists and librarians made the decision to move forward with the archiving after weighing the potential risks and outcomes (personal correspondence with Kelly Eubank, Lisa Gregory, Kathleen Kenney, and Rachel Trent, June 2012).

Not all organizations ask for permission before capturing content; and many organizations are clear that as an archive and/or a library, their organizations has the right and the mandate to capture publicly available content on the live web. Fair use and fair game are two phrases the Archive-It team hears from partners when deciding to capture publicly available web content. In many cases an organization's mandate extends to include ignoring robots.txt on CSS and style sheets so the archived web page renders completely. And in other cases this policy includes researchers and historians capturing documents and/or websites to be able to present an accurate and comprehensive portrayal of a subject matter, with is increasingly including publicly available content on social media sites.

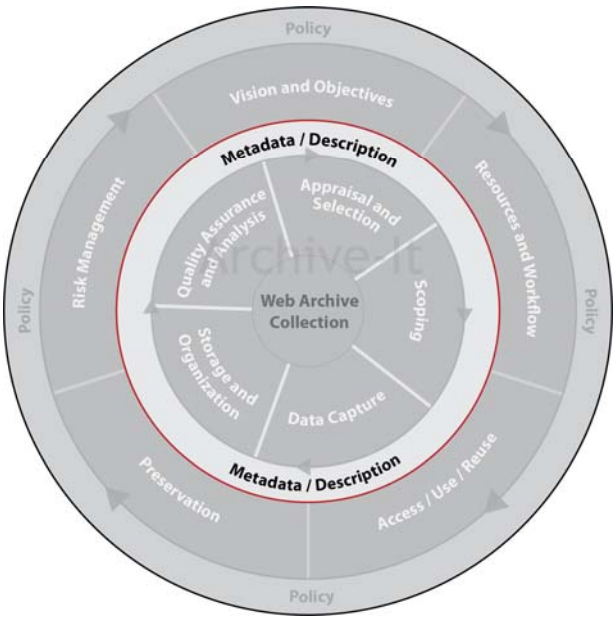
Risk can be managed and mitigated preemptively; and sometimes institutions may also need to address potential issues that come up after archiving of content has taken place. At Creighton University, a photographer became upset that his website had been archived, despite the fact that the site was part of the larger university web space and was therefore crawled per University records management policy. Creighton decided to remove the website from the archive and worked with the Archive-It team to handle the issue, and the content was removed within hours. Since then, Creighton has decided that if there is a risk of embarrassment or litigation, they will remove content from the web archive (conversation with David Crawford, July, 2012).

Note: The Archive-It service does not take a stand on copyright; and follows the Oakland Archive Policy, established in 2002, striving to work collaboratively with content providers. The service will honor requests to remove content from public access.

2. Grey Band

2a. Metadata and Description

Based on information from partners, the Archive-It team concluded that the metadata and description part of the web archiving cycle, like policy, overlaps significantly with other steps of the cycle. Therefore, the decision was made to present metadata and description as an encompassing band of the model rather than its own discrete part of the process. As with most aspects of web archiving, best practices are evolving regarding the use and creation of metadata and descriptive trends for web archives. However, the Archive-It team can make some conclusions based on how institutions use the metadata and description functionality in Archive- It. Data gathered internally by the Archive-It team in 2011 shows that over 70% of Archive-It partners generate collection level metadata, over 60% generate seed metadata, and 10% generate document level metadata. Seeds are the starting point URLs for web crawls and documents are the individually archived web pages. Additionally, this same data showed



GREY BAND - METADATA AND DESCRIPTION

that 60% of partners create both collection and seed metadata. Some partners, such as Columbia University, generate a significant amount of metadata for their Archive-It collections and work with Archive-It to change and expand the application's metadata functionality. While past statistics on metadata generation are not available, the Archive-It team believes based on anecdotal evidence that the rates at which partners are creating metadata have grown. The Marquette survey corroborates these findings. The survey asked how Archive-It partners use the descriptive features of the application. Key findings from the survey include:

- 35% of respondents prepare metadata at the collection level beyond the required description field; 35% do not.
- 81% of respondents do not prepare metadata for individual documents captured by Archive-It crawls.
- 75% of those who do prepare metadata for individual documents generate it manually as opposed to scraping it from the site.
- A majority of survey respondents do not catalog Archive-It content at any level within a catalog record (collection, seed, document) (Sweetster, 2011).

Overall, the Marquette survey authors believe that one of the major outcomes of their work is the suggestion that Archive-It partners are not generating metadata for their collections in the Archive-It application itself. Sweetster offers three possible reasons for this: "organizations just haven't yet gotten around to preparing metadata in Archive-It and are still in their infancy in terms of their web archiving efforts. Organizations do not believe that metadata is warranted or useful to be created [and] organizations are focusing their metadata creation practices in areas outside the Archive-It platform" (Sweetster, 2011).

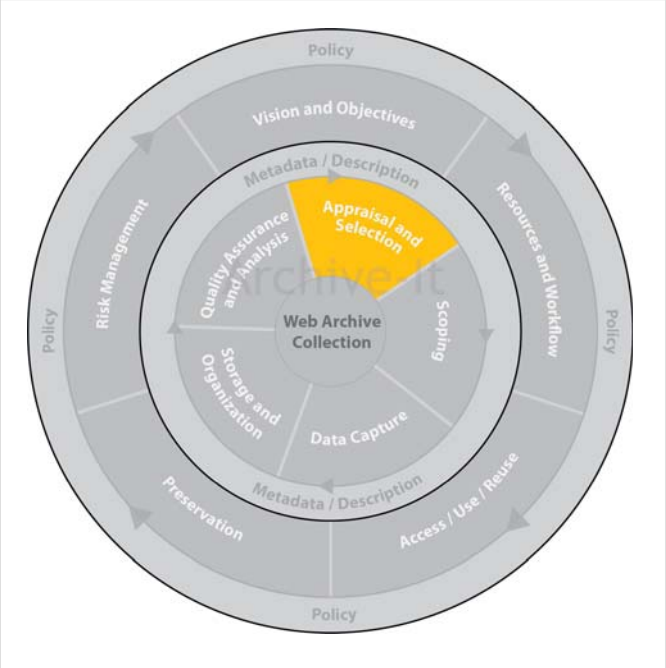
3. The Inner Circle

The preceding life cycle phases have been part of the outer circle of the model, which relate to the broader questions around creating and defining an institutional web archiving program. The remaining phases of the model, or those in the inner circle, describe the day-to- day activities of managing a web archiving program.

3a. Appraisal and Selection

The appraisal and selection phase of web archiving involves choosing specific websites for capture. This step involves more granular, specific decision points than the broader "vision and objectives" policy phase of the lifecycle. In creating policy, institutions envision overarching plans for the entire program, such as what subjects will be included in the collecting activities. In the appraisal and selection phase, however, institutions choose the specific URLs they will archive. (10) As the forthcoming examples indicate, these choices can be made in a variety of ways, with different types of individuals contributing.

State archives and libraries, for example, typically focus their web archiving efforts exclusively on state agency websites and collect those URLs. This is true of Montana State Library, the State Library of North Carolina and the State Archives of North Carolina. However, in the case of North Carolina, they also



THE INNER CIRCLE - APPRAISAL AND SELECTION

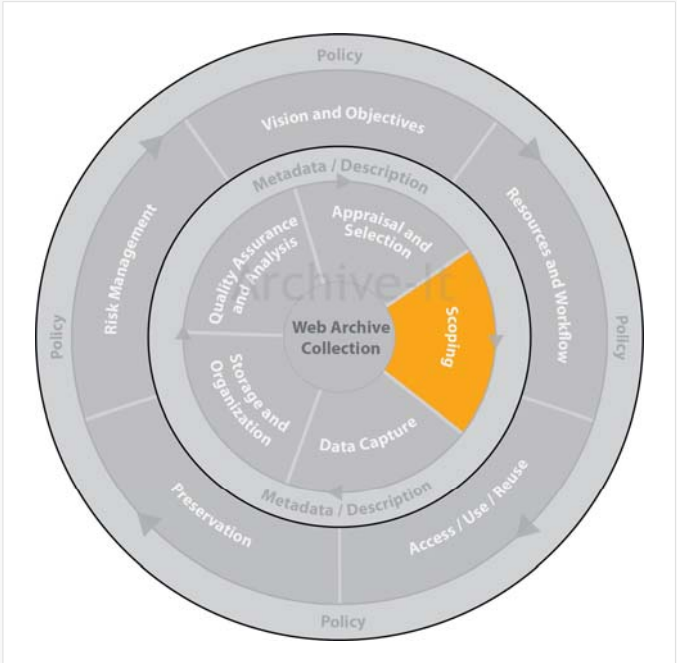
archive social media feeds generated by state agencies on Facebook, Twitter and Flickr, because they see these feeds as extensions of the official web based records. This policy decision is further described in the risk management section of this paper.

Universities that archive the web sometimes take a different approach to site appraisal. They tend to archive the university web presence or create collections based on specific themes. For example, the major topic areas of Columbia University and the University of Alberta web archive collections include human rights issues and Canadian industry and culture, respectively. Translating the institution's major objectives into a list of sites to crawl is the goal of the appraisal and selection process. To do so, the University of Alberta for instance works with subject liaisons to choose URLs. Appraisal and Selection is an evolving area and one we hope to learn more about from our partners.

3b. Scoping

After choosing what sites to archive, institutions must decide if they want to archive entire websites or portions thereof. This can be done before the first page is captured or after content is harvested as part of the overall collection quality review. This part of the lifecycle can be quite technical depending on the tools an institution uses.

The Archive-It service gives institutions several ways to adjust the scoping of their crawls. First, partners can limit what they crawl by listing only part of a website as the starting point for the crawl instead of the entire website. For example, an institution could choose to archive http://www.ncgov.com/government/index.aspx instead of http://www.ncgov.com and would only capture pages nested under that URL. Archive-It also includes other tools that can limit how much of a site is crawled. Recent survey results show that 73% of respondents report that they use a host-constraining tool at least sometimes, This tool allows partner to block specific hosts, or sub-sections of a site, from being archived. For example, an institution may not want to collect third party images that may be hosted on a target website. Limiting the duration of a crawl through



THE INNER CIRCLE - SCOPING

time limits is the second most used tool, as reported by 64% of respondents.

Currently 27% of Archive-It partners run some crawls that capture only PDFs, and we expect to see this percentage increase as PDF's become more prevalent on the web and increasingly the only record available. The Archive-It service is researching adding this capability for other types of file formats. As social media sites become an increasingly vital component to collecting activities, the service is exploring singular ways to provide capture and access solution to social media. Primarily Facebook, Twitter, Facebook and You Tube, as of December 2012.

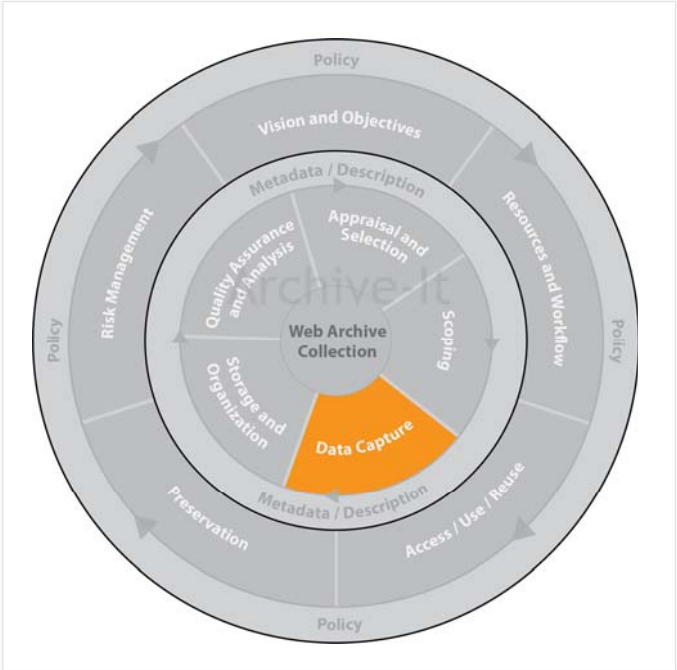
As mentioned above, the scoping process can be quite technical. The complexities involved in effective crawl scoping were a surprise to the team at the University of Alberta. They have found that they need to re-adjust their policies as they crawl sometimes adapting to the kind of data they actually can collect (personal correspondence and conversation with Geoff Harder, 2012). Similarly, Creighton has also found that scoping a crawl involves some extra work; David Crawford finds that he often needs to educate people on campus about the web space, and he tries to work with web programmers to request that they consider crawling needs when making changes to sites in the future (conversation with David Crawford, July 2012).

3c. Data Capture

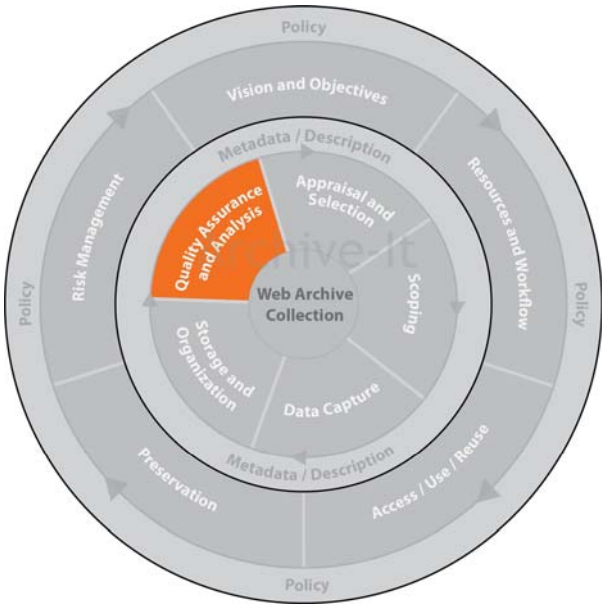
Once institutions have chosen what websites to capture and how to do so, they put their plans into action in the data capture phase of the process. Here, they will deal with the nuts and bolts of the crawling software. They will determine the frequency and timing of their crawls and when to cut-off long crawls, and then they will set their crawls to begin. The Archive-It application includes features that allow partners to make adjustments to the frequency and duration settings in the open source web crawler (Heritrix).

Scheduling crawls for ongoing and reiterative data capture is an area where institutions using Archive-It exercise a lot of control over their crawls. Data gathered in 2011 showed that 78% of all Archive-It partners use more than one crawl frequency. In other words, they do not crawl all of their sites at one interval, they use different schedules for different collections and websites. At the time the data was collected, the most popular crawl frequencies were one time, monthly and quarterly.

Given how diverse websites are in terms of their structure and construction, the data capture step of web archiving can produce a number of surprises. For example, a site can be much bigger than anticipated and therefore exhaust storage resources. Similarly there are ways for web masters to keep their sites from being archived, which can require technological intervention or negotiation between the parties involved. For example, David Crawford from Creighton University experienced issues archiving



THE INNER CIRCLE - DATA CAPTURE



THE INNER CIRCLE - QUALITY ASSURANCE AND ANALYSIS

websites that were preventable by the webmasters, and he was surprised in talking to the webmasters how little they new about the inner workings of their websites (personal correspondence and conversation with David Crawford, July 2012). To try and prevent data capture surprises, Archive-It allows partners to use a test crawl feature that produces reports on data captured without actually capturing any data. This option allows institutions to see what they would have archived without using their resources unnecessarily. The recent Archive-It partner survey shows that 69% of respondents always or often run test crawls when adding new seeds or starting a new collection.

3d. Quality Assurance and Analysis

After institutions capture data from their desired sites, they should review what they archived and assess its quality and completeness. This can be done through reports generated by crawlers or by clicking through the archives themselves by way of an access tool like the Wayback software. The process of web archiving can include trial and error. Like most aspects of web archiving, no single best practice for quality assurance has emerged among institutions that archive the web. However, there are some common trends among Archive-It partners in terms of the types of crawl information they review.

Archive-It survey data shows that a majority of partners often or always review their post-crawl reports generated as part of the service. This is due to the fact that institutions tend to be interested in how much material and exactly what kind of material they are collecting when they start a web archiving program. Findings from the 2012 summer survey of Archive- It partners show that 68% of responding institutions review their host reports on a regular basis. Only 11% rarely or never do so. Reviewing reports can take time, and reviewers need to know what anomalies to look for. Three survey respondents said that the lack of staff/resources make it difficult to analyze reports after every crawl. In 2011 the service implemented a QA tool and the ability to run a patch crawl on top level Url's that had not captured completely the first time around. The response has been positive and the service has been working on extending the QA tool capabilities. At the time of this writing there is little anecdotal knowledge about exactly how Archive-It partners perform quality assurance on their crawls; and it is one of our objectives to learn more about this area as partner's needs become more tangible.

CONCLUSIONS AND NEXT STEPS

The web archiving life cycle model is one step on the road to creating a set of best practices for creating and maintaining a web archiving program. After more than seven years of running the service and working with forward thinking partners, it is clear to the Archive-It team that the web does remain "a mess" and that it is in all of our best interests to continue to work together to find solutions to capturing and displaying web content. As technology continues to develop and as information is increasingly published exclusively online, more institutions of all sizes will need to be archiving web content. Many of the Archive-It partners have been pioneers in web archi-

ving, and enjoy sharing what they have learned. And even as we share our knowledge in this paper, we know that the web and best practices for web archiving will continue to evolve. The Archive-It team anticipates that this model and the institutions that work with it are flexible enough to grow and evolve side by side with the web they are trying to archive.

NOTES

1 Due to upcoming platform migrations, Montana State Library's URLs may change in the near future

CONVERSATIONS/EMAIL

University of Alberta: Conversation with Geoff Harder, June 27, 2012

Montana State Library: Correspondence with Beth Downs, James Kammerer and Chris Stockwell, May 29 2012

NC State Lib/Archives: Correspondence with Kelly Eubank, Lisa Gregory, Kathleen Kenney, and Rachel Trent, June 8, 2012

Creighton: Conversation with David Crawford, July 17, 2012

Columbia: Correspondence with Alex Thurman and Tessa Fallon, May 17, 2012 and February 21, 2013

AIT stats from 2011: correspondence with Kristine Hanna, September 2012

WORKS CITED

Sweetser, Michelle (2011). *Archive-It Metadata Usage Survey Results* [Powerpoint slides]. Retrieved from: https://webarchive.jira.com/wiki/display/ARIH/Archive-It+Meeting+Presentations+2011

THEME 8

Are the social networks any use to the culture industry?

by **José de la Peña Aznar**
@sandopen

Discussing the concept of culture, Wikipedia refers you to the more than 164 definitions listed in 1952 by the US anthropologists Kroeber and Kluckhohn. Nonetheless, in everyday usage it normally means chiefly two things: one is the taste for fine arts and humanities (what we call "high culture") and the other is the *set of knowledge, beliefs end standards of conduct of a social group, including the material means (technologies) that its members use to communicate with one another.*

Consequently, to relate "high culture" with the technologies human beings use to exchange their life experiences is to speak of culture twice over. In fact, all the changes in social behaviour and of the codes linked to new technologies and the Internet are beginning to be called, with good reason, "digital culture". Of all the technologies that are changing our habits of creating, sharing and consuming information, the most recent and the ones that are having most impact are the social networks. They have been with us for more than ten years and they have succeeded in capitalising on human beings' great desire to be sociable. It is estimated that 18% of the time we spend on line is devoted to social networks. And the percentage is growing year by year.

This article discusses the encounter between "Culture" with a capital C and "digital culture". Here we will speak of museums, literature, dance, theatre, film, painting, etc., focussing above all on examples, and on references to the creative use of social networks that may be inspiring for cultural administrators in consonance with this Yearbook.

The term "social networks" will be used in the broadest sense, including under this heading any platforms that allow the creation, sharing and consumption of user-created content.

In the expectation that the article will be more useful for the reader, there will be no references to the more widespread, but more basic and trivial, use of the social networks, namely just as one more unidirectional medium to publicise cultural programming. This use perpetuates the classic "I talk you listen" approach, asymmetrical, merely informational, that fails to take advantage of the main potential of social networks: interaction. In this article we will discuss more innovative, richer ways of working with social networks, ways that are more inspiring and in concord with the potential of these networks of individuals.

THE RULES OF DIGITAL CULTURE

In his latest book, Steven Johnson discusses the fact that the social networks are peer networks, between equals, and are, in his opinion, the true "native" architecture of the online world, in the same way that hierarchical structure would be the dominant social architecture in the spheres of public administration, religion and business. A social architecture is made up of rules and conventions

that direct interaction in the group or in society. Almost 70% of Internet users (64.1% in Spain) are members of social networks, but this figure rises to 94.5% for Internet users aged between 16 and 24. That means that if culture wants to attract new generations it has to take a leap into the online world, and there the rules and codes, the social architecture, are essentially those of social networks. So these rules have to be understood.

The proliferation of devices such as computers, and above all smartphones and tablets, combined with the ease of sharing photos, videos and text on the social networks has turned something that used to be impossible into an everyday affair: sharing experiences in real time. Given that culture is above all the confrontation of new experiences, the facilities for sharing them provided by social networks can multiply the impact and attractiveness of cultural products and are an opportunity for cultural administrators that must not be missed.

Humans are sociable beings, but also symbolic and cultural ones. The tools we call social networks have simply amplified our natural scope for socialising to a larger community and have augmented the number of social interactions by creating a greater connection density.

The social networks have also abolished the information monopoly by cheapening access and augmenting the sources. Also, the information on the social networks reaches us filtered and recommended by people we trust, and this means that we attribute greater value and reliability than we do to the classic unidirectional models for the dissemination of information. Through the social networks there is the possibility of a sort of "marketing by recommendation" that is much more effective than traditional marketing. We are already receiving the first experiences of this marketing by recommendation in the tips we receive from, say, Amazon when buying a book or from Spotify when listening to music. But in these cases the "recommendation" is currently produced by algorithms and the analysis of large amounts of data and the user's transaction history, which sometimes does not describe him or her adequately. However, on the social networks such a recommendation is made between human beings, person to person, between whom there is some sort of relationship, and would have much more chance of being more suitable and accepted.

Social networks also make it possible to achieve something that before was not possible because of the large organisational costs it would involve. This is their capacity to mobilise people, which we have already seen in cases such as the protests of the 15-M movement or the Arab Spring, but which can also be seen in matters such as collective financing and microsponsorship or in the support for social causes. We are entering the era of the crowd economy, with growing importance of the collective impetus. Thus, today peer networks also have the ability to give a second opportunity to projects that the market has rejected.

If the world of culture wants to attract new generations it will have to take a leap forward into the online world where the codes are basically those of the social media

The social networks offer cultural institutions interaction with their users, to collect their comments, understand them better and establish a lasting relationship with them, to learn from their comments to correct deficiencies, and to obtain statistics in a simple way. In the traditional marketing of other products the brands discuss the need to have not just consumers, but fans, users who adore the brand and become spontaneous recommenders of it. This phenomenon can be seen in the followers of brands such as Apple, Harley and Nike, to take just three examples. It is a process that takes time and that requires a prior communication strategy, with aims and a plan, but it is also possible and highly desirable for this to happen for culture, as we shall see in various examples in this article.

But this change to a model that makes use of the social networks is not easy, above all if it is done from the standpoint of a classic or elitist model of

culture. It is a process of general cultural change, in which can be found all the economic sectors and in which, according to a recent report, has still not been successful even for the big companies in the Ibex35 listing, of which only little over 50% had an active presence on social networks, revealing through their dialogue with their users that they have unfinished business, using the networks above for the dissemination of content.

Nonetheless, also in Spain there are other sectors such as leisure, and specifically discothèques, which are demonstrating that in this country it is also possible to do things well with social networks. A report published in 2013 stresses that Spanish discothèques are world leaders in the use of social networks and that of 35% of the Facebook and Twitter audiences of the hundred best discothèques in the world, ten of them are in Spain. Their figures for video viewings and comments on their YouTube channels run into the millions. This shows that it is possible for a sector to make the leap to the social networks if an effort is made to understand the rules and the users.

Its potential really comes to light when it is used to create interest communities, enabling participation, conversation and collaboration

Evidently, the social networks may be used or not used. This choice is linked to the strategy and what it is sought to achieve. But their potential really comes out when they are used for what is truly their essence: to create interest communities, enabling participation, conversation and collaboration. Networks such as Twitter, Facebook, Google+, etc., are merely tools, but what are truly changing the world, what has changed it forever, are the communities, the common interest groups that find on the Net their way of organising themselves, communicating and multiplying the exchange of ideas and knowledge. This was so even before the arrival of social networks and took place through forums, chatrooms and all the tools for interchange available to those who recognised each other as being similar in terms of their interests.

Hence, the aim of using social networks in culture must be to create large, strong cultural communities in which a cultural institution or cultural initiatives are the catalyst that propitiates the interchange of experience. This would have two immediate effects: firstly, engagement (to use the marketing jargon), and secondly dissemination, far beyond what other communications media are able to do and at much lower cost.

REAL CASES: THE USE OF SOCIAL NETWORKS IN CULTURAL INITIATIVES

Let us turn to the analysis of the use of social networks in the field of culture.

First we shall see how they can be used to extend the cultural experience to others and/or prolong this experience.

We shall also see how they can be used to build ever closer links with users, creating cultural communities and to measure this relationship by their interactions ("likes", "comments" or "shares" in Facebook or retweets on Twitter).

Competitions are also a very frequent resource in networks to extend and stimulate the communities that have been created and so widely used and effective are they that they merit a section to themselves.

We shall see how image-based networks such as YouTube, Instagram, etc., can be used in a form of collective co-creation and can also use other networks such as Twitter or Facebook as unexpected "new spaces" to bring a work into existence, be it literature, theatre or dance, for example.

Finally, a lengthy section must be devoted to the issue of the collective financing of cultural projects, crowdfunding. In this case, the social networks share amongst their followers the support one has given

to a cultural initiative, prompting others to participate too. This effect of contagion is having a great impact on the concept of "shared culture", where users find a way to "get things done", particularly projects that had been discounted or had seemed impossible.

THE SOCIAL NETWORKS AS EXTENDERS OF THE SCOPE OF CULTURAL EXPERIENCE

In most of the museums, concerts and theatres in Spain and much of the rest of the world, one of the first things you see when you go in is a sign that says "Photography and the use of mobile phones prohibited".

Nonetheless, others have discovered it is much better to let people do it. MoMA in New York, the Louvre in Paris and the Thyssen in Madrid, in the permanent collection, are examples of this. Also, in ever more art galleries and exhibitions the visitor is explicitly invited to do so, to photograph and share their experience on social networks. The reason is that a visitor sharing in real time their picture in front of a work of art stimulates their followers to take an interest in this museum more than any institutional campaign might have done. Sharing experiences is one of the keys to the new digital culture and the question would be, "Why not take advantage of it to further disseminate culture?". The cost is zero and the benefits might be huge.

What really lies behind the prohibition on photography (apart from the dubious damage that might be caused by flashguns), is an issue of property, image rights on the pictures which, being reserved, should make it possible to sell more reproductions. The impact of this is also dubious, since no visitor's camera will give the same quality of reproduction nor definition nor lighting, yet because of the limitation imposed by this minimum economic impact we lose the "marketing by recommendation" that any visitor might do between their hundreds or thousands of followers and friends.

The Rijksmuseum in Amsterdam has taken the opposite course, digitalising and releasing 125,000 works in its collection for free use. Others who have understood this change have adopted initiatives such as that of the Museum of Natural Sciences in Manhattan, offering free entrance in return for telling of one's experience on social networks, something it dubbed a "TweetUp". A group of young people from Manhattan were given tickets on one condition: that they update their social networking sites during the visit.

Going further than this, the Chicago Museum of Science and Industry organised a competition promoted on YouTube for people to live 24/7 in the Museum for a month. The winner was Kate McGroaty, chosen out of more than a thousand participants. During her stay she published blogs about her experience that could also be followed on Twitter and Facebook, giving the museum great exposure, so striking was the initiative.

Sharing experiences is one of the key elements of the new digital culture, and so the question is, why not use it to spread culture more broadly?

Orchestras have also come aboard. The Cincinnati Symphony Orchestra is one that has established a "Tweeting section", a space reserved for members of the audience who wish to send on-the-spot comments about the concert through Twitter. In this field, the pioneer was the National Symphony Orchestra, Washington, which sent programme notes through its Twitter account during a performance in 2009.

This initiative has also been adopted by opera houses. In December 2011, Palm Beach Opera, in an effort to reach out to the young audience, offered twenty free tickets to see *Madam Butterfly* and tweet their impressions of the performance. The offer also included licence to tweet during the dress rehearsal, when furthermore photos could be taken and uploaded. The majority of those present were under forty.

Another example is the Lyric Opera of Kansas, where the organisers are the first to tweet the audience, in real time, on details of the production or what is happening behind the curtains.

In Chile, the Centro Gabriela Mistral premiered an opera specially for tweeters. In an initiative unique in that country, tweeters used the hashtag #operatuitera to comment on the details of this original and entertaining story.

The same has been the case in theatres. In the US there are places where there are reserved seats in theatres for those who wish to tweet during the performance; they are known as "Twitter-friendly seats".

Also, cultural institutions such as the Casa Encendida programme activities with the aim of obtaining exposure through social networks. Through its twelve-hour free concert marathon (La Radio Encendida) five official tweeters were sought who would experience it all and tell of their experience through Twitter. To propose themselves as official tweeters they had to post comments on the website. The five selected could attend accompanied by one other person.

All these examples show that something is moving in cultural institutions around the world: the recognition of what the social networks can contribute to greater knowledge and dissemination of culture.

An analysis of how Spanish museums were doing things, in terms of prolonging the experience through social networks, appeared in the report *Museums in the digital age*[4]. The main conclusions were that museums were getting better and better with the "before your visit" stage, the discovery stage, with the promotion of networks for their new cultural offerings, creation of applications, etc., but there had been little activity, few initiatives, to enrich the "now" (visit stage) and there was little to promote the exchange of experiences afterwards.

This prolongation of the experience through videos, summaries, competitions, etc., is what discothèques do extraordinarily well, according to the report cited earlier, which also gives clues as to what initiatives could also be taken in other sectors such as culture in order to augment their impact.

SOCIAL NETWORKS AS CREATORS OF CULTURAL COMMUNITIES

Any cultural institution with a large number of followers and a high percentage of interactions with them has created, without doubt, an influential cultural community. However, if a large number of followers come together, but with little interaction, what we have is a community, but one that lacks commitment and proximity, an unengaged community. This situation usually occurs when an institution is attractive but its communication is very corporative in tone and the content does not encourage engagement.

In the report on Spanish museums cited in the previous section on *Museums in the digital age*, drawn up in 2011 by Dosdoce, one of the main deficiencies was the paucity of relationships between the museums and their followers on the social networks. In some cases there was no response to the comments or questions by the long-suffering fans of these institutions, rather similar to the situation of companies in the Ibex35. Neither was there much networking between museums, preventing them from creating knowledge nodes and shared cultural networks.

Another analysis of this sort was carried out on Spanish museums in 2013 and one on art galleries in 2011. In both cases, with few exceptions, we are still at a very early stage, in comparison with other international institutions.

The museum with the largest number of followers on Facebook and Twitter was the Museo del Prado in Madrid, with 278,964 and 190,872 respectively.

With regard to the followers' level of activity, or engagement, the museum that did best on Facebook was the Museo Romántico in Madrid, with 31%, followed by the MNAC, 26%, and the Fundació Gala-Dalí, 25%. On Twitter, however, the largest index of interaction was the Museo Reina Sofía in Madrid, with 91%, followed by the Museo Thyssen with 76% and the Museo del Prado with 38%.

The report showed that the museums' audience on Facebook was larger than on Twitter, but on Twitter the engagement, the interaction, was much greater. None of the museums scored high enough with both parameters for them to have what can be considered an "influential community", the closest being the Museo del Prado, the Reina Sofía and the Guggenheim.

If we compare these figures for followers with the 59 million visits per year that the more than 1,500 Spanish museums receive, they look smaller still. Nonetheless, in comparison with other major international institutions, we see that our museums are still far behind the figures for leaders such as the Tate Modern, with 600,000 followers on Facebook and almost a million on Twitter, but higher than some such museums as the Louvre, with barely 61,000 followers on Twitter.

Good figures, both for number of followers and for engagement, almost always go hand in hand with a clear loyalisation and attraction strategy and well-defined aims, which are essential when an institution enters the world of Web 2.0. Below I give some other examples that might be considered inspiring in this sense.

A traditional institution such as the Real Academia de la Lengua Española, the RAE, has managed on Twitter (@raeinforma) with the hashtag #RAEconsultas to provide a highly interactive service to resolve doubts and definitions that has reached 500,000 followers. Something similar has been achieved by the Fundación del Español Urgente (@Fundeu), with 175,000 followers.

To give something more is always a way to obtain followers. In this way, the Eiffel Tower, has achieved more than a million followers with a 360-degree virtual visit in Facebook made with Google Street View technology.

A great effect is also obtained by showing followers what visitors do not normally see, for example, the montage of an exhibition. The Pinacoteca de São Paulo closed a whole floor for a year to change the permanent exhibition. To maintain public interest it created a very striking communication action entitled "*Aos curiosos*" (for the curious ones) that let its Facebook fans spend three minutes at a time controlling a robot cat which walked around the closed floor with a camera showing images of the work in progress.

A community's engagement is created on the basis of a large number of followers and a high level of interaction with them

One more example of the many things an institution may offer its followers can be seen with Guillermo Solana, artistic director of the Museo Thyssen, in Madrid. Solana has developed an initiative which is pioneering in the world: to show the Thyssen collections through Twitter, thus converting the collection of tweets into an entire art course on the basis of the works on exhibition and a guide to the museum made up of 308 tweets, later turned into a book and the #Thyssen140 initiative. The originality of this approach was to show that, in spite of the 140-character limit, one could attach photographs and describe a picture part by part, tweet by tweet, and later collect all these tweets in a document using existing free tools such as Tweetdoc. In this way a whole course was created, an educational course via Twitter which won more and more followers day by day simply through recommendations between them.

Similarly, the Museo Thyssen has also started activities with network "influencers", tweeters on cultural issues with many followers who are invited to presentations or visits and who afterwards act as

disseminators and promoters through their comments on new exhibitions. For all these activities, Guillermo Solana, director of the Thyssen, received the "Cultural Tweet " distinction 2013 at the last Tweet Awards event after voting on the social networks.

Also, the MACBA (Barcelona Museum of Contemporary Art) has created Radio Macba (RWM). This is the Museum's radio project to explore the possibilities of the Internet and the medium of radio as possible places for synthesis and exhibition. Their programmes are available for listening on demand, for downloading and by podcast subscription. This radio maintains its presence and profile where its listeners are to be found, on Facebook and Twitter.

The social networks are a great opportunity for creating cultural communities of enthusiastic followers

Some public authorities, aware of the importance of social networks for the dissemination of culture, are encouraging their use. A striking case is that of the Government of Cantabria, which has put all its museums, cultural centres and caves on the social networks. The next challenge will be to manage them properly, but this first step is a good sign.

The social networks are a great opportunity to create cultural communities enthusiastic followers, fans. This is well known in the case of other sectors such as cinema, where films such as the *Twilight* saga attained over a million followers, being the first film in history to achieve this level of audience on the networks. What the production company did was to provide feedback to this community via a YouTube video of followers in which they were shown and were thanked for their loyalty.

It is also usual for many films, in addition to posting classic trailers on YouTube, to create "special" videos, which draw attention, videos designed in communication campaigns that try to draw—and in many cases succeed in drawing—attention through "virality" on the social networks until they have had tens of thousands of views and so feed interest in the cultural or leisure product in question, namely the film being promoted. Humour is a very common way of obtaining this virality, although sometimes it depends on music, famous people or unexpected situations.

COMPETITIONS AS STIMULANTS TO CREATE CULTURAL COMMUNITIES

One way of stimulating participation that has a long history of success in all sorts of media is competitions. In this case, both the subject-matter and the prizes must be suited to the cultural action we seek to disseminate on the social networks and be relevant for the users we want to attract. The aims would be to stimulate and generate followers on the basis of user-generated content, a dynamic that will in turn attract its followers.

We have an example in Seminci 2013 in Valladolid, which as well as its usual competitions for tickets through Twitter and Facebook invited photography fans to get involved and post their pictures on Instagram under the hashtag #58Seminci and credit themselves as "Seminci Instagramers". In this way they could win access to a privileged part of the red carpet next to the journalists. This was an action that sought to call attention by creating privileges that would be difficult to obtain simply by supporting the cultural event on social networks.

The San Sebastian Festival has also organised photo competitions, such as the one in 2011 on "Your photo of the festival", which it organised on its Facebook page. The winners could gain free tickets for the closing ceremony.

In 2011, art festivals such as ARCO were also looking for "official tweeters" by way of a competition in which contestants had to answer the question, What does ARCO mean for you? The winners were

announced on Facebook and Twitter and they obtained free passes for the fair.

Non-profit organisations such as the Wikimedia Foundation, operator of Wikipedia, also ran world-wide competitions, such as Wiki Loves Monuments, with a cultural aim: to document the world's monuments in photos. The result was a collection of 360,000 photographs, sorted geographically, which were uploaded under a free licence to Wikimedia Commons.

THE SOCIAL NETWORKS AS NEW SPACES FOR CREATIVITY

Experimentation has also reached social networks and culture. The social networks themselves can be a new space for creation, as we shall see with several examples.

In Mexico an initiative took place to encourage reading through Twitter with the slogan "If your reading limit is 140 characters we are going to make you read". Gandhi books implemented an interactive strategy which won them, in just three weeks, over 10,500 followers and 4,000 visits to the Website just on the day of the launch. The first book to be adapted to this medium (a Tweetbook) was *The Little Prince*. Twitter accounts and avatars were created for the thirteen characters in the book and the whole book was formed by the dialogue between them within the setting of the social network.

Another example of social networks as a new scenographic space can be seen in the Gorki Theater in Berlin, which produced the first theatrical work created and premiered directly in Facebook. The characters interacted with phrases, replies and comments and the audience entered the performance at the moment in which they were following the Facebook page where it was taking place. The development of the work (*Effi Briest 2.0*) can be followed on YouTube, where this experiment is now documented.

The Tate Modern usually stages premieres for the entire world by means of YouTube streaming, as part of its "BMW Tate Live", where it has premiered dance performances such as *Shirtology*. The aim, according to the organisers, is to "capture a volatile audience and face up to the most powerful medium of our time".

The social networks have the potential for being a new space for collective creation where followers are invited to produce a new work

Another way of using social networks is co-creation, inviting followers to take up the challenge to collectively create a new work. Thus, the Sundance independent film festival created the film *Hollywood & Vines*, the first to be created by collective collaboration (crowdsourcing) using Vine, the Twitter video app that lets users record and share up to six seconds of movie. The producer created a script, shared it through Twitter with Vine users throughout the world and received more than 750 contributions. Once they had been selected and edited he formed a composite video made up of the contributions of creators from nine different countries and fourteen states of the USA.

Under this heading we should also mention examples such as the Barcelona Contemporary Culture Centre (CCCB) with its initiative "Pantalla Global", in which followers sent videos less than two minutes long that formed part of a large collective work that was then shown around the world.

In the Guggenheim in Bilbao, in 2012, there was also a trial of this sort of collective work, creating, with photos sent through social network, a great collage under the direction of artists at the museum, after the manner of David Hockney.

Another striking example is how it was possible to collectively create a festival out of nothing on the basis of YouTube and dissemination through the social networks: the *Festival of False Trailers*.

This was a competition to create trailers or teasers for films that never existed (or perhaps they did, who knows?...). The proposition was as follows: "A trailer is the best summary of a film, so if you have no budget to make the entire movie, but you do have a well formed idea, go right ahead and make the trailer to show the most brilliant moments".

There are countless examples, but the social networks are an ideal medium for creation, contribution and participation, which fit in with the more open and social nature of the arts in the 21st century.

THE NETWORKS AS SUPPORT FOR THE FUNDING OF CULTURE

At a time of financial cut-backs, with a reduction of public and private sources of funding such as grants or sponsorship, it is the moment to look around for alternative ways to fund culture.

Crowdfunding, or microsponsorship, is an approach that has been well tried in other areas such as NGOs and by entrepreneurs. There are at least five types, in terms of what the user who contributes obtains in return. The most widespread in cultural projects is microdonation, in which the user receives recognition, without financial compensation, but with the moral compensation of having helped to make it possible to carry out a worthwhile project that could otherwise not have been implemented.

In Spain we have examples such as the film *El cosmonauta,* the first to be funded in this way. Those who donated more than two euros were credited onscreen. In Latin America this method was used to fund the documentary *La educación prohibida.* The antecedent of all this took place in 1989, when a rock group, Extremoduro, inspired by the slips of paper children often sell to fund their end-of-term trips, started to sell a record before it existed, by means of 1,000 peseta "shares", in order to obtain the money needed to record it. They managed to collect 250,000 pesetas and they did it: *Tú en tu casa, nosotros en la hoguera*, the first "transgressive rock" recording. The donors were credited by name on the record sleeve.

Going further back, and still in relation to music, we can cite an earlier type of crowdfunding, "subscription concerts", which in the eighteenth century made possible the appearance of the first independent artists, such as Mozart and Beethoven. This way for the music-lovers to provide the impetus enabled a renewal to take place in music, which before had been straitjacketed by the need to please powerful people for whom musicians were just another sort of servant.

It is well known how in the 19th century when France gave the Statue of Liberty to the United States in 1884, there was no base for it to stand on. So while the ship was on its way to New York with the statue, the Pulitzer newspaper *The World* started a crowdfunding campaign, by public subscription, that raised more than 100,000 dollars in five months, in 160,000 donations of less than one dollar. The social networks of the day were moved by the new medium, the most powerful information service of the time.

This collective economy, which has incorporated terms such as crowdfunding and crowdlending, which now has a prime exponent in a microfunding network which is aimed at large-scale support for creative projects: this is Kickstarter. Founded in 2009, just two and a half years later it had already raised 200 million dollars for 23,000 creative projects. Over the same period, the budget of the US federal fund for the funding of the arts, the NEA (National Endowment for the Arts), was 145 million dollars. So far since the launch of Kickstarter it has raised 750 million dollars and has funded 47,000 projects with contributions from 4.6 million private patrons.
Kickstarter was founded as a company, not as a non-profit organisation. Not all the initiatives attract the interest of donors and obtain funding, only 48% of them. It really acts as a true market in which it is necessary to convince microfinancers that the

project is an interesting one and in which they decide what merits their support. Subsequently a number of networks have been created modelled on it, such as Lanzanos and Verkami in Spain (2010) and a more recent one, Goteo, started in 2011, which adds the contribution of work to that of money, turning it also into a crowdsourcing site. In Spain, micropatronage has already moved 9.7 million euros.

Kickstarter is a crowdfunding platform of world renown while in Spain Lanzanos, Verkami and Goteo are the most prominent

Kickstarter was named by the *The New York Times* "the people's NEA" and *Time* named it as "best invention of 2010" and "best website 2011".

ARE THE SOCIAL NETWORKS ANY USE TO CULTURE?

To conclude this article, the question posed in the title is still awaiting an answer: Are the social networks any use to the culture industry? The answer is a rotund "Yes!". They can be used to create, to fund, to give impetus to culture and to give it a future. I hope that the more than 35 examples given have shown this to be so.

Culture today is inseparable from the way people communicate with one another and live, and the statistics say that more and more we spend a large part of our time on social networks. Cultural creation must be designed to take this new reality into account, in the knowledge that there is a digital culture of which we must form part in order to encounter the most active members of the public. Culture must be opened up to this new digital culture and at the same time take advantage of what it might contribute and the cost savings it might offer for dissemination. To do this well demands a strategy, clear aims and constant evaluation.

This article will have achieved its aim if it succeeds in opening the reader's eyes to this reality, that culture must use the social networks in order to become stronger.

NOTES

1 Steven Johnson (2013). *Futuro perfecto. Sobre el progreso en la era de las redes*. Madrid: Turner Noema.

2 "Presencia de las empresas del Ibex 35 en la web 2.0". *El País* and Estudio de Comunicación. September 2013.

3 That is to say, 24 hours a day, 7 days a week (ed.).

4 Carried out by Dosdoce and EndeComunicación. May 2013 . http://www.dosdoce.com/articulo/estudios/3820/museos-en-la-era-digital/

5 "Análisis de las Redes Sociales. Sector Museos de España" (SocialWin). September 2013.

BIBLIOGRAPHY

Steven Johnson (2013). *Futuro perfecto. Sobre el progreso en la era de las redes.* Madrid: Turner Noema. An interesting reflection about the networks' contribution to what we call the progress of societies.

La empresa en la web 2.0. Javier Celaya http://www.amazon.es/empresa-web-2-0-comunicaci%C3%B3n-empresarial/dp/849875173X

Comunidades virtuales y redes sociales. José Antonio Gallego Ed. Wolters Kluwer http://www.comunidadenlared.com/comunidades-virtuales-y-redes-sociales-el-libro/

Socionomia ¿Vas a perderte la revolución social? Dolors Reig http://www.casadellibro.com/libro-socionomia-vas-a-perderte-la-revolucion-social/9788423409594/1964603

Here Comes Everybody: The Power of Organizing Without Organizations. Clay Shirky http://www.amazon.com/Here-Comes-Everybody-Organizing-Organizations/dp/0143114948

"Presencia de las empresas del Ibex 35 en la web 2.0". *El País* and Estudio de Comunicación. September 2013. http://www.estudiodecomunicacion.com/extranet/presencia-de-las-empresas-del-ibex-35-en-la-web-2-0/ A snapshot of the way the large Spanish companies currently use the social networks.

"Discotecas y medios sociales" (Woo Media). September 2013. http://www.woomedia.es/uploads/1/3/5/4/13549206/estudio_top100_discotecas_y_medios_sociales.pdf. An analysis that shows how one of our country's entertainment sectors is using the social networks well, so much so that it is amongst the best in the world.

"Museos en la era digital" Dosdoce and EndeComunicación. May 2013. An interesting consideration of how the main Spanish museums are using the social networks before, during and after a visit. http://www.dosdoce.com/articulo/estudios/3820/museos-en-la-era-digital/

"Análisis de las Redes Sociales. Sector Museos de España" (SocialWin). September 2013. http://www.socialwin.es/wp-content/uploads/2013/09/An%C3%A1lisis-de-Redes-Sociales-Sector-Museos-Espa%C3%B1a.pdf Ranking of the various criteria for the use of the social networks by Spanish museums.

WEB SITES

Museo Thyssen
http://www.museothyssen.org/thyssen/home
Biblioteca Nacional de España. Biblioteca Digital Hispanica
http://www.bne.es/es/Catalogos/BibliotecaDigitalHispanica/Inicio/index.html
Tate Modern
http://www.tate.org.uk/visit/tate-modern
MoMA
http://www.moma.org/
Rijksmuseum
https://www.rijksmuseum.nl/en
Lanzanos
http://www.lanzanos.com/

Dosdoce. Observatory of the new technologies in the cultural sector
http://www.dosdoce.com/
Medialab Prado
http://medialab-prado.es/?lang=en
Kickstarter
https://www.kickstarter.com/

RECOMMENDED READING

The Rijksmuseum in Amsterdam has digitalised and made available 125,000 works in its collection for free use. An example to the world, as the National Library of Spain now is too having, in collaboration with Telefónica, digitalised and made available more than 200,000 documents
http://www.archivalplatform.org/blog/entry/why_dont/

First film made with a common script and world participation through Vine (Twitter's video app)
http://www.ticbeat.com/socialmedia/hollywood-vines-el-cine-hecho-desde-las-redes-sociales/

Wiki Loves Monuments, a worldwide competition with a cultural aim: the photographic documentation of the worlds monuments
http://www.wikilovesmonuments.org/

Kickstarter crowdfunding platform updated funding statistics https://www.kickstarter.com/help/stats

A pioneering initiative in the world: #Thyssen140 a tweet guide by Guillermo Solana, artistic director at the Museo Thyssen, Madrid http://storify.com/guillermosolana/thyssen140-por-guillermo-solana-2

Guillermo Solana publishes a guide to the Museo Thyssen in 308 tweets http://elasombrario.com/guillermosolana-publica-una-guia-del-museo-thyssen-en-308-tuits/

Social networks and cultural institutions, a selection of examples. http://asimetrica.org/redes-sociales-y-cultura/

New digital culture. Dolors Reig http://www.dreig.eu/caparazon/2011/05/30/video-nueva-cultura-digital/

Emerging digital platforms and open culture. Juan Freire http://nomada.blogs.com/jfreire/2012/01/plataformas-digitales-emergentes-y-cultura-abierta.html

The digital echoes of a cultural future
http://cultura.elpais.com/cultura/2013/11/20/actualidad/1384978739_450388.html

THEME 9

The new affective technologies come to the cultural sector

EMOTION AND FEELING AS TOOLS FOR COMMUNICATION, EXPERIENCE AND CREATION

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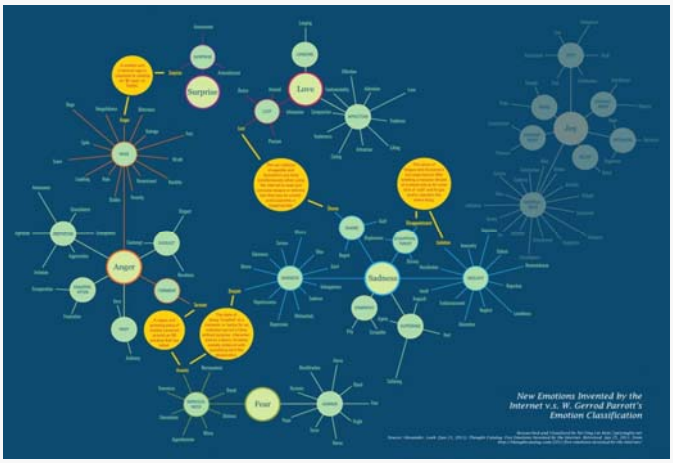
1. SCIENCE FICTION IS NOW JUST SCIENCE: ROBOTICS AND AFFECTIVE COMPUTING

In order to discuss emotions in relation to culture—before going into detail about the subject of this article, the affective technologies—we should have a good idea about what it is that we call "culture", at least in this context, and what is it that we understand as "emotions". There are so many viewpoints and theories regarding both of them—philosophical, dialectical, sociological, anthropological, psychological and even aesthetic, amongst others—that it would be useless to try to offer a summary of the history and evolution of each of these concepts to provide even the most general outline of what they are.

It is important to establish the relation, given that, for example, on the basis of the classic definition of culture in relation to the fine arts, the emotions in their service have been evinced many times when speaking of poetry, theatre and painting. Nonetheless, when we enlarge the scope of what we understand as culture beyond the fine arts, or "high culture", the emotions—once again understood from a commonplace, generalised perspective, without entering into these theories or doctrines—are diluted, we no longer see so clearly the relationship between certain cultural objects and the obligation to generate a particular emotion. However, they are still there[1]. The so-called "subcultures", underground cultures and, beyond them, "popular culture", outside the aesthetically established, regulated or categorised classes, as well as aspects of culture that have become commercialised in some sense[2], also arouse their share of emotions, such is the diversity of their public, or consumers of what have come to be known as cultural products, rather than culture as such.

Hence, the complexity of describing these two notions in all their full dimensionality forces us to generalise about what is usually understood by these two concepts in order to reach the relationship between culture and technology, culture being understood as being more heterogenous than homogenous. To talk plainly, we could say that the cultural sector provides, practises, offers—either privately or through public bodies—cultural products and services, such as books, stage plays, art, fairs, festivals, etc., ranging from the arts to mass culture. Now, in all this immense spectrum that might span what is known as the cultural sector, new technologies have arrived, which may be used as instruments for various creative acts, as tools to provide services and new experiences and even as arguments or dialogue with the technology itself—either for those responsible for creating, offering or selling these cultural products, or for those who are



NEW EMOTIONS INVENTED BY THE INTERNET
http://visual.ly/new-emotions-invented-internet-vs-w-gerrod-parrott%E2%80%99s-emotion-classification

going to enjoy them or consume them.

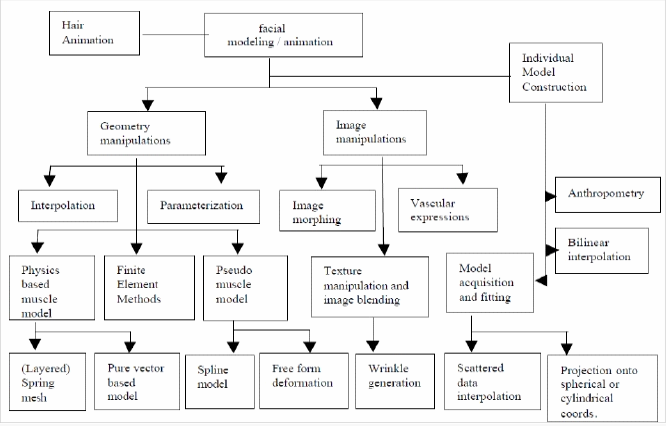
Into this context of the so-called "cultural products", including those that provide access to them or make them, technology has burst in—a technology which in some of its facets may also be considered a part of the culture and a product in itself—in different ways, as I have just observed. From the most complex latest-generation devices to the normal standards of online communication (website design, social networks, mobile apps, etc.), the various technologies available today can—and already do—add a new value to what we understand as cultural products and the cultural sector. One of its most complex phases, although not the latest nor apparently the most novel, is the emotional factor, the affective and sometimes sensorial contribution of these technologies in their various forms.

Having reached this point, we can define the emotions rather generically as those affective states that emerge as a subjective reaction to certain stimuli, whether objects, memories, sensations, acts or occurrences and the experience arising from them. Physiologically these emotions may be expressed as gestures, particular facial expressions, tone of voice, etc. Behaviourally it might influence our relations with others. In psychology, according to a classification by Carroll Izard, emotions may be classified as positive (interest, happiness), negative (fear, loathing, distress, contempt, guilt) and neutral (surprise). Fine distinctions are subjective in nature and may escape rigid classification. In fact, there are those who assert that the Internet and online communication are bringing with them new emotions—or rather new ways of experiencing established emotions—such as the worry experienced when someone fails to answer an e-mail, infuriation at being disconnected, the tenseness caused by sitting all day at the computer, etc.

The worlds of art and culture are highly familiar with the emotions: those they can arouse, those that they can transmit. In spite of the fact that, as we were saying, the issue of human emotions has been the object of study by philosophers from the ancient Greeks until our own day, it was not until the end of the 20th century that it emerged as a fundamental, open, element of human knowledge. So-called "emotional intelligence" (about which the appropriate warnings are now issued about education and the control of these emotions, given that such control may be translated into an opportunity for manipulation) opened up a field in which to cultivate all manner of values in education, personality, work, etc., in relation to the emotions. The neo-classical man's hiding of the emotions has given way to the demonstration of the most violent emotions and passions, together with the go-with-the-flow attitude of twentieth-century man to today, the era of knowledge, education and control of the emotions.

Some of the new technologies that are appearing have affective, and sometimes sensorial, aspects

But how is it that technology establishes relations with humans? Undoubtedly this relationship may exist on different planes, as I suggested at the beginning. Man, in his search for knowledge of his own nature, and the will to overcome it, has developed the idea of the "other" like himself, the Doppelgänger, also in various forms and representations. It is this conception of the double that the emotions have been evolving together with



FACIAL MODELING AND ANIMATION TECHNIQUES
http://ow.ly/tyZkL

growing interest in them. From automata to robots with human emotions is a long and varied journey. And it is precisely at this point where science, technology, art and, indeed, culture, begin a relationship from the real to the fictional, or the fictional to the real. Fiction, science fiction, has sought to anticipate scientific and technical achievements, in which technology acquires a vital role in the attainment of these futuristic aims. Meanwhile, technology and science attempt this anticipation as a measure for prevention (of diseases) and now also of services and experiences (tastes, desires, searches, emotions).

Hence, science, technology and cultural products come together in this search for this latest recreation of the nature of man. A clear example is robotics, where all three have found a common argument to develop their work in this field. Artificial intelligence, affective computing and the semantic Web are three approaches to the question of humanoids or computers with emotions. An approximation to the creation of a "real" person that is no longer like Kleist's puppets in his essay "On puppet theatre": here there is an attempt to recreate in detail what we know about what we are, without ironic distance, including our emotions.

One of the first scientific approaches to the recreation of human emotions in a machine was that made by Fred Parke in 1972. This computer science graduate from the university of Utah unveiled the *first human face with computer graphics*, made in 1974 for his doctoral thesis. Parke was trying to artificially recreate, in 3D and with the maximum possible detail, the movements of a human face, to which end he included a recital of a poem by Emily Dickinson, "How Happy is the Little Stone" (1881). I do not know whether the choice of a poem with this title had a similar intention. It was an exceptionally complex product for its time since it combined programming code with analogue systems of sound recording in order to reproduce in video these pioneering faces with 3-D animation, with the consequent need for a laborious process of synchronisation. The study of human facial expressions has a much longer history than that, of course, but the articulation of such expressions did not take shape until these first attempts that would soon give way to research into the gestural recreation of emotions.

Artificial intelligence, affective computing and the semantic Web are three approaches to the question of humanoids

Since then, the creation of animated interfaces has evolved to attain the standards we all now know, and which we can see in video games and films. Virtual robotics can animate the protagonists of a film that is not necessarily itself an animation. Work is going on in the University of Cambridge on a line of research similar to Parke's with the Zoe prototype, which according to its creators sets out to be "the most expressive avatar yet made, replicating human emotions with unprecedented realism". It is a project based on voice recognition and the capture of visual data. This results in the adjustments of speech that reveal different states of mind. The idea is to develop such virtual faces to turn them into the interactive interfaces of the near future through which humans will be able to relate to computers and digital intelligence of all sorts. But beyond the recreation of the emotions, others are attempting to fully integrate emotion into robots and computers.

In 2011, *Eva*, a highly emotive film by the director Kike Maíllo, told the story of a researcher at the University of Robotics in the field of cybernetic

engineering who is working on the creation of a robot with the feelings, emotions and relationships of a child of about ten. As well as the ideal robot he is working on, the researcher also has a robot assistant. It is spontaneous and energetic, to the point at which the protagonist asks it to what level it has been programmed and the robot assistant says "8". "Reduce it to 6", responds the researcher. "We are not used to such emotive levels". Possibility does not automatically bring acceptance. We are all accustomed, when working with technology, to the need for a period of adaptation, of becoming familiar with it. How much more time would we need to get used to interacting with robots that reproduce our emotions as though they were theirs?

The next step from the example we have seen at the University of Cambridge comes from the same university and is intended to demonstrate precisely how the emotions can be used to improve interaction between humans and computers. In this case, furthermore, taking from the interface and the computer screen—"robotising", as it were—the researcher himself in the form of an android bust. A bust that reproduces voice, movements, facial expressions with the aid of 24 motors in the artificial face to attain the highest possible degree of expressiveness—still very much at a beta stage, it must be said. In Japan there are models incredibly more similar to humans, although I do not know how much research as gone into emotions for them; it must not be forgotten that they have been developed in Japan, where there is a tendency to hide or control emotions in public, focussing them instead on attention to tones of voice when speaking.

2. THE ALGORITHM REVOLUTION: FROM LABORATORY TO POCKET

Although it might not seem so, this whole gamut of scientific and technological research is beginning to be useful beyond the sphere of cybernetics and artificial intelligence. At a level of commercial use or private analysis, the expressiveness of the face can now be measured using technologies that scan such expressions using cameras that may already be built into almost any device. One of the many companies that are developing this sort of technology is Affectiva's Affdex, based on work by MIT Media. It has a great variety of applications, ranging from advertising and marketing campaigns to measure the customer's degree of satisfaction, surprise, interest, etc., to election campaigns. Using this technology in the stages prior to the premiere of a film, for example, could provide interesting data on how it will go down with the public. Just a camera is needed to gather data on the sensations and effects caused by an event, listen to an on-line concert, a press showing, a work of art, etc.

Although it is not a face recognition technology, the application Dumbstruck makes use of facial expression, reactions, and in some sense emotions to perform its function. It is a messaging application by means of which, when a user sends an image message, the reaction of the sender is automatically recorded in a little video by the smartphone's camera. Once the recording is made, the sender receives an alert so that he can see his friend's reaction to the picture he has just sent. Like many other apps and tools that were devised for use by ordinary people (not to mention Twitter or Facebook, as well as Instagram, Vine, Pinterest and many others), it might soon be used by cultural entities of all types to interact with their followers, readers, visitors, spectators, etc. That is to say, there is just one step from games amongst friends to viral marketing, interactive and personalised. Reactions to promotional campaigns, the cover of a book or disk, a poster, a photo of the author, an actor, etc. Later we shall look in greater detail at how the emotional factor is taking root precisely in the field of online communication.

Another technology related to the monitoring of facial expression, which we have already mentioned in connection with robotics research, is voice recognition. As in the case of cameras, all that is needed is a microphone and the integration of the necessary technology, whether as stand-alone

software or as a mobile app, for example, to obtain the desired results. A company of Mexican origin, EmoSpeech, develops software applications based on emotion recognition with voice as its interface. Basically what this technology does is to recognise frame of mind by means of the voice, that is, the software interprets the emotions, which for the purposes of an enterprise can be converted into data on its users. The idea emerged at the Laboratorio de Tecnologías del Lenguaje de la Coordinación de Ciencias Computacionales at the Instituto Nacional de Astrofísica, Óptica y Electrónica, in Mexico City. Its uses, of course, will go beyond the call-centres where it has started to be deployed.

Research is being directed towards recognising emotional expressions to detect the state of mind and determine how to respond properly

Many of these complex technologies are eventually integrated into applications or resources for mobile devices, including smartphones and tablets. Their various features and characteristics may serve as tools or resources for the applications themselves such as data collection: the voice, the camera and the GPS are being used to investigate the anticipation of decisions or searches by users of these devices. Research on the voice may supply many data, particularly from the point of view of affective analysis. It is well known that emotion causes changes in breathing, phonation and articulation, which in their turn affect the acoustic signal. The emotional tone of the voice or prosody take in a number of acoustic parameters such as temporal structure, intensity and frequency. The emotion expressed by a speaker is characterised in all cultures by the universal properties of these parameters.

According to a recent study[3], adult listeners can quickly and reliably recognise different emotions on the basis of different vocal signals. Furthermore, it shows that emotional prosody is not processed voluntarily, and the specific acoustic patterns observed in human beings in response to certain emotions are very similar to those observed in other primates. Recognising emotional expressions during social interaction allows us to detect the state or the emotional reactions of another, and may give clues as to how to respond properly in different circumstances. It is this type of response that is the subject of current work on emotional intelligence projects. The time will come when mobile technology will also decipher the reading of these universal parameters and know how to react. That is to say, it is very possible that thanks to the voice, mobile phones in their most "intelligent" version will "understand" their owners, and, who knows, take decisions for them.

Often this sort of technology is much closer and more commonplace in our environment than we notice or are aware of. Anyone who has an Apple smartphone or tablet running the latest operating system will have a voice application called Siri. This app processes the user's language to respond to his or her commands during navigation without he or she needing to use their hands. It can also give usage tips because, according to its creators, it gradually adapts itself to the needs of each user. In other words, it personalises its service. As is often the case, with successive updates of the application, its success rate gets much better. It is not hard to find amusing anecdotes on the Web about users who ask Siri more or less compromising questions and the surprising answers they may get. For example, if you ask, "Would you marry me?", the application might answer, amongst other possibilities, "I sure have been receiving a lot of marriage proposals recently". It must not be forgotten that it is an application to provide a real service while using Apple's platforms, but as can be seen, it in turn tries to humanise itself and to give a coherent response to the more or less joking or utilitarian queries made by more chatty users.

I cannot fail to mention here another example from the cinema regarding the interpretation these technologies are making of themselves, in this case something very similar to the instance we have just seen with Siri, but perhaps taken to the extreme. I am referring to Her, a film by Spike Jonze featuring

Joaquin Phoenix and Scarlett Johansson, in which the latter's part is played by the voice only. In this story, the protagonist downloads an operating system that behaves intuitively and in a personalised way for the user who has downloaded it. Communication is oral, and the operating system—known to the protagonist as Samantha—with its attractive voice and infinite capacity to store data about its user, can manage everything that the user thinks of, although Samantha is also able to anticipate, choose, revise, propose, etc. The operating system, which gradually grows as data accumulates and as it connects to other systems and computers to which it has access, acquires more and more personality, to the point where it feels emotions and desires. Human and system fall in love. When the human's ex-wife discovers the relationship with Samantha, she even reproaches it for not being able to control its emotions.

Early in the film we see how the protagonist relates to his telephone through a sort of slightly more advanced Siri. He asks for melancholy music, to read his e-mail or the news. Nothing much that cannot be done today with a smartphone. Who can assert that the extremes reached in the film could only happen in science fiction? Samantha, the system, trembles as it speaks. The semantic/emotional metadata that accumulate with its "experiences" (data) gradually form its personality, an artificial personality, nonetheless. It obtains feedback from all possible information, and can recognise the emotions of its user/"lover". We could say that it is the product of a great organic algorithm of "nature", that is, that it thinks and acts for itself thanks to all the millions of fresh bits of data that it accumulates as the seconds go by. Data that enable it not only to relate to other systems and converse with them as it learns, but also to write poems or compose symphonies that reflect its emotional state.

Yet more science fiction? Regarding communication between computers, technology already exists that makes it possible for robots to share experiences (data) in order to learn new tasks. Communication between them via the Internet has given rise to the first programs devoted exclusively to communication between machines, as in the Robo Earth project. As for the possibility of a computer acquiring the capacity for being creative, I think one of the most surprising examples is the project by David Cope and his work on musical intelligence. David Cope is a writer, composer, scientist, professor of music and researcher into artificial intelligence in relation to music. While going through a creative dry spell as a composer, he conceived a program that—naturally—through complex algorithms would be able to analyse music to discover patterns in the musical structure.

Technology already exists that makes it possible for robots to share experiences (data) in order to learn new tasks

The result of his research was at first called Emy and later Emily Howell, a program able to compose pieces of music in the style of different composers: Mozart, Strauss, Bartok or Bach, including chorales similar to those by the latter. In an updated version, Emily was also able to compose haikus. The key to all this lies, first of all, in data and adaptability, and then in the possibility of modifying the ability to respond. The instructions are interpreted and the results are these incredible compositions that some experts in classical music have not been able to recognise as creations by an artificial intelligence nor even distinguish them from work by the original composers who inspired each piece. This, of course, poses many questions, some of them uncomfortable ones, regarding the creative ability of humankind, which—until now?—has been distinguished from that of other living things: "If beauty is present, it is present. I hope I can continue to create notes and that these notes will have beauty for some others". These words are by Emily Howell.

Algorithms. A few months ago, researchers at the University of Granada (Pedro Ángel Castillo Valdivieso, Juan Julián Merelo Guervós and Antonio Miguel Mora García, together with the company Trevenque) announced that they had created a tool called PreTEL which, on the basis of networks of

artificial neurons, can predict whether a book will sell well or not. Its mathematical model is able, they state, to make estimates using multiple variables, such as price, points of sale, publisher, etc., together with the economic situation at the time the book is launched, the author's name, literary fashions at the time, etc. This system also grows with the accumulation of data together with its ability to learn and adapt to new data. Its creators say that the margin of error is barely 18%. I do not know whether any publisher has so far used these services.

Algorithms to predict publishing successes or to analyse millions of words in literary works with emotional density

Nonetheless, the creators of another algorithm state that they have found the key to predicting whether a book will be successful based on "statistical stylometry", that is, a statistical analysis of the literary styles of various genres that identify those characteristic stylistic elements which are most common in best sellers in comparison with those that fail to achieve this status. The research[4] is based on 44,500 books in the public domain published by the Gutenberg project. The researchers counted as bestsellers those which had been a critical success and had been downloaded a large number of times from the Gutenberg Project website. In addition they included others such as *A Tale of Two Cities,* by Dickens, *The Old Man and the Sea,* by Hemingway, *The Lost Symbol,* by Dan Brown, and the latest Pulitzer prize-winners together with some "super sellers" at Amazon. The algorithm analyses parts of sentences and the use of grammatical rules together with another type of semantic analysis.

Some striking data emerge from the report, such as that bestsellers make more frequent use of conjunctions and prepositions in comparison with books that are less successful. Also, the research found a higher percentage of nouns and adjectives in bestsellers than that found in less successful books, which depend more on verbs and adverbs to describe the action of the plot, and more negative language in reference both to actions and to descriptions, for example, of parts of the body. On the other hand, it seems that, according to this algorithm, bestsellers base their language more on verbs that describe processes of thought (remember, recognise) rather than actions and emotions. The report gives a number of grammatical formulae, verbs and nouns that appear to be most used in works of this type. In fact, novelists who write in a more journalistic style have greater literary success. It is not the only study. Another study[5] claims to have found an "emotional algorithm" able to analyse millions of words with emotional density in literary series—the test is based on the works of Shakespeare and the brothers Grimm—but is also applicable to any tool for textual communication, including the Web and social media.

The analysis of language already has commercial applications, as in the case of Luminoso, which understands and analyses different languages semantically in real time. What it basically does is to analyse language to determine whether a particular product or service has really brought satisfaction so as to be able to recommend other services or products with a similar level of real satisfaction. By understanding the data it has about users, it can create a recommendation system that goes beyond just the sales made. A cultural entity, for example, can find out what people really say about its work or what it is that users really want. The technology can even distinguish from the semantic context whether it is a book or a film that is being discussed in those cases where a film has been made of the book with the same title, and whether people liked it or not. Its algorithm, which is fed daily, adds all kinds of terminology, slang, metaphors and whatever may be the figures of speech and linguistic registers used on the Web to gradually refine understanding of what is being said and people's feelings and opinions. What underlies the words is the real answer from consumers or users, which is shown in a graphic interface that looks like a cloud of complex tags in several semantic layers. There are those who assert that, on the basis of these algorithms, it will be possible one day for computers to write novels,

even bestsellers. Samantha and Emily, fiction and reality, have already obtained similar successes, or even greater ones.

Let us return to *Her* and to the user's field of action. I have described how the protagonist asks his smartphone to put sad music on. It is true that there is an application called Stereomood that is heading in this direction, except that instead of using voice recognition it still requires the participation of the user in order to gather data, and so further refine its results, that is, in its service of discovering and recommending new content. This application offers a varied musical repertoire according to the mood the user says he or she is in. As a way to discover new music and groups it turns out to be a very accurate tool and quite addictive in a way. Furthermore, it performs one of the basic functions of these new tools, namely to find out about new content that might really interest the user.

Algorithms that analyse language to determine the level of product satisfaction and make recommendations

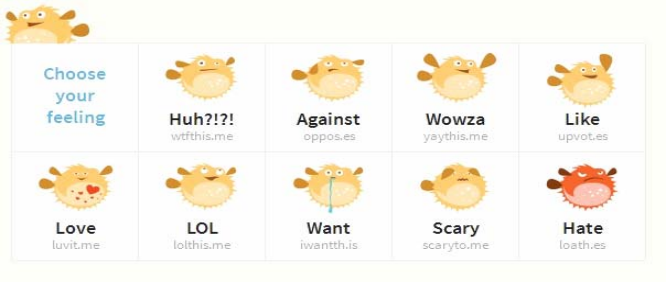
From the examples we have been seeing it is clear that "affective computing" is going to decisively change the way we humans relate with machines. Companies of all sorts are taking more and more notice of these technologies, given that emotion is the driving force behind the way the consumer relates to products and services. In the fields of searching and algorithms that are familiar to us, Web search engines are still evolving along the lines of the Semantic Web, although the ever more frequent use of mobile devices for queries of all sorts has added a possibility of interaction that desk-top machines cannot attain. Mobile technology is becoming more and more in tune with wearable technologies. That is, technology that can be worn, whether in the clothing or as part of apparatus or accessories that is already being applied in fields such as sport and health, but soon it will spread to other levels and industries, including culture. Google Glass is a well known and very typical example. In fact, Google, Samsung and Apple amongst many others, are putting all their efforts into developing technologies of this type.

At the University of Cambridge again, an application has been developed called EmotionSense[6], which tries to determine its user's mood, degree of satisfaction or happiness, combining certain data also collected during smartphone browsing. Thanks to the collection of such information together with another set of data provided by the user, the app gives a report on its users emotional state. As we have already seen in the case of Stereomood, emotional technology of this sort may have a number of uses in our daily lives, such as constantly improving the accuracy of our searches and purchases, even making the process of discovering them entertaining. An interactive resource with which, for example, we can choose something to read, buy a theatre ticket, or go to a concert or exhibition depending on how these technologies read us in order to offer us different possibilities according to this interpretation.

The speed being attained by this technology, together with this tremendous capacity to combine data of all sorts, means that, beyond affective computing, we are entering in parallel with what has been called "contextual computing", which brings together our interests, behaviour, social relationships, reactions together with all sorts of personal data to give us all the possible and necessary information.

3. COMMUNICATION AND EMOTIONAL DESIGN: THE ATTRACTION OF THE INSTANT

We have seen a few examples of these technologies that are already available, above all on mobile devices, that are based in cutting-edge scientific research. However, at a simpler level of communication, there is also this factor that we call emotional with which we want to transmit how our



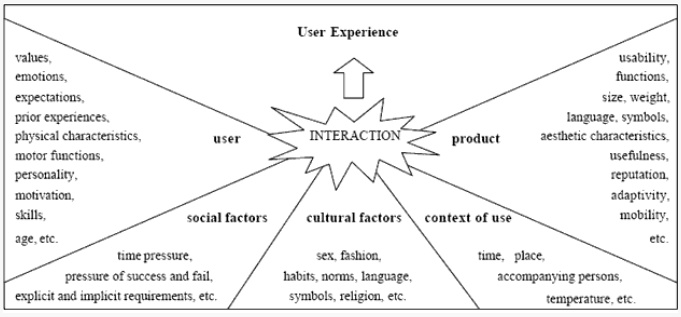
BITLY FOR FEELINGS WEB APPLICATION
https://bitly.com/a/feelings

emotions are to be interpreted. Such as the emoticons that, far from going out of fashion, are becoming ever more precise and more complex. There is the case of Facebook, which has developed, together with Berkeley University and Pixar, more complex forms of this sort of communication that reflect certain feelings, emotions, moods or simply situations through emoticons. Researchers at Samsung are working on software that could assess a user's mood by the way they write their tweets on the smartphone. It would work by analysing the speed with which the user writes, how much the telephone is moved in the process, the frequency of errors or self-corrections and the number of emoticons used. In this way, it would be able to tell if the user is angry, surprised, happy, sad, depressed or frightened. Several marketing 2.0 studies have observed that the use of icons in the pages of social media sites such as Facebook help to empathise with followers. In fact, many of the uses of these affective technologies are within the field of marketing and communication and, indeed, in the field of personalisation and service that are demanded these days.

For example, Bitly.com, the Web service to shorten URLs, has developed a Web application Bitly for feelings, in which they invite users to express what they are feeling together with the content they share on social media tools such as Twitter. These commentaries may refer to a book, a review, a film, a stage play, an exhibition, etc. The methodology consists of making use of the "shorts" that signify feelings or reactions that demonstrate that users are enjoying certain content (luvit.me), are amused (lolthis.me), dislike the content or find it frightening—not necessarily something related to horror (news about the economy may these days lead to the use of the short scaryto.me), are saddened (sadto.me) or also who express some desire (iwanth.is), amongst other options. The search for these shorteners may provide very useful information for all sorts of cultural entities.

On the other hand, the emotional factor may be induced. That is, the entities themselves may provoke an emotional response from their users (through their website, for example) and empathise with them. It is known that people's habits of buying, searching or pastimes are driven by unconscious as well as conscious processes. Our acts and choices are nor always deliberate or rational. Decisions may be greatly influenced by the emotions. We could take as starting points the website of a publisher, an art gallery, a museum, a theatre company. That is, the portal to all the content of every entity, including those offering cultural content. According to conclusions from neuroscientific work that analyses the results of online marketing, two thirds of stimuli reach the brain through the visual system. Hence, Web page design can work in its own benefit when attracting attention, playing, in turn, the emotional role.

Web designers and application developers, of whom we have already seen some examples, are taking an approach of stimulus and understanding, in order to attain a sufficient degree of empathy with the user. In a well-known study[7] on design and user experience, Arhippainen and Tähti, experts on user



DESIGN AND USER EXPERIENCE STUDY
http://www.ep.liu.se/ecp/011/007/ecp011007.pdf

experience of interfaces, classify the various factors to be borne in mind when considering the design of a Web product under five headings: user-specific factors, social factors, cultural factors, context of use and product-specific factors.

In this graphic can be seen on the left value for users, including emotional factors, as well as other equally important factors, such as social or demographic values. A good website design will emphasise visibility, with the consequent increase in the number of visits, as well as the transmission of the experience it is desired to offer: a book, an opera, an exhibition or a concert. In his book *Designing for Emotion*[8], Aarron Walter very acutely describes, giving several examples, these emotional connections between website and its users or visitors, regardless of what sort of website it is. Clarity, simplicity and ease of use, rather than trends, are universal standards; visual contrasts and a design that plays on cognitive elements helps to deepen the user/interface relationship. Furthermore, surprising elements, out of the ordinary, favour emotional responses that can attract users. This is also asserted by Roz Picard, founder and director of Affective and expert on emotional technology. In his opinion, when someone is showing some sort of content on the Web they can make it boring or funny, that is, provoke some sort of reaction. The activation of the webcam, for example, can read the facial expressions of users, so that designers and content creators know how to improve their site.

Since neuroscientists have determined that our brains are designed to follow the emotions rather than the intellect—which means that in reality it is the emotional part of the brain that governs our decision—paying attention to this factor may make an online purchase or search as attractive as it would be face to face, with the appropriate work. Neurodesign enables designers to improve their creative focus and may help to explain why an experience is bad or good, transmit positive or negative emotions. In *On the Emotions*, by Richard Wollheim[9], we read, "Normally, the emotions lead us to form desires, and these desires, together with the appropriate instrumental beliefs, can lead us to action". A different, attractive interface, with interactive elements, a certain touch of creativity and surprise for the user and related resources (video, audio, derived information) lengthens browsing time and heightens interest in what is being searched for. The time for showcase websites has passed; it is now the time to understand and provoke certain emotions in the user's search experience.

4. MONITORING AND SENSITIVE TECHNOLOGIES: SPACE AND CREATIVITY

Emotional or affective technologies are not necessarily restricted to the virtual realm. Some of them, in close relationship with sensitive technologies and monitoring, are used in the pubic space and sometimes are also focussed on improving the visitor's experience. Monitoring of a person in real time is becoming one of the fundamental tools to analyse the public present in places where some sort of cultural event is going on. For example, in some of the venues where exhibitions take place, the Promotion of Art department of the Ministry of Education, Culture and Sport is using data-collection technology from the company Eco-Compteur, which also works with the Louvre and the Orsay museum in Paris. The method uses a mat with sensors that can be placed under a carpet or rug. As people step on it, the system not only counts the numbers entering the exhibition, but can also tell by their weight how many of them are adults and how many are children. This technology is based on a smart counting algorithm with a probable accuracy of over 95%. The results are given as instantaneous attendance statistics renewed every three minutes

Organisations can stimulate the emotional response of users through their Web sites by applying neurodesign

and with the ability to perform an analysis every fifteen minutes. The data collected by the sensor mat are uploaded to the company's application so that later, on the website, the results, trends, busiest times, etc., can be seen.

These intelligent systems for data collection are attaining greater and greater precision. In fact, the latest technology can automatically turn everything that happens inside a given space (fair, gallery, bookshop, library, museum, theatre, etc.) into data. On the same pattern as website analysis tools, companies like ShopperTrak can work on specific visitor data, rather than on estimates. With their devices placed in the entrances to, and exits from, various spaces they can predict the number of visitors on the basis of the frequency of the public's entry and exit. But a more advanced version of this technology is able to monitor individuals one by one to analyse what their behaviour is in particular places, such as boutiques, shops and department stores. If this technology is combined with others we have seen such as face recognition or more recent ones such as those from Emotient, the results can be amazing. In fact, ShopperTrak is able to monitor visitors through their wi-fi and with their smartphones.

It is a technology which, if not used well, may not fulfil minimal privacy requirements, although it is true that such a method of data collection is performed anonymously. Nonetheless, users should always know what types of technology are operating in the places they visit and whether that technology might invade their privacy. If these measuring tools provide the visitors themselves with some sort of service or advantage this methodology is easier to justify. Nonetheless, it seems to be true that the incorporation of technology of all types within physical spaces will become more and more commonplace. The data themselves may be used to analyse how the monitored individuals are feeling. We are in the era of Big Data and Data Mining, in which the feelings and emotions being monitored help to build more data, as in the case of the technologies we have already discussed. Companies such as Digital Reasoning, specialised in stopping fraud through data analysis, are working on the understanding of all types of human communication, including interpretations of how certain colours are used in communications.

The possibilities offered by screens, sensors and cameras may be quite fruitful when devising attractive and even interactive campaigns. Similar things can often be seen in some electronics shops, causing passers-by to stop, play, and even interact with the window display. The cameras in mobile phones may be the ideal tools to enable people to participate in a display window with an intelligent monitor, for example, or for their contacts to see it. It is becoming common in cities such as London and New York to find shop windows with tactile technology. Customers may touch the screens to compare and choose the product they want. Recently, a giant interactive mirror/screen was installed in a Paris shopping mall, in front of which passers-by could position themselves according to instructions given by the software. A scanner analysed the style and physiognomy of each person. Then, a search engine offered a series of results with various similar standard profiles. With these results, shoppers would discover that their style of dress was not unique. The most interesting thing is that the recommendations given by this technology are social in nature. That is to say, it is directed and fed by the patterns of all the users it is continuously memorising, as in other recommendation technologies based on algorithms.

The tendency is, then, to work on sensory stimulation in spaces and commercial premises to create experiences and emotions in the visitors. Some museums are adopting applications together with augmented reality, 3-D technology and face recognition as data for games and experiments with the visitors, the use of GPS or eye-tracking technology using special glasses in order to give visitors detailed information about what they are seeing according to where they direct their gaze. More and more studies are investigating the relationship between sensory stimulation and the emotions in a variety of settings, while more and more companies are working on such projects. What

was formerly based on the lighting, furnishing, music, air quality, odour and temperature of spaces, something linked with what has been called the "narrative of design[10]", is now carried out on a more technological plane in which members of the public, furthermore, also enjoy experiences that let them feel new things in a special, much more "inmersive" setting.

Sensorial or sensitive technology, depending on the case, is not alien to the stage arts. Not just as regards the use that can be made of it for cases such as we have already seen with monitoring, or particularly the management of space and resources for performances, but also on the creative level, where some artists are using similar technologies both to dialogue with them and to create their own works. Whether it be sound, costume design using "wearable technology[11]", multimedia resources, etc., performers are gradually adopting such elements with a high degree of creativity and interactivity with the audience. Such technological resources have the ability to create great surprise and astonishment. In a recent international conference on the stage arts held in Oxford (Performance. Visual Aspects of Performance Practice[12] September 2013), there was a very interesting segment devoted to the most creative aspects of the use of these sensory technologies, able, furthermore, to transmit disparate emotions. Technologies such as mobile solutions and interfaces, analysis and monitoring of emotions, communication and semantic computing, technologies and solutions for live performance, new story-telling modules, 3-D and 4-D technologies and tools, cerebral and interactive interfaces, augmented reality (AR) and speech-processing and comprehension systems. In other words, many of the things we have been discussing in the course of this article.

Creativity makes use of these technologies, and becomes integrated to form part of new artistic expressions. Some contemporary dance, performance art and contemporary artworks incorporate sensorial and multimedia elements that map the emotions through movement, the mind and even the data themselves. The French artist Maurice Benayoun is the creator of Emotion Forecast, a work consisting of a multimedia system for displaying data that reflects on the concept of the Net understood as a "nervous system". This creative mapping exercise sets up an emotional statistical prediction system for everyone, whose interface is reminiscent of stock-market infographics or weather maps.

Many artistic experiences and creations involve screens, particularly touch-screens. A few years ago, a project called "Keep in Touch[13]", by Nima Motamedi, drew attention to the possibilities of touch, together with body language or gestural language, to give emotional and sensorial responses, precisely in response to the massive appearance of smartphones and cameras everywhere and in all devices, and to the lack of privacy accompanying these platforms. It sought to evoke the sensations and the emotions in the fusion of the visual and the tactile on screens. To take interfaces to a new level of interaction where what is physical is not restricted to being a mechanical act and the users of this prototype may communicate with each other through touch, even caress one another, through the screen.
Another multimedia and performance artist who

EMOTION FORECAST
http://www.benayoun.com/

seems to me to be particularly interesting is the Korean Lisa Park. She uses her body and her mind to develop works of performance art. In Le Violon d'Lisa she uses a nichrome wire fixed to a cello bow. When this wire touches the artist's body, the data are collected by a computerised system, and after a process of calibration, are converted into sound. She has turned her whole body into a sort of interface and instrument at the same time. In another of her works, Eunoia, it is her brain-waves that create the sound the audience hears. The brain-wave data are transmitted to the computer via Bluetooth, where a program collects them and turns them into different sounds. These sounds are played through speakers with various dishes full of water on top of them. Every time a sound is emitted, a sprinkling of water comes from one of the bowls. Something at which many people would shudder—particularly those with an aversion to technology, even more integrated or in contact with the human body—is turned into a strange calm, between the artist, the sounds and the movement of the water responding to the reading of brainwaves.

An artistic creation that incorporates sensorial and multimedia elements to map emotions through movement

5. THE VALUE OF INTEGRATION

On the basis of the Internet, technology is weaving another web of connections, a sort of computational intersubjectivity, in which it seems more and more that everything is possible. From the most advanced scientific research to our pockets, technology is invading our daily lives much more than we are aware. This is perhaps the success of these technologies, or of their proper implementation: their ability to integrate, which under no circumstances should be understood to mean to destroy. The integration of technology, from today's basic levels of online communication to the more developed examples of affective or contextual computing, does not imply—or ought not to imply—a complete rupture with the analogue world we have known, but a natural evolution in which these technologies are just tools to be used.

We are not in the era of the man-machine singularity, but in that of technology at the service of man and I think that is how it should be understood. Describing a series technology-related trends, examples and projects does not imply that all or any of them should be adopted by every stratum of the cultural sector. As has already been the case with Web 2.0, every cultural organisation must choose which tools to use, which might advance its aims, whether they be trade, communication, service, content or even creation (there is already a generation of digital artists, some of whom use Facebook not as a promotional platform, but a creative one).

Similarly, this next generation of technology must be understood, not as an imposition, but as an opportunity. Naturally it is still necessary to have many reservations and not everything is applicable to every discipline, entity or business in the cultural sector. There are still questions such as privacy to be resolved. The digital transformation cannot serve as an excuse to destroy some of our most fundamental rights.

For the most fearful, there is still a long way to go before a machine is capable of developing emotions and behaving exactly like a human being, whether it be for entertainment or to provide a specific service. Nor will human beings all respond in the same way to any given stimulus. Think of Agatha, the protagonist of George Bernard Shaw's ill-fated novel *An Unsocial Socialist*. In her yearning for knowledge to escape from the conservative education considered appropriate for well-bred young ladies, she reads books on medicine, but the descriptions of the symptoms makes her feel as if she has got the diseases being described so she has no choice but to give up this sort of reading. Then she decides to read a novel in which "none of the emotions described in

the least resembled anything that she had felt". Discovery or recognition?

The proper use of technology—like the reading of a book, seeing a play, a painting, a photograph—should also help us know ourselves and learn through our different reactions and actions that we find ourselves in a similar interaction. The qualities of the world may change, but the world understood as what affects us is still the world, whether in the desert or on the computer screen.

NOTES

1 In this regard, I recommend the chapter "El arte de masas y las emotions" in a work by Noël Carroll *Una filosofía del arte de masas*, Madrid, Antonio Machado Libros, 2002, pp. 213-248. An idea of "mass art" that approaches what John Street would call "popular culture" in *Política y cultura popular* (Madrid, Alianza, 2000): "Popular culture is all entertainment that is produced on a mass scale or is accessible for a large number of people".

2 And not just in what we could call "alternative"; "'refinement' may be perfectly commercial", as we know very well, and as we have been reminded by Terry Eagleton in his book *La idea de cultura. Una mirada política sobre los conflictos culturales* (Barcelona, Paidós, 2001), where he picks apart the various conceptions there are about culture and its complexities.

3 In "Emotional Voice Processing: Investigating the Role of Genetic Variation in the Serotonin Transporter across Development".

4 Vikas Ganjigunte, Ashok Song and Feng Yejin Choi: *Success with Style: Using Writing Style to Predict the Success of Novels*. Department of Computer Science, Stony Brook University, NY.

5 Saif Mohammad: *From Once Upon a Time to Happily Ever After: Tracking Emotions in Novels and Fairy Tales*. Institute for Information Technology, National Research Council Canada, Ottawa, Ontario, Canada.

6 Various authors: "EmotionSense: A Mobile Phones based Adaptive Platform for Experimental Social Psychology". Cambridge University. http://emotionsense.org/

7 Leena Arhippainen and Marika Tähti: "Empirical Evaluation of User Experience in Two Adaptive Mobile Application Prototypes". University of Oulu, Finland.

8 *Designing for Emotion*, http://www.abookapart.com/

9 Richard Wollheim: *Sobre las emotions*, Madrid, Antonio Machado Libros, 2006.

10 Jihyun Song: "Retail Design and Sensory Experience: Design Inquiry of Complex Reality". Iowa State University, United States.

11 "Multimedial Enhancement of a Butoh Dance Performance - Mapping Motion to Emotion with a Wearable Computer System".

12 "Emergent Sensorial Forms of Performance". http://www.inter-disciplinary.net/

13 Nima Motamedi: "Keep in Touch: A Tactile-Vision Intimate Interface", School of Interactive Arts and Technology, Simon Fraser University, USA, 2007.

BIBLIOGRAPHY

Books

Carroll, Noëll, *Una filosofía del arte de masas*, Madrid, Antonio Machado Libros, 2002.

Eagleton, Terry, *La idea de cultura. Una mirada política sobre los conflictos culturales*, Barcelona, Paidós, 2001.

Kleist, Heinrich von, *Sobre el teatro de marionetas y otros ensayo de arte y filosofía*, Madrid, Hiperión, 2011.

Street, John, *Política y cultura popular*, Madrid, Alianza, 2000.

Walter, Aarron, *Designing for Emotions*, *http://www.abookapart.com/*

Wollheim, Richard, *Sobre las emociones*, Madrid, Antonio Machado Libros, 2006.

Articles and studies

"Face of the future rears its head": http://www.cam.ac.uk/research/news/face-of-the-future-rears-its-head

"Cambridge University film provides a glimpse of how robots and humans could interact in the future": http://www.cam.ac.uk/research/news/cambridge-ideas-the-emotional-computer

"Emotional Voice Processing: Investigating the Role of Genetic Variation in the Serotonin Transporter across Development": http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0068377

Experiments in Musical Intelligence: http://artsites.ucsc.edu/faculty/cope/experiments.htm

Jihyun Song, "Retail Design and Sensory Experience: Design Inquiry of Complex Reality". Iowa State University, Estados Unidos. http://www.drs2010.umontreal.ca/data/PDF/111.pdf

"Multimedial Enhancement of a Butoh Dance Performance - Mapping Motion to Emotion with a Wearable Computer System". http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.86.5719&rep=rep1&type=pdf

Alexandra Cabral, "Smart Costumes for Performance Art", College of Architecture of the Technical University of Lisbon, Portugal. http://www.inter-disciplinary.net/critical-issues/wp-content/uploads/2013/08/cabralperpaper.pdf

"Sensory and emotional immersion in art, technology and architecture". http://www.rafolio.co.uk/dissertation.pdf

"Store Sense Reclaiming the four walls with sensory engagement". http://www.deakin.edu.au/buslaw/gsb/retail/docs/store-sense.pdf

"Converging technologies for improving human performance nanotechnology, biotechnology , information technology and cognitive science". Edited by Mihail C. Roco and William Sims Bainbridge, National Science Foundation, June 2002, Arlington, Virginia. http://www.whitehouse.gov/sites/default/files/microsites/ostp/bioecon-%28%23%20023SUPP%29%20NSF-NBIC.pdf

Jackie Bailey , "The impact of digital technology on the major performing arts industry". http://ypaa.net/wp-content/uploads/2012/01/AMPAG_impact-of-technology-on-performing-arts.pdf

"Digital Transitions and the Impact of New Technology On the Arts".http://www.cpaf-opsac.org/en/themes/documents/DigitalTransitionsReport-FINAL-EN.pdf

Web sites:

http://attentivecomputing.dfki.de/home
http://searchengineland.com/
http://singularityhub.com/
http://affect.media.mit.edu/
http://native.artsdigitalrnd.org.uk/
http://medialab-prado.es
http://www.engadget.com
http://gigaom.com
http://www.zdnet.com
http://www.wired.com

2 Focus 2014: The use of the new technologies in the performing arts

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Introduction: the impact of the new technologies in the performing arts

This study attempts to provide a panoramic view of the application of the new technologies to the performing arts. It does not, therefore, attempt to rank or evaluate each of these applications but rather to provide an exhaustive analysis of the most significant tendencies, and the cases in which they are best demonstrated. The research is structured into three sections:

1. The use of the new technologies in performing arts works.
2. The influence of the new technologies on the way people view the performing arts.
3. The new technologies before and after a performance.

Analysis of the impact of the new technologies in the performing arts

The history of the performing arts has, from the very beginning, been tied to the relationship with the spectator, the effect that the work—through its author and those interpreting it—aims to have on the audience present in the auditorium. The fact that those in the audience breathe the same air as the actors means that theatre, opera, ballet are a kind of collective communion, a shared experience. In ancient Greece and Rome, the theatre busied itself with the affairs of the polis, it was a mirror of everyday avatars, the exemplary and mythical character of which drew parallels with the lives of those watching. So the protagonists were kings, princes, gods or demi-gods. The works of that period aimed for catharsis, to move consciences, to change the morality and conduct of the theatre goers.

This relationship began to change as works started to be performed in less accessible, more closed places, such as the salons of aristocratic palaces, something that commencing during the Middle Ages. Nobles and the court would fête their guests with plays and little operas. In fact, what is considered to be the first opera in history was performed in a salon in the palace of the Gonzagas, in Mantua. However, such works were destined to become eminently urban and they were increasingly performed in theatres.

In large cities, theatres were built and those who previously would have met in exclusive palatial salons began to devote their attention to them as places where the feelings inspired by those first gatherings were widely amplified. The performing arts were the entertainment of a social class, one of the preferred pastimes of the court. The musicians

were at the service of their employer just as much as the butler would have been, and they wore livery just like the other servants.

These ideas began to change with the French Revolution. Transcendental and mythical subjects came much closer. The distance between the stage and the audience became even shorter and the performing arts once again aspired to change the thoughts and behaviour of spectators.

From the mid-19th century onwards the efforts of the performing arts were centred on obtaining the spectator's maximum attention on what was happening on the stage. With Richard Wagner, who was inspired by recovering the spirit of ancient Greek tragedy, spectators witnessed a musical drama that was a mirror of themselves and of the things that surrounded them. The lights and the orchestra, on view during the 18th century, would disappear and he would be the first to put the lights out and hide the orchestra in a pit. And all this was done with the aim of concentrating the spectators' attention, of captivating it, on what was happening on the stage.

The adoption of new technologies in the economic and social life of these early years of the 21st century has led, according to the name given to it by various experts, to veritable attention economics. The wealth of information is of such magnitude that recipients must process and select from all these stimuli. The struggle to attract their attention has become one of the axioms of the new digital society, precisely what has been happening in the history of the performing arts.

There may be those who might be suspicious about the application of these technologies in a field in which the spectators' attention should be focussed on what is happening on the stage. However, far from representing an obstacle, the application of the new technologies to the performing arts is an opportunity, not only for increasing the efficacy of reaching the public, but also for creating new audiences. It is the aim of this study to provide examples of this change.

The application of the new technologies to the performing arts has, firstly, generated a series of changes in the conception and staging of works, and secondly it has generated changes to the way people attend these performances.

The first and clearest consequence has been the change their use has had on the works being performed. The technical possibilities have multiplied the options for stage designers. It is no longer just the stage machinery but also the resources in the stage sets themselves that affect the mise-en-scène. New arts such as video art or sound performance have opened the way forward when reconsidering works, considered to be classical, as new contemporary proposals.

The second consequence concerns the way in which the public attends a performance. People's attention will still be focussed on what is happening on the stage, but we can wonder if, in the future, the new works created for these spaces will include a way of interacting with the public via the electronic devices everyone has in their pocket. In the end this is about "culture seen with other eyes through other eyes" as Isabel F. Peñuelas says in her article "Culture in the Cloud", for this Annual Report. The oft-repeated phrase, "Please turn your mobile phone off" might soon become, "Please put your mobile phone on silent mode" or, "Please put your mobile phone on theatre mode", the latter being a new mode, like airplane mode, that limits some of the phone's capabilities but which in the case of the theatre would mean its complete silencing. It would not be for the first time that a member of the audience, entranced by the performance of an actress or by a phrase they have just heard, feels the urge to consult their programme sheet to find out who the actress is or to find the exact phrase they have just heard. Or to find out in which year the

The application of the new technologies to the performing arts is an opportunity to reach a wider public and to create new audiences

work was written. This programme sheet, we can be sure, will become an *ad hoc* application for each performance, and one that provides the possibility of increasing the information available during moments such as the interval. The same thing happens with the social media. It will become more and more commonplace to see people tweeting about something they like a lot or sending or recommending it to a friend at the very moment they are involved in it.

The new technologies will make it possible for the performing arts to widen their radius and reach other people through audiovisual media with ever better sound and image quality. This formula will become a source of additional income for the theatrical venue concerned and it will spread its fame.

The third consequence concerns the before and after for every performance. Experimental theatre's old aspiration, an aspiration that had the ambition for the work to remain in the mind of the spectator even after the performance was over, could be broadened with the new communication technologies which enable the creation of common interest communities amongst the public for each theatrical venue, although the distance between them can be measured in kilometres. In the future theatre goers will attend performances at the theatres closest to their places of residence but they will be able to have distance subscriptions to the theatrical seasons of other theatres around the world. They will form opinions and make recommendations in languages other than their own about what they have seen and heard, either at the same time they are seeing and hearing it, or after each performance. They will follow the lives of their theatres and those of their favourite actors, singers and ballet dancers. They will be able to watch the rehearsals and see what happens behind the scenes. And when they get home, perhaps they will be able to download one of their favourite theatre's multiple educational resources and share with their children, the future generation of theatre goers, everything that arouses their passion for the performing arts.

SUCCESSFUL CASE ANALYSIS AND GOOD PRACTICE

1. The use of the new technologies in performing arts works

The performing arts' adoption of the new digital and communication technologies has kept pace with the possibilities offered by those technologies and they have been incorporated in two ways: as a kind of mise-en-scène of previous works, or as an integral part of new works of creation. First it was illumination and then it was the adoption of large format images made possible by high definition projectors. The control of these resources by computer has led to the development of software tools specially conceived for the management of all stage elements.

These innovations have been shared by opera, theatre and dance since they incorporate other disciplines that feed directly from technological advances for their creative possibilities, such as videoart and sound performance. All the examples mentioned here do not form an exhaustive list of all the possibilities that might exist, but rather of the ones that exist at present and they show a growing and unstoppable wave of evolution in the performing arts that is broaching the question of their own limitations, in the sense of how we have understood them since the 19th century.

The 20th century was more contemplative about the performing arts and the 21st century is going to be more interactive with the public. Since the apparition of the performance, the role of the audience has been changing, knocking at the barrier between the stalls and the stage in order to form part of the show. In the new mise-en-scène the scenery overflows the stage and nobody knows exactly where it stops. Within the same space, fiction and reality become confused to become one with each other.

The same can be said of the artistic disciplines, which have been merging to the point where the boundaries between them have become diluted. By the mid-20th century we had already started talking about dance-theatre, or musical theatre, in imitation somehow of opera, the true multidisciplinary exponent of the performing arts. New narrative forms are emerging as Carlos A. Scolari describes in his article for this Annual Report, "Transmedia storytelling, new ways of communicating in the digital age".

The revolution in stage setting brought the best theatre stage designers to the most important opera houses. In a way, opera recovered its theatrical dimension, one that had been stifled by music and singing during the preceding centuries. The adoption of videoart and audiovisual sets sprang from this revolution. Proposals such as the recent *The Ring of the Nibelung* by La Fura dels Baus theatre group, designed between 2006 and 2009, find structural building blocks for constructing their ideas for stage sets in the videos made by Franc Aleu. It is the same with Bill Viola, one of the most important videoart artists, who embarked on a common project with theatre director, Peter Sellars, to design a videoart series for use in a production of *Tristan and Isolde* at the Paris National Opera in 2005.

As can be seen from the analysis of the cases chosen so far, videoart has progressed a step further with the technique of video mapping, which suggests the possibility of not even using props for stage sets. Dance has also explored this possibility and has gone a step further by integrating projected images with the movement of the body. In these new theatrical proposals it is the body that creates the space, as has been pointed out by one of the most

relevant researchers in this field, Núria Font. This combination of disciplines can also be found in the work of creators such as the Belgian, Thierry De Mey (http://youtu.be/teQNe2zPdRk) and the Austrians Klaus Obermaier & Ars Electronica Futurelab (http://vimeo.com/64624233). Technology should not substitute everything that derives from the main source of expression, which is the body, nevertheless, there are works of new creation, such as *Robot*, which use robots in their choreography. The question, one that belongs almost to the realm of science fiction, is if a robot will be ever to be able to perform with the same wealth of expression and depth as a dancer.

It is most probable that in the future we shall find ourselves faced with new theatrical works and operas which include audience participation by means of information technology or the use of social networks in real time. It would be yet another step in the integration of the stalls and the stage. The audience, playing itself, as another character in the work and capable of knowing what it thinks without having to ask everyone individually. It will be a question of time. Let us now consider the cases that have been chosen.

VIDEO MAPPING

In opera:

Das Rheingold (Oviedo)

http://www.elcomercio.es/videos/asturias/noticias-de-asturias/2668577209001-wagner-actualiza-oviedo.html

The Cantabrian company Visual Scenic was commissioned to produce the scenery for *Das Rheingold* by Richard Wagner, a work that opened the Oviedo opera season in September 2013. For the first time in Spain, the audience were to see a virtual stage set based on the video mapping system. This technique consists of the projection of three-dimensional images on a stage, completely painted in white, containing very few real stage props. The task was accomplished under the direction of the Cantabrian artist, Jaime Cobo, the artistic director of the Visual Scenic company which has already received invitations to work in other European theatres.

In dance: Núria Font

http://www.nu2s.org/cas/p_altres.php?ida=73164

In October 2011 the facade of the Rafael Masó Foundation in Girona became the stage setting for an image, dance, light and musical performance during this Catalan city's VAD Festival. The *Habitat* production was a joint work by various artists under the direction of Núria Font.

SPACES FOR CREATION

IDN Festival

http://www.nu2s.org/idn_2013/

Founded in 2007 under the direction of Núria Font and the NU2 association, IDN Festival consists of creating the mise-en-scène for proposals that include digital images and tools in their transformation of the performing arts. The relationship between dance and cinema, the direct manipulation of sound and image on the stage, the creation of proposals in an expository format with the body and motion as the subject, these are some of the core issues around which the Festival programme revolved. The Festival is biennial and will be held for the fifth time in 2015.

Instalaciones Interactivas Bailadas (Interactive Dance Installations)

http://www.nu2s.org/cas/inv_lab.php?ida=84753

A creation by LAB 2012, the latest performing arts laboratory of NU2, a not-for-profit association created in 2005 to research, produce and disseminate works that link dance and the performing arts with the audiovisual. Instalaciones Interactivas Bailadas consisted of the presentation of four interactive pieces by a similar number of other visual artists, painters, sketchers and software designers.

European Performing Arts and Transmedia Lab

http://on-the-move.org/news/region/article/15854/european-performing-arts-and-transmedia-lab-pilot/

Three French performing arts institutions (Centre Chorégraphique National de Franche-Comté à Belfort, Le Granit, scène nationale de Belfort, and MA scène nationale-Pays de Montbéliard) have come together to create the European Performing Arts and Transmedia Lab Pilot Scheme as a platform to examine contemporary stage writing more profoundly from the point of view of the confluence of theatre, dance, music and the digital arts. Together they have announced the holding of residential events to be held between January and April 2014 with the aim of producing innovative artistic projects in this field.

GHOST ROAD

WORKS

Robot, by Blanca Li.

Choreography created by Blanca Li and her dance company that broaches the complex subject of the relationship pertaining between mankind and machines. The idea arose as a result of a meeting in January 2011 between Maywa Denki, a collective of Japanese artists whose work combines a mixture of animated objects, technology, farce and refinement, and NAO, a humanoid robot. At one point during the choreography five small NAOs dance in synchrony with music created by the Japanese team's machines. There is no human being on the stage but what is happening is choreography with live music. The production was given a standing ovation at the Montpellier Festival held in July 2013.
http://www.blancali.com/es/event/99/robot

http://cultura.elpais.com/cultura/2013/07/05/actualidad/1373037271_187585.html

Ghost Road, by LOD

Premiered in Rotterdam in 2012 this musical theatrical work combines images, videoart and electronic music applied to the performance of a play about a journey through ghost towns, past ruined houses and rusting gas stations in California, Arizona and Nevada. The work was directed by Fabrice Murgia, from Belgium, and forms part of a production by LOD (http://www.lod.be/), a performing arts laboratory that combines a number of disciplines in its work such as music, videoart and the plastic arts.

Trinity, by Òscar Sol and Iris Heitzinger

http://vimeo.com/64894353

An interactive audiovisual dance presented at the first International Performing Arts Meeting organised by the Grec Festival. The work tells the story of a body, that journeys through various stages of the perception of space, through movement, light and sound. The body is submerged in an environment of audiovisual textures and landscapes which not only accompany it but also push it towards a transformational process. By means of the broad relationship achieved between the triad of movement, light and sound, a language is created through which these elements can be seen in space while, at the same time causing profound changes in the physical behaviour of the body as a result of the reverberations and echoes of its own actions.

Compañía Ferroviaria: *El sueño de la razón*, (The Sleep of Reason) Antonio Buero Vallejo

http://www.youtube.com/playlist?list=PLsPK8tlkG7CS8awDrjMqNVpsZKE9X7roU

A series of dramatised videos about Goya's Black Paintings which the Compañía Ferroviaria (Elche) has created as a foil for Buero Vallejo's work *El sueño de la razón (The Sleep of Reason)*, about the artist's last years, the ones in which he painted this series of paintings. A stage designer and a visual artist, together with the director and the actors, created the mise-en-scène for, and made a video recording of, twelve paintings belonging to the Black Paintings series. They published these scenes on YouTube and would later use them during the stage performance enabling interaction with the audience. The work therefore had a life before its stage performance during which bonds were established between the public, the author, with Goya and with the mise-en-scène. And after the performance its life continued as the director and the stage designer gave courses about the development of these images and their content. The work has already been performed, and on 30 November it was also performed in Paris.

Insectotròpics

https://vimeo.com/39310031

https://vimeo.com/75856363

A Barcelona performing arts company distinguished by its mixture of languages and new technologies. It was founded in 2011 as a union of artists from diverse backgrounds and languages, enthused by the idea of experimenting with the fusion and interaction of their disciplines in order to create new multidisciplinary performances combining video, painting, music and theatre. The company has two performances to its credit: *La Caputxeta Galàctica*, which was presented at the Tàrrega Fair in 2012 and at festivals in Denmark, Sweden, and Korea; and *Bouazizi*, a coproduction between the Tàrrega Fair and CAET in Terrassa and premiered in Tàrrega in September 2013. In both performances there was a fusion of new technologies such as video (computers, video cameras, video mixers, mobile phones, samplers and a long etcetera), with the fine arts, music and theatre. Insectotròpics consists of the artists Xanu and Iex, the musician and composer Tullis Rennie and the video experimentalists Vicenç Viaplana and Laia Ribas and the producer and manager, Maria Thorson.

Corpo-Realidad, by María Castellano

http://www.mariacastellanos.net/index.php?id=corporealidad

A performance about perception and human sensorial failings, specifically those concerning human sight in comparison with that of the mechanical eye of the video camera. Through this, a relationship is created between perception and the everyday act of getting dressed. It is a work in which two dresses are constructed. One is made of plastic which is transparent under infrared light but opaque when seen by the human eye. Thus, the artist appears to be clothed to the audience but if they watch the scene through the monitors which are displaying the images they will see that the dress is completely transparent. The second dress incorporates infrared LEDs which become illuminated when the hooks of the dress collar are fastened, thereby establishing the electrical connection to make the lights come on. However, as with the first dress, the light emitted by this dress is only perceptible if seen through the monitor because the human eye is incapable of perceiving infrared light.

Todos mienten, by Producciones Margarita Iriarte

http://youtu.be/hZDZcAT-ATo

An example of the application of new technology to small-format works. This work is centred on Paniquis, the Delphic priestess who predicted Oedipus's tragic end, now in her dotage and weary of her responsibilities. She is so disgusted that she confesses how, through sheer malice, she invented the prophecy that would affect the lives of all those

SKINSTRUMENT II

concerned. It is an adaptation of the work *The Death of Pythia*, by Friedrich Dürrenmatt. Participating in this work, were, for the lighting design, Juanjo Llorens, twice awarded the Max Prize, for the stage set, Juan Sanz and Miguel Ángel Coso and for the video scene on a large circle occupying the centre stage, Bruno Praena. This is used as a window to the outside world and shows a number of different images which help to explain the passage of time and create an ambience. It is also a resource which, at various times during the performance, shows a video camera in live use.

Skinstrument II, by Daan Brinkmann (Amsterdam, 1983)

http://cargocollective.com/d44n

http://vimeo.com/25547889

Daan Brinkmann is a multimedia artist who recently took part in *We Love Technology*, an advanced technodigital initiative that brings together the latest artistic tendencies and organised by the Telefónica Foundation Space. Brinkmann's works are always based on the spectator's potential for expression. His installation, *Skinstrument II,* located in the hall of the Space, is a musical instrument that works by using the resistance of skin as a parameter to generate sound and which can be used simultaneously by four people as a game. When the players touch one of the hemispheres they become part of a technological circuit. If the players start touching each other, this circuit starts to generate sound. The intensity of the touching and the various possibilities of player contact determine the modulation of the sound.

Malabaracirco

http://www.malabaracirco.com/

http://youtu.be/LZo-m7FgSYE

We have chosen this as an example of a company that is investigating the infinite possibilities for combining various arts in the field of circus-cum-theatre in its productions. All their creations are the fruit of a quest that combines circus techniques such as balancing acts, trapeze, aerobatics, juggling and the like with the staged presentation of these skills through physical theatre, clowns, gesture and movement. All this with the additional ingredients of magic, music, dance and lighting effects. As a company they have worked with other theatre

MALABARCIRCO

TRILOGÍA SOBRE NIÑOS E IMÁGENES

groups, musicians and artists in their field with the aim of promoting and enriching what is known as *cirque nouveau,* or contemporary circus.

Trilogía sobre niños e imágenes, by Teatro Paraíso

http://www.teatroparaiso.com/

The creation of a scenic trilogy about the relationship between children of up to six years of age and images. These children are little spectators who grow up in a world with continuous visual stimuli. The idea of the work is to try to show, through a number of artistic projects, how images are not only for contemplation but offer the possibility of interaction and for transforming the world. These three works were produced in collaboration with the Théâtre de La Guimbarde, in Belgium. (http://www.laguimbarde.be/):

- *En el jardín* (1-3 years of age), 2005. http://vimeo.com/31543990
- *Kri Kra Kro* (3-6 years of age), 2009. http://vimeo.com/34244745
- *Kubik* (1-3 years of age), 2011. http://vimeo.com/56320275

The work is based on Serge Tisseron's research http://www.sergetisseron.com/ into the relationships human beings have with images. The process is completed with tracking and research carried out by the "Art and infancy" section of the teacher-training department at the University of the Basque Country.

In this trilogy three ideas with different technologies are considered:

1. Image as shadow and as physical presence. The design of a sequence of images, by means of back projection with screens and mirrors, that enable actors to interact with them during the time the scene takes place.
2. From abstraction to narration. The use of multiple screens and mobiles and the projection of images onto real stage elements. Based on the Isadora software program (http://troikatronix.com/) and the design of a specific tool that makes it possible to develop the poetic idea of "entering" an image and journey from abstraction to narration via the figurative.
3. Creation of live images that are projected onto objects by wireless miniprojectors in sight of the audience. The aim is the live manipulation of images in real time. The stage props, in continuous motion, serve as screens on which the images are projected.

The whole process of creation and technological development was carried out by the Belgian video creator Marc Cerfontaine (www.marccerfontaine.be). The process of technological empowerment enables the development of a drama of images in relation to the children in the audience. This innovative drama was awarded the 2012 National Performing Arts for Children and Young People Prize awarded by the Ministry of Education, Culture and Sport and at the present time it is being used as the basis for sharing experiences with other international theatre companies.

2. The influence of the new technologies on the way people view the performing arts

2.1. The use of the new technologies during performances

The use of a second screen poses a challenge for the performing arts. Outside the theatre building this second screen is something habitual, as Sergio Jiménez Arenas says in his article for this Annual Report "Gamification, generating commitment to culture". It is not unusual to find conversations on Twitter between spectators who are observing an event via streaming, either from their homes or at the cinema, in which they comment about it to each other. This community is growing and knowledge of the institution is going viral.

In the performing arts the fundamental idea is that there is no substitute for being physically present to see a work performed live. Theatre as a magic place is still its main appeal for ticket sales. That is why it still remains to be seen how the second screen will form part of live productions. The history of the performing arts shows how it has always been necessary to isolate spectators from the exterior world so that they concentrate on what is happening on the stage. At first sight, it does not seem logical that a small screen should compete with the stage setting for the attention of the audience. But what is certainly true is that these screens are becoming an extension of their owners, a tool in the full sense of the word. TV viewers already watch programmes with their mobile phones or tablets nearby. Visitors to museums are starting to use their devices to find out more about what it is that they are seeing, if the museum does not already have guides available that are designed for such devices. In theatres it is becoming ever more frequent to see somebody with a smartphone ready to tweet something in the middle of a performance. Quite often they are rebuked by other members of the audience nearby who find this sort of behaviour annoying. In fact, at the beginning of performances the request will have been heard to "disconnect" mobile phones, not to "silence" them. Any lover of concerts of classical music, theatre, opera or even cinema knows how irritating it is to hear someone's mobile phone go off. It can even distract the attention of the actors or the musicians. Perhaps, therefore, it would not be preposterous to think that in the future mobile phones will have a function called "theatre mode", similar to "airplane mode" that will completely silence the device, even incoming calls, and only allow Internet access for social networks and for searching for information. It is here that experiences such as tweet seats, bloggers' nights and social media moments, which some artistic institutions have already developed, have their origin. The social media thus extend the reach of the cultural experience as José de la Peña Aznar notes in his article for this Annual Report, "Are the social networks any use to the culture industry?".

For creators, this second screen also opens up an opportunity. Some of them, as is the case with *The Eyes of Helios* and Diablo Ballet, have already produced experiences in which this tool is used to monitor the effect a work is having on the audience while it is being performed.

If, in the short term, this second screen does not become a way of communicating with other members of an audience, who may be present in the building or elsewhere outside, it can be used as a support for theatre information that was previously provided on paper. Any institution knows how expensive it is to publish a good-quality programme of events. But the fact that it is provided to people just as they are entering the building is a hindrance to reading it. Very few people arrive sufficiently early. Today's audiences arrive with all their problems and hardly have time to prepare themselves for, or adjust to, the performance they have come to see. It would not be surprising, therefore, to see theatres become the publishers of their own programmes in electronic format. This would make marketing possible before the performance, and even much afterwards through the interest generated by specialist articles to accompany the work. As with video performances, in which a number of theatres have already made themselves their own producers, something similar might happen with the publication of the programmes to accompany performances.

What follows is a selection of various cases in which the new technologies have been used during performances.

LIVE OPERA ON TWITTER

Teatro alla Scala (Milan)

[@teatroallascala](https://twitter.com/teatroallascala)

On 7 September 2013 at the Teatro alla Scala in Milan a new opera season opened. It was the much anticipated moment, the *prima* that excites the attention of the Italian artistic and theatre-going world. Thanks to the new technologies this event had a global dimension. The season opened with a performance of *La Traviata*, an iconic work for the opera house in Verdi's bicentennial year, and it was transmitted live to a network of high-definition cinemas around the world.

Two hours before the performance began the Scala's Twitter account started providing backstage images of the artists being made up. There were even images of one of them in the dressing room adjusting their costume and winking at the camera. However, there is evidence to suggest that these images were recorded on the day of the dress

LIVE OPERA ON TWITTER AT TEATRO ALLA SCALA IN MILÁN

TWEETED BACKSTAGE IMAGES AT TEATRO ALLA SCALA

rehearsal. The character seen adjusting a bow tie does not in fact appear wearing it until well into the second act. Of course, it seems less than ideal for the theatre's audiovisual team to be interfering with the artists' concentration and relaxation at a moment filled with tension and heightened nerves.

Once the performance had started, the Scala's Twitter account started tweeting what was happening on the stage and even small fragments of video were provided. There were also backstage images of the stage effects and even of the artists awaiting their moment to take the stage.

When the performance was over the Twitter account continued to provide information about what was happening backstage with the artists embracing each other and then the post-performance celebration.

TWITTER PROGRAMMES

Although this is a service in its infancy there already are a number of institutions that have started providing brief programme notes about what the audience is viewing through their Twitter accounts. The National Symphony Orchestra, based at the Kennedy Center in Washington, has been one of the first orchestras in the United States to provide their programme notes in real time via Twitter. The Indianapolis Symphony Orchestra also provides this service.

TWEET SEATS

In 2009, the Lyric Opera of Kansas City (@kcopera) reserved a hundred seats during its performance of *HMS Pinafore* for some very special members of the audience. Occupying the back rows of the stalls, so that the light from their mobile phones would not disturb the other members of the audience, they were able to tweet a concert, an opera or a play using specific hashtags that had been designed for this performance. Some years later, this practice has spread to a good number of musical and theatrical institutions in the United States. An article published in the *USA Today* newspaper (http://usatoday30.usatoday.com/news/nation/story/2011-12-01/theater-tweet-seats/51552010/1) mentions the Carolina Ballet (@CarolinaBallet), a dance company in Raleigh, and the Dayton Opera (@daytonopera). In this article, Rick Dildine, director general of the

TWEET SEATS
Photo credits: http://ow.ly/tuoD6

TWEET SEATS
Photo credits: http://ow.ly/tuoGI

Saint Louis Shakespeare Festival @shakesfestSTL #intheglen) says, "Coast to coast, theatres [in the United States] are experimenting with how to use 'tweet seats' effectively. The arts are evolving right now, they are participatory. ... Social media are a tool we rely on, and we should not be afraid to experiment with them." The Cincinnati Symphony Orchestra installed its tweet seats in September 2010. Its communications vice-president, Chris Pinelo, said, "It was great to see how people were reacting to the orchestra, reacting to the conductor and, frankly, reacting to the insights happening backstage. We've had some repeat visits from people who came to the tweet seats". One of the people sitting in one of the tweet seats, Jennifer Nissenbaum, of 35 years of age described her experience in Cincinnati in the *USA Today* article, "I could communicate openly about my reactions to the music, musicians and conductor — without speaking a word. Plus, I had the opportunity to engage others, and get their reactions to the performance".

BLOGGERS' NIGHT AT THE OPERA

Vancouver Opera holds blogger nights to which it invites bloggers, all those influencers who tweet most or comment most on theatre programmes in all the social media. They are a kind of press corps in addition to the traditional one and they are afforded special treatment. They are invited to see what happens before the performance with the artists backstage. The idea is that they will tweet about these moments as well as tweeting about the performance during the intervals. Once the performance is over they are invited to a party with the performers and artists, a moment they also tweet about via the social media. http://www.vancouveropera.ca/

SOCIAL MEDIA MOMENTS

San Francisco Gay Men's Chorus

http://www.sfgmc.org/

This San Francisco musical institution tweets backstage photos just before its performances and it includes QR codes in its programmes for additional downloads about the day's interactive programme including the social media moments, moments of the performance during which the organisers encourage the audience to take out their smartphones, tweet and send photos to their social networks. These moments are represented with the logos of Facebook and Twitter on the programme.

SAN FRANCISCO GAY MEN'S CHORUS

OPERA NINJA

Vancouver Opera invites some of the city's most influential bloggers to tweet about their experiences of seeing a performance from unusual places, such as, for example, the orchestra pit. Such events are usually rehearsals or dress rehearsals for the performances.

TEXT-PERTS

The Eyes of Helios (Toronto)

http://debbiewilson.ca/WordPress/?p=594

On 6 and 7 May 2013, Debbie Wilson wanted to stage a rehearsal of her new work at the Winchester Street Theatre in Toronto. She contracted dancers from the nearby dance school and let the public "pay what they could" to see the performance. She asked only that they should bring their mobile phones and to tweet all the time with the hashtag #helios what their impressions were while the performance of *The Eyes of Helios* was taking place (http://youtu.be/U6zJOq7uR_0). The experiment enabled her to learn about how the audience's attention shifts during a dance performance.

Diablo Ballet (San Francisco)

@DiabloBallet

A San Francisco dance company set up a chat on Twitter to find out how people viewed their performances and what they paid attention to, what they were likely to take a photo of or tweet about. The conversation took place through #SMCHAT. This company opened its first social network account in 2010. In the social networks Dan Meagher, director of marketing, has found a formula for connecting with the public and finding a way of transmitting dance through 140 characters. He therefore searches for what he terms "text-perts" (http://www.artsmarketing.org/resources/article/2012-11/diablo-ballet-and-power-social-media) and places them strategically during the performances so that they are best placed to infuse their tweets with the essence of what they are witnessing. This experience has produced many interesting ideas, and further work is being carried out on them and with people who want to attend the performances because they have been following the conversations on Twitter. Since then they have kept up a very strong presence in the social networks having accounts with Facebook, Twitter, Pinterest and YouTube as well as a blog (http://diabloballet.wordpress.com/).

2.2 The commercial exploitation of performances as an audiovisual product

New high definition techniques and high quality sound have meant that recordings of auditorium and theatre performances can be marketed through the technologies, such as platforms that enable high quality streaming, as new audiovisual products.

Theatres and auditoria have therefore become audiovisual producers and this means that, in addition to the public in attendance, they have a complementary and additional commercial resource available. The real challenge consists of not converting these two products in substitutes for each other but as complementary to each other. A recent study in the United Kingdom about theatre productions that can be seen via streaming through chains of cinemas concludes that the public attending do not feel dissuaded from attending the theatre but, on the contrary, feel much more motivated to buy a theatre ticket and see the work live the next time. (http://www.nesta.org.uk/publications/beyond-live).

In his work *The Work of Art in the Age of Mechanical Reproduction,* Walter Benjamin says, "That which withers in the age of mechanical reproduction is the aura of the work of art". In a theatrical work, in an opera or dance performance there is nothing to substitute the experience of being present in the audience. But these performances can be enjoyed in a different way through a means of reproduction such as a DVD or live streaming. Under ideal circumstances the spectator would prefer to be in the theatre but often, the fact of living in another country, or not being able to afford either the journey or the ticket for the performance mean that such options are the best way of enjoying a pleasant evening.

Any theatre-goer twenty years ago would simply find it incredible to learn that now in a similar situation anyone attracted by the performing arts and music has available, via their computer or a relatively nearby cinema, the entire season of concerts by the Berlin Philharmonic Orchestra and the most important productions of opera houses such as Covent Garden in London or the Metropolitan in New York, La Scala in Milan or the Bayreuth Festival. These institutions have before them the opportunity to multiply their audiences and for every performance to be seen by a number of spectators that would have been unthinkable just some years ago.

For this study, the following cases have been chosen as examples of the current trends in the commercial exploitation of performances as an audiovisual product.

CONCERT HALLS

Berlin Philharmonic Orchestra

http://www.digitalconcerthall.com/es/

The system created by the Berlin Philharmonic, its sound and audio quality, is simply spectacular. It required enormous initial investment but in the long term the idea is that it will pay for itself and become another source of revenue for the orchestra. Above all it has involved the international public and the orchestra's great admirers who want to see the concerts they have most enjoyed again, as many times and they please. It is a question of recouping the "expanded there and now" that Antonio Rodríguez de las Heras discusses in his article for this

BERLIN PHILHARMONIC ORCHESTRA

Annual Report entitled, "Tensions and trends in digital culture".

The model consists of the streaming of their concerts on a pay-per-view basis. This system, which has been in operation for four years, has enabled them to expand their archive to the point where, today, it is an attraction for spectators, not only for the live concerts, but also for their entire concert archive. In all this time the fee has only been modified once and at the present time this is calculated by time viewed on a flat-rate basis. There are "tickets" for a day, a month, for a year.

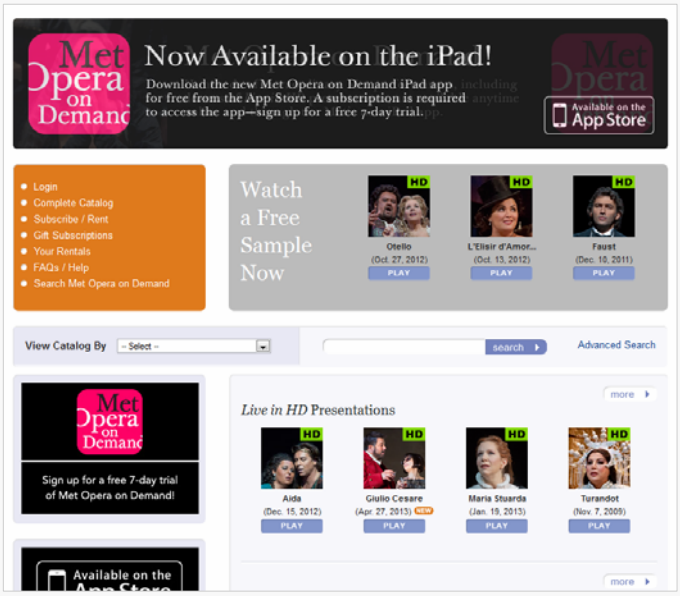
The BPO promotes its concerts through the social media. The main window is Facebook, with more than 500,000 followers, and YouTube, only for promotional videos of three or four minutes. A secondary position is occupied by Twitter, with more than 50,000 followers.

OPERA HOUSES

Metropolitan Opera House (New York)

The Met was a pioneer for the high definition systems and distribution of signals to cinemas around the world, although most of them were located in the Unites States or in Canada. They started in 2006 with a performance of *The Magic Flute*. During the last season the operas transmitted by the Met in this manner were seen by 2.5 million people in 54 countries around the world achieving an income thereby of $20 million, which it shares with the artists and workers at the opera house. According to *The New York Times*, it is the only institution to have made this kind of activity profitable.
http://www.metoperafamily.org/metopera/liveinhd/LiveinHD.aspx?nav=top

These transmissions are the basis of its on-demand service and the future publication of its operas on DVD which it always markets together with abundant additional material such as behind the scenes interviews, reports about the stage setting and so on. This material can usually also be seen during the intervals of live opera performances and the service also has a corresponding application for iPads.
http://www.metoperafamily.org/ondemand/index.aspx



METROPOLITAN OPERA

LIVE STREAMING AT THE ROYAL OPERA HOUSE

Royal Opera House (London)

Like the Met, the Royal Opera House streams its signal of various of the season's performances to high definition cinemas. This also enables the segmented promotion of its performances as was recently the case with the ballet *Don Quixote* which was promoted amongst the Opera House's Spanish devotees through newsletters and the social media.

The Royal Opera House's high-definition signal distribution of its performances has a global reach. Its Web site provides a calendar of its live performances and lists the cinemas at which they can be seen. There is a search engine that indicates the cinema closest to your place of residence. Over the course of the last season it distributed the signal for nine productions which were seen in 38 countries.
http://www.roh.org.uk/cinemas

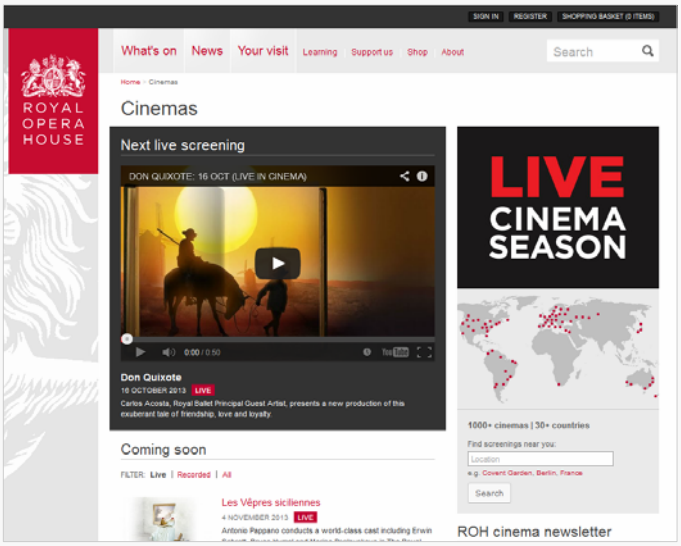
Other similar services are provided by the **Glyndebourne Festival Opera** (http://glyndebourne.com/production/tristan-und-isolde-o), which reached an agreement with *The Guardian* newspaper for the streaming of one of its operas during each of the last two seasons. The **Teatro Real** in Madrid has a video on demand service through the Palco Digital platform (http://www.palcodigital.com/) in combination with live streaming to high definition cinemas. Palco Digital can only be accessed via the Internet and has not yet designed an application for other devices such as mobile phones or tablets. **La Scala in Milan** and the **Bavarian State Opera** have also adopted the same policy of streaming some of their performances to high-definition cinemas.

AUDIOVISUAL PLATFORMS

Medici.tv

http://www.medici.tv/

This is a Web platform for musical and operatic content. Each year it streams around 80 live concerts which are free as a result of sponsorship and agreements made with the various concert halls and opera houses. It has an on-demand video library containing a thousand videos that are available via



SCREENING OF PERFORMANCES AT THE ROYAL OPERA HOUSE

MEDICI.TV

The Digital Theatre

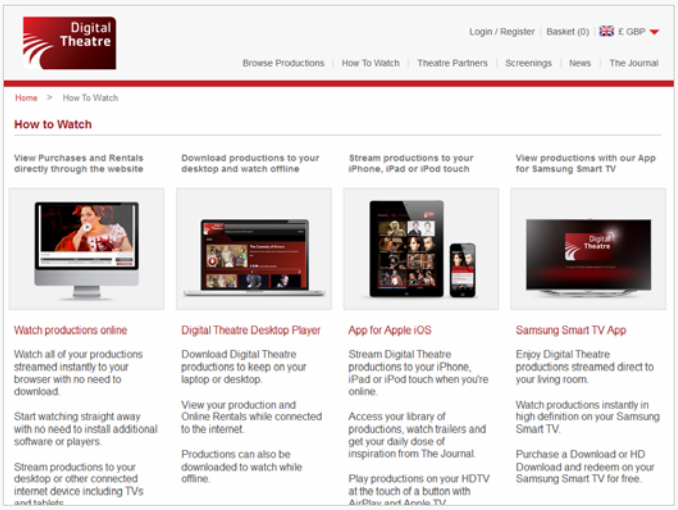
http://www.digitaltheatre.com/

This platform brings together productions from a number of London's performing arts centres such as the Royal Opera House, the Royal Court, Shakespeare's Globe and the Royal Shakespeare Company. A total of 18 institutions record their performances in multi-camera high definition video which is then made available through this digital platform. There are operas, theatrical works and musicals. There is a special subscription for schools and there is an application for Apple iOS and subscription. It has recently added the technical possibility of accessing the platform via Samsung TV. It receives 80,000 visits every month from 198 countries.

Arte Live Web

http://liveweb.arte.tv/fr

As with the previous case, the thematic channel Arte has an Internet platform and through it can be seen some streamed and some recorded programmes once they have been aired on TV. The problem they continue to face is posed by the fact that viewing rights outside France and Germany have not always been resolved and on many occasions viewing beyond these two countries is impossible, with the consequent audience limitation. Both Medici.tv and Arte Live Web have applications for mobile phones and tablets.



DIGITAL THEATRE

3. The new technologies before and after a performance

3.1 The use of new technologies to create a community

This is one of the most important and practical uses of the new technologies in venues used for the performing arts. The fundamental aim of the use of new technologies consists of enriching experience of the performing arts. Contact is not limited to "today, here and now", but extends to the relationship with the theatre after the performance. The old aspiration of getting the spectator to become part of the artistic project is more feasible than ever thanks to the new information technologies.

As shown in the diagram "Conceptual model of relationship development of a theater", it is sought to build a habitual, lasting relationship, which brings the spectator in to share the future of the theatre. Amongst his or her fundamental tasks, the artistic director will build this relationship as one of the fundamental aims, as it forms a direct channel to the spectators or subscribers and lets them share in the principles that underlie the artistic project.

Using social media a common-interest community can be formed, with a fundamental commercial, marketing objective. The idea is to loyalise a public that wants to keep informed, find out about the details of the staging before seeing it and even to talk to the actors or singers, as many of them are starting to acquire a presence in the social media. Facebook and Twitter are the most usual media, with the largest number of users. Almost all performing arts entities now subscribe to YouTube.

As Esteban Trigos mentions in his article in this Annual Report "Cultural sector marketing and consumption through digital technology", the new communication technologies present challenges such as the segmentation of the public and the creation of value-added applications that improve

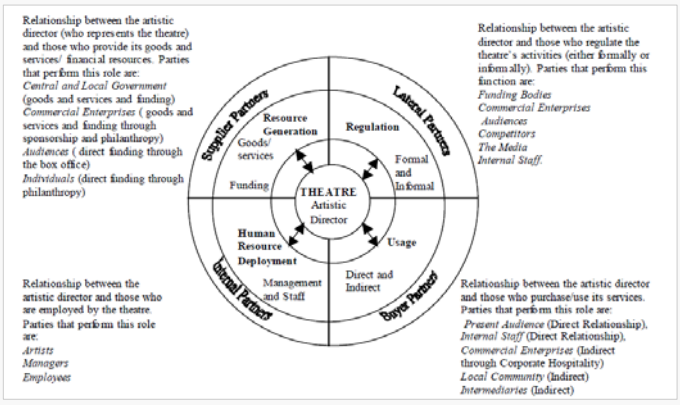


Diagram "Conceptual model of relationship development of a theater" (Conway and Whitelock, 2003) mentioned in *Social Media Marketing In Performing Art Centers*, doctoral thesis submitted by Natalia V. Ryzhkova in the Graduate School at Rochester Institute of Technology (May 2010) https://ritdml.rit.edu/bitstream/handle/1850/12677/

the public's experience. Crowdfunding and crowdsourcing call for special mention, as they have become ways to generate productions and audiences that have already come into existence, but which will continue to be refined in the future. To analyse the use of the new technologies to create a community in the performing arts, we have selected the following cases.

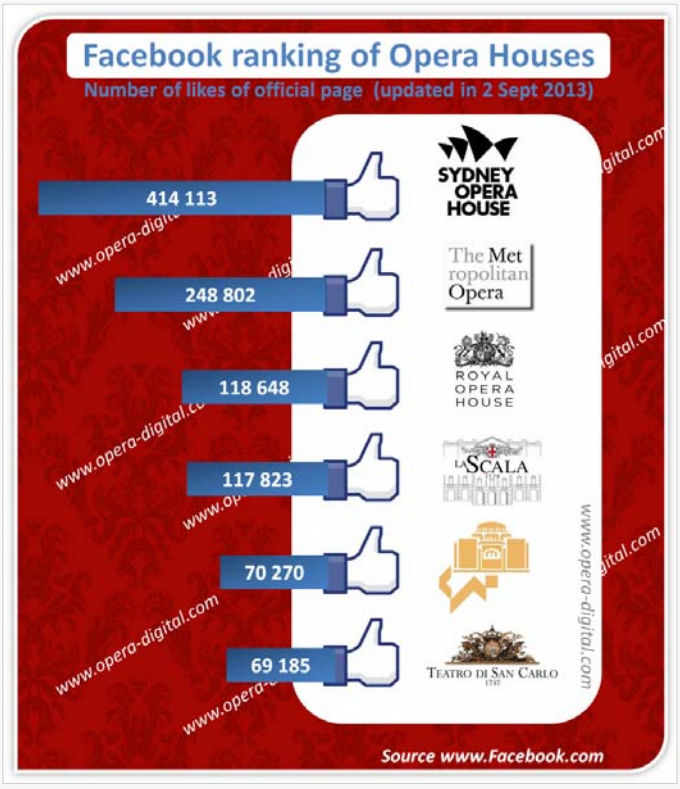
SOCIAL MEDIA IN THE PERFORMING ARTS.
The use of the social media is very widespread amongst performing arts centres and institutions throughout the world. We shall now see which are the most frequently-used and the particular uses that have been made of certain less commonplace social networking platforms, something that significantly broadens options for the future. So, we shall discuss here the ones that stand out for this reason, so that they may serves as examples for institutions that are deciding in which social media they are interested in having a presence.

In the study "The Tangled Web: Social Media in the Arts", carried out in 2011 for Theatre Bay Area (http://www.theatrebayarea.org/)—the theatres in the San Francisco Bay area—to analyse the social media habits of 207 cultural and artistic institutions, it was clear that all of them used at least one social network. The challenge now lies in how to take best advantage of them at these times of cutbacks to all budgets. With regard to the types of social media, it was found that Facebook, Twitter and YouTube were the most usual. On average, these institutions uploaded a total of 66 content items a month and received an average of 162 responses (mentions, "likes", comments, etc.) for all their social networks.

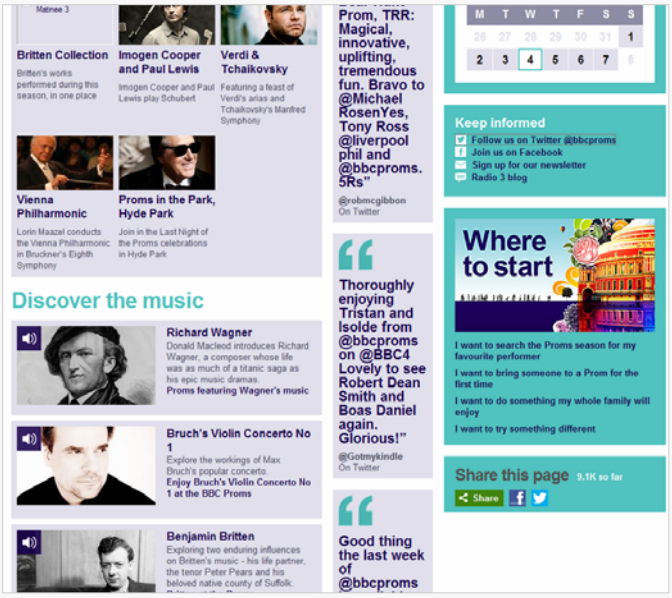
In this way, the uses of the social media in the performing arts can be divided into two groups:

1st group: social media that are regarded as essential, where one must always have a presence.
Facebook (the most common)
Twitter (an average of four tweets a day)
YouTube (on average one new video uploaded per week)

2nd group: social media that are additional or optional but in which, depending on the profile, an institution may fit in with the characteristics of some specific social network.
Vimeo, the alternative to YouTube: http://vimeo.com/englishnationalopera, http://vimeo.com/channels/opera
Instagram: http://instagram.com/englishnationalopera/#
Flickr (used more as an archive than for social networking): http://www.flickr.com/photos/komische-oper-berlin/, http://www.flickr.com/photos/mataderomadrid/
Google +: https://plus.google.com/102988227450719931549/videos
Pinterest: http://www.pinterest.com/glyndebourne/, http://www.pinterest.com/teatroallascala/
Yelp: leisure search engine that includes the ratings



FACEBOOK RANKING OF OPERA HOUSES



BBC PROMS

of establishments. In Spain little use is made of it for culture and theatre. http://www.yelp.com/c/sf/theater
Foursquare: another leisure search engine that gives a rating. In Spain there is no tab for theatre or the performing arts, but there is for art museums. https://it.foursquare.com/v/arena-di-verona/4baef12ff964a52023e33be3
Dailymotion: audiovisual service used by the Théâtre de l'Odéon, one of the six national theatres in France. http://www.dailymotion.com/TheatreOdeon#video=x168koy

CASE STUDIES OF THE USAGE OF SOCIAL NETWORKS

Admiralspalast

http://www.admiralspalast.de/

After being restored six years ago, this Berlin theatre, built in 1910, has preserved much of its original charm as a variety theatre, even though it served as home to the Staatsoper in the post-war years, until the reconstruction of the Unter den Linden building.

Presence in the social media: Facebook, Twitter, YouTube and Flickr: http://www.flickr.com/photos/admiralspalast/

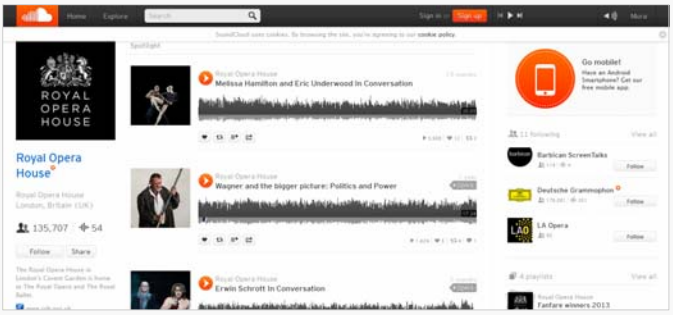
BBC Proms (London)

http://www.bbc.co.uk/proms

Its connection with the BBC lends this London summer festival a multimedia presence that few others could imitate. The service is based on all the BBC material: live broadcasts, which may then be heard online for a week, interviews and special programmes made by BBC Radio 3. But the fact that concerts are broadcast live does nothing to prevent the Royal Albert Hall being full.

The Web is the platform, which has a multiplicity of entrances and levels of reading. For each concert more information is available about the composer, mainly from material made by the BBC itself. The section "Where to start" is the clearest example, in which the viewer/listener is at the heart of the strategy.

BBC PROMS ON TWITTER



SOUNDCLOUD

It combines excellent pre-concert information, ticket sales close at hand and the BBC's recordings that are available for one week. Dialogue focusses on Facebook (with 27,000 followers) and Twitter (28,000 followers). For the last season an image line was developed, in connection with Instagram, to promote the concerts, also distributed by Facebook and Twitter, so that the images could easily be re-sent to others.

Soundcloud

Social network that brings together the collected podcasts of lectures and round table discussions on each of the works programmed by the Royal Opera House.
https://soundcloud.com/royaloperahouse?utm_source=wordfly&utm_medium=email&utm_campaign=2013_Oct_Cinema_DonQ_Spain&utm_content=version_A&emailsource=17467

AUDIENCE SEGMENTATION

Mercat de les Flors (Barcelona)

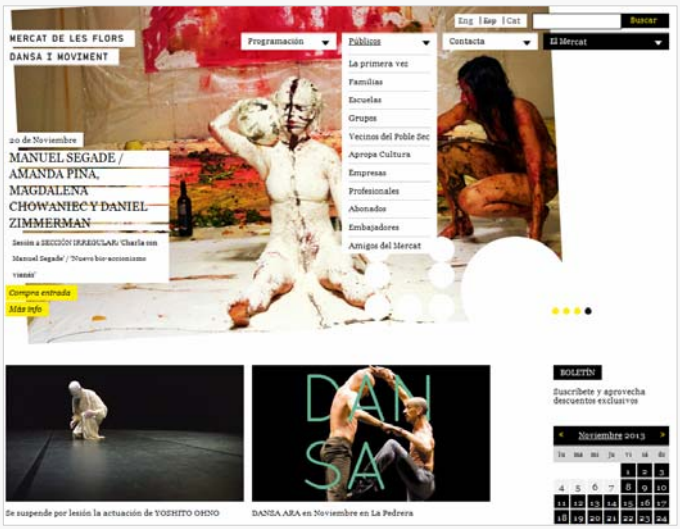
http://mercatflors.cat/es

Audience guidance and segmentation. There are few artistic entities where this approach can be seen right from the moment the visitor first enters the Web site. Whether it is for the first time or if someone is looking for a plan for small children, or if one is a fan wanting to share experiences with others, the Mercat de les Flors website will lead in different ways to participation in the centre's artistic life.

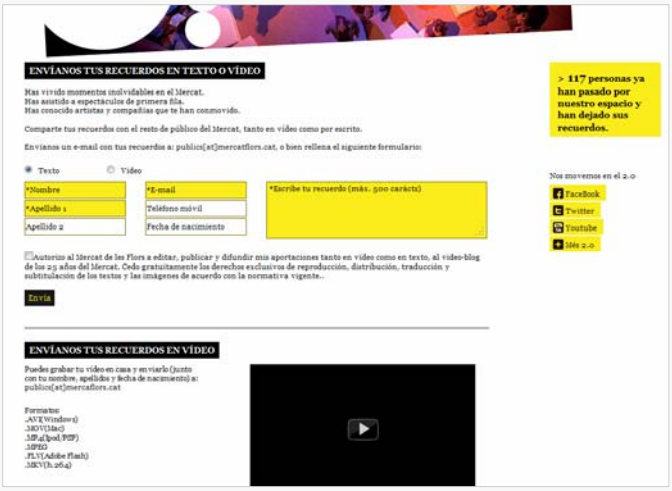
A notable case is the "Ambassadors" programme, which deals exclusively with all those ready to spread the word about what has been programmed at the Mercat. They are, as it were, unofficial representatives, who also usually have a blog where they can share their experiences with others. (http://mercatflors.cat/es/publicos/embajadores/) Also interesting is "We are all the Mercat", a videoblog showing the experiences which some members of the audience recorded in words or on video. http://25anys.mercatflors.cat/lang/es/

CROWDFUNDING

Crowdfunding is a new way of obtaining funding to enable certain projects to go ahead, with the particular characteristic that it is done collectively. If someone likes a particular idea or finds it interesting, they can donate a certain amount of money to be used to set the project up. The process is very simple: someone has an idea (any idea, from writing a stage play, staging a forgotten work, composing an opera and staging it or some choreography that a company has been trying to do



MERCAT DE LES FLORS



VIDEOBLOG AT MERCAT DE LES FLORS

for years) and then they show it on some digital platform. Hundreds of users see the idea and if they like it they can support it financially, with whatever amount they wish. When the target sum has been reached, the money is collected from the users and they are usually given some recompense proportionate to the donation (such as a ticket to see rehearsals of the work).

In November 2012, the innovation laboratory of RTVE (the Spanish state broadcaster) drew up a report analysing the situation in Spain of the crowdfunding model (http://lab.rtve.es/crowdfunding-espana/). According to this datamap, publishing projects are the ones that have most success (81.1%), followed by musical ones (79.1%), the latter being the art-form that most often seeks this type of funding. It also concludes that the highest failure-rate is that of low-budget projects, as these figures show: with over €50,500 (0), €30,000–€50,500 (3), €15,000–€30,000 (9), €10,000–€15,000 (17), €5,000–€10,000 (96), €2,500–€5,000 (220), and under €2,500 (417). Catalonia is the region with most crowdfunding projects, with 52% of the Spanish total. The success rate for projects in Spain is 73%, compared with the European average of 80%.

This way of funding will become more and more normal in the cultural sector, since the ongoing economic crisis presages a lengthy period without any return to the levels of support for cultural projects formerly provided by the public authorities.

As Esteban Trigos mentions in his article "Cultural sector marketing and consumption through digital technology", we are today in a scenario in which most of the crowdfunding projects in Spain are cultural ones, connected with the audiovisual arts, music, film, performing arts or literature. There are as many as 60 platforms, of which we should mention the following: **Lanzanos.com** (http://www.lanzanos.com/) is a website devoted to seeking funding for "dreamers" who can turn their ideas and projects into reality. However, not all of them will see the light of day. A candidate project is sent to the website where it enters the area called "La Caja" (the box). Only projects that receive a majority of votes in favour will eventually obtain the requested money. In return, the sponsors—anyone who wants to contribute anything from €1.00 to €250, depending on the project, will receive acknowledgements from the applicants in proportion to the amount contributed. Working in a similar way, **Goteo.org** (http://goteo.org/), is a social networking site for monetary contributions and distributed cooperation. **Verkami** (http://www.verkami.com/) specialises in creative projects. This platform works in a similar way to the ones already described: a project is published and is given a page to describe all the details: what it is, what it consists of, how much money is needed and how it is to be distributed. The applicant has 40 days to collect the necessary money and thus be enabled to carry the project forward, in return for which the patrons receive some sort of recompense.

Der Kaiser von Atlantis

http://www.verkami.com/projects/6041-representacion-de-el-emperador-de-la-atlantida-opera-de-viktor-ullmann

In October, the Asociación Aragonesa de la Ópera was able to stage this little-heard and little-known opera by Viktor Ullmann, which he wrote in a concentration camp before arriving at Auschwitz, where eventually he died. The association instigated a crowdfunding campaign on the Verkami website and achieved its aims: it collected €5,420 of the €5,000 that had been sought through promotion on the Web and in the social media.

DER KAISER VON ATLANTIS

Caminos

http://www.lanzanos.com/proyectos/caminos/

Cristina Rosa launched this project to bring to life a one-person show of theatre and dance in which she uses her body and her voice as the main vehicles of the performing arts. The piece passes through different times of life, such as the search for life-aims at different ages and their various nuances. A multidisciplinary show that brings together dance, acting, music, lighting and audiovisual. "The idea of creating this one-person show was inspired by my last spell at the École des Sables, Senegal, in 2011", said Cristina Rosa in the presentation of her idea. "After returning to my home city of Badajoz in Spain, I put a lot of work and effort into developing the project for over a year, and when that process was nearing completion, I thought it necessary finalise it and thus end this cycle where it began, in the École des Sables, Senegal, with help and review by Patrick Acogny (codirector together with his mother, Germaine Acogny, of the École des Sables)". Rosa promised to keep her donors informed about the progress of the project, particularly the final stages of the creative project in Senegal. She obtained €3,360 after requesting €3,200.

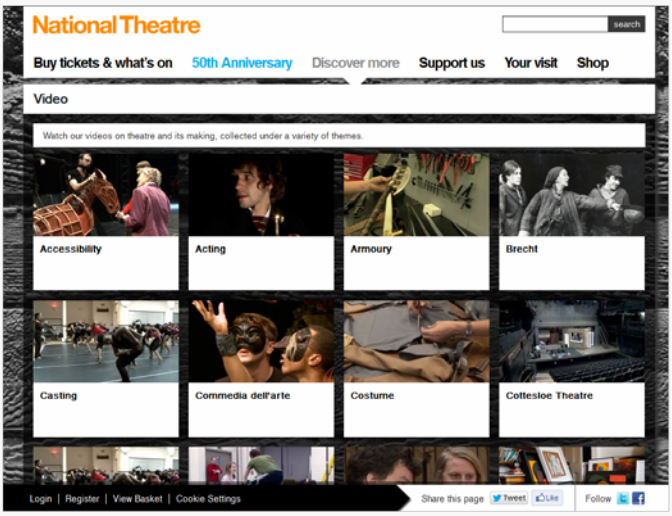
CROWDSOURCING

Crowdsourcing opens up infinite possibilities for creative collaboration through participation. The new technologies have become an ideal medium for creative proposals open to a broad audience so that they can contribute to setting them up and developing them. In comparison with crowdfunding, we could say that this is more a way of contributing work and ideas than a way of contributing money. This concept is thoroughly explained in the article by Tíscar Lara in this Annual Report, entitled "Crowdsourcing. Shared Culture". Both this writer and Esteban Trigos, in "Cultural sector marketing and consumption through digital technology", coincide when they state that most of the crowdsourcing projects that are undertaken have culture as a common denominator.

Diablo Ballet: Flight of the Dodo

http://youtu.be/w_9GTbuYHxE

This dance company from San Francisco once again serves as an example, precisely with a project that emerged after using social networking as a strategy to bond with audiences, as we saw in the previous case. *Flight of the Dodo* is a work that was entirely conceived on the Internet. During January and February 2013, the company called a brainstorming session on Twitter for suggestions for a new show. tweets such as "The story of Dodo Bird, birds that cannot fly and are beginning to become extinct", "Feeling of the choreography: deliberately ironical", or "Turquoise" reached choreographer Robert Dekkers. In total, 130 ideas of which eight were selected for the conception of the new production. Even the music chosen by the choreographer, the *Concerto for two cellos* by Vivaldi, was decided in an online vote.



NATIONAL THEATRE

PROGRAMME PROMOTION

National Theatre (London)

http://www.nationaltheatre.org.uk/discover-more/backstage/videos

The theatre's website includes a video channel to bring audiences closer to all that world that is not seen but which is just as fascinating in its way. Creative activity backstage can be just as interesting as the work itself. These videos let members of the audience understand the role of the many creative people who never appear on stage but without whom the performance would not be possible.

Your Digital Double, by Headlong (UK)

http://www.digital-double.com/digital-double/

http://headlong.co.uk/work/1984/#details

The Headlong theatre company, from the UK, has promoted its adaptation of George Orwell's novel *1984* through a Web application. Whoever accesses it can check out their "digital double", that is to say, everything Internet companies know about us through our search engine enquiries, access and on-line purchasing history. "Big Brother is watching you."

Livekritik.de (Germany)

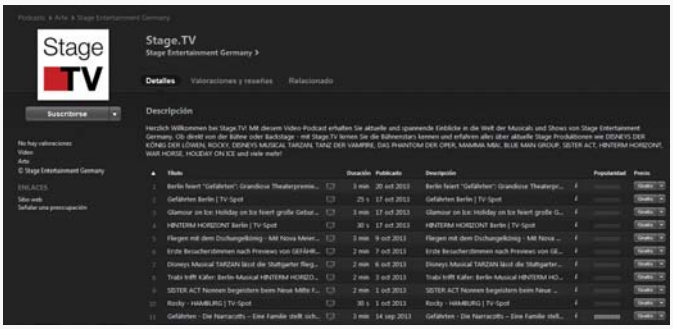
German website that collects the opinions of the public about the programming of the performing arts in five regions of the country. Those particularly recommended by the public are displayed conspicuously. http://www.livekritik.de/

Stage Entertainment (Germany)

https://itunes.apple.com/de/podcast/stage.tv/id639547160

Theatre and performing arts company that manages twelve theatres in five German cities, five of them in Berlin, such as the iconic Theater des Westens and the brand-new Theater am Potsdamer Platz. The methods used to promote its productions include a podcast channel on iTunes, where it places audiovisual news produced by the Stage company itself of the works staged in its theatres, showing images of the premiere, opinions from famous people who go to see productions, etc. It is interesting that, instead of making a podcast for each theatre, they are made under the company's logo for all of them. All the images used are watermarked with the logo of Stage TV.

LIVEKRITIK.DE



STAGE ENTERTAINMENT

Sydney Opera House (Australia)

A portal that brings together short videos to promote the cultural content of the complex, to which at the moment eight cultural organisations contribute. The categories range from dance, music and opera to theatre. http://play.sydneyoperahouse.com/

SETTING UP FORUMS

Portal de la Danza (Inaem)

http://www.danza.es/

Conceived not just for spectators but also, above all, for professional dancers, who have a private section (Club Danza.es) accessible using a password. It is present in Facebook, Twitter and YouTube and it is the only website out of those analysed to have a profile on LinkedIn: http://es.linkedin.com/pub/danza-es-inaem/54/6a/397. There is also a billboard section, to find out about all the shows connected with dance and ballet.

These portals also play an archival role, bringing together all the cultural life taking place within the discipline in question and offering it to users in an organised, categorised format. The article by Kristine Hanna in this Annual Report, "The web archiving life-cycle model", goes into this in detail.

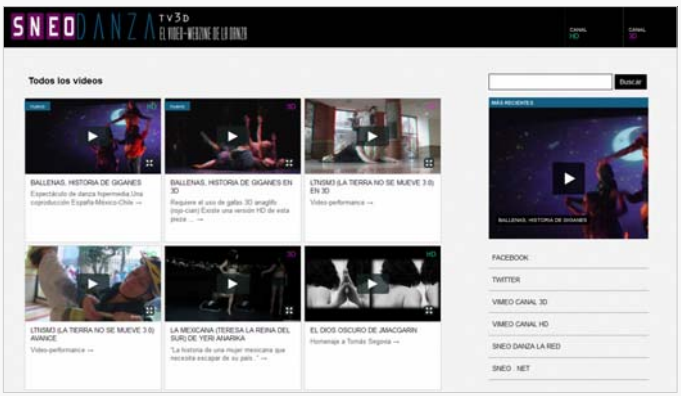
SNEO Danza tv3D

http://www.sneodanza.com/index/

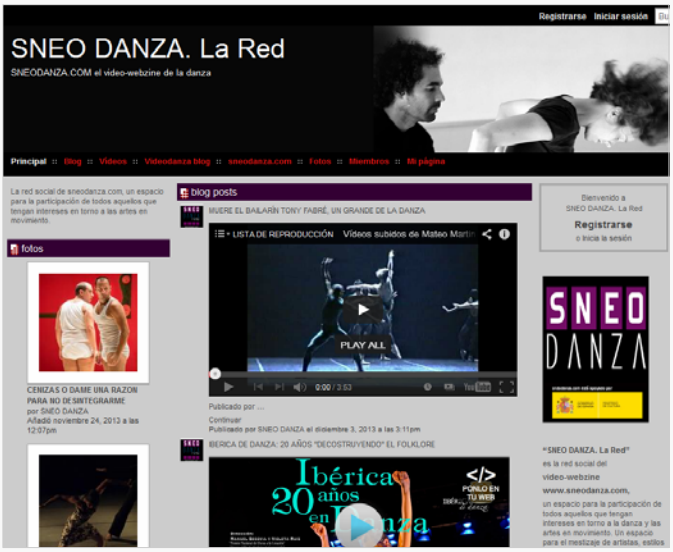
SNEO Danza tv3D is an innovative project initiated in March 2011, based on the use of technologies and new languages which consists of the creation of a video-webzine with two main channels:

- SNEO Danza 3D
- SNEO Danza HD

It is a place on the Web that serves as a meeting-point for specialists in image and dance and the arts of movement; for the patronage of artists, styles and media, and to foment dissemination in Spain and abroad of all the stage activities taking place in Spain and Latin America. The channels carry quality content based on their own material and invited artists, who are shown on 3D and HD television. The creation of this webzine is the outcome of multidisciplinary work by designers, programmers, dancers, choreographers, cinematographers, editors and producers, as well as specialists in marketing studies and authors' rights on the Internet. The use of technology has been a constant in work by SNEO Mestizaje Projects, the company behind this virtual space, from the use of huge projections on facades (*El Quijote hip hop,* 2005, Biblioteca Nacional) to the production of dance that is viewed entirely through 3D glasses (*Ballenas, historias de gigantes,* Mexico-Spain-Chile, 2013). The recordings (performances, rehearsals, interviews, pieces, documentaries) are made with 3D cameras, taking the greatest care, particularly during live performance, not to interfere



SNEO DANZATV3D



SNEO DANZA - LA RED

with or distract performers or audience. The editing of dance pieces, the most common resource and the basis of the channel's programming, and subsequent publishing and dissemination, complete the cycle. Displaying the materials on the computer screen requires the use of anaglyphic spectacles (red-cyan), which are quite common these days, while viewing on 3D TVs requires active glasses.

SNEO Danza tv3D is present on Facebook and Twitter and has launched its own network: **SNEO Danza. La Red** (http://sneodanzalared.es/). Anyone interested in the arts of movement can contribute their own materials (texts/videos) and SNEO will edit them and update them. The task of documentation performed by this channel brings an opportunity to many companies that do not have the resources necessary to create and upload their own projects. The performers are not only from Spain, since particular effort is made to record Latin American companies touring Spain.

Comédie-Française

http://www.comedie-francaise.fr/

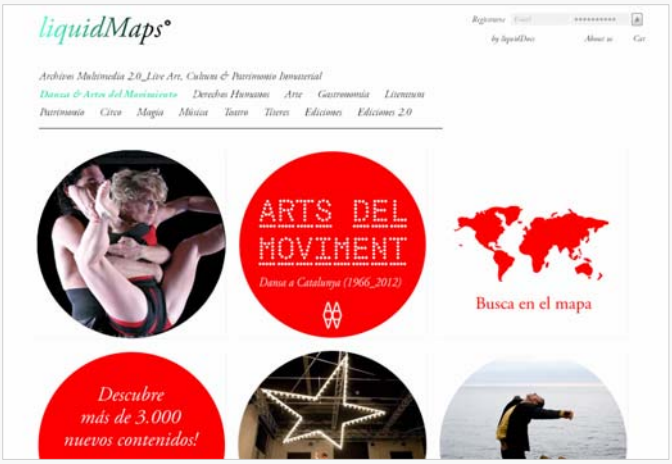
It is worth mentioning in this study the particular strategy of France's premiere theatrical institution, which has decided not to have a presence on the usual social networking sites. All it has done is provide a forum on its website, which is a sort of digital mailbox for suggestions and comments, which users may sign or leave anonymous. They can be consulted by the public on the same site.

liquidMaps

http://www.liquidmaps.org/

liquidMaps.org is a new online platform, a hub or virtual nucleus that interconnects agents, bodies and organisms. The initiative is a Web 2.0 service that enables the publication and consultation of cultural material (creations, projects, itineraries, points of interest, various multimedia archives, etc.) on the GoogleMaps® platform. It presents interviews, videos of works recorded in various places and stages around the world, "making-ofs" and various contents provided by each agent/user. Videos, photos, texts, archives, testimonies, creations and processes provide an approach for spectators/users to the innumerable multidisciplinary concepts and contemporary proposals connected with the body and with movement in a transversal, simple and entertaining way. The information is presented through a map-network that searches, in a visual and intuitive way, the work processes and works of the creators and

COMÉDIE-FRANÇAISE



LIQUIDMAPS

the centres, institutions and businesses that house them, produce them and disseminate them. Using free microsites and a pioneering online content manager, the user can include a multitude of documents in different formats in his or her interfaces.

SOLUTIONS FOR TICKET SALES

Although most theatres have had an online booking system for some time, it was found that some have made advances, creating more integrated solutions, such as mobile apps and Web portals for chains of theatres. As Esteban Trigos mentions in his article in this Annual Report entitled, "Cultural sector marketing and consumption through digital technology", where and how to buy tickets will be the fundamental variables when speaking of models and strategies based on CRM (Customer Relation Management) in the field of the performing arts.

iTunes applications

To offer ticket sales and to provide information about programming. Connection to social networks.

Portals

This is the other option, together with applications. Almost all theatres offer ticket sales on their websites, so it is not difficult to find cases such as the following, in which theatres that all pertain to the same institution provide a centralised portal for ticket sales.

Inaem

http://www.entradasinaem.es/ListaGruposVenta.aspx

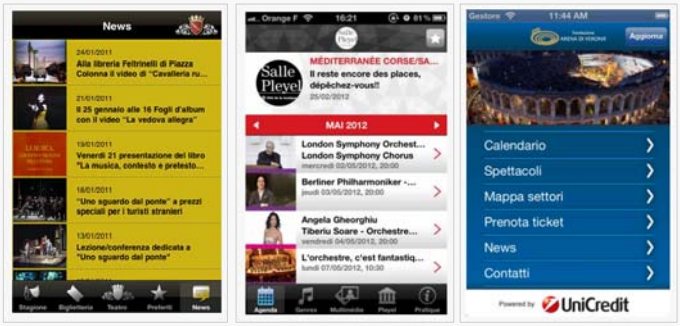
Common booking portal for all the theatres in the Inaem group. This portal is linked to from the websites of all the individual theatres.

THEATRE MANAGEMENT PROGRAMMES

E-Protea

http://www.embocadura.es/eprotea/eprotea.asp

Theatre management software for theatre management via the Internet developed by Embocadura, a Zaragoza company. This platform can be used for the integrated management of all the aspects of the life of a theatre, such as allocating rehearsals, renting spaces and ticket sales.



APP - ÓPERA DI ROMA
https://itunes.apple.com/it/app/operaroma/id416816204?mt=8

APP - SALLE PLEYEL (PARIS)
https://itunes.apple.com/fr/app/salle-pleyel/id507135398?mt=8

APP - ARENA DI VERONA
https://itunes.apple.com/es/app/arena-di-verona/id520794544?mt=8

A NIGHT AT THE SIDNEY OPERA

SITE Distribución

http://www.sitedistribucion.es/

Online platform for information services on the main systems for the distribution of the performing arts in Spain: circuits, networks, distributors, fairs and venues. The site forms part of a larger programme of action called SITE (Servicios de Información de Tendencias Escénicas), organised by the Cultural Management Department of the ICCMU–Madrid Complutense University. SITE Distribución is the first product of the programme to reach the market and from 2013 access is unrestricted and free of charge. It has a powerful search-engine, has thorough, updated information about any company or cultural agent, in Spain and abroad, and can draw up a plan or strategy for the distribution of shows in Spain. The aim is to make it easier for new players to enter the scene and to let it be the theatrical projects themselves, and not the control of specialised information, that conditions access to the market.

A NIGHT AT THE SYDNEY OPERA

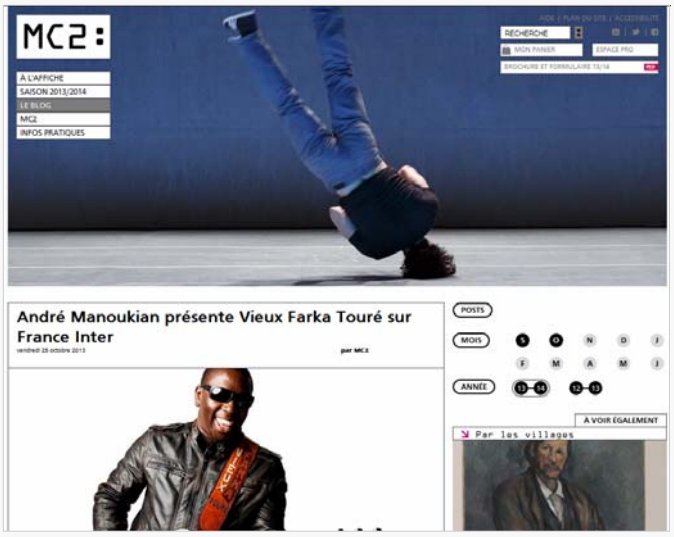
In early December 2013, the Sidney Opera invited a hundred computer experts to spend 24 hours on the premises, including the night hours, to create an innovative application to promote the institution's iconic building. Aspirants had to register on the theatre's website and to present themselves on the appointed day with everything necessary to spend the day working on the new application. No sooner had they arrived than they toured the complex and collected photographic and audiovisual material that was available to the theatre so as to get down to work. Notable amongst these materials was a project carried out by a Scottish company that generated 56,000 3D digital photos of the entire complex. The experts were to work alone or in groups to create the application. They were to submit it the following day at noon and the best prototype would be awarded a prize of 4,000 Australian dollars.

BLOG CREATION

Teatros del Canal (Madrid)

http://www.teatroscanal.com/

Blog "No me montes una escena" (Don't make a scene!). Conceived as a complementary page of the theatre's website: http://blog.teatroscanal.com/



LA MAISON DE LA CULTURE'S BLOG

THALIA THEATRE

MC2 (Maison de la Culture de Grenoble)

http://www.mc2grenoble.fr/Le-blog/p3.html

Blog of the Maison de Culture de Grenoble, covering theatre, music and opera. The posts promote cultural content at this centre for the arts, one of the most important in France. This promotion makes use of audiovisual and photographic material, photos of productions, interviews with significant people who visit the centre and radio programmes about the productions. The blog can be followed via an RSS feed that can easily be found on the home page.

WEBSITE DESIGN

Many intangible elements can be communicated through design. At a glance, users can get an impression of the institution they are visiting: what sort of programme they put on, what their priorities are, etc. A similar thing is the case with multiplatform possibilities. As Isabel F. Peñuelas comments in her article, the optimisation of design for different devices, without the need to create many different versions of the website, improves user experience and makes it possible to create a primordial use for each device. Here are some examples.

Thalia Theater (Hamburg)

http://www.thalia-theater.de/h/aktuell_31_de.php

One of the main theatres in Hamburg. It is mentioned here because of the originality of the design of its website, which gives visitors a clear idea of the sort of shows to be seen there.

MC2 (Maison de la Culture de Grenoble)

http://www.mc2grenoble.fr/Accueil-mobile/p20.html

Version of the theatre's website for mobile devices. This approach is to be recommended if the home page is difficult to display on a mobile screen, and users are provided with a quick search of events at the centre.

MAISON DE LA CULTURE DE GRENOBLE - MOBILE WEBSITE

A QR CODE ON A POSTER

QR CODES

Quick Response Barcodes, usually called just QR codes, are little black and white squares that open up a new world of possibilities for cultural marketing and electronic social commerce. To access the information they contain, users simply scan the code with their mobile phone to view the content.

In the performing arts, a QR code can send the user to a wide range of possibilities, ranging from the programme for the season to the times of a specific performance, or to additional information on the works or the performers. The codes can be placed on the website, as in the case of the **Instituto Nacional de Bellas Artes (Compañía Nacional de Teatro de México)** http://www.cnteatro.bellasartes.gob.mx/, on posters, as in the case of the **Teatro Español (Madrid)** or inside theatres, as in the case of the **Teatros del Canal.**

FiraTàrrega

http://www.firatarrega.cat/

FiraTàrrega is an international performing arts fair held annually in the town of Tàrrega in the second weekend of September. Since 2013 a new website design has been adopted based on interaction with social networks and with an adaptive design for all devices.

Laburbujacirko!

www.laburbujacirko.com

Animation company that sells its services through an innovative, attractive website.

3.2 The generation of accessible educational resources in performing arts centres

The new technologies have enabled major developments to take place in the generation of resources and educational programmes that will help to create new audiences for the performing arts. Two organisations, Reseo and ROCE, bring together and share experiences between major theatres in Spain and abroad.

Websites are an ideal platform to distribute this content. Many institutions reserve microsites within their website to host educational programmes and resources. The Globe and the National Theatre in London are two of the best examples we mention here.

Finally, facilitating access to the performing arts for the disabled is one of the aims of any artistic institution. Thanks to the new technologies, various formulae have been adopted that improve the theatre experience for such spectators, as in the case of the Teatro Accesible that has been set up by several Spanish theatres, and which has met with great approval.

EDUCATIONAL RESOURCE ORGANISERS

Reseo (European Network for Opera and Dance Education)

http://reseo.org/

An organisation that brings together all the educational departments of European opera and dance institutions. They have no projects in hand that combine educational programmes with the new technologies.

Red de Organizadores de Conciertos Educativos - ROCE (Organisers of Educational Concerts Network)

http://www.rocemusica.org/

A not-for-profit association founded in 2010 by public and private entities that share the idea that music is an educational subject of the first order in any society and that concerts and activities for schools, families and groups in society are an essential and key element of their artistic and social proposal. The association was founded with the aim of coordinating the educational activities of its members, encouraging cooperation, creating new synergies, communicating the value of its activities to society and building solid relations with the public. Their Web site contains an option for digital access to resources from "Conciertos didácticos" (http://www.conciertosdidacticos.org/): a free access page for which registration is required and which brings together educational resources and materials structured as a multimedia and multilingual data base. Its contents are specifically related to educational activities associated with musical performance and are intended for teachers and those working in the fields of promotion, performance and management. The aim is to create a valid environment and an efficient tool to provide specialised information to enrich musical educational projects. Every year the ROCE also publishes a CD that contains, in digital format, the content of the specialised meetings that are held every year: Granada, Donostia-San Sebastián, Valladolid, Barcelona, and in 2014, Las Palmas de Gran Canaria. By 15 November 2013, www.rocemusica.org had received 177,797 visits and www.conciertosdidacticos.org had 1,083 active references, 857 registered users and had received 182,228 visits.
One thinks of the development of resources based on the new technologies that substitute the

DIGITAL CLASSROOM AT THE NATIONAL THEATRE

educational guides published by many theatres, such as the **Centro Dramático Nacional**. http://cdn.mcu.es/cuadernos-pedagogicos/

EDUCATIONAL PROGRAMMES

Globe Playground

http://www.shakespearesglobe.com/playground

Shakespeare's Globe Theatre educational resource, conceived as a tool to be used in parallel with the Lively Action Workshops. This resource is designed so that children can carry on at home with the experience they have gained during educational visits to the theatre itself. The visits and the resources are intended for children aged between five and eleven years of age.

Digital Classroom

http://www.nationaltheatre.org.uk/discover-more/digital-classroom

The National Theatre is a complex of three theatres located on the South Bank in London. Their Web site has a tab leading directly to the digital educational resources for both students and teachers alike. There are podcasts, interactive whiteboard resources for teachers and downloadable classroom materials such as drawings, interactive maps and images concerning the performances.

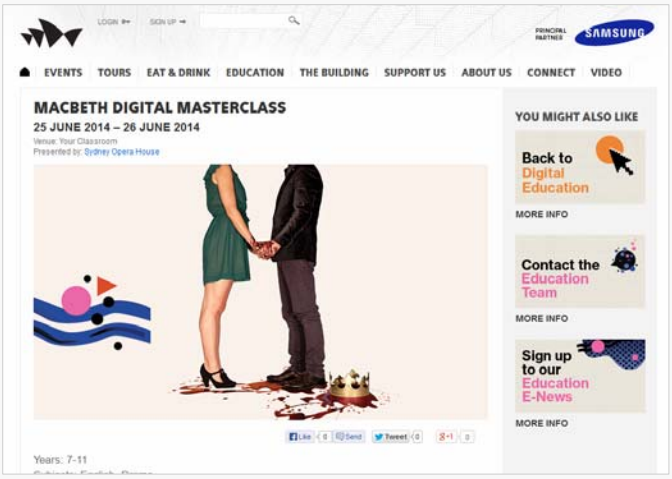
The National Theatre has an interesting intervention in **iTunes University,** where it has established its own channel with resources for each of its theatrical productions. There are also brief courses on vocal delivery and specific cases such as how to stage a production, from the initial idea to the staging of the event: https://itunes.apple.com/itunes-u/overview-national-theatre/id429201413?mt=10

La dama boba

http://damaboba.e-ucm.es

La dama boba is a videogame about this classical dramatic work and is intended to help students to become familiar with the language and context of the play, as well as the play itself, in order to be able to organise a class discussion about it, or even to stage it. The experiment was carried out by the e-learning research group at the Universidad

THE NATIONAL THEATRE'S CHANNEL ON ITUNES UNIVERSITY



SIDNEY OPERA HOUSE

Complutense in Madrid, directed by Baltasar Fernández-Manjón, titular professor of Software Artificial Intelligence Engineering. The game can be downloaded from the Web site for Windows, Mac and Android. The results of the pilot scheme in schools will be published shortly.

Sydney Opera House

http://www.sydneyoperahouse.com/education.aspx

This institution has all its educational material structured on the main Web site. It is easy to find if you are a primary or secondary student or a teacher. The itinerary makes it easy to choose performances, most of them designed for these age groups, the purchase of tickets and group management.

New Music Now

A project being carried out by a company in Pamplona to enable musicians to take a technological leap forward in their daily work by discarding paper scores. The company's strategy supposes that musicians take this step forward with all the elements with which they work at the same time. To that end three products are offered:

- Software. On one hand, an application for the organisation of scores and users and on the other hand, an application for fieldwork by the musicians in the group or by teachers and students at an educational facility.
- Music stand. As well as holding the tablet it interacts with the software by means of pedals and it incorporates other useful functions (batteries, loud speakers, sensors, etc.).
- Web portal. A place for the acquisition and exchange of scores and arrangements in digital format.

The project is currently at the development stage. Product launch and sales are planned to begin during the first half of 2014.

RESOURCES FOR THE DISABLED

Teatro Accesible (Accessible Theatre)

A programme sponsored by the Vodafone Foundation to make performances available to people with disabilities: http://www.teatrosaccesibles.com/es. The most outstanding applications:

AUDIO DESCRIPTION. By means of individual audio receivers people with impaired vision can listen to a description of a play's relevant visual content.

MAGNETIC INDUCTION LOOP. Users with auditory prostheses (hearing aids or cochlear implants) can hear the sound of a theatrical work clearly using an individual loop system.

AMPLIFIED SOUND. Users with impaired hearing, or who simply want to hear what is happening better, can do so using headphones.

An example of the Teatro Accesible programme was the **International Classical Theatre Festival of Almagro.** For the 2013 Festival, people with either impaired hearing and/or vision were able to enjoy seven accessible theatrical productions corresponding to four works on the official programme which were enabled with subtitling and audio description services.

Conclusions

1. New technologies led to the radical transformation of stage design over the last century. The latest advances have sown the ground for the effective integration of the various arts from opera, theatre to dance. Videoart has gone a stage further with video mapping techniques that raise the possibility of not even having real stage props on the set.

2. The technologies should not substitute everything that derives from the main source of expression, which is the body, nevertheless, there are works of new creation, such as *Robot*, which use robots in their choreography. The question, one that belongs almost to the realm of science fiction, is if a robot will be ever to be able to perform with the same wealth of expression and depth as a dancer.

3. In the future we shall find ourselves faced with new theatrical works and operas which include audience participation by means of information technology or the use of social networks in real time. It would be yet another step in the integration of the stalls and the stage.

4. In the performing arts there is no substitute for being physically present to see a work performed live. It remains to be seen how the second screen will form part of live productions. But changes can already be seen: in theatres it is becoming ever more frequent to see somebody with a smartphone ready to tweet something in the middle of a performance.

5. The challenge will be to reconcile this new audience with the traditional one. Perhaps, therefore, it would not be preposterous to think that in the future mobile phones will have a function called "theatre mode", similar to "airplane mode" that will completely silence the device, even incoming calls, and only allow Internet access for social networks and for searching for information.

6. For creators, this second screen also opens up an opportunity, that of being able to integrate the effect their work is having on the audience in real time, and this is especially so in the case of works of new creation.

7. If, in the short term, this second screen does not become a way of communicating with other members of an audience, who may be present in the building or elsewhere outside, it can be used as a support for theatre information that was previously provided on paper.

8. Theatres and auditoria have become audiovisual producers of their performances enabling them to generate income additional to that generated by sponsorship and ticket sales. Any theatre- or opera-goer has available, via their computer or a relatively nearby cinema, the entire season of concerts by orchestras of international repute, as well as the most important theatrical, operatic or dance performances.

9. Social media enable common-interest communities to be formed around the performing arts. Theatres can exploit this as a way of loyalising a public that wants to keep informed, find out about the details of the staging before seeing it and even to talk to the actors or singers, as many of them are starting to acquire a presence in the social media. Facebook and Twitter are the most usual media, with the largest number of users. Almost all performing arts entities now subscribe to YouTube.

10. These networks also enable the public to participate in the creation and production of works through such formulae as crowdfunding and crowdsourcing.

11. Websites are an ideal platform for distributing such visual content as the visual arts. Together with promotion Web sites are expanding to include educational resources which widen access to these cultural venues to new audiences.

12. Similarly, access to the performing arts for the disabled has been boosted by the new technologies.

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We would also welcome your comments and observations about this publication which you can send to:
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