

GD

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INTERA

A Gateway to reality.



**GD**  
**+**  
**INTERACTIVITY**

A Gateway to reality.

*Huge thanks to Sarah and Mark for all the inspirational and philosophical chats we've had and their guidance throughout this journey; to Ness and Akash for their speed of light proof-reading and to all those who have taken time to have a glance at this dissertation.*

*à maman, papa et la petite Ash;  
un grand merci pour m'avoir  
accorder votre soutiens dans tous  
ce que j'ai entrepris dans ma vie  
et de m'avoir guider en chemin  
pour faire de moi la personne que  
je suis aujourd'hui.*

**‘How will you go about finding that thing the nature of which is totally unknown to you?’**

**- Plato**

**ANTICIPATE THE  
UNEXPECTED**

**EEE**

To calculate the unforeseen can somehow seem extremely paradoxical but our mind does just that. Our every actions and reactions are precalculated in our brains, so as our perception of the world around us. Throughout this dissertation you will be prompted with various experiences, lose yourself to them in the same way you would do to the world. Become immersed in what is present, notice the occurrence of those objects that indicates the probable presence of something else. Interact with them and discover your own perceptual experience of those things, the nature of which is totally unknown to you.

— MEETS INTERACTIVITY

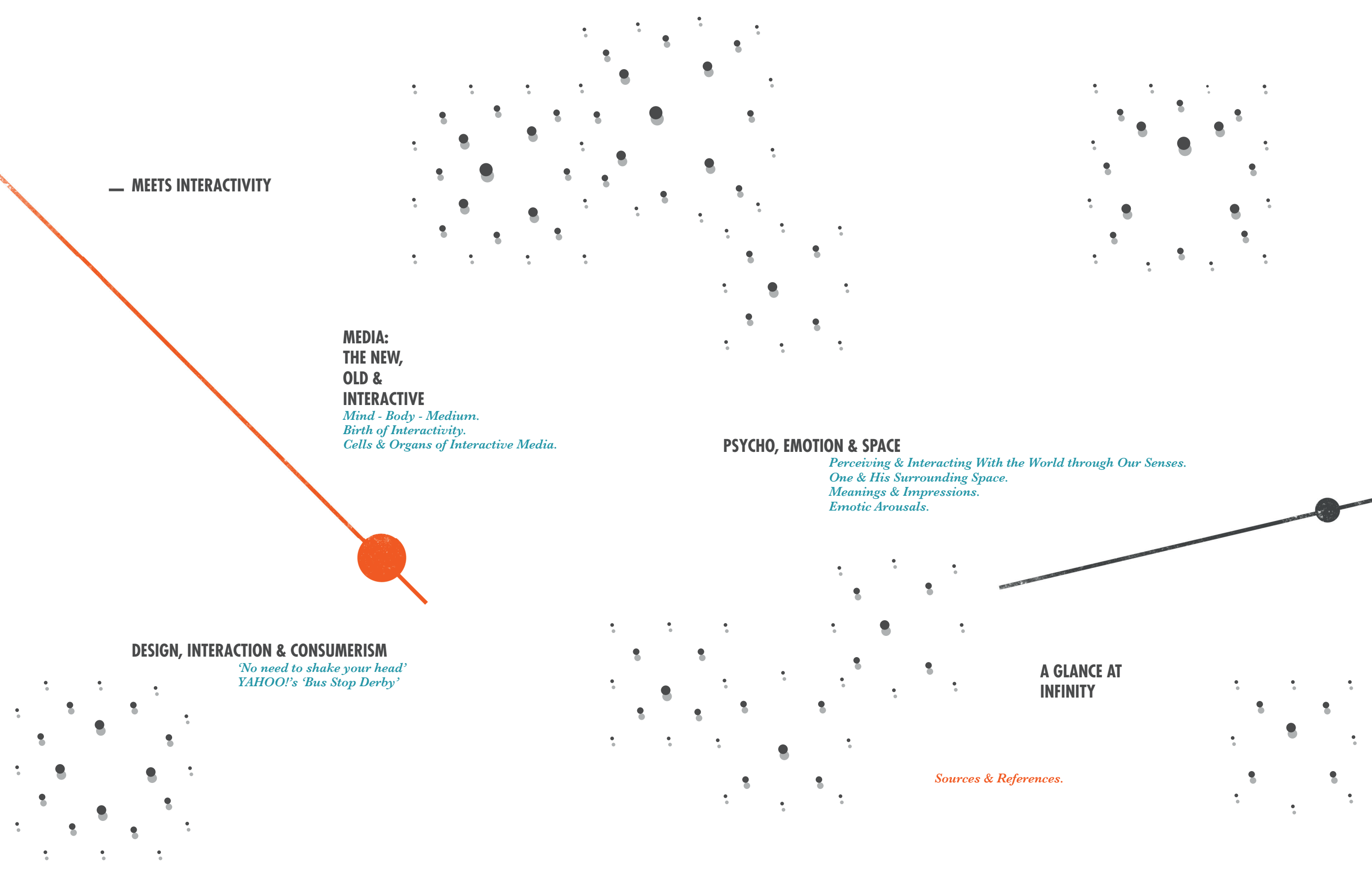
**MEDIA:  
THE NEW,  
OLD &  
INTERACTIVE**  
*Mind - Body - Medium.  
Birth of Interactivity.  
Cells & Organs of Interactive Media.*

**PSYCHO, EMOTION & SPACE**  
*Perceiving & Interacting With the World through Our Senses.  
One & His Surrounding Space.  
Meanings & Impressions.  
Emotic Arousals.*

**DESIGN, INTERACTION & CONSUMERISM**  
*'No need to shake your head'  
YAHOO!'s 'Bus Stop Derby'*

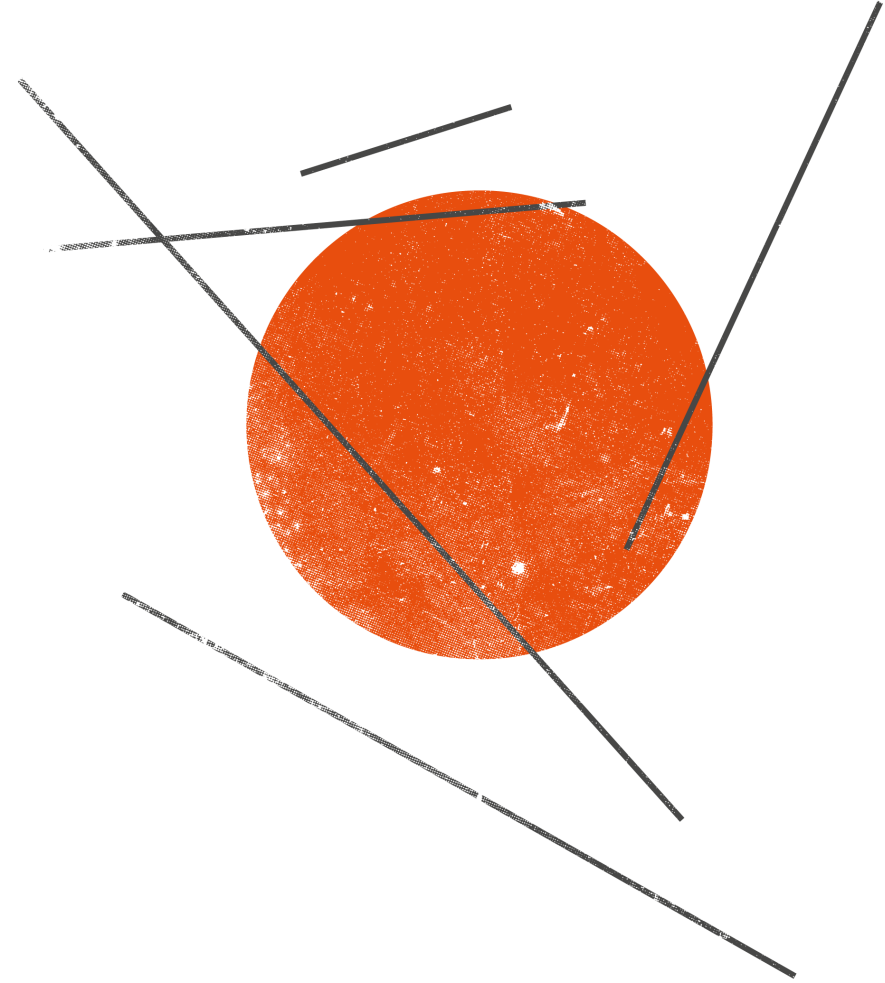
**A GLANCE AT  
INFINITY**

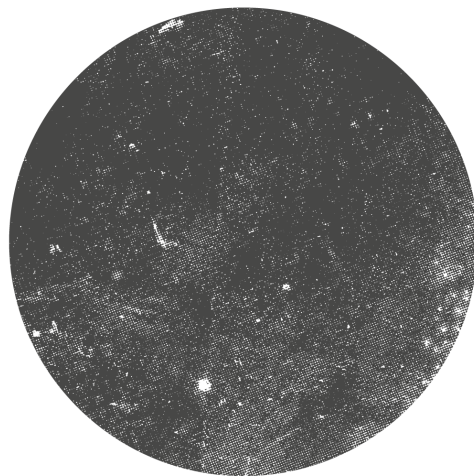
*Sources & References.*





— MEETS INTERACTIVITY





*ht touch of modesty*

*Looking back at a few months before writing this dissertation; an elapsed period time over which I thought of my understanding for design to be exiguously better than average “*

*” I now feel like I have never really been thoughtful of the journey that this discipline has travelled over the years and how far it extends itself and its implications on our modern-day society. I had enclosed myself in a small cocoon and was always looking at what is an extremely complex realm of design from the same angles days in days out, without realising that I was slowly building a barrier that was obscuring the real potential of what has been an ever evolving practice since the creation of the first tool by the Homo sapiens.*

*with a slig*

*Anyone living in a busy city is familiar to that robotic state of mind, to which we switch to on the journey back home during rush-hour, after a long tiresome day of hard-work. I was fighting my way empty-minded through hundreds of people crowded in a busy underground network, trying to board a train that could imaginatively be described as an overcrowded arena, with three robots fighting for each 50 cm<sup>2</sup> spot and a small amount of fresh air. The train departed and the platform was now less busy while I found myself right behind the yellow line facing a 38 sheet billboard poster with very little on it. Instinctively, due to what I think would be my (astute) graphic design reflexes, I looked at the poster which read “*

*” It took at least a good second or two before my neurones woke up from a brain dead state and for me to realise that there on the other edge of the poster, was another column of words. It clicked, and I started reading this immense 6 meters wide poster from left to right which now made more sense, reading “A Golf is up to 10% cheaper to run over 3 years than the competition. It’s true, no need to shake your head.” And there we were, that instant where VW (Volkswagen) made me look like a stupid little monkey shaking his head from left to right for at least 20 times in front of dozens of commuters who gathered behind me. But hey; I didn’t care for a second. I was standing there with a smile on my face, thinking to myself how that campaign was so cleverly executed while my train approached the platform.*

*A is up to  
cheaper  
run 3 than  
competition...*

**A  
is up to  
cheaper  
run  
3  
than  
competition.  
true,  
need  
shake  
head.**

**Golf  
10%  
to  
over  
years  
the  
It's  
no  
to  
your**

**Unbelievable value.**



**Das Auto.**



*Fig 1.*



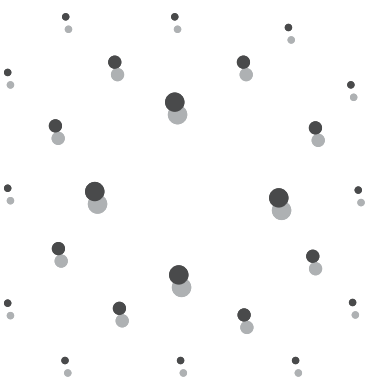
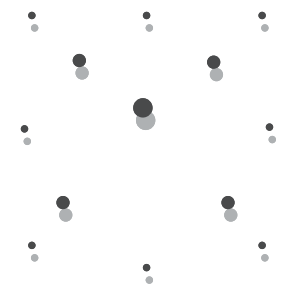
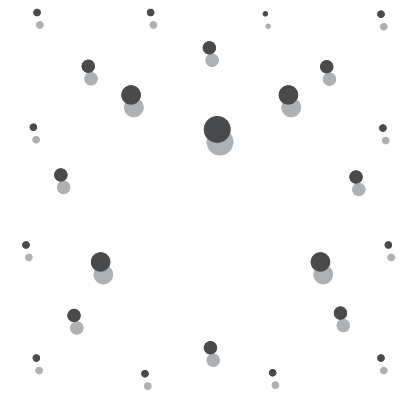
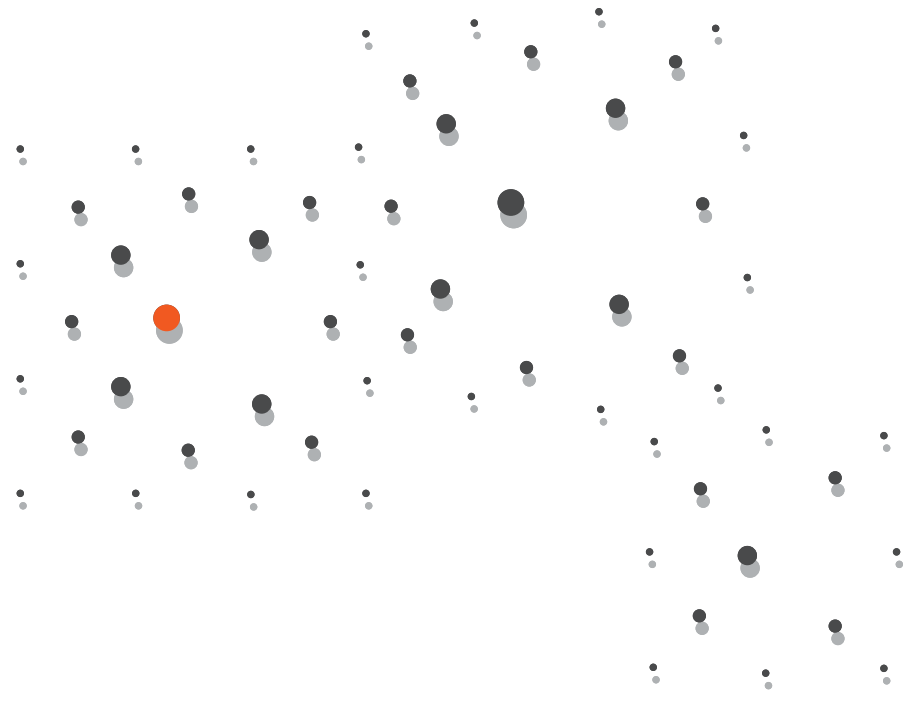
*I snapped out of that robotic state of mind and felt an urge of adrenaline revitalising my body. For the rest of the journey I was there, awake, paying attention to every-single visual experiences surrounding me. This was the impact that Volkswagen has had on me, it created a bond through design in its simplest form that resolves to interaction, a participation, which lead to an experience embedded in one's mind and furthermore, made way for me to write my dissertation.*

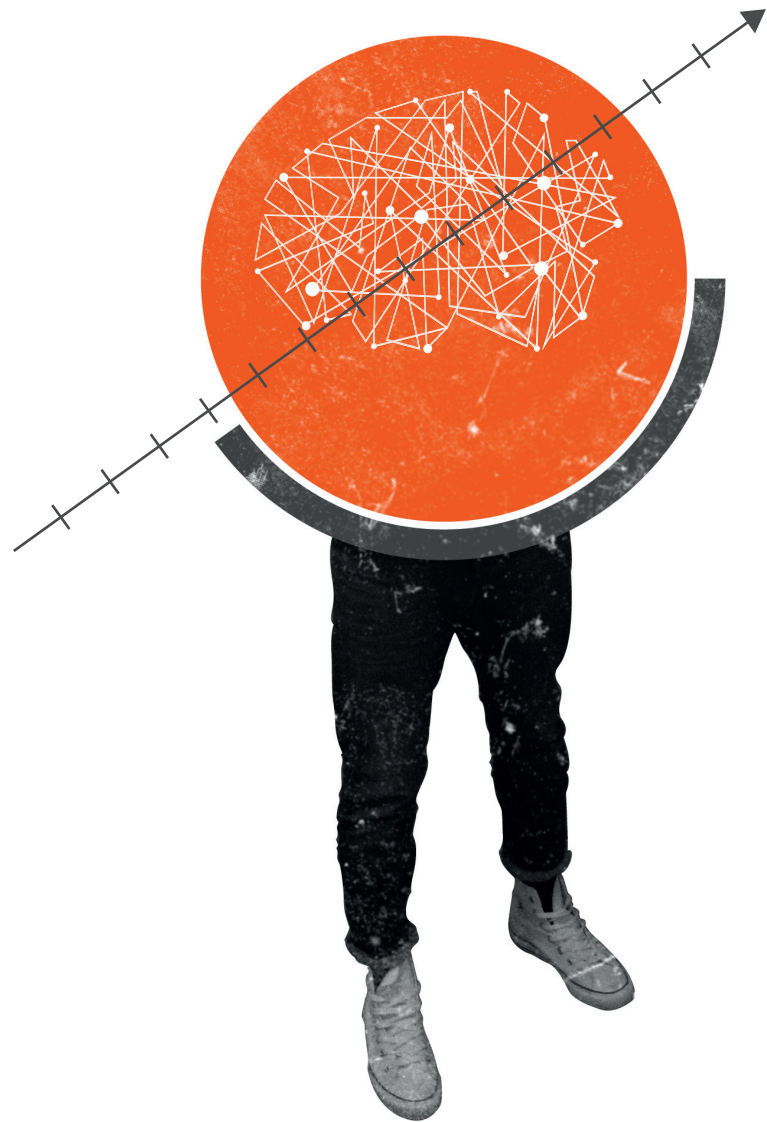
*In what has been described numerous times by the communication theorist Marshall McLuhan as the global village, a world that is now saturated by visual information and messages, with revolutionary technologies passing information at the speed of light, if not quicker; how do you stand out, shine and catch the attention of the consumer? That, is the point in time where there is an evolution. Design meets interactivity.*

*Interactive media, a relatively new but dense source of media, if not a movement in itself, extends design to a completely new dimension opening doors to an infinite world of experiences. Events and occurrences that makes connections, creates bonds, leaves an impression on any human being who have encountered them in a way or the other. Through this dissertation, I would try explore the links between design and interaction to create a better understanding of this emerging new medium and try to determine how interactivity can help the creative industry provide better solutions via experiences. This journey should take us through a vast pool of disciplines from understanding human behaviours and emotions to the virtual, non-existent realities.*

“ Determine how interactivity can help the creative

industry provide better solutions via experiences.”





## MEDIA: THE NEW, OLD & INTERACTIVE

*Mind - Body - Medium.  
Birth of Interactivity.  
Cells & Organs of interactive Media.*

Interactive media, although seeming rather new, has been present throughout history, evolving exponentially with the development of existing and new technologies, and has been spreading rapidly throughout the world with art and design having taken the latter under their wings. For most of us humans, metaphorically described as 'fish' that are unaware of the mediating water that surrounds us (McLuhan, 1994), a good starting point, would be to question our understanding of the word medium itself, before diving into the complex world of interactivity. Through this chapter, we will discuss the roots of interactive media, understand the nature of this new type of medium, its evolution along the years and focus on its primary characteristics.

## M nd - Body - Med um.



A systematic solution that has always been beneficial over the years would be to start at the source of the subject matter. So, let us go back to the word medium's most fundamental root; its intrinsic meanings. In the sphere of graphic design, in which I found myself surrounded most of the time, the use of this term immediately implies the obvious such as printed posters, digital screens and the occasional installations.

Why not look at it from a different angle? Resorting to a little exercise should ease this. Grab yourself a pen and something to write on, unless you consider yourself to be one of those brainiacs, able to retain multiple terms locked up in different cells of your brain. Keeping our eyes closed for a few moments, and concentrating on the word medium, drop down as many terms as possible that relates to the matter. By doing so, we immediately come across words like channel, means, vehicle, convey, pass-on, intermediary and a host of others; pushing our understanding of it to be a way to

is an extension of the mind

to communicate, a conduit. We have now established that a medium allows us to communicate with someone or something else. It is a means we utilise to express ourselves. A way to convey information and pass on our thoughts and ideas to others. A means to interact with our surroundings.

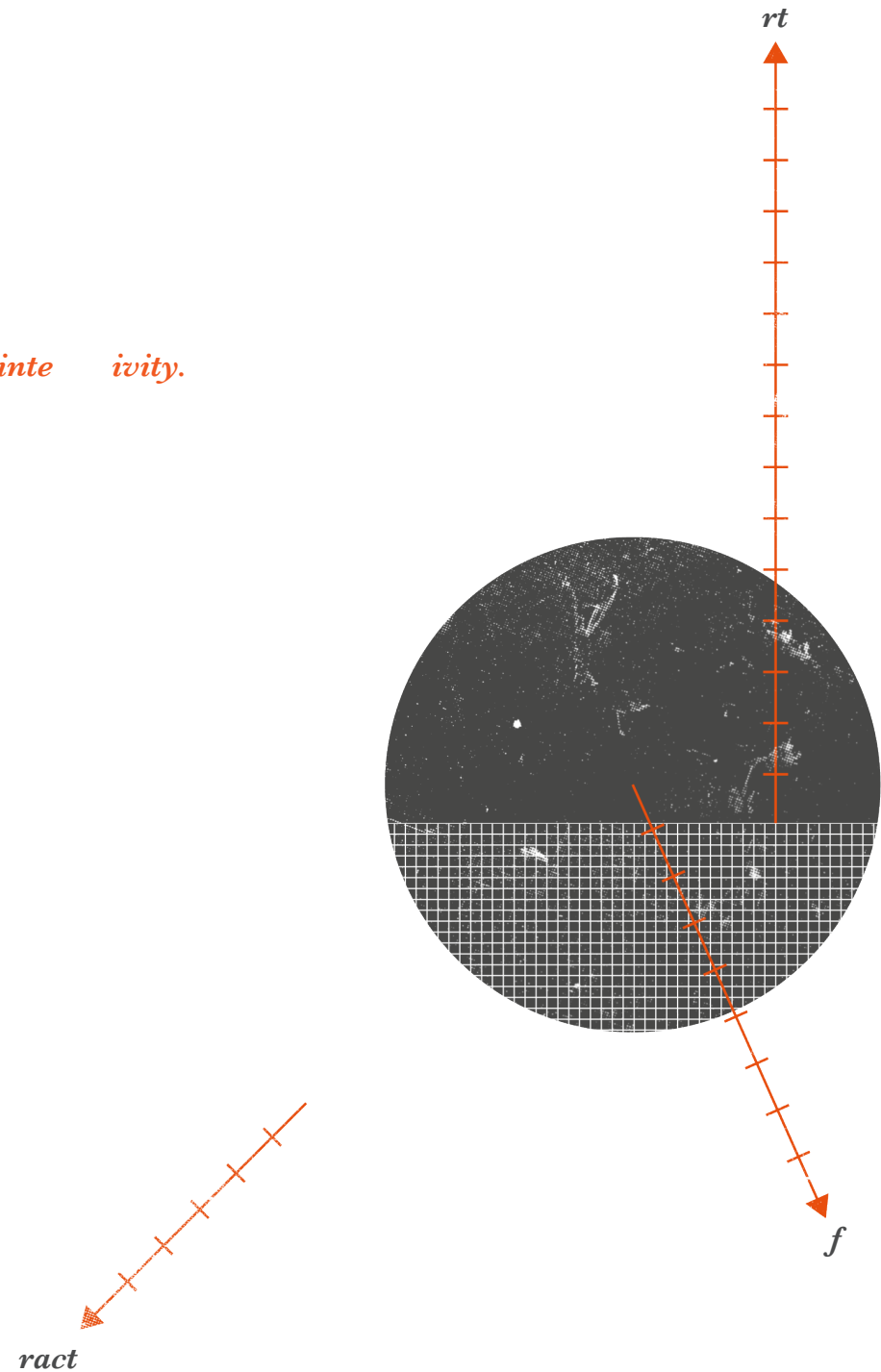
This would imply that to achieve its primary function, a medium should have some physical entity in itself such as a mere, volatile spoken word; the medium of speech. Therefore, stressing the importance of our physical form as without such a thing as our physical body, there would exist no medium even though we possess thoughts and minds as big as the universe. This brings us to the inevitable thesis of McLuhan (1967) who stated that any medium is an extension of man, as the wheel, an extension of the foot and clothes, an extension of the skin. I myself, consider this statement to be rather vague. 'A medium is an extension of the man', as we have analysed above, a medium in its own self would be futile and in-existent without some sort of physical interaction, requiring the intervention of a human body in the first place whether it was thousands of years ago or even now, where automated systems do still need some sort of physical interaction at the source. This brings us to yet another important factor of this system, the mind. The mind, intellect, thoughts or brainpower; which ever way you want to refer to it as, is in essence the source of this system. It is what initially gave birth to medium, sending information as electric impulses to our nervous system which in-turn allows our physical form to interact via a medium and vice-versa.

MIND  $\rightleftharpoons$  BODY  $\rightleftharpoons$  MEDIUM

Accordingly, a more precise statement in this vicious circle should be "a medium", as if there was no mind, no brain activity as such, let us take for example a comatose person, there would be no such thing as an interaction or communication method.

It can be argued that if we take time and look around us in present times, technology and automation systems such as cruise control found in modern cars would imply that the above reasoning is weak but the anti-determinist view of critic Raymond William as referred to by O'neill (2008: 3) only reinforces this logic. He states that 'our environment and behaviour, according to William, is determined not by technology itself but by the intentions of those with the power and money to develop such technology.'; stressing that this determinism thesis returns control to human agency thus bringing us back to the source of the human factor, the mind.

*Bi h o i n t e r a c t i v i t y.*



Having established an understanding of what a medium is in its whole, the second hurdle comes in the form of interactivity. Interaction is present in every corner of the world we live in. It is the most common aspect of design but can often be overlooked. Everything in this ecosystem we found ourselves in, revolves around interactions; whether it is us, humans communicating with a machine or with a mere picture through our eyes; to an ant interacting with its environment, leaving a chemical trail behind in order to relate with others or find its way back to its nest.

Looking closer into this complex system that seems to have no starting or finishing point, it seems fair that we can divide it into two distinct groups. The first being what I call "natural interaction" which can be described as the primary/direct interaction that any physical body engage in by means of its senses. For example watching a scenery around you, which implies you interacting with your surroundings by means of your eyes without having recourse to any fabricated medium as such.

*fabricated interaction*

The second group, "intermedia", is what we would closely look at throughout this dissertation; in other words the essence of this piece of literature. Fabricated interaction occurs on a secondary level, where it involves the use of a man-made medium. A good explanation of this idea would be that of professors Heath and Luff (1996) referred by O'neill (2008: 23) in which they relate to interaction as *with* a medium and *through* a medium. For an in-depth understanding, he explains that interaction *with* involves the manipulation of an interface/medium to perform a task, whereas interacting *through* is the goal achieved by interacting *with*; an example being sending a message to a remote person *with* the help of a computer via Skype.

*intermedia*

Early manifestation of fabricated interaction came in the form of "intermedia" in the early 20th century, a period during which avant-garde artists set out to experiment with bringing different forms of media together, merging images, film clips and sounds into artefacts. Within this period, artists such as John Cage and Allan Kaprow were willing to push the boundaries and experiment with new media forms and explore their endless possibilities. Allan Kaprow's *happenings* in which anyone could take part while abiding to his set of rules was an early form of interaction, putting in focus the relationship between the artist, the viewer and the medium into question.

This will to push forward and explore the unknown, inevitably started a chain reaction in other disciplines during the late 50's in America, resulting in the personal computer. An instrument solely designed around interaction between human and machine (HCI). The application of "fabricated interaction" quickly cascaded out of proportion and is nowadays integrated in every corner of our environment. It has become an aspect of design that we all take for granted at present times, as we have grown up with it and it is now embodied in our culture.

*I recently found myself reading an online article on a technology related website, which in a way demonstrates in a very peculiar but somehow amusing manner of how quickly interactive media has taken over our society. This article, 'GeekDad's daughter re-imagines interactive TV', by David McClelland (2011) describes how the latter was left speechless after her 16 months old daughter, who is old enough to totally get tablet computers, confidently addresses the television, reaches up to the screen and attempts to drag and drop Upsy Daisy onto her bed; a gesture that she would normally perform on the ipad's app. After a few failed attempts, she turns around and cries a complaint as if to say, "*

*" To which he apologetically responded that it doesn't quite work like that. But again, why not? Fifteen years ago, the possibility of manipulating images on a TV screen with one's bare hands would have never had crossed the mind of a little child but yet, 15 years from now or even less, this possibility might be viewed as an antique.*

*why not?*

*Daddy,*



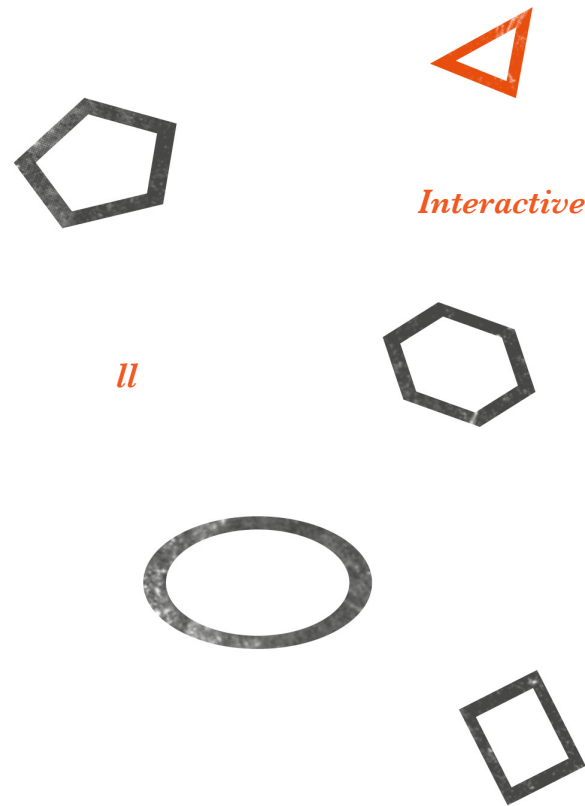
Fig 2.

## Ce s & Organs of Media.

This quick evolution in recent years resulted in the consumerism world having to put themselves hard at work to turn this situation to their advantage, by developing interactions with interactive media in such ways so as to create experiences between the producer and the consumer. This relationship was once considered as two very distinct roles in the "mediatic" realm, before the application of "fabricated interaction", where media such as TV and images were focused at producing messages for the masses as referred to by Marshall McLuhan on numerous occasions. The introduction of interactive media in a way tends to muddle those messages, making the pill sweeter for the consumer. I often view this technique of interaction as containing some quite subliminal characteristics, as they convey the same messages via a very different channel. It puts the consumer at work and requires some effort from them to access those messages, which then result as a reward.

According to O'neill (2008: 23), this interaction with media develops a relationship between the production and interpretation of the medium's sign system. A closer look at the notions of immediacy and hypermedia should clarify, elaborate and create a better understanding around those complex interactive sign systems in their pure forms.

Scholars Bolter and Grusin (1999: 21-30) implies that immediacy occurs when the nature of the medium is hidden from our perceptions but offers a window onto its represented content. Let's consider a simple example of staring at a scenery through a window. One is mostly concerned by the scene without at any point realising the implication of the window as being the medium. This closely relates to Lombard and Ditton's (1997) thesis of 'non-mediation' which many technologies over the years have attempted to create. It is the feeling of being somewhere or doing something without necessarily considering that in reality, it is only a mere projection. A reality that is projected by this medium in question but nothing more, which



we still enjoy as we have been immersed in this mediated virtual environment. A sense of 'telepresence' (Lombard and Ditton, 1997). This practice dates back to the renaissance where interior walls, acting as a window were painted with splendid outdoors scenery to submerge the viewer into thinking he was part of that. More recent technologies that have integrated this practice of telepresence and immediacy would be simulators or game consoles.

*Sit back a minute and think of the last time you have played a simulation game such as Gran Turismo or any others; and if you haven't, please do. When thinking about it now, you picture yourself in that room, holding the console's pad in your hands; but remember that point during which you were totally submerged into the game up to the point where your body movement was synchronised to that of the car. The point where you could feel every bump and the slightest change in direction, the point where your mind was there in that car; which in reality you never were, your mind was projected onto this virtual reality with the help of a particular medium/media.*

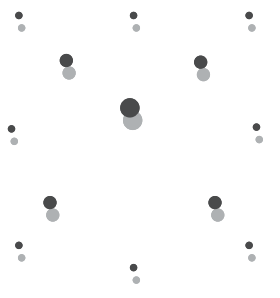
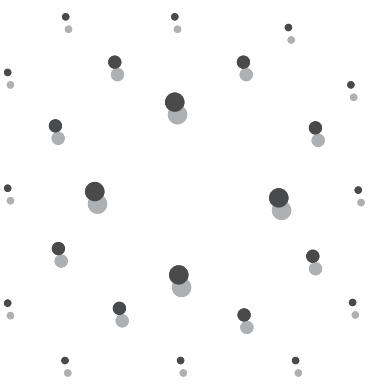
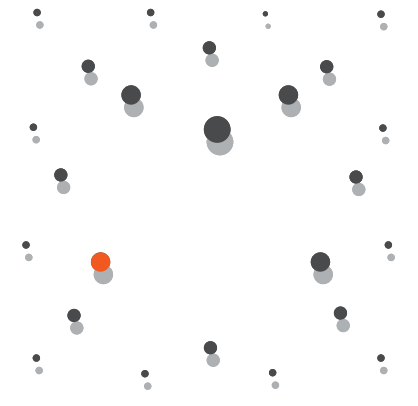
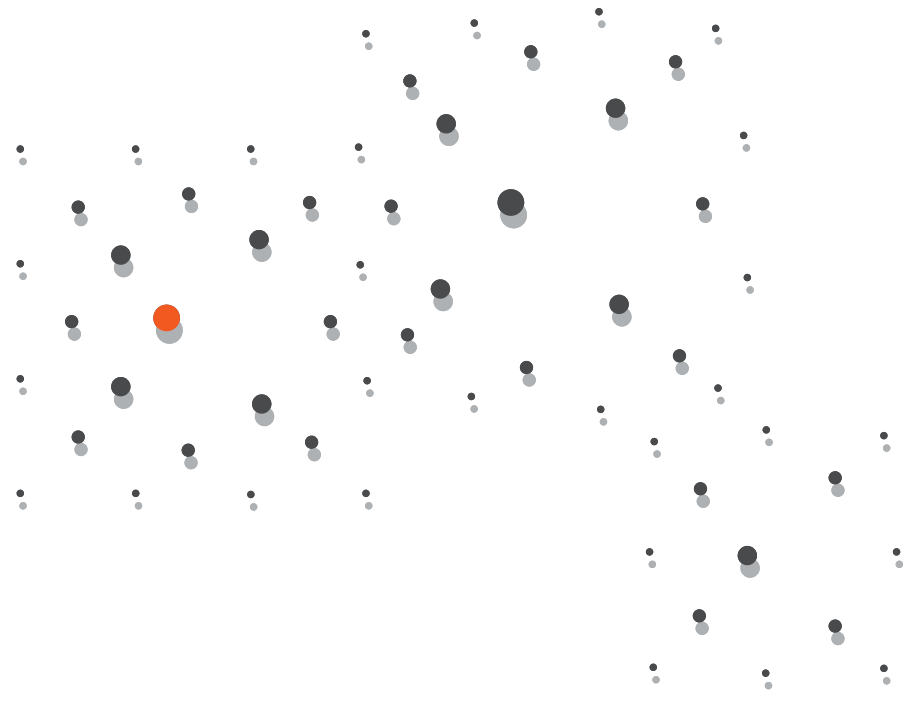
On the other hand, hypermedia can be considered as the total opposite of the immediacy. Hypermedia results in the medium itself bearing the main focus from the viewer/user and its content being secondary. As referred by O'neill (2008: 18), 'They are heterogenous and multifaceted groupings of multiple media elements, where the manipulation of medium itself is the most important factor.'

This relatively new form of media although identified by Bolter and Grusin as being present throughout history as illuminated manuscripts and art collages in which abstraction created a focal point on the medium itself, has in recent years taken an extremely huge leap forward. With art installations combining numerous physical and new media elements in the same spaces constituting of information, signs systems and participatory roles where one can interact and subsume a piece of their own in the artist's work, the notion of hypermedia can be considered to exponentially grown. This growth and successful integration, resulted in new technologies and new media in the like of I pads with (GUI), augmented reality and a host of others all incorporating the notion of hypermedia within them. To sum up, it can be argued that this idea of hypermedia in itself plays a major role in the foundations of the computer system and in that of the Human Computer interaction (HCI). With this in mind, one can go as far as implying that hypermedia is at the heart of the interactive media system, as if any object, as observed by new media professor Manovich (2001:55), is placed within a medium promoting hypermediacy, such as the computer, it immediately renders that object as being interactive in countless ways.

*The previous chapter having touched on the fundamentals of the subject matter, which is interactive media, this has allowed us to create a better understanding of the field. We are now able to conjure a simplistic view of this intricate system, conditioning our brains for a vast and complex array of theories and analyses to follow, in regard to its psychological perspective and implications upon us as living entities.*







*Perceiving & Interacting With the World through Our Senses.  
One & His Surrounding Space.  
Meanings & Impressions.  
Emotic Arousals.*

Interaction in our everyday lives is mostly presented to us in the form of computers, Ipads, smart phones and various other gadgets, in other words technology, which at times simply amazes us. Nevertheless, we often seem to overlook the simple nature of interaction, us in our physical body making contact or existing in the space around us, our environment. This system in its own, has hugely influenced interactive media as a whole, and the technology developed towards it. It has attracted endless amounts of research conducted by pioneers such as psychologists James Jerome Gibson, cognitive science analyst Donald Arthur Norman and French philosopher Maurice Merleau-Ponty amongst others, whose works still serve as basis for the development of any modern experiences involving interaction. In this chapter, we will address those philosophical and psychological characteristics of interaction by focusing on subjects such as cognitive psychology, psychogeography, emotions, experiences and others, to try and create an in-depth comprehension of how we as humans interact with the world around us.



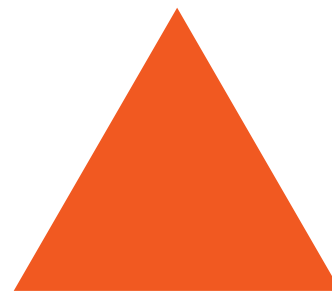
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*The minute we were born, the minute our skin was exposed to the atmosphere, firmly seized in those huge hands covered in latex, the minute we opened our eyes onto this world, we immediately started creating a perception of it. What is it that we call perception? Why is it so important? Well, those two questions are the answers to the roots of the cognitive psychological approach to any interactive medium.*

*sed to the atmosphere, firmly seized in those huge hands covered in latex, the minute we opened our eyes onto this world, we immediately started creating a perception of it. What is it that we call perception? Why is it so important? Well, those two questions are the answers to the roots of the cognitive psychological approach to any interactive medium.*

*te act*  
**& In r ing With**  
**the World through**  
**Our S ns s**

e e .



This leads us to think that perception is a system of meanings resulting from our bodily experience and our minds, by which an object is recognised in the field in which it belongs, in its environment. Having acquired a knowledge of how we perceive interactions, this projects us to the third element of this

Perception, is what can be simply seen as how our senses detect features of our surroundings, which are then relayed to our brain and processed to allow us to create an image of an object and think about it. An elementary example of such would be through our sight, where data, in this case light that is captured by our retina, passed along to our brain through our nerves where this information is processed into a compressed and complex form allowing our mind to draw a picture of that perceived object. Those perceptual experiences for example smell of smoke and seeing smoke, raises our awareness of an external happening which exists beyond our minds. However, as explained by O'neill (2008: 29), those perceptual experiences can sometimes be misleading and inaccurate e.g., when a stick looks bent when it is partially submerged in water or when we have consumed some hallucinogenic substances such as drugs. O'neill (2008: 29) goes on to state that 'these experiences force us to question whether the immediate objects of our perceptions are actually outside or inside our minds.' What this implies is that our perception of the world is what our mind makes of it, a "representation of this world, thus accounting to philosopher Decartes' cogito 'I think, therefore I am'. This representation is a result of the cognitive ability of our mind to process raw data fed in by our five senses; in a similar way that a computer chip will crunch data which has been inputted via typing and give an output after having processed it. This, therefore puts the human mind at the centre of the perceptual phenomenology but one must not disregard other factors present in the equation.

representation

Merleau-Ponty, in his analysis of 'The Phenomenology of Perception' (1945) elaborates on those different factors within the theory of perceptual contact with the world. For him, the thing that connects our mind, referred as consciousness, to the world is our physical body. He argues that without our physical body present in the world, the mind will have no existence. In his investigation of phenomenology he puts the body as an equal to our consciousness, assigning meaning to the world. He states that the body gives us the initial perception of the world, of something new (Dreyfus 1998, 2004). Our physical body allows us to interact with the world around us without recalling to knowledge that we may or may not have stored in our brains. Merleau-Ponty relates to the body as being an expressive space, which is at the origin of expressive movements and a medium for perceiving the world. Our bodily experience allows us to perceive the world in a different manner to that of our consciousness. An analysis that contradicts Descartes' cogito. Merleau-Ponty goes further as to imply that psychological and physiological aspects of perception can sometimes overlap and influence each other such as our body image (Scott 2002), the image that we make of ourselves e.g., a woman applying make-up, generating an image of what looks good in her mind after physical alterations.

system of meanings resulting from our bodily experience and our minds, by which an object is recognised in the field in which it belongs, in its environment. Having acquired a knowledge of how we perceive interactions, this projects us to the third element of this

*One & His Surrounding*

*S*

Professor Scott (2002) in his study of Merlau-Ponty's  
P h e n o m e n o l o g y o f P e r c e p t i o n

describes space as a form of external experience in which external objects are arranged. He implies that the relationship between objects and space is a direct result of the experience of the perceiving subject. The subject, present in that space can in turn create his own relationship with those external objects, hence resulting in initial signs of interaction within that space. Physiologist Gibson's 'Theory of Ecological Perception' (1979: 8) considers this relationship between living entities and their environment they found themselves in. He for example refers to how animals can sense what is going on in their environments, which are the physical properties of nature. He implies that this is due to the animals being physically part of that environment, and have evolved in sensing physical properties of that world, such as vibrations, sounds and light variations.

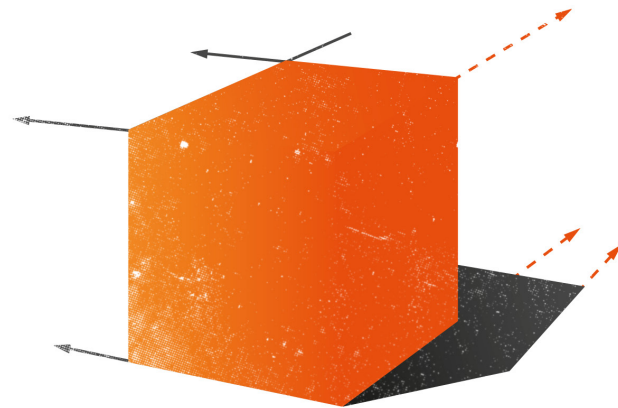
*p*

*a*

*c*

*Ever thought of how a bat interacts with its surroundings? Being a nocturnal specimen, they have adapted their senses to amplify sound waves and decipher those, in the dark so as to be able to interact with the spaces around them and hunt. A process that is scientifically referred to as echolocation.*

*e*



The way that any living object interacts with the space around them, plays a major role in the interactive system. This fact brings in focus the importance of the world, the space in which interaction occurs. A dimension that allows us to be present. Space supports our presence in this world. Without space, there would be no such thing as a physical presence. O'Neill (2008: 34) studies the views of German philosopher Heidegger on his theory of 'Being-in-the-world'. O'Neill points out that Heidegger makes explicit the 'aspect of our being-in-the-world is that we are concerned about ourselves being-in-the-world'. This awareness, one can describe as being the result of our perceptual experience of the space that surrounds us.

This leads us to the theory of " " by theorist Guy Ernest Debord. A theory which Debord (1955) suggested as ' the study of precise laws and specific effects of the geographical environment, wether consciously organised or not, on the emotions and behaviour of individuals.' A notion that one can associate along side his theories of 'détournement' , diversion, (Kaufmann: 3), with works of installation artists, trying to develop an in-depth understanding of how humans interact with the space around them in different situations and in relation to their perception of to the objects within that space and manipulate this relationship.

P s y c h o g e o g r a p h y

‘ the study of precise laws and specific effects of the geographical environment, wether consciously organised or not, on the emotions and behaviour of individuals.’

- Guy Ernest Debord (1955)

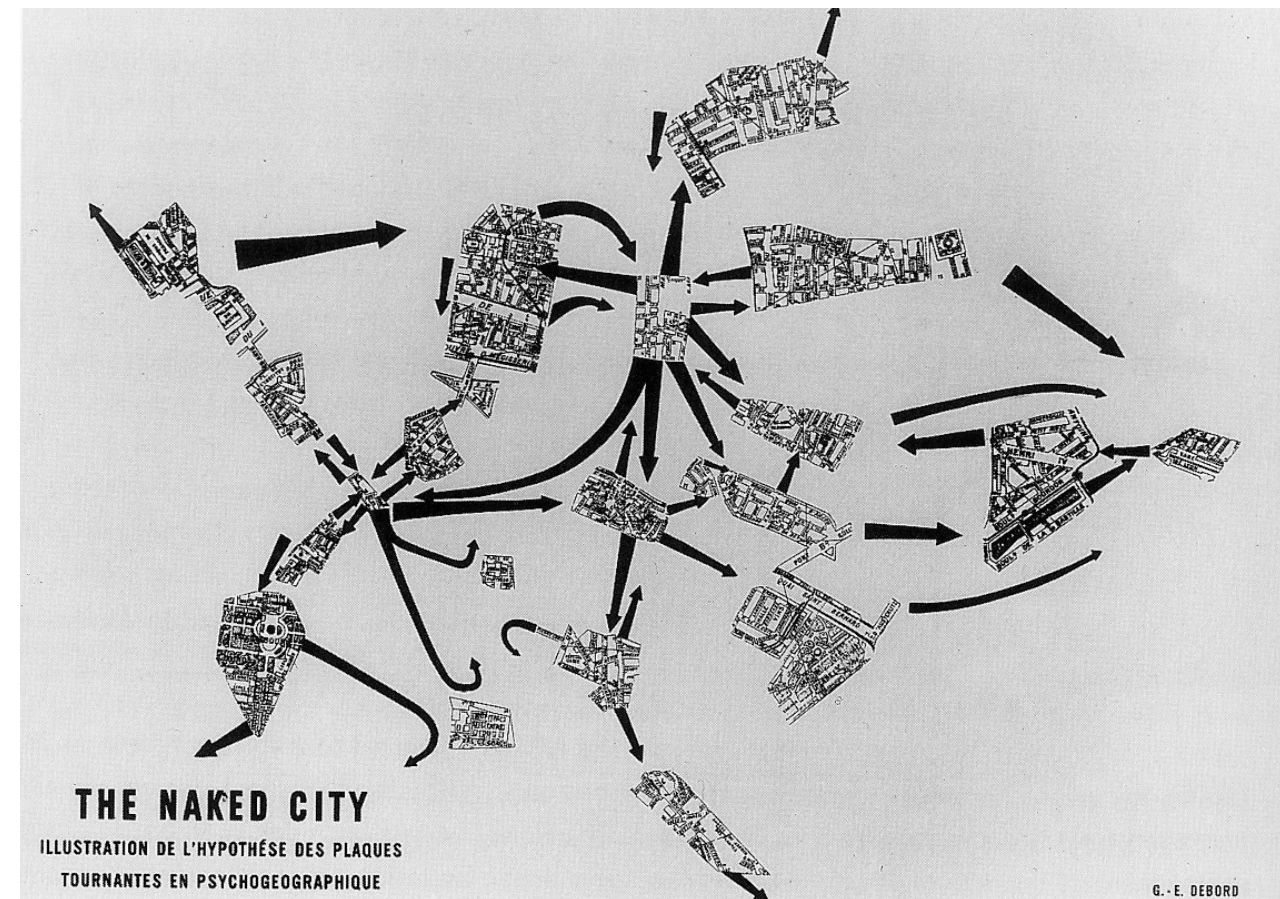


Fig 3.

Furthermore, it is necessary to allow some thought towards being in a space together with other living entities as this opens a total new world to that of static objects. This brings another aspect of Heidegger's concept of Being into play, " " (O'Neil, 2008: 34). He implies that even though other beings may or may not have a concern of being present in the same space as us, we on the other side definitely hold a concern of their presence and it eventually affects how we exist in that space.

b e i n g - w i t h - o t h e r - b e i n g

*Let us conduct a little experiment.  
so as to cheer you up a little and  
get all excited now though,  
is best suited for you. It is a simple form  
by one of my tutors, Dr Mark  
famous Newton's Law of Motion  
So,  
The latter should automatically swerves around you.  
different ways and observe their  
another being gets close to you,  
and attempt obstructing  
dangerous at times, so chose your victims  
and another change of direction or sometimes  
is that you as a being, has affected  
you were not present it would have been  
our interaction with  
relationship to it (O'neill, 2008: 35).*

*I will put it forward in the form of a little game  
make it more interesting. No need to hasten up and  
as you can conduct it when you are on the move or when  
of interaction that was brought to my eyes  
Ingham. An observation which I like to relate to the  
which states that to every action there is a reaction.  
position yourself on the path of a person walking towards you. Note his reaction.  
You could try that in a few  
reactions, for example stand still and as soon as  
step in their way, and then follow their movement  
them again when they react. This though could prove a little  
well. You should notice another reaction  
attitude. What you have done there  
how another being exists in a space, whereas if  
a different story. In short, one can relate  
the world as being closely entwined with our phenomenological*

affordance

The above phenomenology of perception and space can be defined as the initial stage of interaction, which leads onto " ", a theory initially derived by Gibson, which in essence draws itself from the meanings resulting from any perceptual experience.

## *Meanings & Impressions*

e e

In the field of interaction, the relation between the viewer and the object he is presented with, is considered to be one of the most crucial factors within this complex system. Interaction rarely occurs if a being is not subjected to the presence of an external object or environment; which makes it indispensable to understand the relationship between those two. What are the meanings that emanate from them, how they react to each other, and the impressions they leave on each other.

To acquire an advanced knowledge of this relationship nowadays, one would have to research on semiotics. Research and acquire some of the knowledge of theorists and philosophers such as Roland Barthes (see Mythologies) on signifiers and their signified, signs and symbols and many others. But while dealing with interacting systems, we must first start by understanding how those meanings in the semiotic system are drawn and the root of those meanings. Interactions in themselves, whether they occur in the mind or physically, as discussed above, allows the viewer to assign them meanings. The theory of affordance, closely studies this relationship between the viewer and an external object. O'Neill (2008: 50), while describing Gibson's initial theory of affordance, states that those associations 'are a direct result of the relationship between the objective physical properties of the environment and the subjective experience of the perceiving actor within that environment'. For Gibson, affordances had no resort to cognitive modelling of any thinking process. His initial view of affordances was a direct result of the physical properties of the environment and that of the perceptual experience of the viewer. An appropriate example of such is how newborn babies respond to grimaces hours after birth, even though there is no relevant thinking processes.

*standing behind the yellow line*

*Ah! yes, the yellow lines, what about them? Our perceptual experience or representation of that yellow line is imprinted so deep in our brain, in our conscience that we automatically, without any forced thoughts, adhere to its meaning. We afford the yellow line as a boundary, a meaning that we draw subconsciously from our perceptual representation of it in our mind, from an earlier encounter and interact accordingly with it by*”

However, cognitive analyst Norman, an ex-student of Gibson, seemed to have discovered some flaws in his former mentor's theory. His idea of affordance clashes with that of Gibson in quite a conflictive manner. Norman states that he 'believes affordances result from the mental interpretation of things, based on our past knowledge and experience applied to our perception' (1988: 219). By implying so, Norman leaves out the physical properties of our environment and concentrates more on the cognitive side of affordances. It is true that in an environment like ours, we keep bumping into similar objects millions and millions of times over and that eventually we get accustomed to what those objects afford, meaning our perception of that particular object. Let's take for example a phenomenon that we experience in our everyday lives but to which we normally don't pay much attention or at least we don't seem to do so. The yellow lines on train platforms.

On meeting with such an external object, we do draw back to memories of it present as representations in our mind. We eventually reflect on those experiences we have had in the past with that object and have a better understanding of what it affords. These knowledges and experiences allow us to manipulate or interact with those external objects or spaces more easily, which in essence does compliment the theory of Norman. On the other hand, one can argue that in the field of interaction, the objective and physical properties of the world is as important as our subjective representation of it. Lets consider for example contemporary art; with artists working towards creating new experiences out of objects in our everyday lives through interaction, the role of the viewer no longer just involves passive interpretation, but also the manipulation of those objects and being in contact with their physical form wether it is by direct contact with that object of walking through a space around the object in question. This objective perceptual experience then, I believe overrides the existing subjective experience stored in our minds and allows us to discover the reasons behind this art piece and associate new meanings to it.

*Let us consider the following installation. A project by Studio Roosegaarde which was exhibited at the V&A London, consisting of a wall composed of hundreds of ventilators. The installation only comes to life when the viewer interacts with it physically. Walking around it, touching its surface etc.*

*By Normans theory of affordance, one would have associated this piece of installation with wind, cold air and other such representations that exists within our mind due to the presence of ventilators. But in essence, this piece has a totally different message and meaning behind it. The installation is based around the concept of “Flow”, it detects movements in front of it and on its surface and creates a reaction that flows along with the viewers movements, thus providing a whole new experience to what ventilators are normally associated with.*

*Flow*



*Fig 4.*

Creating an understanding of how we perceive the world and assign meaning to external objects sharpens our understanding of the interactive system. It allows us to devise how to go along with creating an interactive experience between living beings and objects through the understanding of what our physical abilities allow us to perceive and what that of the external objects affords.

perceive the world and assign meaning to external objects sharpens our understanding of the interactive system. creating an interactive experience between living beings and objects through the understanding of what our physical abilities allow us to perceive and what that of the external objects affords.



## Emotional Arousal

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By acquiring an understanding of how we focus our reactions to those affordances, perceptual experiences of an object that in the future. Emotions as such, are often consumerism or our social lives; which

people perceive the world, it is easier to devise an interactive experience. This though brings in how we as a viewer feel, our emotions. Yet another subjective factor resulting from our plays a major role in how we interact with that particular object whether it is on the moment or associated as being a persuasive element in our decision making whether it involves further highlights its importance in the interactive structure.

What we generally call emotion has long been studied by psychologists, which up to the present is still quite an elusive subject. It forms part of our consciousness and reflects on the complex interaction of our mind and body as formerly discussed. Philosopher/psychologist John Dewey (1934), divides emotions into two groups. 'Emotional statements and emotional expressions'. He describes emotional statements as being short and expressive, what can be viewed as an automatic reaction; which for example can be spontaneously laughing at a joke. On the other hand, an emotional expression is a calculated response of feelings that references emotions from previous experiences. These emotional expressions as described by psychologist Keen (1977) such as sadness, fear, happiness and others are results of personally meaningful characters and social episodes of our past, stored in our minds. They are directly related to the meanings that preside over our existence. Furthermore, Dewey explains that emotions are a prevalent quality of an experience that helps to mould that particular experience into shape. A notion closely related to that of Norman's theory of affordance and psychologist Schachter's (1966) approach which he describes as 'Two-factor theory', where arousal is the source of the feeling and cognition is the personal relationship to that feeling.

**Emotion = Arousal + Cognition**

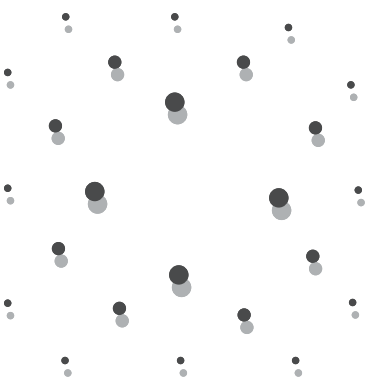
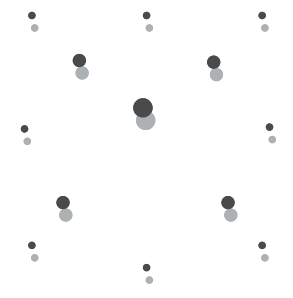
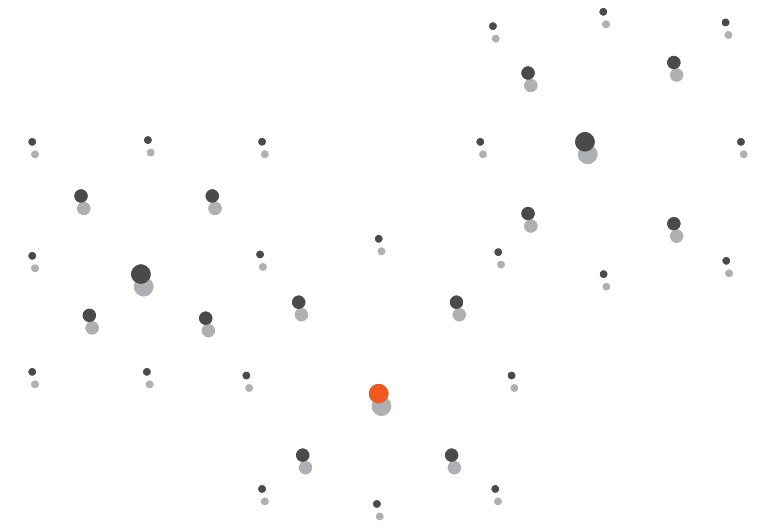
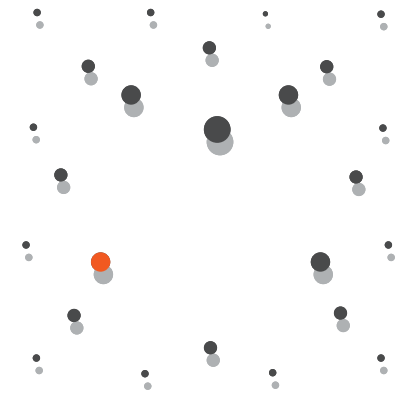
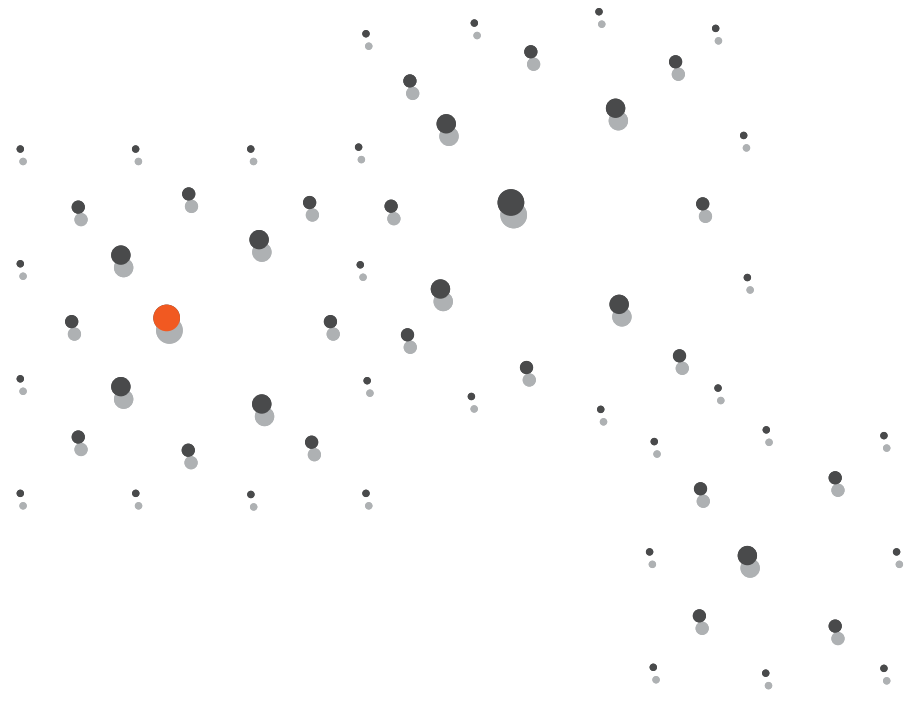
*This now leaves us with two systems, our emotional experience and our perceptual experience formerly discussed. One can assume that having those two complex sets of data, our mind can now reprocess those and deliver what can be called an overall enhanced experience of an interaction. It is important to note that any changes in those two experiences would result into the final outcome*



*Our emotions, our perceptual experiences, the meanings that we associate to those and most certainly the space around us all occupy an important role in how we as living organism interact with our surroundings whether it is in our mind or via physical bodily expressions. They all contribute in their own way to how we respond to our physical environment or engage it in such. When working towards creating any interactive system, it is important to familiarise oneself with those fundamental characteristics of this complex system; as whether it is to do with a traditional piece of interactive poster, contemporary art installations, graphic user interfaces or even interaction between one person to another, those characteristics together are the source of where it all starts.*

*to proportionally change. For example, if we take excitement to be our emotional experience, a moderate level of its arousal would present a different overall experience than that of an excessive level of arousal.*







## DESIGN, INTERACTION & CONSUMERISM

*'No need to shake your head'  
YAHOO!'s 'Bus Stop Derby'*

Consumerism has been an ever expanding realm since the end of the traditional barter systems. It is becoming more and more saturated by the hour, with major and small organisations all pushing forward to devise new products and services to offer to the consumer in order to stay afloat or break through this extremely competitive sector. Over the years, it has led to a proportional increase in the amount of media produced to advertise those products, resulting in the mediatic system adventuring into devising new strategies that would reach their audience and have an instant and even more powerful impact on them. Recently, the creative industry has turned to the interactive systems to try stand out from this infinite matrix of messages and images, that populate nearly every moment of our lives. This chapter will focus on 2 very distinct advertising campaigns, as to see how and why the above theories of interaction are applied in the practical world, which is as important as their theoretical nature.

*ee e e*

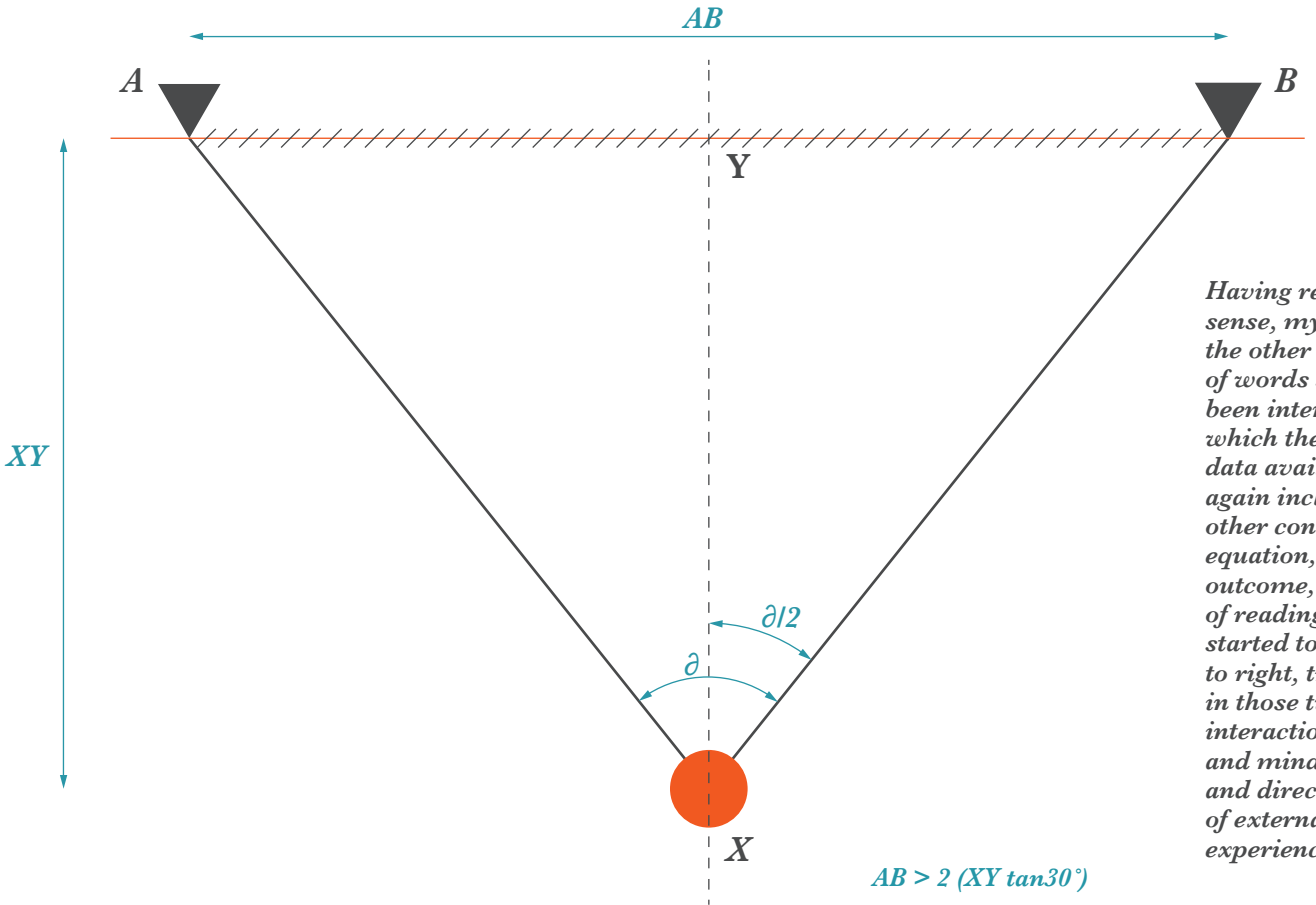
*'No need to shake your head'*



This ad by Volkswagen, one in a series of many from the Unbelievable value campaign commissioned by the DDB London, has let its mark on me with its simplistic execution in the form a very traditional form of media, a printed poster. Having said that, the realisation of this campaign has demanded an enormous amount of work and thought put towards it and most certainly an in depth knowledge of how we humans exist and react within our surrounding environment.

The initial purpose of this ad is to communicate how cheap it is to run a Golf compared to its competitors, an important fact that can easily be communicated in various ways but at the same time can easily be overlooked in a society where information is passed on at the speed of light. This cleverly executed poster though uses a very interesting form of interaction, a visual one that makes the audience work for the information even though it is readily presented to them. It makes the perceiving subject engage in a movement from left to right in order to read the information separated by a massive strip of white space. Having visually interacted with the poster and "worked" for the information, feeling of satisfaction arouses in the audience. An emotion that is developed after successful completion of a task, which can be considered as quite pleasurable. The arousal of this emotion is what we can call the catalyst of this interactive system. In other words, it is what will have an impact on the audience and imprint itself onto the latter. When recalling to that particular experience, the audience, in this case the consumer will automatically be reminded of the information presented to him, which is how cheap it is to run a Golf. Furthermore, this shaking movement of the head, which is normally associated to a sign of disapproval, makes it possible for the advert to bring a touch of quirkiness, by implying that the information passed on to the audience is true, and that there is no need for the latter to shake his head. Yet another cleverly executed aspect of this interactive poster, which relates an eventual physical interaction to a common meaning of our society. This in turn, imprints itself on the subject's memory, making a difference in this saturated realm of advertising.

The elementary key to designing the experience around this interactive poster is to understand the audience's perception of a set of words put together and how they proceed to read this set of word. From the above phenomenology of perception such as that of Merlau-Ponty's and Norman's theory of affordance, we understood that our mind take in information, which it processes and associates with our knowledge and past experiences, so as to output an appropriate response to the situation. By analysing my first perceptual experience of the poster and recalling the initial "passive/subjective interaction" with it, which was my eye contact with the column of words on the left, one can deduct that my mind, having processed this set of information, responded by the instinctive reaction to read this set of words. This reaction can be closely associated to Norman's theory of affordance, where in that case as in many other, a set of words affords reading.

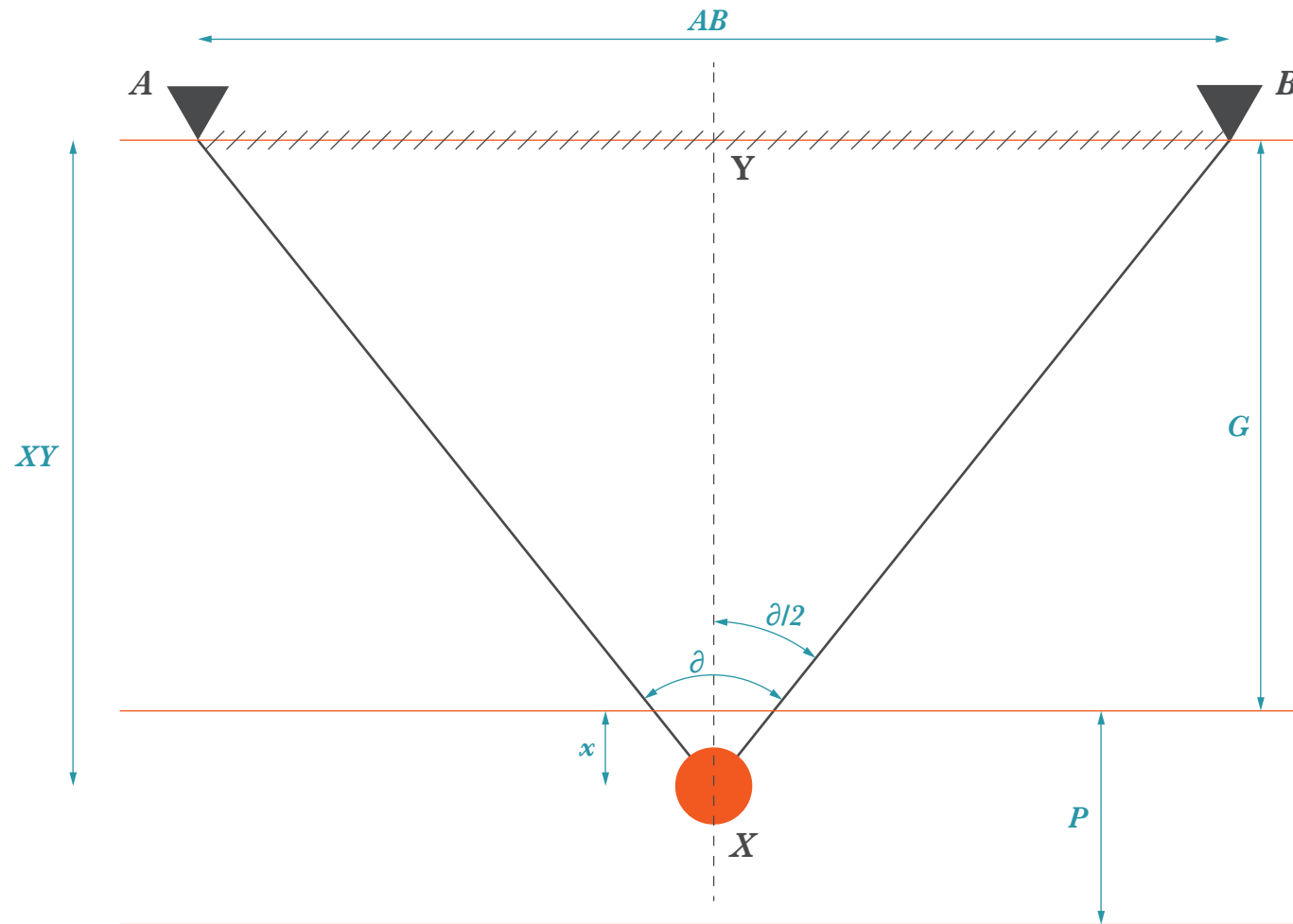


$AB > 2 (XY \tan 30^\circ)$   
 where;  
 $X = \text{viewer,}$   
 $Y = \text{poster,}$   
 $AB = \text{gap between set of words,}$   
 $\theta = \text{field of vision} \approx 60^\circ,$   
 $\theta/2 \approx 30^\circ$

*Having read and without it making any sense, my reaction was to instinctively move to the other side of the poster, where another set of words sat at the same exact height, and I had been intentionally separated from the information which they eventually were. With this information and data available, my mind set itself to a new task again including similar past experiences and other connected variables of my knowledge and memory equation, before resulting in an outcome. This outcome, was drawn from the tradition of reading, from left to right, and thus I started to move from column to column to right, trying to break down the message in those two set of words. At that point, the interaction which involved only the visual and mind processing has evolved into a direct physical interaction which consisted of external bodily movements and physical experiences within an external space.*

Space. The external space, in which the viewer finds himself confronting this piece of interactive poster is another factor that plays an indispensable role in its success. What triggers any sort of interaction with this traditionally printed poster is the distance by which the two columns of words are separated. For the physical interaction of moving one's head from side to side to exist, it is imperative that the latter's field of vision is smaller than the distance between the two columns. The above diagram, is a graphical representation of how this interactive system between the poster and the viewer works.

y plausible  
 y glance at  
 ther column  
 as if they had  
 one of the left;  
 new set of  
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 ces and  
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This adapted diagram demonstrates how the setup of the underground network was an adequate if not perfect space for this interactive poster to be situated, with the only variable being "x", which itself is limited to the platform's depth, resulting in the perceptual experience of the viewer to be as expected.

*The space in which this interactive experience occurs, and how the viewer initially proceeds to interact with this system, are the two most prominent elements that enabled this interactive poster to enhance the experience perceived through this campaign. Those factors that have attracted interest from many fields such as philosophy amongst many others, have most certainly been studied closely during the creative process that gave birth to this final piece of successful award winning advertisement. They are often considered to be the genesis of interaction, as would suggest the following analysis of another campaign which in essence has very little in common compared to the one we just depicted. The key is to understand how to manipulate those elements in order to enrich any experience.*

This setup is crucial for the interactive experience to be complete and thus the space in which the poster was to be brought to the view of its audience was highly dependant on those factors. This coheres with an observation made by Merlau-Ponty (1945) when he describes the relationships between objects in space, in which he implies that this relationship reveals the experience of the perceiving subject. This space needed to constraint the viewer's field of vision accordingly, in proportion to the poster's size. A field of factors that rendered the poster adequate for a 38 sheet billboard situated on the walls of the tunnels of the underground network, facing the platforms frequented by millions of commuters everyday.

$$AB > 2 (XY \tan 30^\circ),$$

$$XY = (G+x), \quad x \leq P$$

where;

$X$  = viewer,  
 $Y$  = poster,  
 $AB$  = gap between set of words,  
 $\theta$  = field of vision  $\approx 60^\circ$ ,  
 $\theta/2 \approx 30^\circ$ ,

$P$  = platform depth,  
 $G$  = gap between platform and poster,  
 $x$  = distance of viewer from platform edge,

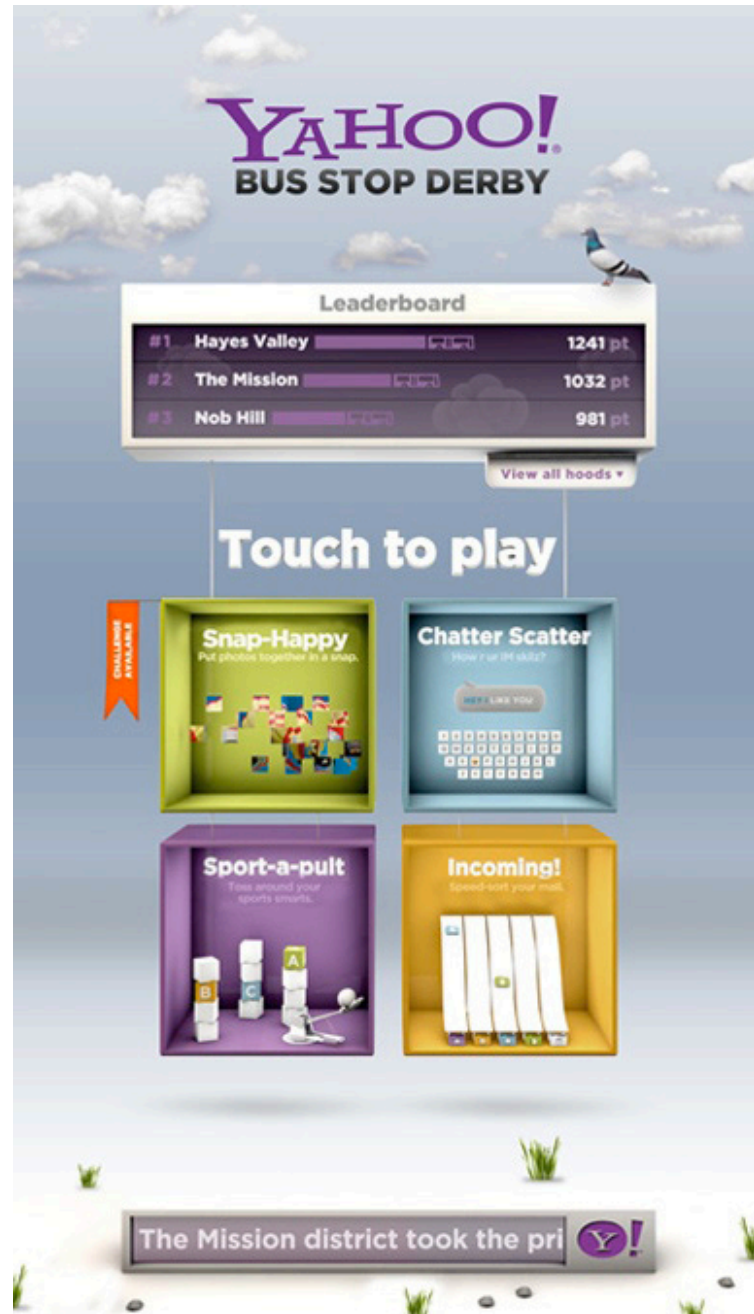


Fig 5.

## YAHOO!'s 'Bus Stop Derby'

OO

humane

The Yahoo! 'Bus Stop Derby', a campaign commissioned by Goodby Silverstein & Partners took interactive media to a whole new level. The task was to help Yahoo! reclaim their role as the original social network by showing how technology can bring people together offline, in the same way it does online. The innovative and unique aspect of this campaign which took place in San Francisco over a period of two months, is that it was composed of a medley of interaction, interaction through the technological advances of present times and also had the " " aspect of social interaction to it. It brought members of a community together and allowed them to connect through the interactive system, initially involving human-computer interaction as a base, evolving into an ocean of social interactivity with other beings present not only in the same space but also via long distances.

The mere nature of our society is based around interaction. It is what makes the world revolve. As suggested by Heidegger, humans are bound to interact with one another. His theory of Being, discussed in the previous chapter; which implies that our existence is affected by other beings around us and thus results in interaction whether they are intentional or non-intentional. This makes the interactive system the perfect solution to Yahoo!'s problem which is to bring people together. The question though would be how to provoke the desired interaction to occur, which leads on to many others such as the type of interaction, the environment in which it is to occur and what it means to the audience.

The key to this successful ambient advertising campaign, is how human-computer interaction was utilised to enhance the perceptual experience of the audience. This created a chain reaction in strangers getting together as a group, and competing with other communities in a different environment to achieve a goal. The interactive technology, 72" gaming screens, only served as a bonding agent to link the experiences of many individuals together. The inclusion of games and a competition to win a prize prompts the audience with a challenge, which in turn when completed, result in the arousal of different emotions such as joy or satisfaction to which individuals associate meanings. In essence, these emotions is the result that Yahoo! wishes to reach; as emotions are accompanied by meanings and would always leave a mark on any individual who have experienced it. One can relate this observation to Schachter's (1966) representation of emotion, **Emotion = Arousal + Cognition** (see previous chapter), where in this case the arousal comes in the form of initially interacting with the gaming screen.



This though only solves the problem of how Yahoo! leaves its mark on its audience but still needs to reach that audience in an adequate manner. The concept had to be in constant action all the time, getting as many people as possible from a community to interact and share a moment together. By not being an online/virtual project, the only factor that influences this is the space in which the experience is conceived. The space can be considered as important as the interaction itself. That environment is the only aspect of the equation that contains a variable, the audience. It is in other words what decides how frequently the campaign would be consumed and by what majority of the community. This is why bus-stops as a location for this interactive campaign to occur is ideal. It allows access for the majority of the community. Furthermore, bus-stops are the classic locations where strangers bump into each other without even engaging with one another, even though they stand there bored, with not much to do. Thus the choice of this space renders it appropriate for the campaign to challenge that state of mind and bring to life this interactive system. By including the gaming screen in this environment, all the ingredients are now present for the interactive system to exist and be successful. In addition, the spaces in which this interactive campaign is encapsulated create a sense of camaraderie amongst the participants in each individual area. The use of such an open public space allows spectators to join and support the individuals who are actively interacting with the gaming screen. The experience might even evolve into a multitude of participants interacting with one screen at a time, depending on the nature of the game, creating a more complex system of interaction with group coordination.

## Bus Stop Derby

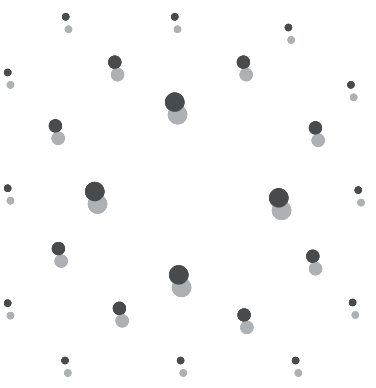
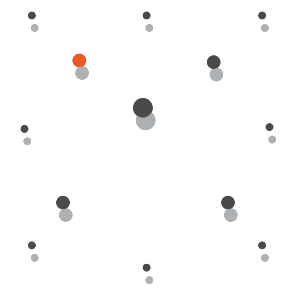
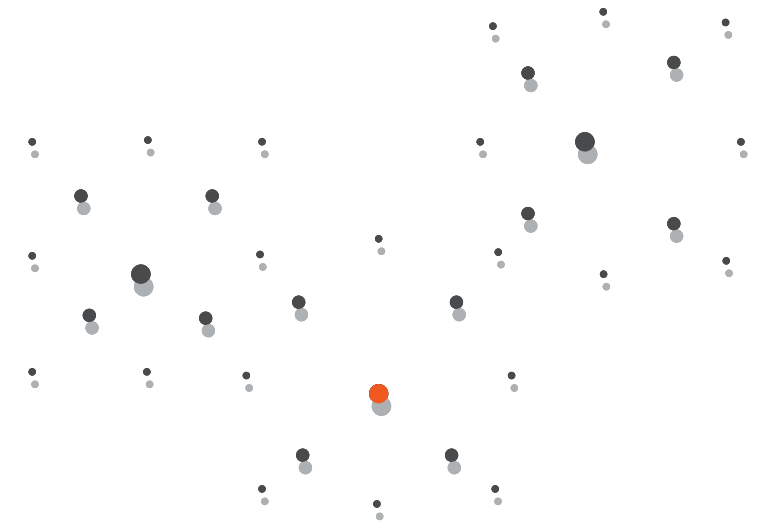
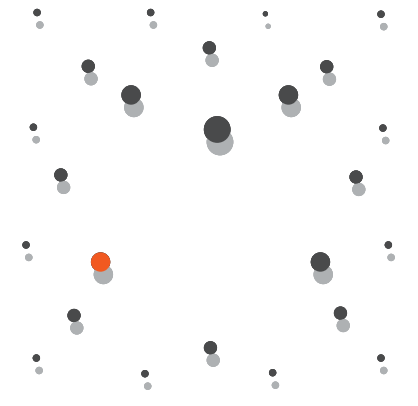
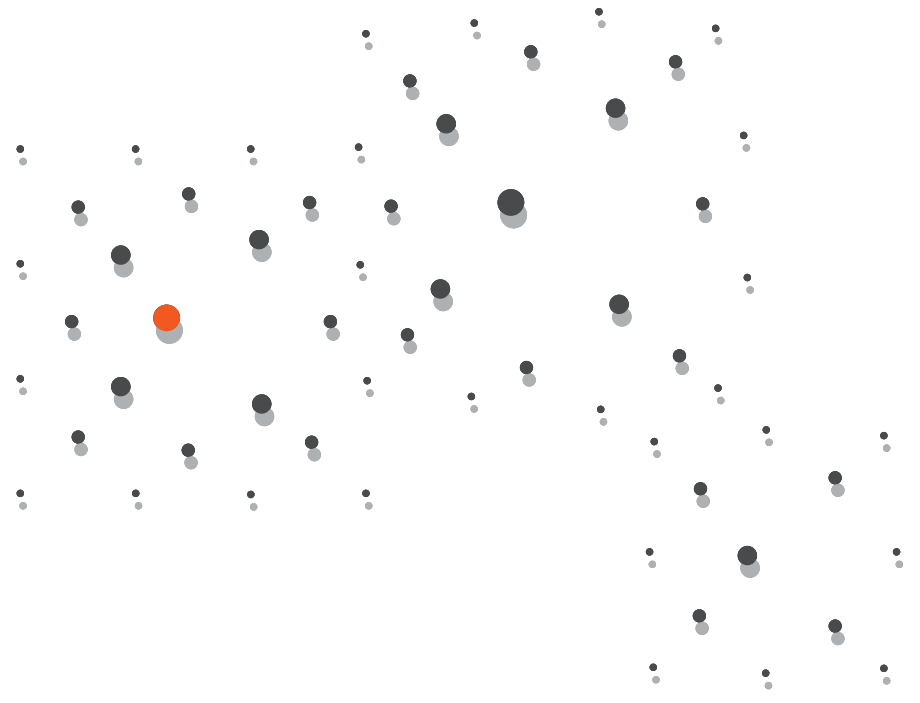
*The same problem could have been tackled with a different solution such as organising an event that brings people together at for example, a concert; but this would merely serve as a social gathering, with no real certainty of those people bonding together and engaging in any kind social interaction amongst themselves. By resorting to the “  
”, the perceptual experiences of the audience can now be considered as having been enhanced by the simple inclusion of an interactive device in a dull and boring environment. This led to a chain reaction and made way for a much greater interactive system with an immense impact. It allowed for very different personalities to connect and experience the moment in an innovative and entertaining way, to which they will associate a meaning. The objective of this campaign was to reach those meanings and have a*

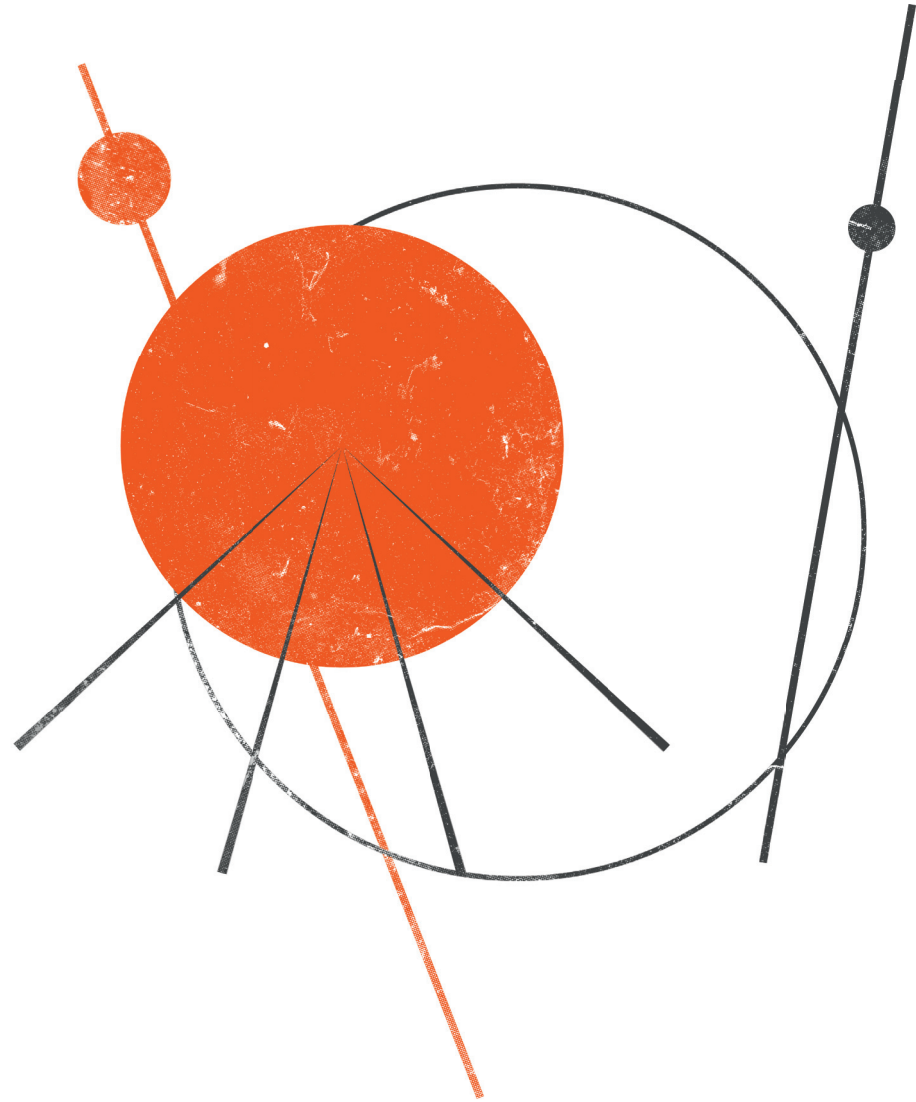


Fig 6.

*presence in those communities, a goal achieved by solely capitalising on how we, humans interact with other beings and the space around us and triggering that interaction.*







A GLANCE AT  
NF N TY



*“How can interactivity help the creative industry provide better solutions via experiences?”*

*Throughout this dissertation, I have been working towards reaching an answer to the above question, which can seem a very simple one; but I now find myself in a position where answering this question would be implausible, as this would lead to an infinite number of answers. In essence, there is no question as to whether or not interaction helps enhance design; this would be a daft and senseless argument, but what I feel the right argument should be is:*

*“What makes interactivity the perfect ingredient for bettering solutions and enhancing experiences?”*

*In spite of that, my initial questioning of the interactive system in relation to the creative industry brought me along a journey to discover the very nature of interaction, the different aspects of it and its occurrence. It allowed me to realise that interaction is present everywhere, it has existed since the beginning of time; it is present in every aspect of this world as we know it. It is at the centre of any living ecosystems and subsists deep down in our minds, even in our smallest thoughts.*

*By picturing interactivity as a medium, it enabled me to narrow its field and provide a starting point, from which I was able to analyse the essence of the term; leading onto discovering how interactive media evolved to what it represents now. Its significance in the early 20th century, to the possibilities of its future. I visited the characteristics of this medium, the notions of immediacy and hypermedia, which made way for some more complex philosophical and psychological theories.*

*Essential research in various fields, from philosophy, science to psychology, enabled me to acquire an in-depth knowledge of this complex system from the very initial stages of its occurrence. How we perceive the world through our senses and physical form, to how our mind processes that information before inducing an appropriate reaction; stressing on how the role of the human mind counts for as much as that of our physical body. Our consciousness is an infinite source of interaction in the subjective form, and in order to grasp the interactive system, it is of utmost importance to understand how we as living entities in our physical body perceive the world around us. How we associate meanings with those experiences which are stored in our brains, to which our minds draw back from time to time and associates them to experiences. Deciphering how those meanings often lead to the arousal of different emotions was yet another crucial stage in understanding the interactive realm. The arousal of an emotion, whether passive or assertive, often results from interacting with external bodies and is a field that requires close attention when designing any interactive experience. It is the end product often achieved from any form of interaction and often determines the nature and intensity of the perceptual experience of the subject.*

*Space, is another facet of interaction that necessitates close attention in order to comprehend its nature. An interactive system cannot exist without an environment or a space for it to exist in, which is what renders it as a fundamental aspect to consider. Without a world/space, our body or any other objects would not exist, thus there would be no mind or consciousness; resulting in no interaction at all. As addressed in the third chapter, when depicting the Yahoo! Bus Stop Derby, space highly influences every interactive system, whether it comes in the form of an art installation or an advertising campaign.*

*This journey full of information brought me an insightful view of the interactive system, which is so vast that at times, I found myself wandering away from my initial motive which was to relate the subject to the creative industry “advertising”. While tackling the third chapter, and realising that I was going of course by analysing the application of interaction through different mediums, such as installations, traditional posters and graphic user interfaces, ipads; I had to revert and re-bring my focus to advertising campaigns and analyse their interactive aspects. Conducting this process, made it more adequate to notice how different characteristics of interaction can be applied accordingly so to enhance the perceptual experience of the audience.*

‘The new beauty will be IN SITUATION, that is to say provisory and lived.’

- **The Letterist International (1954)**

*In my point of view, the above quotation by  
The Letterist International group sums up  
why interaction serves so well at bettering any  
experience. It enhances the perceptual experience  
of the viewing subject on the moment, rendering  
that instance in time and space special.*



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**Fig 1.**

[http://www.the-annas.co.uk/nma/uploads/21927/highres/vw\\_shake\\_hires.jpg](http://www.the-annas.co.uk/nma/uploads/21927/highres/vw_shake_hires.jpg)

**Fig 2.**

[http://cdni.wired.co.uk/620x413/a\\_c/5741516702\\_644f000856\\_b.jpg](http://cdni.wired.co.uk/620x413/a_c/5741516702_644f000856_b.jpg)

**Fig 3.**

[http://4.bp.blogspot.com/\\_NV5qyb0qnDo/TIYzSyzMByI/AAAAAAAAALM/9NgP\\_Pg46Xg/s1600/naked.jpg](http://4.bp.blogspot.com/_NV5qyb0qnDo/TIYzSyzMByI/AAAAAAAAALM/9NgP_Pg46Xg/s1600/naked.jpg)

**Fig 4.**

<http://www.studioroosegaard.net/uploads/images/2011/02/18/37/37-228-image.jpeg>

**Fig 5.**

<http://cdn.funcheap.com/wp-content/uploads/2010/11/ishot-308.jpg>

**Fig 6.**

[http://farm6.staticflickr.com/5130/5356303422\\_1d96c5de34\\_b\\_d.jpg](http://farm6.staticflickr.com/5130/5356303422_1d96c5de34_b_d.jpg), <http://www.flickr.com/photos/16413917@N07/5356303422/sizes/l/in/photostream/>



