HOW ARE SCREENS AFFECTING OUR PERCEPTIONS OF INTERACTIONS?

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Introduction

I n 1960 the United States of America experienced one of the most pivotal presidential elections in its history. Richard Nixon, vice-president at the time, came up against the young senator John F. Kennedy. The debates were heated, but, more importantly, they were aired on both the radio and a new invention of the time: the television *(Fig. 1)*.

Fig. 1

Indeed, those who listened into the debate of the 26th of September 1960 on the radio decided Nixon to be the stronger candidate thanks to his older, more serious voice. Yet, those who viewed the clash on their television sets were more inclined to vote for Kennedy due to his smiling, fresh faced disposition[1]. This demonstrates how the birth of a new method of divulging information, the screen, had already started to affect human perceptions of their interactions with their surroundings.

The screen and the search for representation is a story that began with Man's search for reflection of himself and the world. With the search, he invented the support that later will be classified as a screen which, according to the *Cambridge Advance Learner's Dictionary*, is "a flat surface in a cinema or on a television or a computer system on which pictures or words are shown."[2] However, this definition could be applied to any support on or through which information is displayed.

1   BRUZZI Stella, *Contemporary Documentary : A Critical Introduction*, Routledge, 2000, p. 128
2   "Screen", *Cambridge Advance Learner's Dictionary* [1995], Cambridge University Press, 2008, p. 1279

Today, screens have moved on to different objects with different technologies, proliferating around the globe in different forms, shapes and materials. It seems one cannot escape them as they have now become part of everyday life. Indeed, screens are now not only displaying sequences of images. They are also showing textual data, possible actions for users or even completely virtual environments, thus giving designers plenty of possibilities to play around with.

With such an impact on the world, one may wonder how Man's perceptions of himself and his environment have changed due to screens. It would thus be interesting to study how the fast growth of this medium has had an impact on human interaction. This will be viewed, with a case study, from the point of view of the different areas with which humans interact. To begin the study with the right bases, one will first look at Man's quest for reflection or the evolution of the narrative of representation. This will demonstrate how screens in their different forms have had their impact on a quickly changing world, their peers, objects and environments.

After the foundations are set, the second stage will involve looking into the basis of human interactivity: communication. One will study how screens have had an impact on the emotional values of communication and the way Man looks at how he is now interacting with others. For this one will take into account the predecessors of screen communication, writing and talking, and compare them to what is available and used today.

From communication, one will then move on to the representation of life and fantasy. Through Man's history of representation he has always sought to represent life as he saw it or wished it. With the advancement in screen and entertainment technology, reality and fiction are changing rapidly to suit ever changing human amusement needs. Two aspects of this reproduction will be studied: the effect of the silver screen and the illusion of interaction with screen based objects.

Finally, the impact of screens on Man's perception of his environment will be examined. One will consider how screens have impacted on the human body and its ability to perceive the world around it. Both the positive and negative aspects of this transformation will be analysed so as to gain a better understanding of the way humans now perceive themselves within their environment.

1 The quest for reflection

Man's search for himself and the world

Cave painting

Visual representation is known to have begun during the Upper Palaeolithic era (around 30 000 years B.P.) when Homo Sapiens began to decorate his caves with scenes of his everyday life and sculpting statues of himself *(Fig. 2)*[3]. However, the act of painting in those days would have been difficult as noted by Paul Johnson in *Art: A New History*. The paint would have needed to be created from natural resources, using handmade tools.

Fig. 2

The cave would be dark so light would have to be created so as to see what is drawn, which would involve animal fat torches. Some cave paintings are placed very high up on the cave wall *(Fig. 3)*, suggesting the painters would need to have created some sort of elevated platform so that they may reach the height required[4]. As all this was done to create simple images of animals seen around them, it does seem a lot of work was put into painting the caves. According to Johnson:

Fig. 3

> The most likely reason why these societies devoted so much attention and resources to cave art, over so long a period, is that they found satisfaction in it. It gave them

3   TURNER Mark, *Artful Mind : Cognitive Science and the Riddle of Human Creativity,* Oxford University Press, 2006, p. 305
4   GOMBRICH Ernst, *The Story of Art*, Phaidon, 2004, p. 42

entertainment, fun, excitement, sensual and spiritual relief, and added to their knowledge.[5]

Thus, Palaeolithic humans were already beginning to see the world as not just land on which they stood on and used what it produced. They also saw it as a means of inspiration to produce something fundamentally useless, but fun to create. This would also be the start of when they would notice the shape and colours of animals, humans and plants around them. This would lead them to try to reproduce what they saw on the walls, while using the tools and pigments they created. Art theorist, Professor Sir Ernst Gombrich, provided a second hypothesis to the reasons for cave paintings:

The most likely explanation of these finds is still that they are the oldest relics of that universal belief in the power of picture-making; in other words, that these primitive hunters thought that if they only made a picture of their prey – and perhaps belaboured it with their spears or stone axes – the real animals would succumb to their power.[6]

In other terms, it is thought that humans of the time painted on cave walls with the belief that they will gain the strength of the animal they drew. Thus, the world became an element which could be interacted with through the cave walls and what was inscribed on them. Since these simple lines and figurines, Man has been representing the world around him with tools and his hands. The images he created placed him in a certain position in relation to the rest of the

5   JOHNSON Paul., *Art: A New History*, Harper Collins, 2003
6   GOMBRICH, op. cit., p. 42

world. He knew he was the hunter and others were the hunted. Those images painted on caves, primordially reflected this point of view. However, even though he could see the world and could represent it, he could not see himself as others could.

Mirrors

Fig. 4

For a while, prehistoric humans caught glimpses of themselves in reflections of water or shiny rock. Their self awareness evolved in a way that they soon began to search for ways to see themselves better. The first manufactured mirror was discovered in a Turkish burial site and dated to approximately 6000 years B.C., the Neolithic era of human evolution.[7] *(Fig. 5)*

Fig. 5

Made out of a ground then polished volcanic glass called obsidian, the mirror would have taken a lot of manufacturing and time to be created. However, once made, the human would have been able to see a quite clear reflection of him, thus giving him more details of his own features to be compared with those of others. Over the many years of human evolution, mirrors changed to become more and more reflective, thus enabling more details in the reflection of the person looking into it.

Indeed, a mirror will reflect reality by displaying the information in front of it back to the viewer, back to front *(Fig. 6)*, without controlling it. Movement is
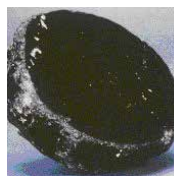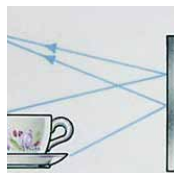

Fig. 6

7   ENOCH Jay, 'History of Mirrors Dating Back 8000 Years', *Optometry and Vision Science*, Vol. 83, N° 10, October, American Academy of Optometry, 2006, p. 775

then created by either moving the mirror, or moving oneself.

The viewer will then reorganise his perceptions of what he sees providing his cultural background allows him to recognise the mirror and how it works.

The Parisian museum *Palais de la Découverte* (Palace of Discovery) offers its visitors experiments involving male Siamese fighting fish and the way they communicate visually.[8] One such experiment involves opening a trap in the fish's tank to reveal a mirror. Since it does not have any knowledge of the object it is swimming in front of, the fish will believe its own reflection to be another male rearing up *(Fig. 7)*. Even after many mirror revelations, the fish will always react in this fashion. However, a chimpanzee will learn very quickly, after a few goes, that the entity in front is a reflection of itself and will stop attacking it *(Fig. 8)*.[9] The author of the experiment, psychologist Gordon Gallup, explains this difference through the fact that the chimpanzee is Man's closest relative in the evolution tree whose brain has many similar capacities, including that of self-recognition.[10]

Fig. 7

Fig. 8

As with chimpanzees, humans also go through a process of self-recognition. A human baby will only start to explore the mirror and recognise the objects within the reflection by the age 18 months. At that point, he or she will be able to identify the silhouette as their own and remove any markers placed on themselves

8   *Palais de la Découverte*, [on line], http://goo.gl/OeFiy4
9   ZEMAN Adam, *Consciousness : A User's Guide*, Yale University Press, 2002, p. 23
10   Ibid

by some experimenting adult.[11] They will note the different part of the bodies as part of themselves, then, later on, discern the differences between themselves and others. This is when the sense of "Me" appears, as in "I" opposed to "the other".[12]

However, in contrast to animals, a human baby will take on an extra step in his interaction with the mirror at the age of 24 months. Indeed, not only will he will recognise the entity in the mirror as "him", he will also understand that the entity is not him but a reflection. It is that point that the infant will be interacting with the mirror in the same way as adults do. This not only enables them to see what they look like, it also gives them a place in the world, they can now compare their appearance to others and start to cultivate their own identity.

Indeed, Carol Delaney states that: "A symbol does not just happen; there is a process of construction and an accumulation of meaning."[13] Thus, one builds a certain form of interaction with what one sees through first and many other experiences. The infant will thus gain awareness of his looks and will understand that the symbol in the mirror is a truthful representation of him, and will then learn to recognise it in other circumstances. This could be considered as the beginning of consciousness.

11   ROCHAT Philippe, 'The emergence of self-awareness as co-awareness in early child development', *Structure and Development of Self-Consciousness: Interdisciplinary Perspectives*, John Benjamins Publishing Company, 2004, p. 9
12   Ibid, p. 10
13   DELANEY Carol, *Investigating Culture: An Experiential Introduction to Anthropology*, Blackwell Publishing, 2004, p. 373

Canvas

Fig. 9

With Man having the ability to see himself, he then moved on to try to reflect what he is feeling and conveying his views of the world to others. For this, he used a particular kind of screen involving canvas sheets stretched over frames or large slats of wood onto which paint is applied. From then, the discipline of art was created.

Where most paintings of early history were created as religious artefacts, some periods of art saw creations being done for decoration or as details of daily life for historical reproduction. During these periods, artists painted as they were taught, style s being passed down from teacher to student, which involved set rules on how different elements should be represented. An example is Ancient Egyptian artwork *(Fig. 10)* where rules were set so that: slaves and animals were painted smaller than free men and gods; bodies were twisted so that the lower body and face went in one direction while the upper body faced forward; there was no spatial representation.

Fig. 10

Evolution of art saw the development of these rules till the Renaissance period of the 15th century when a new and highly influential convention was invented. A new trend of trying to produce accurate representations of what is seen had emerged which allowed painters of the time to discover perspective *(Fig. 11)*.

Fig. 11

Based on mathematical calculations, perspective is created by setting a vanishing point on the canvas then deducing the angles at which drawn objects would be distorted. It is this proportionate

and calculated distortion which will then create the illusion of realistic space to the user standing directly in front of the vanishing point.

Thus, as Jay David Bolter and Diane Gromala stated: "The surface of the picture (the framed canvas or painted wall) became your window onto a depicted world."[14] It is then that the interaction between user and screen becomes interesting as the user needs to remember what he or she is actually looking at, just as looking into a mirror. He would need to remember that he is no longer looking at a reflection but a subjective representation of the object.

Renee Magritte, a Belgian surrealist artist of the early 20th century, painted in 1929 a simple yet extremely realistic painting of a smoking pipe with a very carefully brushed inscription beneath: *Ceci n'est pas une pipe.* (This is not a pipe.) *(Fig. 12)* This sentence alone poses a conundrum to the viewer. Indeed, what he sees is what he would first consider a pipe. However, he would only understand the painting once he realises that what he is looking at is not a pipe in itself, but a representation of a pipe, it is the way Magritte sees the object.

This places the viewer no longer in a virtual reality. He is instead in the reality of the artist. Thus, the viewer would need the symbolic knowledge that the house does not, in real life, actually slope down or taper to a point as portrayed on the canvas.

14   BOLTER Jay. D. and GROMALA Diane, *Windows and mirrors: Interaction Design, Digital Art, and the Myth of Transparency*,The MIT Press, 2003, p. 36

Indeed:

> Paintings [...] offer an experience, and perspective painting offered the same experience as the one now promised by virtual reality – the experience of 'being there'. As the viewer, you were supposed to be able to reproduce the experience of the artist as he looked on the scene (or imagined the experience as he constructed an imaginary scene.[15]

One could thus describe the invention of perspective as the beginning of the search for strong experience whilst viewing images, a search which continued on through photography then computerised imagery. Since then, painters have had to change their objectives and, instead, began to explore the concept of the real in painting and aimed to make the viewer think about what he is actually looking at.

15   Ibid

Figure 1. Televised Richard Nixon and John F. Kennedy debate, U.S.A., 26th of September 1960

Figure 2. Rhinoceros drawings, Chauvet caves, France, 31 000 B.C.

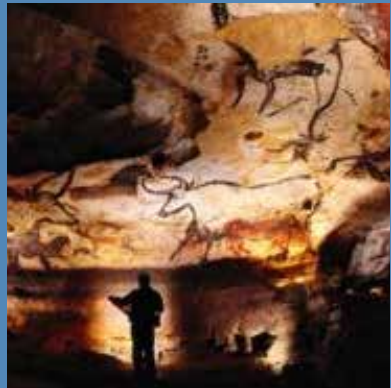Figure 4. Japanese infant inspecting a mirror.

Figure 3. Bull drawings, Lascaux Caves, France, 17000 B.C.

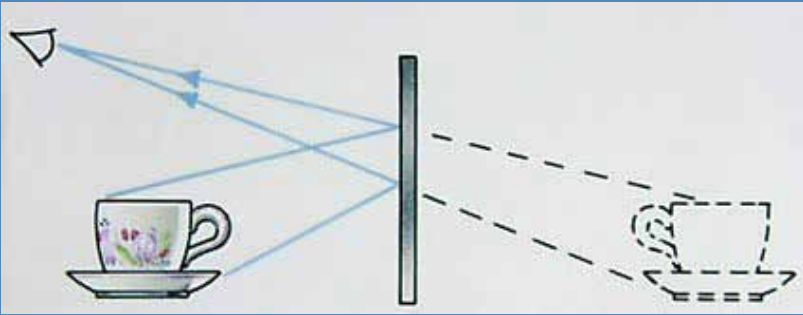Figure 5. Obsidian mirror, Catalhoyuk, Ancient Turkey, 6000 B.C.

Figure 6. Diagram showing the formation of an image in a mirror.

Figure 7. A male Crowntail Betta
Splendens (Siamese fighting fish)
flaring at his own reflection in a
mirror.

Figure 8. Chimpanzee observing
himself in a mirror.

Figure 9. Norman Rockwell, Triple
Self Portrait, 1960 (oil on canvas).
The Norman Rockwell Museum,
Massachusetts

Figure 10. Bird hunting scene, fragment from the tomb-chapel of Nebamun, around 1350 BC, British Museum, London

Figure 11. Pietro Perugino, The Delivery of the Keys, 1482 (fresco), Sistine Chapel, Rome, Italy

Figure 12. Renée Magritte, La Trahison des Images, 1929 (oil on canvas). Los Angeles County Museum of Art, California

Searching for reality

The camera

Paintings were considered up to a point as potential exact reproductions of reality. However, as some portraits demonstrate, they can be touched up to embellish reality or transform it to suit the painter's or viewer's wishes. The appearance of the camera changed this mind frame and rendered paintings as representations of reality obsolete.

Invented by Charles Chevalier, the first camera which used light to reproduce paper prints first appeared in 1826 with which Nicephore Niepce created the first photographic image on a pewter plate of a country scene *(fig. 13)*.[16] The pin hole camera, or camera obscura, worked by allowing light to shine through a small hole on an air tight and blacked out box for a limited amount of time. The light will then hit the chemical covered paper, or later on a negative film, which will react in a way that a reproduction of what is in front of the hole, will appear as a reflection. It is only the invention of the negative film which will allow the photographer to produce prints of what he shot as exact reproductions of reality.

Having started large, bulky and on tripods, cameras quickly evolved to become transportable. Once this happened, photographers began taking their cameras out in the world to take pictures of foreign lands

Fig. 13

16 GERNSHEIM Helmut, *A Concise History of Photography*, Thames and Hudson, 1971, p. 20

and people. They then brought the prints back to those who couldn't leave, thus giving them the opportunity to discover the rest of the world. This easy and cheap form of representation meant a lot more people could have access to a more open mind of the world around them. It is from this point that the camera was described as the mirror to the world, especially due to the exactness of its reproductions.

Before the invention of photography, people who wished to have portraits done of themselves or family would commission an artist to undertake the work. This meant preliminary drawings and hours of sitting for the artist so that he or she may reproduce, as best as he can, what they looked like. Due to the nature of the work, the commissioners would most often ask to have physical faults altered, or would require the artist to paint them in a scene which would create the particular atmosphere they wanted. One of many examples is the portrait of Anne of Cleves which managed to convince Henry the VIIIth that the lady was suitably beautiful to be his wife *(Fig. 14)*. When seeing her at the altar however, he very quickly changed his mind.[17]

Fig. 14

However, cameras allowed people to create portraits of themselves as themselves, so with no artist's touch ups. Thus, they became aware of how others could see them. When a viewer looks at himself in the mirror, he is seeing himself through his own eyes, thus allowing him to touch up what he thinks is needed before he presents himself to the rest of

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17   POOLE Rosemary, 'Holbein, Hans, The Younger', *Renaissance & Reformation, 1500-1620: A Biographical Dictionary*, Greenwood Publishing Group Inc, 2000, p. 196

the world. However, the image he or she will see is reversed, thus not an absolute true picture. With photographic portraits however, he will see himself through the eyes and lens of the photographer. He will not be able to change what is on the paper, so anyone looking at it will see what the photographer was seeing on that day.

Indeed, Victorian poet Elizabeth Barrett Browning wrote to a friend in 1843:

> It is not merely the likeness which is precious – but the association and the sense of nearness involved in the thing... the fact of very shadow of the person lying there fixed forever![18]

Thus, the photograph, and indeed any photograph involving scenes of human life, gives an added value of intimacy to the portrait. The memory of the person can now be kept for a long while in his or her true form.

Fig. 15

This concept is ever truer today when the first screen that a baby sees after its birth is that of a camera a most doting parent will want to record the quick growth of a newborn to that of a toddler *(Fig. 15)*. To the baby, it is like looking into an eye which is looking back at it and capturing the moment.[19]

With printing and now digital technologies, the pictures can now be saved and made ready for the

18   GERNSHEIM, op. cit., p. 64
19   HOVEYDA Fereydoun., *Hidden Meaning of Mass Communications : Cinema, Books & Television in the Age of Computers*, Greenwood Publishing Group Inc, 2000, p. 12

child to look back at his or her first moments. Before the invention of popular photography, this would not have been possible. This enables viewers to see themselves in the past and trace back their physical evolution through times when even their conscience was not yet awake. This also allows the parents to capture their child's youth on paper, where he or she will thus never age.

Projection screen

Fig. 16

The screen appeared as an object in itself as a vertical piece of flat and stretched material along with the invention of the projected image. When the viewer recognises the sheet and the image projecting device, he or she knows to turn to the sheet and use it as a support to view the images.

Today, most of the time, an audience will deduce that they will be seeing a piece of entertainment or information if they see the screen and a projector. The presence of both elements and light emanating from one end demonstrates the transfer and travel of such information between both points. Thus, the interaction has become a three way system as the nature of the information has changed and now needs its support. It is now stored on a replay able medium rather than having an immediate form.

Indeed, before the invention of moving picture projectors, viewers would look at a static image on a screen. This would either be painted on or projected through different devices such the camera obscura

(Fig. 17) invented during the Renaissance or magic lantern projectors of the 16th century (Fig. 18). These evolved alongside the invention of moving picture creators such as thaumatrops (Fig. 19) and zoetropes (Fig. 20). It is only with the invention of the praxcinoscope (Fig. 21) that both evolutions merged to become the ancestor of modern day cinema[20].

Fig. 17

Going for the first time to the cinema is for everyone an intensively thrilling experience. One no longer has time to view one image at a time and understand each of their meanings as with the camera. Instead, each insignificant image will run together very quickly to form a story, whose plot holds the meaning of what is viewed. The camera now holds the "magical power" of transposing a scene from the outside to a flat screen in a box or a room. Moreover, as they work on the same concept as cameras, the viewer will know that what he sees on the screen is a true depiction of life. Thus, he is no longer looking at a piece of time stilled by the camera; he is now looking at a period of someone's or something's life.

Fig. 18

Fig. 19

Moreover, as Daniel Chandler explains:

> We usually assume that 'the camera never lies'. We know of course that in a film a dog can bark but it cannot bite.[21]

As the camera films reality as it happens, it will not express the sensational feelings such as touch, smell and taste. Thus, when watching a film, a viewer will suspend disbelief for the duration of the viewing,
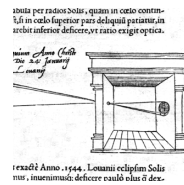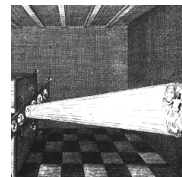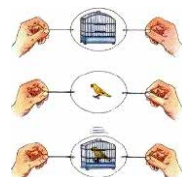

Fig. 20

20   MCKERNAN Brian, *Digital Cinema*, The McGraw-Hill Companies, 2005, p. 4
21   CHANDLER Daniel, *The Basics: Semiotics*, Routledge, 2002, p. 77

while at the same time knowing he will sense noth-
ing else other than through his eyes. This, howev-
er, is only true if the person knows that the images
displayed on the screen have been recorded some-
where else and thus are only representations of mo-
ments once real, but no longer. Once assimilated,
the viewer will perceive the screen as only a support
and no more, although he will allow himself to be-
lieve what he sees as instant reality for the duration
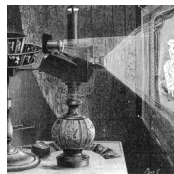of the viewing. Daniel Downes explains:

Fig. 21

> The indexical power of the cinema to draw our atten-
> tion to what is portrayed (rather than what is represent-
> ed) changes the relationship between the recorded im-
> age and the viewer. In cinema, the task is convincing
> the viewer, as a willing participant in the experience of
> viewing, of the plausibility (not the actuality) of events
> displayed on the screen.[22]

Thus, like the painting and the camera, the cinema
is creating an experience with meaning. However,
the viewer is no longer a passive; he can now choose
whether or not to believe the truthfulness of what he
sees. This is commonly referred as the viewer's "sus-
pension of disbelief", where for the duration of the
film; he or she will trust the truth of images on the
screen. Indeed, even though the cinema uses the
same technology as the photographic camera, it can
still be transformed, starting at negative film level, to
fit the desires of the artist.

The interaction between viewer and screen has
evolved from that of the mirror. Indeed, one no

22   DOWNES Daniel, *Interactive Realism: The Poetics of Cyberspace*, Mc Gill-
Queen's University Press, 2005, p. 60

longer sees a direct reflection of reality. Instead, there is the potential of a reality that happened at some-place else at a completely different time. While being immersed in what he sees, the viewer thus finds his temporal and spatial boundaries blurred. He now sees himself in the space and time of what is displayed. Thus, along with the camera, the projection screen has made possible one of Man's many dreams, to be able to see from a distance. With much research and discovery, this dream then created the television.

Figure 13. Joseph Nicéphore Niépce, View from the Window at Le Gras, 1826 (heliograph), Harry Ransom Centre, University of Texas at Austin.

Figure 14. Hans Holbein the Younger, Portrait of Anne of Cleves, 1539 (oil on canvas), Musée du Louvre, Paris

Figure 15. New born child in a blanket.
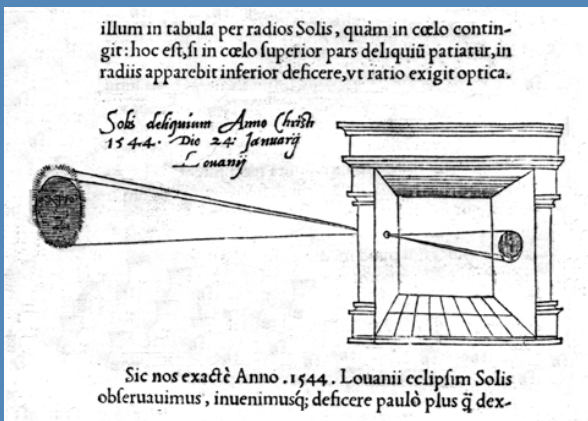

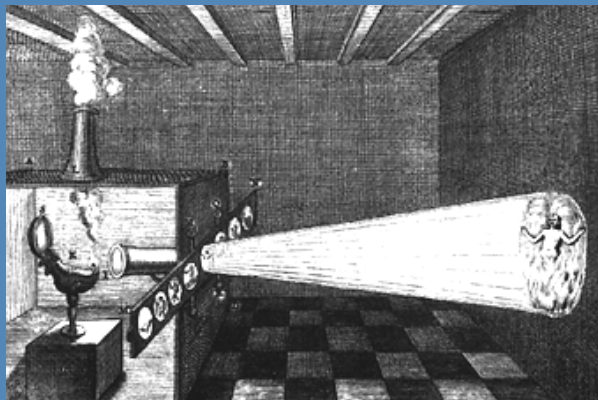Figure 16. A simple projection screen.

Figure 17. Reinerus Gemma-Frisius, Camera Obscura, 1544 (Illustration), first used in De Radio Astronomica et Geometrica, 1545

Figure 18. The magic lantern projector, believe to have been invented by Athanasius Kircher in the 16th century. An image from the 1671 edition of Ars Magna Lucis et Umbrae.
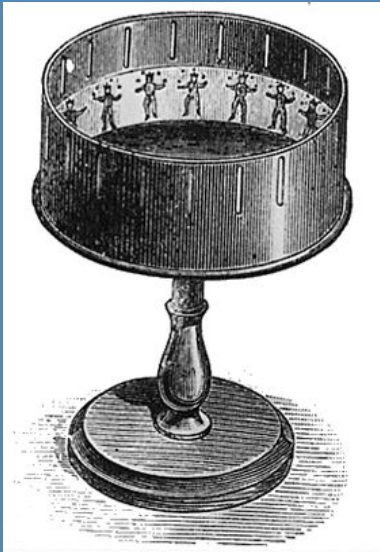
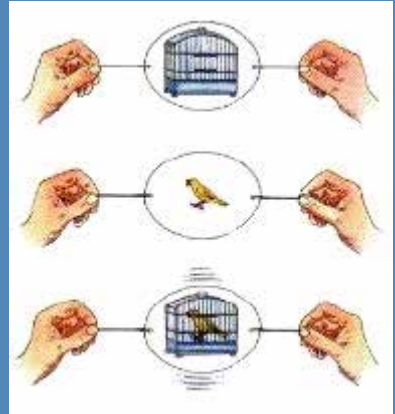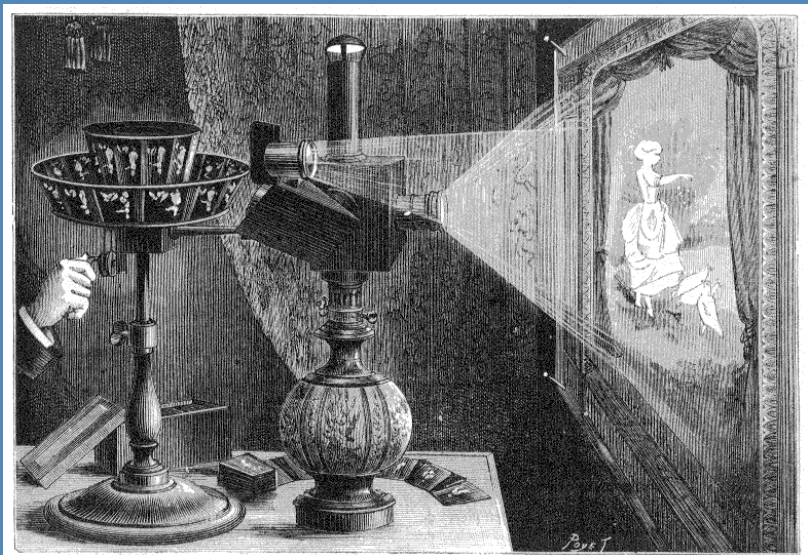Figure 19. An example of a thaumatrop.

Figure 20. A Victorian zoetrope.

Nouveau praxinoscope à projection de M. Reynaud.

Figure 21. The praxcinoscope, a primitive projector invented in 1889 by Charles-Emile Reynaud.

The screen becomes interactive

The Television

In the 1950s, the television set made its first ap-pearance at home along with the creation of a very new kind of screen. Indeed, a huge leap has appeared between the projection screen and the one found on the television. It no longer is a support for image projection or reflection as both screen and projector are grouped into one product.

The three way system of the projector screen is still existent but hidden from immediate view. A television set is composed of a box with a piece of what looks like black glass on one of its long sides. There is, generally, a brand's logo located near such a panel. A person with the right cultural background will recognise the brand name and/or the black screen, and deduce the box is a television where the images will be viewed from the black glass. This recognition of the television is becom-ing increasingly early in most children's education. "Most people under fifty have been watching televi-sion since before they could read or probably even speak."[23] Thus, one can see that the emergence of this screen beginning to change how people see the world from a very young age.

The support has now become multicomposed and potentially transparent with all the technology

23   SHANAHAN James, *Television & Its Viewers : Cultivation Theory & Re-search*, Cambridge University Press, 1999, p. 20

needed to operate it behind. Thus, the TV screen is now seen as a medium to display entertainment and information. What is displayed is, most of the time, generated and controlled by third parties outside the environment of the user. With so many companies creating television channels, the viewer now has the power to choose what he wants to watch.

Like radio, the television broadcasts information and entertainment programmes aimed at the whole spectrum of society. The viewer can then chose what he wants to watch by 'zapping' through the channels on his remote. However, unlike the radio, the television not only provides sound, it more importantly provides moving pictures. This brings world news closer to the home, continuing the impact of image that the camera had started and adds the aspect of real-time viewing.

Fig. 23

One good example of this impact happened on the 9th of November 1989 with the fall of the Berlin Wall *(Fig 23)*. Previous world news was filmed then broadcast a few days later when it had gone through the process of adding it to the programme. This event, however, was aired as it was filmed thus giving people the sensation that they were at the scene, that they were participants rather than watchers[24]. Thus the fall of the Berlin Wall happened not only in the centre of the capital, it also happened in every living room where a television was playing.

This real time viewing of world news also has an impact when war breaks out. The Vietnam War was

24   SEIB Philip., *Headline Diplomacy : How News Coverage Affects Foreign Policy*, Greenwood Publishing Group Inc, 1996, p. 105

the first to be covered by the media, its broadcast-ing happening a couple of days after each event was filmed[25] *(Fig. 24)*. This was the start of the change in the views of those who watched the news on war and the world around, as well as the beginning of censorship of what is showed of future wars. Sud-denly, the enemy and victims were no longer still pictures, names and numbers; they became living, talking beings.

Fig. 24

When the Gulf War I broke out in 1991, the president of the time George Bush senior announced his at-tack to the media on January the 16th, fully know-ing that those he was about to bomb in Iraq were also watching[26]. During the following years, media coverage policies changed rapidly to the point that during the Gulf War II, started by George Bush junior in 2003, 3000 journalists covered the event and were given open access to all areas, making the latest war the most broadcast on television[27]. This meant that the war did not stay in the area where it was fought, it happened as well in the homes, changing the views of many on its nature and necessity. They could see how a war is truly fought along with the consequences on those involved. Not only were the lives of the victims considered, but so were those of the troops and the journalists *(Fig. 25)*.

Fig. 25

Compared to the computer and the cinema screen, the television is a lot more available and, today, af-fordable. Thus, the TV today has become an ingrained

25 TUMBER Howard., *Media at War : The Iraq Crisis*, Sage Publications Inc, 2004, p. 2
26 SEIB, op. cit., p. 108
27 TUMBER, op. cit., p. 161

piece of equipment within family life, with many households today owning at least one set, placed in the living room. It has been shown that many people have become very attracted, and sometimes addicted to the point of becoming 'couch potatoes', to the TV's screen and what is shown on it. Companies have understood this impact and have taken advantage of its image diffusion. Today, more advertisement can be seen on the television than anywhere else, defining the appliance as one of the main causes of the expansion of today's consumer culture.[28]

The Computer

Fig. 26

Technology researchers then created the personal computer in 1977[29], producing yet another different screen. Indeed, the aspect of human to screen interaction is included as a more complex technology, the computer chip, had been added to the object. The computer screen has the same symbolic aspects as the TV screen. One of the main differences, however, is the amount of peripherals and accessories which hold a very important part in the interaction between user and computer screen. Indeed, such objects are physically linked to a middle piece of equipment, mostly the central processing where the chip is held, which is then linked to the screen. The user will forget about the CPU and mentally link the screen to the accessories directly when he uses them. This happens as the user touches such objects with his hands while looking at the screen.

28   WARD Glenn, *Postmodernism*, Teach yourself, 1997, p. 57
29   "Personal computers", *Britannica*, [on line], www.britannica.com

This explains why most people who interact with a
computer for the first time believe the technology is
held in the screen and not in peripheral equipment.
The computer screen is then seen as an opening to
many more interactive possibilities than the TV. In-
deed, it is now seen as an entertainment, informa-
tion, creation and communication device. As one
child in the Indian city of Shipuri exclaimed on the
computer, "he had never seen a television where
you could do something."[30] *(Fig. 27)*

Fig. 27

Today, most objects with screens are a form of com-
puter as they hold a computer chip which permits
interaction. The screen is now not only multicom-
posed, but also multifunctional in the eyes of the
user. It can also take on the job of inputting infor-
mation into the device with the invention of touch
and multi touch screens. The computer screen to-
day holds all the characteristics and potential of all
the previous screens discussed previous. As Bolter
and Gromala discuss:

> When we look in the mirror, we see ourselves, and we
> see the room behind and around us – that is, ourselves
> in context. Digital interfaces are like mirrors in the
> sense that they reflect the user in context, including
> her physical surroundings, her immediate working or
> home environment, and the larger environment de-
> fined by her language and culture.[31]

Thus, the computer screen can display as graphical
representations what cannot be felt by emotions and

30   MITRA Sugata, "Can kids teach themselves?", *TED*, February 2007, [on line],
http://goo.gl/JkfX0O
31   BOLTER and GROMALA, op. cit, p. 27

senses. It interacts with the viewer not only by allowing him to choose what he wants to see or hear, but also by letting him create. The screen is now seen as a window to the world, as well as fantasy. It is this screen that will be discussed through the rest of the dissertation as it has had the biggest impact on humans in history.

Figure 22. A collection of televisions

Figure 23. The Berlin Wall falling on November 9th 1989.

Figure 24. Watching the Vietnam War led many Americans to protest against it.

Figure 25. A BBC journalist stumbles away from an air attack on the convoy he was travelling in, April 6th 2003.

Figure 26. Baby playing with a computer.

Figure 27. A school dropout in Shipuri experimenting a hole in the wall computer placed by sociologist Sugata Mitra.

2 Communication and emotion

Handwritten letters vs. emails

With the proliferation of computers and word processors, writing text has never become so easy and rapid. Programmes can now check the spelling and editing is at the click of a mouse. Such ease of process means humans are now opting for this technology rather than using the ancient art of hand writing.

Fig. 28

Touching others through letters

As *TED* speaker Lakshmi Pratury demonstrates, "letter writing is a disappearing art."[32] She goes on to demonstrate how letters have extra emotional value *(Fig. 29)* to electronic mails, emails, and other virtual information dispensers.

Fig. 29

The act of someone picking up a pen, touching and writing on the paper adds an intimacy between writer and reader. Pratury's father left her a collection of letters after his death in which he had written all his memories and thoughts of her. She explains: "The paper that touched his hand is in mine."[33] Like Pratury's experience, a letter leaves a physical trace of the person who has written it, something which emails and other virtual communications cannot simulate. Handwritten letters send out the signs that

32   PRATURY Lakshmi, 'The lost art of letter-writing', *TED*, March 2007, [on line], https://goo.gl/2F2SkM
33   Ibid.

someone sat at a desk, picked up a pen or pencil and wrote the words that came through their head on a sheet of paper. That person may have made a few mistakes so would have crossed words and lines out, or would have even rearranged whole paragraphs. This would mean the writer would have needed to rewrite the entirety of the letter to make it legible and neat *(Fig. 30)*.

Fig. 30

On the other hand, electronic mail are decomposed into binary data consisting of 0s and 1s, thus never keep their original form. This means email can be opened in most devices with the right programmes and, more importantly, with a screen through which the information can be reorganised and viewed.

Indeed, the printing of an email is not compulsory; neither is storing it, nor keeping its original form. An email can be remodelled to an extent that the sender would not be able to recognise it as the one he sent.[34]

Thus, where emails are sent instantly, their contents no longer hold the same amount of authenticity as a letter *(Figs. 31 and 32)*. For instance, when one looks at a love letter, one knows that we are getting an original and unique copy. If the handwriting is recognisable, one will also know that the letter was written by the sender, the beloved, a fact never sure in an email. This demonstrates how an email cannot be classified as tangible yet can still contain the same information as a written letter.

Fig. 31

Fig. 32

34   YATES Simeon, 'Computer Mediated Communication: The Future of the Letter?', *Letter Writing as a Social Practice*, John Benjamins Publishing Company, 2000, p. 234

Writing to someone seems to be only left to special occasions and postcard writing. A postcard is traditionally considered as a photograph of the places currently being visited printed on cardboard with a message on the back *(Fig. 33)*.

Fig. 33

This tradition began in the late 1869 century in Austria, which then rapidly spread to the rest of Europe.[35] This form of communication was first used for its cheapness and speed. It was also considered a support that was quickly viewed then that could be unemotionally chucked away. One would have thought with the invention of digital photography and emails that the postcard would eventually become obsolete then die out. However, the support has become an ingrained tradition within the culture of tourists.[36] Not only is it a sign to the recipient that the sender is thinking of them, it is also a way for the sender to demonstrate their luck at visiting their location and gives both of them a conversation point. With a very light and quick message on the back, the postcard demonstrates to the recipient that it is the sender who has very likely bought the postcard where he or she was located at the time, thus offering proof that they were there. As demonstrated earlier, this cannot be created through an email as anyone could have written the words and sent the letter.

35 PRITCHARD Annette and MORGAN Nigel, 'Representations of 'Ethnographic Knowledge': Early Comic Postcards of Wales', *Discourse, Communication, and Tourism*, Channel View Publications, 2005, p. 55
36 KENNEDY Chris, ''Just Perfect!' The Pragmatics of Evaluation in Holiday Postcards', *Discourse, Communication, and Tourism*, Channel View Publications, 2005, p. 226

The only time when an email gives the sense of being touched would be if the user lays a finger on the screen. Just by doing this action he is actually touching the panel on the front of the display. He could also print out the email. However, the information contained by the email would only be transferred onto paper and lose its digital properties. This blurs the physical attributes of written communication as tangible documents created that way could potentially be infinitely printed and look exactly alike on each copy.

However, as discussed above, an email is stored as binary data either on a computer hard drive or on an internet server. This means that one can pull up the email on the screen whenever needed and print it out. Where a letter will slowly change with damage, light or moisture, an email will always stay intact as a virtual entity and thus show on the screen, or printed out, exactly the same as the previous time it was looked at. One could thus say that the sense of time is blurred with the screen and the email.

This can especially be seen in an environmental point of view. A letter constantly relies on ink and paper to be seen. Therefore if many letters need to be produced, the fabrication of each of them would require a lot of physical material, thus damaging to the environment. However, emails rely on computer hardware, software, screen and accessories to be viewed. Although more expensive to produce and buy, these supports can be used for a numerous number of emails and do not require constant renewal. Hence, emails can be seen as a more ecologically friendly way of communicating, especially as

much more are sent then hand written documents. This is something that many businesses have noticed and have taken on board in their ethics, asking their personnel to only print an email if they really need to.

Blurring space and time

The other advantage to emails which also blurs the sense of time as well as physicality is its editable aspects. Erica Matlow analysed text production on a computer:

> Writing on a computer screen has enabled us to visualise text in three and four dimensions, moving around text as if it existed in a physical space imbuing the words we use with a particular sense of location and creating information environments that enables us to negotiate with textual information from within a range of different dimensional, virtual perspectives.[37]

Therefore, text on screens are no longer subject to the two dimensional world as with handwritten letters. It can now be written and sent miles away in an instant to a correspondent, posted permanently on a site to be looked at by millions of people, or edited in real time by these people to recreate a new text. This creates an ecological aspect to the email. Indeed, a writer can write an email to many correspondents, using each their personal details such as names or address yet would only need to write the actual contents once

[37] MATLOW Erica, 'Women, Computers and the Sense of Self', *Digital Desires: Language, Identity and New Technologies*, I. B. Taurise & Co ltd, 2000, p. 173

and edit the necessary parts. A handwritten docu-
ment would need the writer to rewrite the whole con-
tent each time he or she changes correspondent. To
the sender, this takes away the sense of repetition and
time consumption. To the receiver however, if the
person knows the content is generic, this removes
the sense of originality[38].

As Mark Hansen demonstrates in *New Philosophy
for New Media*:

> We now live in a world of around-the-clock infor-
> mation exchange where the profound increase in the
> speed of information-processing has greatly shortened
> response time in any number of cultural domains.[39]

Thus, the speed of digital information is now chang-
ing today's society's sense of time and space. One
could say that people who are around the tech-
nologies for speed communication would lose the
patience to wait for information. As the comput-
er offers, they require instant access and instant
knowledge, something letter writing no longer of-
fers. Therefore, as an example, a new grandfather,
not able to travel to the clinic where his daughter is
giving birth to his grandchild, could receive an email
on the very same day with a picture of the new born
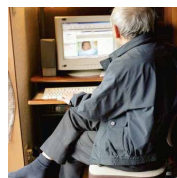and its details *(Fig. 34)*.

Fig. 34

The screen creates a reduced tangible connection
between speaker and spoken. There may still be
some sort of physical action in the process of con-
tacting someone, but that only involves pressing

38   YATES, op. cit., p. 250
39   HANSEN Mark, *New Philosophy for New Media*, MIT Press, 2004, p. 235

buttons to create virtual letters or to compose a number. Furthermore, information can now be gained through the Internet with ease, quickness and reliability, something that newspapers, books and word of mouth rarely offer.

Although the act of communication has been simplified, the process behind has become more complex. Interaction goes through five entities rather than two: speaker, screen, satellite/cable, screen, spoken.[40] This is what makes long distance and future communication possible and easy *(Fig. 35)*.
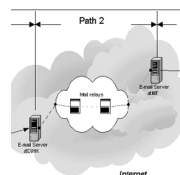

Fig. 35

Yet, with so many entities between start and end point, this form of interaction can only be called indirect. Hervé Fischer demonstrates this phenomenon:

> Communication conducted through current technologies is technically very powerful – much more so than the African tam-tam or the smoke signals of Native Americans. But what it gains in distance it loses in psychological proximity.[41]

With so many choices in methods of communication and human sharing, it is natural that people are using the fastest and easiest ways. This especially helps the business sectors as this improves their productivity as proved in 1996 Corporate Communications Director Stephen Jolly and his project at the Japanese investment bank Nomura International. Through an intranet based, thus virtual system, Jolly increased internal communications which then

40 "Email", *Wikipedia*, [on line], https://goo.gl/xNju7a
41 FISCHER Hervé, *Digital Shock: Confronting the New Reality*, McGill-Queen's University Press, 2006, p. 70

increased the bank's productivity.[42] This was espe-
cially down to the fact that the workers no longer
had to rely on letters to be physically sent back and
forth, nor had to leave their work stations to pass
the communication. The result was that less infor-
mation was lost by human error or memory, and
its distribution could happen instantaneously and
to a multitude. Thus, the same information can be
viewed from a multitude of different screens at the
same time, making information dispersion instan-
taneous. Thus, while space and time are brought
closer together, people are losing the importance of
psychological contact.

One can thus see how views on communication
have changed since the arrival of email and the
screens to read them from. Boundaries of space and
time are now blurred due to the speed and distance
an email can travel while handwritten messages
are now mostly used to provide extra authenticity
to the message and sender such as in the example
of the postcard. The screen in front of the email has
brought people spatially closer while distancing
them psychologically.

42   SMITH Lyn, *Effective Internal Communication*, Kogan Page ltd, 2005, p. 11

Figure 28. Different methods of communication using letters.

Figure 29. Lakshmi Pratury at the TED conference of March 2007

Figure 30. Person penning a document.

Figures 31 and 32. Same content, different support.

Figure 33. Choosing a postcard is still a very important ceremony in the tourist's visit.

Figure 34. A grandfather viewing an email including a picture of his newborn grandchild.
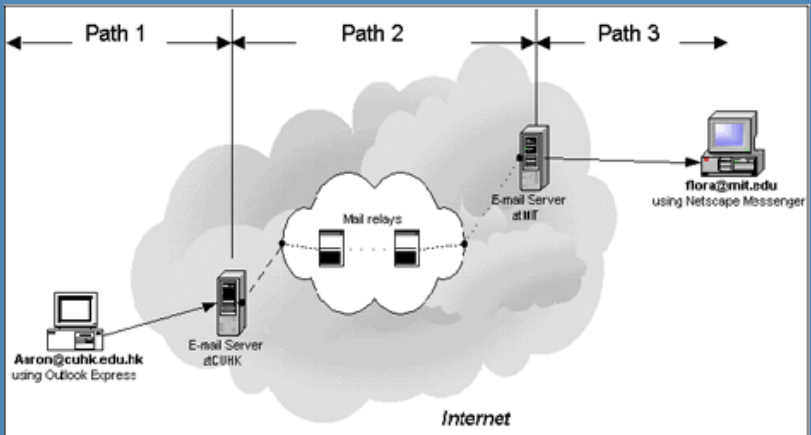

Figure 35. An email's journey across Internet

Instant messaging vs. talking

In a popular book shop located on Chatham's high street (England), a seven or eight year old girl was overheard being chastised by her mother for not having brought the name of the book she needed for school. As a solution to the problem, the mother told the girl: "You will have to ask a friend on MSN for the name of the book."[43] One may wonder as to why she did not ask her daughter to give her friend a phone call instead.

Fig. 36

Immediacy of talking

Indeed, talking is an act that is performed in many different ways by most living creatures of this planet. The way humans talk is through a series of sounds produced by the vocal cords at different inflections to denote different meanings. However, when talking face to face, or even on the phone, most of the meaning of the conversation is understood through body language and vocal tones. Without these, conversations become uninteresting and people tend not to listen and take in as much.

Fig. 37

It seems many more young people today turn to instant messaging for communication with their peers rather than the telephone.[44] This is particularly down to the fact that the two technologies that enable such

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43   From author's experience
44   MILLER Stephen, *Conversation : A History of a Declining Art*, Yale University Press, 2006, p. 282

conversations are easily available and wide spread around the developed countries.

The first of the two is the Short Message Service system (SMS). Invented in the 1980s to be part of the mobile network application Global System for Mobile (GSM), an SMS is a short text of around 200 characters long including spaces, and is extremely cheap to send. A user will open an application on his mobile phone and use his key pad to type in the message, an action described as texting. It will then be sent through the user's network service. *(Fig. 38)* Such applications which enable SMS creation are now common on all mobile phones which, in turn, have become accessories and identity creators.[45]

Fig. 38

The second form of instant messaging is the use of computer and Internet dependant communication devices such as Microsoft's *Windows Live Messenger (Fig. 39)*, *Yahoo Messenger* and *AOL Instant Messenger.* These applications consist in waiting for a friend to be online then "sharing" a window on to which both parties will type messages to each other. Compared to SMS, this method of conversation is more instant as it requires both parties to constantly check if they've received a response, then answer quickly back. As this method resembles a lot more than SMS and emails face to face conversation, today's society has nicknamed the act of using messengers "chatting".

Fig. 39

Due to the technology used, the power of such conversation methods is the speed at which responses

45   OKADA Tomoyuki, 'Youth Culture and the Shaping of Japanese Mobile Media: Personalization and the Keitai Internet as Multimedia', *Personal, Portable, Pedestrian : Mobile Phones in Japanese Life*, MIT Press, 2006, p. 49

can be sent over long distances. Thus friends living on different continents can instantly chat without spending a fortune on telephone bills. Misa Matsuda describes the result of this impact on Japanese society, where mobile phones have had a very particular impact on its young adults:

> Users pay more attention to [mobile phone] interlocutors than to people they are with, whether friends, family, or somebody they happen to sit next to on the train; no one is expected to be available for contact anytime, anywhere, and waiting is not tolerated; parents are no longer aware of who their teenagers' friends are.[46]

Thus, the sense of space and time in communication is yet again blurred by the screen. People, especially the younger generations, seem to no longer be focused on what is nearby, and would rather deal with those who are not at face to face distance.

Repercussions of the instantaneous

This is ever more relevant to today's adolescent generation. Indeed, SMS and instant messaging users expect relatively quick and short answers just as talking does, yet do not receive the attributes of face to face conversation. What both methods of conversation lack is the possibility to read body language and tone of

46   MATSUDA Misa, 'Personal, Mobile Communication and Selective Sociality', *Portable, Pedestrian : Mobile Phones in Japanese Life*, MIT Press, 2006, p. 123

voice. While this has an obvious blockage to chil-
dren's experience of human interaction, it does
give them a sense of freedom from adult control.
Where most adolescents in developed countries
have mobile phones and access to internet, one
of their rationales to use them at home is to show
their controlling adults their independence.[47]

Fig. 40

Indeed, when confined to the home in the evenings,
adolescents tend to still want to keep communicat-
ing to peers. If they were to use the family house
phone however, they would more often than not
need to ask for permission or make sure no one else
needs it at the time. They would then need to control
the amount of time spent on the phone to avoid any
rebuke from their parents for an extensive telephone
bill. Thus the adolescent turns to his mobile phone
or computer with which he can quickly and cheaply
chat without fear of being over heard, or time con-
trolled by the parent. Thus, to the adolescent, the
screen has become a source of freedom and expres-
sion through which he can escape the house.

This demonstrates how people are already losing
some will to communicate with others directly near
them, thus lessening direct contact and face to face
communication. However, this does mean long dis-
tance relationships (business, friendship or roman-
tic) can now stay constantly strengthened as people
are now more willing and have the possibility to use
their phones where ever they are. Thus, SMSs and

47   KRAUT Robert, BRYNIN Malcolm and KIESLER Sara, 'Teens on the Internet
Interpersonal Connection, Identity, and Information', *Computers, Phones, and
the Internet : Do mesticating Information Technology*, Oxford University Press
Inc, 2006, p. 201

chat conversations are seen as openings to the rest of the world.

There is a downside effect however. According to Phil Tabor:

> It will become increasingly difficult to define the nature of occupation of physical space; the association between space you are in and what you might be doing in it is dissolving in a blurring of definitions, and a confusion of the different activities and roles we assume.[48]

While analysing the effect of mobile phones, Jos Boys is here demonstrating that while one uses a mobile phone, one's psychology is no longer in the same space as where the body is. For instance, a user may be sitting in a bar surrounded by people but will have his mind on the people who are not with him. He will be sending an SMS telling others how much fun he is having where he is. *(Fig. 41)*

Fig. 41

As with emails, instant messaging and SMS create a reduced connection between both participants. The only meaning they can gain out of the conversation is through the wordings themselves. If they want to express more, users tend to send icons of emotions, called emoticons, representing different facial expressions *(Figs 42 and 43)*. One could consider this as mobile phone and instant messaging users trying to replicate a very important aspect of face to face conversation to give them the impression that this is what they're doing. Thus, if someone receives a text from a friend with this icon included **:)**, with the
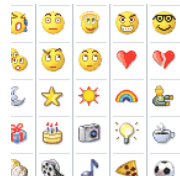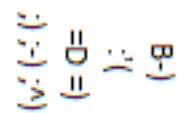

Fig. 42

Fig. 43

48   BOYS Jos., 'Windows on the World?', *Digital Desires: Language, Identity and New Technologies*, I. B. Taurise & Co ltd, 2000, p. 141

right symbolic knowledge, they would automatically transpose that person's face on the icon and know that he is smiling.

Indeed, with both SMSs and Messenger chatting, conversations made in those applications seem to be mostly used for unimportant, light conversations, to arrange outings or just kill time.[49] Anything more important seems to justify spending a bit more on a telephone conversation. The screen of the mobile phone and computer thus become frivolous openings to conversations. The telephone then becomes a little more serious and maybe even scary for some.

On the whole SMS and instant messaging has allowed an increase in conversation throughout developed countries. However, Fischer states: "Communication has become a sledgehammer that knocks us senseless."[50] When communication increases, its importance lessens, a phenomenon discovered in many other areas of nature such as in economics with Laffer's Curve of taxation *(Fig. 44)*.[51]
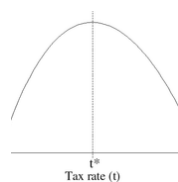

t^*
Tax rate (t)

Fig. 44

This curve demonstrates the effects of increasing taxes on the government's revenue. If the taxes are increased by 100%, the population would have less inclination on working to pay such funds. Thus the government would lose money. The tax increased so that the revenues lost their importance.

49   OKADA, op. cit. p. 54.
50   FISCHER, op. cit., p. 99
51   LANGDANA Farrokh , *Sustaining Domestic Budget Deficits in Open Economies*, Routledge, 1990, p. 58

Thus, with the appearance of mass communication, thanks to screens, perceptions of human interactions have changed to ones with less importance and impact, to which the users are no longer sure of their standing in space, time and physics. To reduce this impact, users are still trying to reproduce nature's way of conversation by creating artificial icons of themselves on the screen of the other person.

One can thus deduce that communication today has lost a lot of its emotion since the invention of the screen. Users of such technology no longer see their recipients as individual cases to which each document or conversation made with them has to be personal and thought out to each need. At the same time however, as conversation through the screen is cheap and fast, the amount of conversation between individuals has increased, even if most of it is done through the screen. Thus, as demonstrated, the importance of communication has lessened as people are opening to more of the world.

Figure 36. Talking to someone, or texting them?
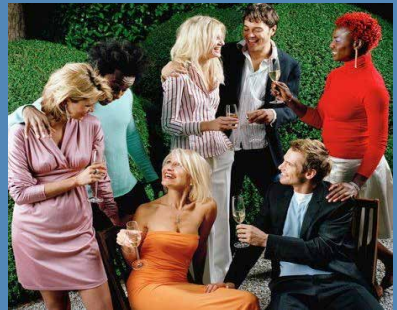

Figure 38. Example of a text message.

Figure 37. An example of talking: people having a chat at a party.
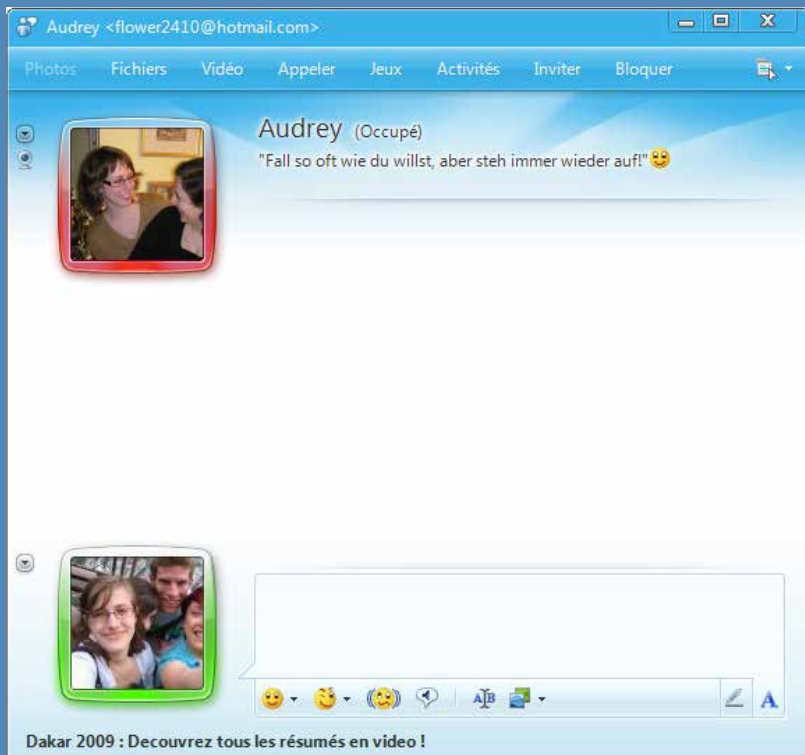
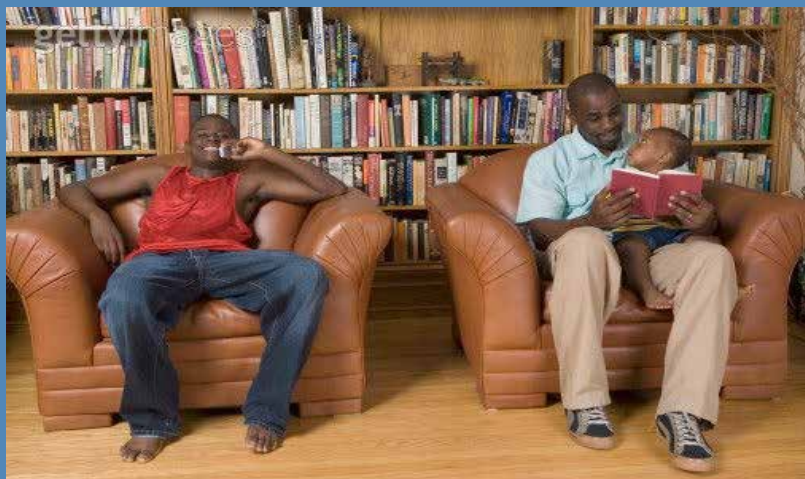Figure 39. Example of a Windows Live Messenger conversation, or "chat".

Figure 40. Young man on his mobile phone while adult tells a story to the younger child.

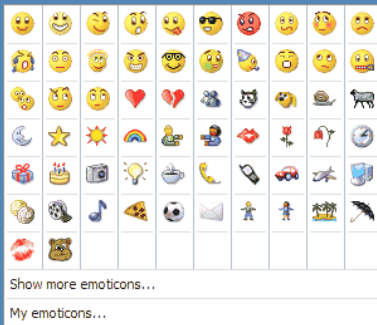Figure 41. Are these men really in the same room as the young woman?

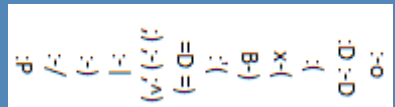Figure 42. Examples of Windows Live Messenger emoticons.
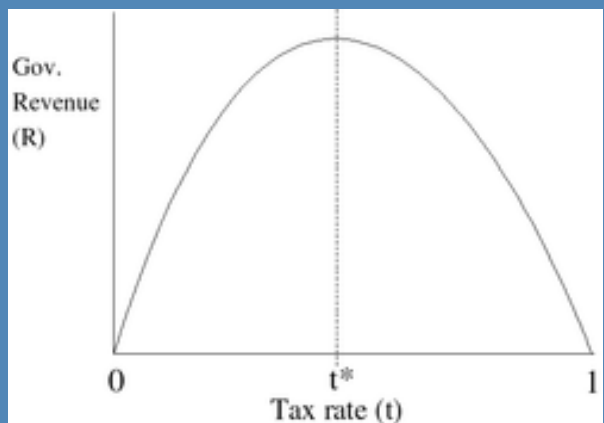

Figure 43. Examples of SMS emoticons.

Figure 44. Laffer's curve of taxation

3 Reproduction of life and fantasy through screens

The cinema and T.V. screen experiences

As demonstrated in the first chapter, the screen has the amazing power to deceive the viewer's mind of what he is seeing. This began with the canvas and perspective where artists were tricking the human eye into believing it was looking out of a window onto a scene. This deceit then died with the arrival of the camera when it was no longer needed. However, it was later revived with the creation of the largest screen created by Man which has the strongest power of deception: the cinema screen *(Fig. 44)*. The deception was further continued with the apparition of the television, the in-home cinema.

Fig. 45

The cinema screen experience vs. the novel

Before movies arrived, people would read books or go to the theatre for entertainment. As theatre still contains live action whereas books only contain words, it would be more interesting to compare the later to the cinema screen. Films and novels both revolve around the same language pool of the narrative. Both follow a plot, have rounded characters, set scenic styles and follow narrative fashions. They both play on camera angles to set atmospheres in which they want their audience to fall into. Films

and novels are to be enjoyed under solitary circum-stances, preferably in a quiet place to enhance their effect on the viewer, giving them both aspects of high realism. This is where the similarities between films and novels seem to stop. Indeed, the way their realism is created, as well as their user experience, is very different. For this, one will study the differences in experience between a book and its film adaptation in the cinema: Chris Weitz's *The Golden Compass* to Philip Pullman's *Northern Lights* (Figs. 46 and 47).
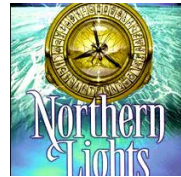

Fig. 46

Fig. 47

Sitting in a dark, silent room, with imagery being displayed on a magnificent screen up ahead, the cinema experience has always been impressive. Even in its early days where simple scenes were filmed and viewed, the screen still attracted people. They wanted to know what is happening in other lives; they wanted to experience the newest in en-tertainment. After the simple scenarios, film makers started coming up with stories to create as a film. From that point, they discovered they could make their audience believe in the story they wanted to tell. Christian Metz demonstrated that:

> The peculiar circumstances to which we submit our-selves in entertainment cinema (sitting still – or rea-sonably still – in the dark) produce a particular attitude to the representation on the screen.[52]

John Ellis goes on to explain that while the specta-tor is in his seat, his psyche becomes more recep-tive to what will be displayed, to the images that are much larger than him; and to the sound which

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52   ELLIS John, *Visible Fictions : Cinema, Television, Video*, Routledge, 1992, p. 49

drowns out anything else. Indeed, most seats are low in the room, thus the viewer will need to look up. One could thus conclude that in the cinema, the screen becomes all powerful. It controls the human's stance, state of mind and beliefs. It is only once the film is ended and the spectator has left the room that he will be released from the control. Thus having left the room where *The Golden Compass* was viewed, one suddenly finds themselves back in the town they left, away from the fantasy world of the film.

A film has to be seen in one straight, taking a pause means missing out on parts. Furthermore, the screen itself and the sound system surrounding it are known to have certain effects on the human body. Staring at any electronic screen too long can cause the eyes to tire and thus headaches and other symptoms. However, with films averaging around 2 hours and 30 minutes long, one does not need to stay in the cinema for too long to get the story. The ease that the cinema screen provides is one of speed and conciseness.[53] Long descriptions are cut down to seconds thanks to the camera, episodes are deleted and dialogue is increased to tell the story. The Philip Pullman story in 397 pages thus becomes a 2 hours and 40 minutes film, with the spectator leaving the room having understood the same story as the book, even though a few events were left out.

With the book version, a reader will be able to make his or her own impressions and realisms through their imagination. On screen however, it is up to the actors on the screen to reproduce the feelings and

53   HOVEYDA, op. cit., p. 35

sensations described within the book. At the same time, the scenery and sound have to recreate the imagery of the novel *(Fig. 48)*.

Fig. 48

All these aspects were, before hand, decided by the director. Thus one of the main differences in the realism from a book to that of the screen lies in who is in control of its creation. With a book, the reader makes his or her own decisions helped by the directions of the author. On the screen, however, the viewer is in full control of movie's director, he or she only needs to decide whether to suspend his or her disbelief.

Indeed, after an exponential development in film technology, what is shown on the screen can now attempt to make the audience believe that they are viewing real fantasy, science fiction or historical scenes; that the director managed to travel in space, back in time or sideways to different dimensions. Indeed, the technology used in *The Golden Compass* managed to create such a brilliant illusion of realism that the film received the BAFTA Award for Special Visual Effects[54] as well as an Academy Award for Achievement in Visual Effects[55], both in 2008.

However, despite the extent of the technology used to reproduce realism in its full visual and audible representation, the film on a screen will always lack an aspect which many humans prefer in the book. It is a wonder why people would want to submit themselves to such a state, especially when they could easily escape the control by reading the book.

54   FERNIHOUGH Jo, 'Winners Announced', *BAFTA*, 10th of February 2008, [on line], http://goo.gl/YfOh8L
55   'Oscar Awards 2008', *IMBD*, [on line], http://goo.gl/Mpu02W

Indeed, just like the silver screen, one can dive in the book and have trouble surfacing again. However, the control is not as tense. If someone calls out to a book reader, he or she can respond without feeling guilty about having interrupted the show. This is mainly down to the environment in which a book is read, that is: everywhere. One does not need a special room or a particular atmosphere, albeit a quiet one, to enjoy flicking through the pages. This ease of transport in a book is joined by its ease of viewing. Indeed, a book can easily be thumbed through to different pages depending on what the reader wants to see, while at the same time having little effect on his or her eyes *(Figs. 49 and 50)*.

Fig. 49

Fig. 50

Thus, the book and the cinema screen experiences both have a lot of similarities but also many differences. Even with the appearance of cinema and its increase in technical prowess, books have never ceased to exist and continue to be produced by the millions[56]. This may demonstrate how humans are still in the search for the physicality aspect of the book. The fact that the book can be touched, the words read and reread with possibilities of new interpretations each time, may mean that its production will not decrease due to the screen. This means the cinema's screen attraction will always only remain that of instant escapism through someone else's realism.

56   CHILD Katy, 'Books – UK – July 2007', *Mintel*, July 2007, [on line], http://goo.gl/CNg1bF

Television vs. the cinema experience

The television screen, however, does not demand to be watched, even if people today do so in enormous amounts. Even though they both screen moving images, the cinema and the television have many differences.

Fig. 51

The silver screen, as mentioned previously, is much bigger than the humans watching it, thus the images it displays are also of considerable size. The viewer is thus dwarfed and made to be in awe of what he or she sees. Compared to the cinema, the television screen is a lot smaller than the viewer and is surround by a more basic sound system. This reduces the imagery displayed to a human level, creating a form of psychological intimate link between the spectator and what he sees. Furthermore, with the screen's smallness the images displayed are, and will never be, as detailed as those on the cinema one. Despite this, people have been buying televisions since its invention in the 1950s. In 2002, 99% of British households had one in their home.[57] The factor remains that the television has become a central part to the family life. Members gather together to watch a film, the housewives have it on while working on repetitive chores such as ironing, employers sit down in front of it for some wind down time after work.

Thus, people still spend hours a day, when at home, in front of the television, 'zapping' from channel

to channel in the search for an entertainment that suits them. Being in a home zone and surrounded by people they know and feel comfortable with, they know that they can gain some control over the appliance. Television viewing becomes less immersive as the cinema, making the event less hefty on the psyche and allowing the spectator the freedom to wander away and back to the screen. Yet, still the appliance has managed to set a routine in many households, where family events are timed so as to be able to catch particular shows. This demonstrates already how the television screen has given only the illusion of control to those who use it.

Fig. 50

Another illusion created by the television can particularly be seen during sporting events *(Fig. 52)*. Many aired in real time, the different sports are filmed so as to show in as much detail as possible what is happening. From that point, the screen acts in the same way as a painting does when it includes perspective. One can see the whole image at once giving the user the impression of omniscience over what is happening down on a football field for instance. He can see where all the players are standing and, depending on his knowledge on the sport, can determine what the best moves are for the players. Those on screen being close to each other in real life, and without the overhead point of view, have a tougher job at determining where everyone is located and thus making the best decision.

This is something the viewer would need to remember before launching insults at a player who has just made the wrong move. Indeed, a spectator would only get to understand the difficulty of moment till

he finds himself in the seats surrounding the pitch. As he is closer to the field, he loses some of the perspective deformation of the screen and thus can take in the reality of the game. This, and the atmosphere of the match, will be an aspect that the television screen will never be able to truly reproduce as it will always give the viewer an over head view of the game, creating foreshortening. Furthermore, it will not be able to recreate the same interactivity that one experiences in the stadium. The screen only gives the illusion of this.

Figure 45. The silver screen: the cinema.
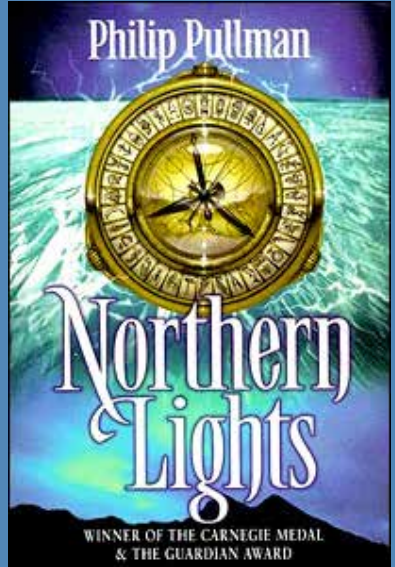

Figure 46. 'The Golden Compass' film poster

Figure 47. Scholastic Press cover for Philip Pullman's Northern Lights.

Figure 48. Scene from 'The Golden Compass', the scenery makes us believe that the girl is sitting on a real bear, whereas her facial expressions display at her amazement at what she sees.

Figure 49. Reading a book can be done with ease.

Figure 50. A crowd in a cinema room.

Figure 51. Siblings watching television.

Figure 52. Boys watching football on their television.

The interactive illusion

When looking at the vocabulary surrounding the element, one can see that there is a heavy influence on the interactivity between Man and screen. Indeed, just the word "interface" suggests a direct exchange between what is behind the "glass" and what is outside it.

Fig. 53

Touchable screens rendering objects untouchable

Companies producing objects with screens play heavily on the amount of interactivity available within the product. This does attract the attention of consumers who flock to obtain the newest technology. Touch screens however, have their information directly inputted through themselves and the application/interface. This gives the user the sense of directly interacting with the application running behind. Non sensorial screens need their information inputted through external accessories such as keyboards, keypads or pointer mice.

The difference between simple touch and multi-touch screens lies in the amount of simultaneous pressure points recognised by the sensors. A simple touch screen will only register one pressure point at a time, whereas a multi-touch will respond to any number of them.[58] This allows a greater amount of

58   HAN Jeff, 'The radical promise of the multi-touch interface', *TED*, February 2006, [on line], http://goo.gl/XPsWyG

interactivity with the application behind, as well as a possibility to shape the items to what the user wants or needs them to be. As Jeff Han *(Fig. 54)*, scientific researcher at the New York University, states, "We have so much technology these days; these interfaces should be conforming to us."[59] Indeed, appliances with screens play a lot on the notion of interactivity, which, however, is only superficial.

Fig. 54

This can be seen with the emergence of the newest of Apple items: the iPhone, launched in 2005. The device has one of the most interactive screens today, especially innovative with the display of the user's music list. The iPhone's ameliorative aspect is the fact that it could contain around 10 000 songs in one small device, thus lessening storage requirements. Like riffling through a record collection *(Fig. 58)*, one riffles through the images of the different albums with a finger *(Fig. 55)*. Yet, in contrast to the record collection, one plugs in a set of earphones into the device to be able to listen to the music , thus reducing the possibilities of sharing and human interaction.

Fig. 55

Fig. 56

Before the invention of the screen, people listened to music via the radio or record players *(Fig. 57)*. The latter involved choosing a disk and taking it out of its case to then slip it on or in to the music player. This means the user will have interacted a lot more with his music as the packaging; the medium it is stored on and the player are all tangible. When using the iPhone, one only looks out for the image of the music wanted then taps the graphic to activate the playing
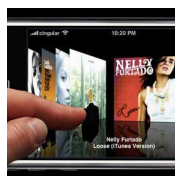

Fig. 57

Fig. 58

59   Ibid.

of the song. One could thus say that the music has lost some of its ties to the real due to the screen.

The never sharing experience

As demonstrated previously, the screen can display anything that is virtual giving a second dimension to the object. The user is not only interacting with the object itself but also with its virtual content and possibilities to create the unreal.

Screen based products offer a visual of what is happening within the electronics, also known as a graphical user interface (G. U. I.) thus giving a better understanding of its applications. They have become a lot more interactive thanks to technological developments such as intelligent interfaces, multi-touch screens and more powerful processing units. This can especially be seen in the video game market.

Magnavox Odyssey's tennis game was the first games console to appear in the home in 1972.[60] It required a button to be turned, thus only one style of hand movement[61] *(Fig. 59)*, to move the paddle up and down the screen so as to avoid the ball from entering the danger zone.

Fig. 59

Launched in 2006, the Nintendo *Wii* has taken the game to the postmodernist era *(Fig. 60)*. The game still involves a ball and a set of rectangular paddles,

Fig. 60

60   WINTER David, 'Magnavox Odyssey', *Pong Story,* [on line], http://www.pong-story.com/odyssey.htm
61   Ibid

one for each player. The rules have not changed: each player has to send the ball into the other's goal to score points whilst protecting their own from the other's attacks. The difference: the *Wii* paddles no longer just go up and down. With flicks of the wrist and precise arm movements, one can now move the paddle all over one's court and twist it at angles to get the best defence or attack, thus making the game a lot more active.[62] This makes interaction with the other indirect as both players are staring at the same screen, while it stays direct with the object itself.

Iain Simons explains the *Wii* in the journal *Design Week*:

> Playstation Europe has driven a number of pioneering innovations with its EyeToy and Buzz projects, pushing the concept of 'social gaming' forward, principally through hardware design rather than software. But surely the accolade for the most inclusive design of recent years belongs to the Nintendo Wii.[63]

Therefore, one can say that the *Wii*'s uniqueness revolves around its game play. Indeed, the player points a Bluetooth remote control to a sensor linked to the *Wii*, placed on top of a TV screen. He, or even they, then creates real movements which will then be copied by the console and displayed in the game *(Fig. 61)*.

Fig. 61

Even though the *Wii* enables sharing games and playing with others, all players are interacting with each other through the screen. At difference to many other consoles, the interaction is a lot greater as the games

62   *Nintendo WiiU*, [on line], http://www.nintendo.com/wiiu
63   SIMONS Iain, 'In Control', *Design Week*, Vol. 23, N° 17, 24th of April 2008, p. 19

require most of the body to move. Indeed, as Nintendo describes their product: "You don't just play *Wii*, you experience it."[64] One thus gets completely physically active while taking part in the game. For instance, if a player makes a mistake, there are chances that he or she will knock into his or her partner *(Fig. 62)*.

Fig. 62

This can be opposed to other consoles, such as Microsoft's *Xbox* or Sony's *Playstation*, as they only require slight movements of wrists and thumbs to get the wanted reaction within the game. Even so, players of these consoles would still get the sensation of sharing an experience when playing a game together.

Thus, one can already notice an increase in the importance of the screen. It gives the sensation to both players that they are sharing the experience of a game. This notion is one disputed by Slavoy Zizek:

> Freud already knew about the link between narcissism and immersion in a crowd, best rendered by the Californian phrase 'to share and experience'. This coincidence of opposed features is grounded in the exclusion that they share: one not only can be, one is alone in a crowd. Both an individual's isolation and his immersion in a crowd exclude intersubjectivity proper, the encounter with an Other.[65]

In this extract, Zizek points out the oxymoron in the concept of sharing an experience. When going through an event a human will always looks into him and realise the feelings he is having about or

64 *Nintendo WiiU*, op. cit.
65 ZIZEK Slavoy, *Violence*, Profile Books Ltd, 2008, p. 26

caused by the event. If several people are partaking in the occurrence, they will compare their own emotion to what they think the others are feeling. This will then create their own identity within the group, separating them from the Other all around. Thus, one can never share an experience as one will never truly know what the other sharer is feeling. In fact, one will not want to know as this would remove part of their identity.

As noted earlier, the cinema screen and experience also gives the same sensation of having partaken with others in an event. However, when going to see a film, one just sits in a darkened room in singled out chairs while keeping quiet so as to enhance the experience of the sound effects. The screen holds the audience captivated during the period of the film and only releases them once they have stepped out of the room. The sense of having shared something together is strong at that point, which explains why many couples go on dates to the cinema.

This would give the impression to screen users that they have connected to more people than they would without. They give them the feeling of being sociable when, instead, screens seem to isolate them further from others. The fact that one can play video games, thanks to their artificial intelligence software, or go to the cinema alone enhances that point.

Moving as fantasy does

Thus, as the *iPhone* also demonstrated, screen based products have become very much interactive, useful and, especially, customisable. Indeed, the *Wii* demonstrates this through its interface and the changeability of its remotes.

Fig. 63

Indeed, the *Wii* remotes can now be clipped into plastic covers *(Fig. 63)*. This will then create the illusion of another object such as a tennis racket, baseball bat or even golf club. Called specific input devices, these objects were already popular as Moggridge notes:

> Between 5 and 10 percent of the people who buy car driving games will buy a steering wheel, and 15 percent of the people who buy flight simulator games buy the control column and pedals.[66]

These were created to enhance the interactivity between the player and what he sees on screen. Indeed, the *Wii* remote has now the potential to be held and used in many different ways, enhancing gaming effects.

Fig. 64

Indeed, the Wii not only recreates real sports, it also generates games set in fantasy worlds, with fantasy characters or surreal situations *(Figs. 64 and 65)*. This means the player will find himself creating real movements which will then be imitated by the character or piece on the screen in a completely different environment. This potentially creates a stronger link between what is on the screen to the

Fig. 65

player as he has the best chance to imagine himself in such a different world.

The screen here acts as a display or reward of the movements the player is making. If the player acts out the right choreography, the screen will reward the player with a successful game. Even though the player is not linked physically to the screen, it is still the main element with which he or she inter-acts. Yet, in contrast to a T.V. viewing, phones with screens and computers, the Wii initiates, creates and responds to greater physical action from the user.

Where other game platforms have enhanced their console's technology to allow more power and re-alistic 3D graphics generation, the *Wii* opted for the user to feel as immersed in the game as possible through his actions. It is interesting to note that the player in creating movements which, in the game, are placing him in a fantasy world, he feels as though he inhabits it.[67] Indeed,

> A high level of detail in appearance and movement can increase the degree to which it seems believable, in its own context, no matter how fantastical its nature.[68]

This demonstrates that, however fantastical the scene is, if the experience surrounding the screen is a realistic as possible, the viewer will be able to fool his mind to believe what he sees there. Thus the screen is able to create an escapism door for the seeker of entertainment. The illusion created for him

67   KING Geoff, *Tomb Raiders and Space Invaders : Videogame Forms and Contexts*, I. B. Tauris & Co Ltd, 2006, p. 129
68   Ibid, p. 132

would allow the gamer to enact his dreams. As many users do, he would then need to remember to come back to reality and remember that what he sees in front is a virtual world which has no impact on the one he is in.

Figure 53. An illusion through the screen.

Figure 54. Jeff Han demonstrating his multi touch screen at the Technology Entertainment and Design Conference, California, February 2006.

Figure 55. Riffling through the iPhone list

Figure 56. iPhone with earphones

Figure 57. Gramophone

Figure 58. Young man riffling through his record collection

Figure 59.The original tennis game by Magnavox Odyssey

Figure 60. The Wii laser hockey game

Figure 61. The remote being used

Figure 62. Wii tennis players

Figure 63. Covers for Wii sports

Figure 64. Wii players on EA Games' 'Project H.A.M.M.E.R'
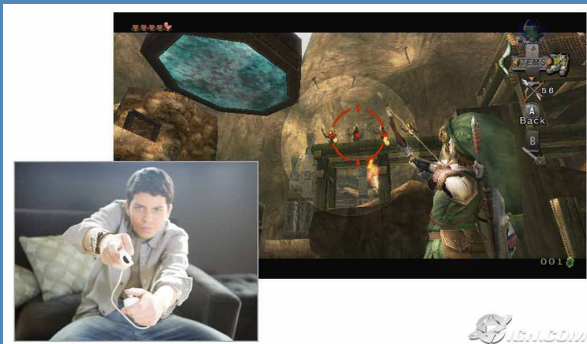
Figure 65. Wii player on Nintendo's 'Link's Crossbow Training'

4 The environment through screens

The rise of the 'super human'

With the fast evolution of technology in today's world, one can see screen based objects bringing gradually more elements to daily life. The computer screen has become a connection to the whole world, the cinema screen creates reality out of fiction and video games can allow enacting what cannot be done. Today, the attraction of the screen is the fact that it can bring something to the human body that it cannot do. Thus, with the rise of screens in developed countries, one could say that the population living there and using such objects are slowly becoming super human.

Fig. 66

Enhancing human senses

The enhancement of the human body past its natural barriers has always fascinated scientists who have researched profusely in the matter. Stone tools were created when prehistoric Man was not strong enough to rip material or pierce hide[69]; the wheel was invented around 3500 BC to aid Man's mobility[70]; Dutchman Hans Liperschey came across the telescope in 1608 to be able to see the stars.[71] All these inventions and more have been

69   HARMS Archie, *Engineering in Time : The Systematics of Engineering History and Its Contemporary Context*, World Scientific Publishing Company Inc, 2004, p. 20
70   Ibid, p. 30
71   WINDELSPECHT Michael, *Groundbreaking Scientific Experiments, Inventions & Discoveries of the 17th Century*, Greenwood Publishing Group Inc, 2001, p. 226

created to compensate where the body lacked. One can now see that humans now perceive screens as devices to add to the functions of the body so as to cover for its weaknesses. This gives the user the impression of interacting with the environment around him or her.

Thomas A. Furness III and Woodrow Barfield noted that:

> Typically, the computer, via a display monitor, only allows a limited two-dimensional view of the three-dimensional world we live in.[72]

However, as the image itself is less complicated, more information can be displayed, such as a wider view of the environment around and further ahead of the user's location. This could be described as transcendence as the screen is bringing a distant environment into the users near surroundings. One could thus say that this creates an extension to the user's eyesight thus adding the aspect of extrasensory perception to the object and its screen.

One such example is the satellite navigation system included in many objects built for the purpose or added as an application is existing ones. Indeed, the Sat Nav brings to the human eye what it sees miles ahead so as to warn him of a turn or junction. More about this will be discussed in the second part of the chapter.

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[72] FURNESS III Thomas. and BARFIELD Woodrow, 'Introduction to Virtual Environments and Advanced Interface Design', *Virtual Environments and Advanced Interface Design*, Oxford University Press, 1995, p. 3

One can also see this in the Nokia Research Centre (NRC) and the Cambridge Nanoscience Centre joint project on a mobile communicator called the *Morph (Fig. 67)*. Using nanotechnology, the *Morph* evolves from a watch to a very flat Personal Digital Assistant (P. D. A.), passing through a mobile phone form. One of its many applications involves testing the air for certain chemicals *(Fig. 68)* which Nokia describes as: "*Morph* enables us to observe our local environment."[73]
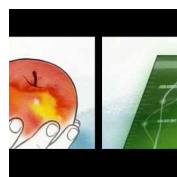

Fig. 67

Like the Sat Nav, the *Morph*'s screen enables the user to see more than his body can allow. The screen thus allows him to select parts of the environment that he cannot see and then view it in a virtual graphic format.

Fig. 68

Creating omniscience

This is an important aspect of the screens enhancement of the human body. A good demonstration of this is the fast moving evolution of home electricity monitors. Electricity is a very common power source which is invisible to the eye until it becomes lightning. When used in the home, it flows through cables in the walls to feed electrical goods and light bulbs. This power source can become quite costly to the home user, especially if wasted through unkempt powered elements. Moreover, according the Design Council design consultancy, "studies demonstrate that if the energy

73   'The Morph Concept', *Nokia Research Center*, [on line], http://research.nokia.com/morph.

used in a home could be visualized, we would consume 15 percent less."[74]

Fig. 69

However, to do so, one must find a way to be able to see electricity. This is where the screen steps in. With a team of graphic and product designers, the Design Council came up with a monitor which would enable users to see exactly where their energy consumption was distributed within the house . They could thus tell when and where they needed to switch appliances or light bulbs off when they're not needed, or seek out energy leaks when appliances became faulty.

Fig. 69

This energy saving device not only gave the user the power to save money, but he also became an omniscient being in the house. He would be able to know who is using what, when and how long for when looking at the screen and its interface. Even though a simple and necessary concept, this screen has managed to increase the human conscience to the point of super human as do some many others.

Fig. 69

People using such screens would no longer look at themselves and others in the same way. With the invention of Internet and other technologies, humans now know that they can potentially know everything there is to know about the world. With so much information flying around unseen, designers and engineers have taken what is available and have made that knowledge modular so that each human can control what he wants to know.
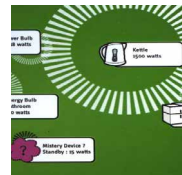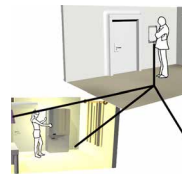

Fig. 70

74   Design Council, 'Home Monitoring Display: Red Project – Future Currents', *So Watt! Du Design Dans L'Energie*, Beaux Arts Editions, 2007, p. 34

Thus, in comparison to when screens where only considered as supports to view moving pictures, such supports are now viewed as having the potential to display more than the human sense can discover. This gives the user the impression that he or she knows more of his or her environment thus creating a better understanding and control of it.

Fig. 71

Figure 66. How are screens transforming the way humans are looking at themselves?
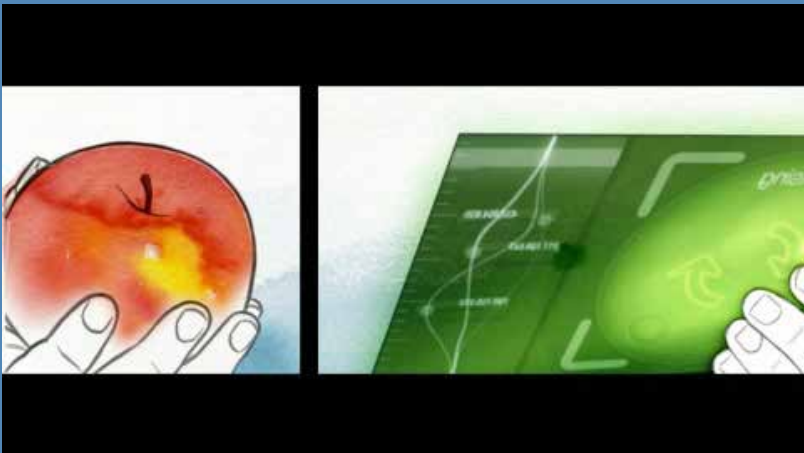

Figure 67. Nokia's Morph

Figure 68 The user flaps the Morph next to what he or she wants to analyse. The Morph will then display the object's chemical components and their effects on humans.
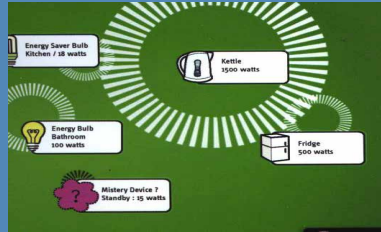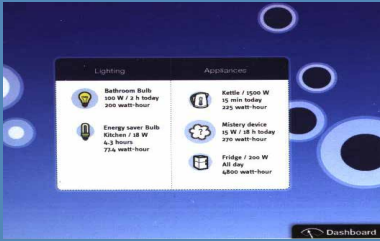
Figure 69. The different display screen of the Home Monitoring Display showing the electrical usage of different household appliances.
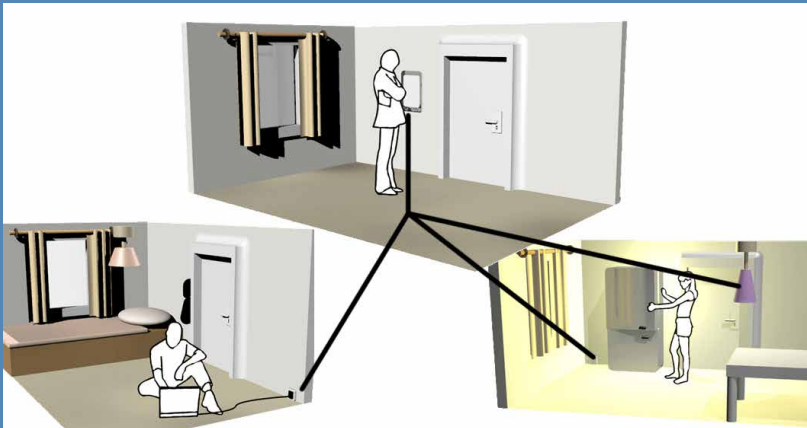

Figure 70. The power of omniscience with the home monitor. (Illustration: author)

Figure 71. Will these screens ever let you smell, touch or taste?

A loss of human instincts and habits

As demonstrated in the previous chapters, the screen has the power to deceive human belief and senses. It gives Man the possibility to create illusion and the impression of interaction. With the amount of objects and uses of the screen, it is no wonder that this has had an impact on Man's instincts and habits.

Depriving the natural senses

The screen's utmost characteristic is to display what cannot be naturally seen. With the growth of technology, they can now display what cannot be heard, touched or smelt. This gives the screen the greater possibility to display a complete environment.

However, Nicholas Negroponte maintained,

> We all have five senses; how sad that our connection to computers is 'sensory deprived and physically limited.'[75]

This demonstrates how little one interacts with reality when looking at it through a screen. Only sight is used to gather other information normally transmitted from the others senses. Seeing that the postmodernism era of today is also described as the age of visual information, with imagery appearing everywhere a head turns, the fact that

75   MOGGRIDGE, op. cit., p. 515

sight has become the domineering sense comes to no surprise.

Furthermore, as screens can give more information to the brain than human senses cannot, they are sent further away from being attached to the human body. For example, satellite navigation (Sat Nav), through Global Positioning Satellites (G.P.S.) and a device with a screen such as the Tomtom Sat Nav *(Figs. 72 and 73)*, shows the road that is coming up, thus displaying what the eye cannot see or the mind predict. As no human can do this naturally, this gives an enhanced artificiality to the Sat Nav's screen. Another of the screen's characteristics is its possibility to display information instantly.

This is something a map will struggle to provide as the user needs to look for the start point and end destination while mentally calculate the route between. The user also will have to continuously look down to the map during the journey to make sure he or she doesn't sway off track *(Fig. 74)*.

This means that two people are required in the car to navigate the device through the geography as the driver needs to keep his or eyes to the road ahead to stay safe.

On the other hand, the user would only need to define the destination point on a Sat Nav such as the *Tomtom*. From then the GPS system calculates the route to that point from the location the user is starting from. The screen displays a map of the surroundings either in a two dimensional format *(Fig. 75)* or a three dimensional one *(Fig. 76)*, all the while
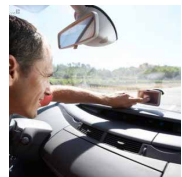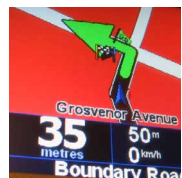

Fig. 72

Fig. 73

Fig. 74

Fig. 75

Fig. 76

potentially dictating the route in a preselected voice. This calculation system is also used on maps found online from websites such as *Google Maps* and *Mappy.com*. Using the same technology, such maps only give the viewer a direct route to the destination by displaying a few road names and numbers.

Changing views on the environment

This is where the paradox begins since humans are seen to be embracing the technology into their everyday lives to such an extent that such objects are becoming additional limbs to their bodies. Those who are surrounded by screens are becoming reliant on them as demonstrated in the previous chapters. Indeed, according to Bill Hill:

> Where evolution was once an interactive process between human beings and a natural, unmediated world, evolution is now an interaction between human beings and our own artefacts.[76]

Thus screens are slowly but surely transforming human instinct and habits. Moreover, as humans are so intently studying what cannot be seen without the screen, they tend to disregard what can be sought through their own senses. One example of this is the simple act of map reading.

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76 HILL Bill, 'Techno-Darwinism: artificial selection in the electronic age', *Art, Technology, Consciousness*, Intellect Books, 2000, p. 20

Most walking tourists carry a map of the city to keep their bearing and to guide them to their chose destination. Even though the sheet of paper offers the same basic information as the Sat Nav screen, the tourist will interact with his environment differently. Travelling from a small suburb town of Paris called Le Pecq sur Seine to Versailles' castle will provide a good illustration.

On the map the traveller holds[77], she will know to go across the George Pompidou Bridge where she will notice the figures guarding its end *(Fig. 77)*. At this point, she will also notice the signs indicating the direction to Versailles.

On the way, the map reader will look out for the outskirts of another castle located in Marly Le Roi. The road leading to Versailles runs alongside this castle and its park.

By just looking out of the window and seeing the Horses' Watering Pond, he will know she is on the right track *(Fig. 79)*. Continuing down the road, she will also notice the entrance to the castle's own museum.

From then on, the road is a straight line to the entrance of the Versailles town. The map reader will then look out for the signs to the castle and its car park *(Figs. 81 and 82)*.

Thus, the tourist would interact with his environment by just looking around for landmarks which are not necessarily his destination. One can see an

Fig. 77

Fig. 78

Fig. 79

Fig. 80

Fig. 81

77   Appendix A.

interaction between the tourist and his environment happening with the help of the map. By using this method, bit by bit, the tourist will find he is getting to know these different landmarks and will learn his way around the area without the use of the map. He will also learn the habit to look out for important landmarks when visiting other unknown places.
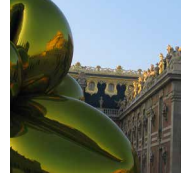

Fig. 82

On the other hand, Will Pavia of *The Times* stated,

> Motorists following Google Maps through Wiltshire may be told to "exit on to the A303 toward Andover", but they may have no idea that they are passing Stonehenge.[78]

Thus, the satellite navigation user does not get the chance to learn his surroundings. This aspect is further enhanced by the fact that the user can pro-gramme in destinations into his Sat Nav. Thus he will never feel the need to take out a map. He will only take in what is in front, and will rarely look sideways at what he is actually driving through. This creates a loss of context to the visitor; a gap is formed in his knowledge of the world between the points where he started to his destination.

Indeed, when driving around being guided by the voice and the flat interface of the screen, the user will only have the reflex to make sure he is driving safely and according to the law. Furthermore, the interface on the Sat Nav has to stay simple so as to facilitate rapid comprehension. This means the de-signers of the maps displayed would have left out important landmarks such as buildings. He will have

78   PAVIA Will, 'Heritage wiped off the map as sat-nav puts motorists on road to ignorance', *The Times*, 29th of August, 2008, [on line], http://goo.gl/uMgSVs

less incentive to look out for landmarks which could guide him to his destination *(Fig. 83)*.

Thus one can see less of an interaction between environment and user due to the screen. As pointed out by Mary Spence, president of the Royal Geographical Society, during their annual conference, on Sat Nav mapping,

> I think there is a danger children are losing skills because adults are being exposed to mapping that is a second rate product.[79]

She further pointed out that those adults who do rely a lot on the technology are seen to be losing their map reading skills. They are thus starting to lose a few habits and instincts which would allow them to avoid getting lost in an unknown place. They are now looking at the world around them a different way to when only maps and spoken directions were available. The globe has become a potential of journeys all involving direct lines between the point A and the point B, with minimum exploration in between.

79   GRAY Louise, 'Map reading skills 'dying out due to internet and satnavs'', *The Telegraph*, 29th of August, 2008, [on line], http://goo.gl/V22Qpj

Figure 72. The Tomtom Sat Nav with sucker to stick on the window screen

Figure 73. Sat Nav being used

Figure 74. Trying to read a map while driving can be difficult.

Figure 75. The map in 2D display (Photo: author)

Figure 76. The map in 3D display (Photo: author)

Figure 77. Renée Letourneur, L'Oise, 1955 – 1971 (marble), George Pompidou bridge, Le Pecq sur Seine, France (Photo: author)

Figure 78. A road sign to Versailles, Le Pecq sur Seine, France (Photo: author)

Figure 79. The Horses' Watering Pond of the Marly le Roi castle, Marly le Roi, France (Photo: author)

Figure 80. Signs to the castle and its car park, Versailles, France (Photo: author)

Figure 81. The castle's car park is full, time to find a spot in the street, Versailles, France (Photo: author)

Figure 82. The castle's entrance, marked by a statue by Jeff Koons, Versailles, France (Photo: author)

Conclusion

The search for a transformation in Man's vision of his interactions has been possible through the study of the many different aspects of the screen. Its evolution has caused many changes in the way humans see themselves as well as their environment. This development is mostly due to the fact that the screen itself has evolved since Man became conscious that he could affect the world around him. Today, it has become an entity which connects, controls and is controlled by humans.

They now rely on the screen a lot more than any other object to create representations of their environment. This has had an impact on many aspects of their life such as communication, entertainment and their habits. Man no longer sees himself and others through his eyes; he is more likely to do so through a screen which is reorganising the information for him. His connections to the world are no longer restrained by natural boundaries such as space and time; he can now access anything by the click of a button. Through screens, he has become a powerful being, able to sense without his own body, perhaps marking the start of yet another construction of a Babylon tower. One may wonder whether Man will be able to complete it this time.

Being a very broad and complex subject, the human interaction with the screen will always fascinate researchers, especially in this day and age when they are developing at an extensive speed. Thus this dissertation concisely touches the most important points that mark out the changes happening in society. Much more could be said for each part, all culminating in a potentially huge book.

However, the information discussed was enough to bring to light a very new aspect of today's society: the increasing importance of human senses to themselves. Even though they seem to rely less on their own body functions, sensory interaction has become and will continue to increase in importance for them. All that they search for through screens seems to be increased sensorial moments. Each event has to be fast and easy to stimulate their eyes, ears, nose, mouth and skin. These will then provoke the fast creation of emotions, moving their own actions along at the same pace. Humans seem to be content to live in this fast moving world, and even expect it to become faster, as they get more free time to explore spare-time activities and enjoy each other's companies.

Indeed, the technology is moving so fast today that is becoming harder to keep up long enough to analyse the change it is provoking on society. It is even harder after wards to look back on those alterations as they are so close to present time they could still be considered new even if they have become obsolete. This rapid metamorphosis may slow down quite soon in the view of today's current economic situation. With potentially less people buying appliances with screens on them, one may wonder whether humans will change again to accommodate the situation or carry on whilst pining for the screens they are missing.

Annexes
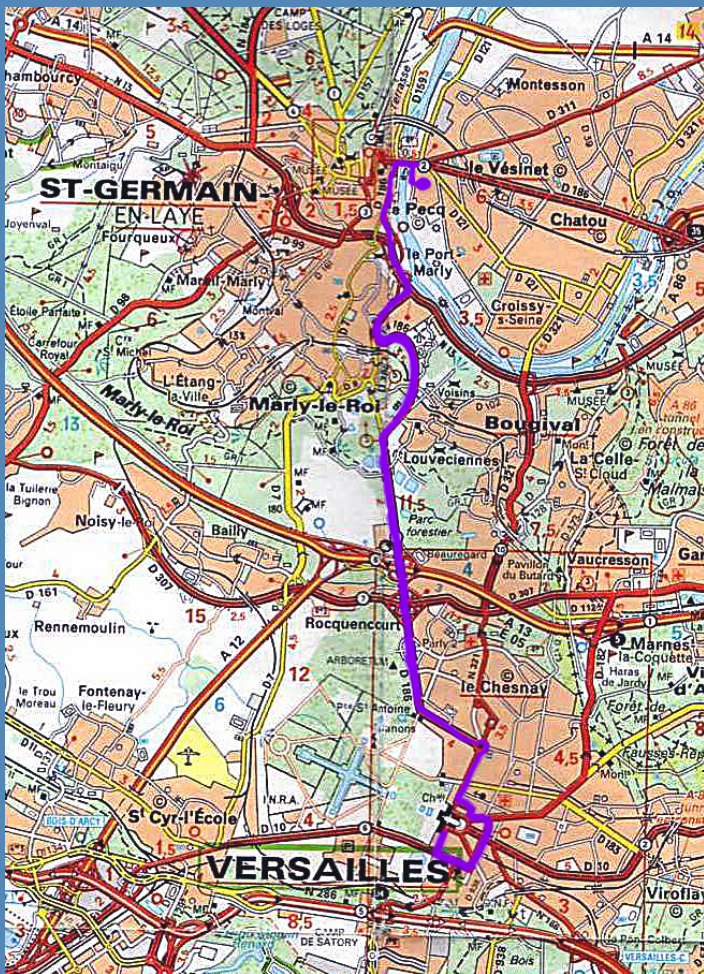
Appendix A. Michelin Map, Environs
de Paris, 2004

Table 4.19   Consumer durables, central heating and cars: 1972 to 2002

	1972		1975		1981		2000		2001		2002	
Percentage of households with television												
Colour	93		96		74	97	98	99	99	98	99	99
Black and white only					23		1		0		0	
Satellite/cable/digital							40		42		44	
Satellite*											26	
Cable*											14	
Digital*											28	

Appendix B. Extract from National Statistics table 'Consumer Durables, Central Heating and Cars: 1972 to 2002', published on 20th of April 2004

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