Introduction

The very basic function and design of media, such as newspapers, radio and TV, is to send viewers messages; to convince you to buy stuff, or to inform you of the state of the world. In psychosis, however, the messaging somehow takes on ‘a life of its own’. It becomes an experience in which it feels as if media are communicating, with a particular sentient awareness, directly to you. One person describes this experience as: ‘There was something not right with newspapers, they were printed especially for me. The radio was not broadcasting the right programmes, but ones that were meant especially for me. It was the same with the television’.1 Such an experience may be terrifying, as another person describes when he was fourteen years old, he came home from school one day and began to hear voices on the radio speaking directly to him and about him. The voices on the radio commanded him to hurt himself, they were predicting his death and telling him how he could electrocute himself, burn himself or make himself explode.2 Apparently, experiences of feeling that one is being controlled by radio, occurs relatively frequently.3 And psychotic experiences, in general, often seem to revolve around themes related to (electronic) media.4 Before I speak about the simulation of psychotic experiences, it is useful for the reader to know a bit more about what psychosis is considered to be and why it is important to simulate it.

In medical literature, psychosis is often described as a severe mental illness during which thoughts and emotions are so impaired that contact is lost with external reality. In a state of psychosis one might hear voices that others do not hear, see things that others do not see, and have beliefs that others do not share, often causing someone to act in unfathomable ways. In isolation these behaviours and cognitions are not necessarily seen as illness, but when they manifest themselves in a way that causes someone to retreat from society, to become a danger to him- or herself and/or others, they are usually considered as a set of symptoms of mental illness and described as hallucinations and delusions.

Approximately 3 in 100 young people are estimated to experience psychosis in their lives, in particular in the age group between 16-30; it is estimated that 1 in 100 of these young people will be diagnosed with schizophrenia, which simply put, could be described as a condition of chronic psychoses.5 In spite of such high occurrences, psychosis is hidden in society, hard to detect, as its onset is similar to adolescent behaviour, and talking about it, seems taboo. People with experience of psychosis are severely stigmatized and misrepresented in the media as being dangerous and violent. Understanding psychosis is important, if only for the reason that science
still does not know what causes it, but in particular because of the costs of psychosis to society, in relation to health care, which lies in the billions. A diagnosis of psychosis will often lead to a loss of social connections, jobs, and the means to take care of oneself, as a consequence there is much emotional suffering. But understanding psychosis is difficult, symptoms are considered bizarre; people say the strangest things and act in the weirdest ways, it is difficult to sympathize with:

‘[…] it is as if the person has lost control of his/her brain. How can we sympathize with a person who is possessed by unknown and unseen forces? How can one sympathize with a madman or madwoman? […] Because there is little understanding of schizophrenia, so there is little sympathy’.7

Additional obstacles of understanding psychosis are related to an ability to find words to do so. Those who have experience with psychosis, find it hard to explain, and those who don’t, find it hard to envision, making it extra difficult to understand and empathize with:

‘Currently patients have to describe their hallucinations, auditory and visual, to their therapists. There is no way that therapists can either share the experiences or objectively evaluate them. As a consequence patients often feel their therapists do not really understand them. Therapists themselves have difficulties learning about the exact nature of psychosis, as they have no personal experience of it’.8

And:

‘In attempting to communicate with a patient in such a state, the interviewer or therapist is liable to have the sense of bumping up against the limits of language and communication. Few patients can offer more than the cryptic statement that things seem somehow “different”, “unreal”, or “intense”.’9

The ability to engage in a process of understanding and empathy is crucial to a person struggling with psychosis; it makes the experiences more bearable as it creates an environment of support in which a person may feel safe to share what is bothering them. This is where simulation may come in handy. Simulation is not an unknown phenomenon in medical science. In order to help their patients, doctors have traditionally simulated symptoms to better understand what their patients are going through, but how to simulate psychotic phenomena? In the past, doctors took drugs, such as LSD, to better understand hallucinatory phenomena. But, as such actions are now considered taboo, one might consider possibilities of simulating psychotic experiences with the aid of technical innovations as a form of digital LSD. Many people find this unappealing. I often receive the question why anyone would want to simulate psychosis, let alone experience the simulation.

My own personal reason for wanting to understand psychosis is that my sister-in-law, who was diagnosed with schizophrenia, committed suicide. It was only after her death, when I realized how little I knew about her condition. As I am normally a very active, curious person, I
wondered why this was the case. As I began to investigate, I learned that there is genuine fear of understanding psychosis, maybe on some unconscious level I was afraid to understand her? When a person tries to understand what it is like to be another, one engages in the process of empathy and sympathy, one could say that an attempt is made, to construct in oneself a feeling of what the other feels, but this is not so easy when it comes to psychosis, even professionals struggle, as Bertram P. Karon described in his article ‘The Fear of Understanding Schizophrenia’ that: ‘Sometimes the therapist may, all too successfully, empathize with the schizophrenic patient’s terror and tend to withdraw in terror just like the patient. Human beings are not easily able to tolerate chronic, massive terror’. If a well-informed professional is having an arduous time, what does that mean for non-professionals? But, just because it is difficult, does not mean we should not try to understand it, in particular as it is so beneficial. I learned that there are more challenges. As, in addition, there seem to be neurological barriers.

In the book ‘Perspective Taking: Misstepping Into Others’ Shoes’ of the Handbook of Mental Simulation and Imagination (2009), Nicholas Epley and Eugene M. Caruso point out that although humans possess the mental capacity necessary to adopt another’s perspective and consider another’s thoughts, feelings and mental states, possessing this capability does not mean that people will necessarily use their perspective-taking skills when they should. This is what was most like going on with me. In fact, they clarify how recent studies show that there are several important challenges to using one’s perspective taking capabilities to their fullest potential. Supporting their argument, they explain, is a recent neuroimaging experiment, in which neural regions associated with self-referential thoughts were activated when participants reasoned about the mental states of a person perceived to be similar to them, but not when they reasoned about a person perceived to be very different. Meaning my brain somehow remained ‘silent’, as I had no analogue archive of experiences that was sufficient to understand my sister-in-law. So what to do about that?

Epley and Caruso name three barriers that need to be overcome when trying to understand what it is like to be another person who is very different from you. First, the mental process of perspective taking must be activated. This, they point out, requires people to actively think about another person’s mental state: ‘when it is appropriate to do so’, as they say: ‘there is no more immediate barrier to accurate perspective taking, than failing to use it in the first place’. Secondly, they say: ‘people who are actively attempting to adopt another’s perspective, must first get over their own, to try to experience, simulate, or infer the perceptions of another person’. They explain how one’s own perspective is: ‘typically immediate, automatic and easy, whereas thinking about another’s perspective is typically slow, deliberate, and difficult’. The second barrier is none other than taking the more difficult road, than the easy one, and being aware when this happens. Thirdly: ‘overcoming one’s egocentric perspective’, they describe: ‘[…] may require using some other information in its place to intuit another’s perspective’; too often such substitutes are based on ‘stereotypes or other idiosyncratic information known about the target being evaluated’. They continue with: ‘Accurate perspective taking requires using diagnostic and useful information about another’s mental state’. This, for me, emphasises the importance and need for psychosis simulation.

Like a flight simulator helps aspiring pilots in their journey of learning how to fly, technological tools might be developed that act as a prosthesis to imagination, to help better under-
stand and communicate what it is like to be in psychosis. In recent years, several such multi-media psychosis simulators have indeed been developed as teaching and awareness environments for mental health workers, police and students to increase their knowledge and understanding of the subjective experience of psychosis. They aim at helping professionals to become more empathic towards their patients as well as towards their patients’ friends and families to what their loved ones are going through. In this article, I will introduce three of these multi-media psychosis simulation projects: *Paved with Fear* (2001), *Mindstorm* (2007) and *Virtual Hallucinations* (2005). I will take a closer look at how they simulate the particular phenomena of the experience of media ‘talking to you’. I will analyse their design against descriptions of psychotic experience in literature and show why I think it is important to be vigilant about their design. In this article I will identify the problematic aspects that I see and argue for approaching these design challenges with the use of multi-media installation art. In order to illustrate this I will use my own work, *INTRUDER 2.0* (2008), as an example.

Psychosis Simulation *Paved with fear*

The first psychosis simulation project that I would like to introduce is *Paved with Fear*, which was made possible by the Belgian branch of Janssen Pharmaceuticals. The simulation is situated in a truck currently still visiting health care institutions throughout Europe. In 2007 I had the opportunity to visit the experience myself. Upon entering the truck, I found an interior that, for me, resembled a sci-fi waiting room. Blue light came from a light source behind a line of aluminium chairs against the wall. The ceiling was painted in a way that emulated a blue sky with clouds. Beneath the ceiling were two constructions with large doors that reminded me of some kind of time machine elevator. A staff member greeted me and told me, that in order to enter one of the simulators, I first needed to answer a couple of questions at a computer station; simple questions such as ‘What is your name?’ After the questionnaire, the computer station showed me a short video of a ‘normal’ trip to a bakery.

Once I was in one of the ‘elevators’, I experienced that same trip to the bakery in the form of a cinema experience with a psychotic narrative that employed a whole range of cinematic effects. The film was shot from a first person perspective in which the camera is positioned as the eyes, making it feel like I am the person going to the bakery. Time seemed to slow down by delaying the frame speed of the film, creating an experience of people staring at me as if they knew something that I did not. Quick close-ups with added sound effects made objects suddenly become suspicious. Fast camera shots were made to redirect my attention into all kinds of directions, making it hard to build a consistent mental image of the represented journey. Voices whispered, people seemed to be talking about me. Apart from cinematic techniques, the simulator also used other technologies; for instance at key moments in the narrative the floor started shaking and clever software took the pre-registered answers of the questionnaire, such as my first name, and had it whispered to me by a computer voice during the experience.

*Paved with Fear* simulated a ‘The-tv and Newspaper are talking to me’ experience by using software to trigger a camera to take my picture while I was in the simulation. This picture was then repositioned within the film, in the shot of a newspaper carrying the headline: ‘Police arrest suspect in family horror drama’ and in a news report about this drama. I imagine, the message
could be interpreted as me receiving a message of being guilty of the family horror drama. But, after this experience I began to wonder, did my sister-in-law have such experiences? Did she see pictures of herself in the paper or in the news?

*All illustrations in this article: Photo author*

**Psychosis Simulation Mindstorm**

The second project I want to introduce is *Mindstorm*, which was independently developed by an American branch of Janssen Pharmaceuticals. I did not have the opportunity to visit this simulation, but I found online footage of the film that was used. The cinematic project does not take place in a cubicle; it is built more like an IMAX theatre installation that seats 11 people. Much like *Paved with Fear*, the simulation project employs various special effects, such as smells that are released at key moments of the experience. The film itself first shows a set of everyday situations, such as brushing one’s teeth, making coffee, reading the newspaper and watching the news, and then portrays the same situation while employing a more ominous atmosphere; the light in the film darkens, voices make derogative remarks. Like *Paved with Fear*, the whole film is also filmed from a first person perspective. In the narrative, the character sees coffee bubbling, a mysterious phone call is received, full of static, with a female voice repeating ‘rain, rain’, and pizza is suddenly delivered in a box that first has a text on the box that reads as ‘pizza’ which later can be read as ‘poizzon’. Later on, in the film, one learns that the phone call comes from a friend, ‘Loraine’ (not rain), and the pizza is a gesture from her.

*Mindstorm* simulates media as communicating to a person by showing a newspaper with the headline ‘Man Wins Lucky Lotto’, which later reads ‘Don’t Leave The House’ and ‘renew prescriptions’. A man’s portrait first is printed as laughing, and later is printed as looking serious. When the TV reporter on the TV is doing a weather report, the actor turns to the main character and addresses him or her directly as worthless. Again, after seeing this representation of the experience, I wondered, did my sister-in-law see completely different headlines switching at different moments? Or was it more like a how the word ‘pizza’, transformed into a word that resembled ‘poison’. Misreading a word is a common mistake any brain can make. Or did she have literal experiences of TV reporters turning to her, addressing her directly? That is terrifying stuff of horror movies!
Psychosis Simulation *Virtual Hallucinations*

The third project I would like to introduce was formed in collaboration between Queensland University and UC Davis, in which they developed a virtual reality experience on *Second Life* named *Virtual Hallucinations*. I visited it many times over the years. The experience, like the others, is also aimed at simulating psychosis for the purpose of education, showing visitors what it is like to undergo psychotic phenomena. In *Virtual Hallucinations* it is possible for one’s *Second Life* avatar to become subject to visual and audio hallucinations. The simulation consists of a walk through the hallways of a small virtual hospital. When I entered the experience with my avatar I was invited to ‘put on’ a voice badge, a piece of audio software that allowed me to hear things that other avatars could not. I was able to choose a male or female voice badge, which then allowed me to hear voices; a malignant male voice repeatedly whispers things like: ‘You’re dead’, while a dominant female voice whispered things like: ‘She thinks your ugly’. There were several visual hallucinations staged throughout the experience. Laptop computers at an abandoned reception desk opened and closed as if they were munching mouths. The tiles of the floor suddenly become a precarious path above a sky full of clouds as I walked over them. There was also a mirror in which I could see a man’s face slowly decaying, while blood dripped out of his eyes, horror indeed. Walking further down the hall, I came into a common room with books that were war-related. The room was made location sensitive – when I passed a table, a gun appeared and a voice was triggered that told me to ‘Get the bloody gun’ and kill a ‘copper’ (police officer). Next to every hallucination, there was a small coloured triangular cone that provided additional information explaining the experienced phenomena. Unlike *Paved with Fear*, which was exclusively filmed from a first-person perspective, *Second Life* allowed me to experience the same environment from a first-person or a third-person camera position – the camera was either located ‘as the eyes’ of my avatar, or just behind my avatar.

The *Virtual Hallucinations* project on *Second Life* simulates ‘media talking’ or ‘sending messages’, by an animation of a folded newspaper that is lying on a table in one of the rooms in the hospital. As my avatar approached the table, I saw the newspaper as ‘normal’ with the headline ‘Reagan Death Shakes Nation’, then everything in the newspaper faded, leaving only the word ‘Death’. This was a subtle, yet important difference, as in this case, the word really existed; it just became more meaningful as all the rest disappeared. However, again, I am curious, did she literally see words disappear in a newspaper, leaving only one word? In the room with the gun
and library there was a TV. As I approached the TV a male voice accused my avatar of being the most worthless person in the world and that he will not have me ‘contaminating his society’, the voice then told me to kill myself. Did she hear such direct voices coming from the TV? My sister-in-law jumped off the seventh floor of a building. I began to wonder: if she was constantly seeing messages or hearing voices telling her to kill herself, then this would help a lot to understand why she did it.

Vigilance

The above mentioned simulations I found crucial as they are contraptions that helped me to break the first barrier, by allowing me to consciously be activated in thinking about what my sister-in-law was going through. The simulations also helped me to break the second barrier, as their design was carefully based on patients real stories and not on, for instance, media stereotypes. The simulations helped me to overcome my own easy perspective. With regards to the third barrier, as an artist, I felt a responsibility to be vigilant of the accuracy of information provided, or more precisely, I questioned the methods that were used to represent and illustrate certain experiences. They seemed somehow artificial to me. I wondered if the experience of media sending messages was something more subtle or more complex.

Upon investigation, I found an example, that supported the need for my questions, in the
famous 1950 *Autobiography of a Schizophrenic Girl*, in which a girl, Renee explains how, in early childhood, her friend suddenly appeared like a lion: ‘Once more my playmate became strangely transformed and, with an excited laugh, once more I cried out, ‘Stop, Alice, I’m afraid of you; you’re a lion!’’ If one views and simulates this hallucination from a literal perspective, then one must simulate Renee’s friend literally as a lion. But, as Renee later explains, she did not really see these things literally: ‘But actually, I didn’t see a lion at all; it was only an attempt to describe the enlarging image of my friend and the fact that I didn’t recognize her.’

What Renee was describing was a metaphor, that in the moment of her subjective experience, she felt, could best explain and express the alterations she was experiencing. Thinking in metaphors, to express how you feel, is something I recognize and do as an artist. This made me wonder if, when a person describes the TV talking to them, this is a literal description or a metaphor, or other.

In another situation described by Renee, I found more reason to evaluate the design of simulations. It seems that in part, why communication might be difficult, is that it can be quite creative. Renee describes an attempt to communicate to her therapist, Marguerite Sechehaye, what she was feeling: ‘One day, after tying together all the shoes I could find, I hung them on the key of the wardrobe, and on the key I balanced a pair of scissors, the sharp points up.’ Renee later explains how the shoes signified for her ‘departure’ and the way they were in disarray represented her ‘anger’. The strings signified for her the tension of ‘unreality’; and the scissors represented ‘aggression’. It was a request to her therapist to help find a place for the anger to help her cut the tension. But her therapist did not understand and took the small installation apart with the remark that the composition was too dangerous. Communicating with objects and materials is, again, something I recognize well as an artist, by engaging in such play, I deal with, and express, my own inner issues in a way that is transferable to a viewer. In childhood such play is considered having an important function that allows ‘to find a “middle ground” between our inner world and the real world’, whereas ‘in psychosis the boundary between fantasy or play and reality has been lost’.

The relation between creativity and psychosis is of such a complex nature that there is little room to discuss this in this article, however the artist Jannemiek Tukker, diagnosed with schizophrenia, does describe: ‘When you are psychotic you are capable of inventing a whole new language. You make new words, create new images. You are all creation’. The philosopher (MA) and linguist (Ph.D) Wouter Kusters, who also has experience with psychosis, goes as far to say that the psychotic person is the artist in ‘extrema forma’, a performance artist that does not know that the performance has ended. It is thought that creative ‘disconnected narratives’ in psychosis may serve as a ‘protective function’ and that ‘[…] personal narrative, or the meaning persons make of their lives in a storied manner, may stand as a unique dimension of recovery’. It is as if the ‘tools’ we use in childhood, to digest everyday life, become significant again.

This makes me think of how much the description of media talking to you might be part of a creative narrative. Renee’s description of miscommunication between her and her therapist, and her explanation that she did not literally see lions, but that she meant it as a metaphor, makes me feel that a literal simulation of a metaphor is problematic, as with metaphors, and other creative acts, there is a danger of them being seen as facts. Considering the importance and need of psychosis simulation, it is crucial to be aware if psychosis is simulated in a misleading way, and if yes, think about ways to address this. A literal simulation could unwittingly be alienating
A person's experience as very different, when it might not be. During my investigations I found two aspects of psychotic experience, the way senses are altered and the way meaning is created, that would bring psychotic experiences closer to our own archive of experience.

**Altered Senses**

In his chapter ‘The Inner World of Madness’ in *Surviving Schizophrenia*, the American psychiatrist Edwin Fuller Torrey begins with what he describes as one of the most prominent features in the onset of psychosis which can be found in almost two thirds of all patients: the alteration of the sensory experience in which senses are felt to be enhanced, blunted and/or flooded.\(^27\) One person explains a heightened sense of colour:

‘Colours seem to be brighter now, almost as if they are luminous painting. I’m not sure if things are solid until I touch them. I seem to be noticing colours more than before, although I am not artistically minded (...) Not only the colour of things fascinates me but all sorts of little things, like markings in the surface, pick up my attention too’.\(^28\)

Another person experiences a heightened sense for sound:

‘During the last while back I have noticed that noises all seem to be louder to me than they were before. It’s as if someone has turned up the volume (...) I notice it most with background noises – you know what I mean, noises that are always around but you don’t notice them. Now they seem to be just as loud and sometimes louder than the main noises that are going on (...) It’s a bit alarming at times because it makes it difficult to keep your mind on something when there’s so much going on that you can’t help listening to’.\(^29\)

Learning that psychosis is related to a state of heightened senses, helps me to understand and imagine what that would feel like, as it breaks it down into something that I can relate to.

Psychologist John Cohen writes: ‘(...) nothing is so alien to the human mind as the idea of randomness’.\(^30\) When bombarded with an array of stimuli, we want to make sense of them:

‘In the beginning I had to prick my ears to hear or understand them. They sounded softly and they worked with damned hard codes to unravel. Snap-crackle-pop, the sound of the wind with blinking lights and car horns as punctuations. I unravelled the code and made myself so accustomed with them that in the end it seemed as if I was hearing normal words. In the beginning it seemed mostly non-sense, but gradually they gained in meaning. When you start to hear voices, you realize that they have always been there. It is just a matter of the right frequency’.\(^31\)

This suggests that voices are born from experiences that are similar to our ability to see shapes in clouds, or see faces where there are none (Pareidolia) and hear full sentences in random
'white noise' (Electronic Voice Phenomenon).

During my investigations I also learned that a common misconception in understanding psychotic experiences is, indeed, to think that these are unrelated to the ‘normal’ experiences of everyone else. I learned that I could better describe psychotic experiences as ‘enlargements’ of everyday experiences: ‘(...) [t]he apparently mysterious, incomprehensible symptoms of the mentally ill are actually extensions of what many of us experience every day.’ This I find in the following story:

‘I would sometimes get a fright whilst listening to music that I know well, as there would be sentences or sounds that I had never heard before. Looking back I think it also has to do with heightened senses and not actually hearing something that wasn’t there. I think I heard layers within the actual music that I had never noticed before and some sentences sprang out which I had never noticed, also parts of the percussion or backing music were more prevalent than at other times. I think my perceptions were effected not that I heard things that weren’t there, however my experience in these moments was very much as if I was hearing things that weren’t normally there’.33

What fascinates me about this is that in the moment, the experience is very real, but that in hindsight it was considered based on errors made by the senses. So how does this relate to the design of the above mentioned simulations? Mindstorm and Virtual Hallucinations both simulate the reporter in the news addressing the character or avatar directly. I wonder if, when a person experiences that the TV reporter is turning towards them, it is a reaction based on an enlarged sensory experience? For instance a small muscle movement, that in force feels like it is coming directly at you? If one simulates voices coming from a TV and talking to you in a literal sense, yes, you simulate the reality of a momentary conclusion of a person in psychosis, but it does leave out the sensorial ‘errors’ that might have led to this conclusion.

In simulating the ‘TV talking to you’, one might want to consider simulating it in a way that allows for a more open interpretation, using layers that allow for an experience of interpretation or ‘filling in’. Or in other words, a simulation might consider simulating voices coming from the TV, not so much as literal and concise, but in a way that illustrates or steers an experience of errors based on sensorial enlargements making it sound as if additional words and sentences are born. In that sense, the simulation of the Virtual Hallucinations project is less alienating, as it does not shift the actuality of the newspaper text completely, but illustrates how one word ‘jumps out’. Hearing, or interpreting, the word ‘death’ from chaos arising from the mixture of background and foreground noises, and seeing the word ‘death’ in news headlines, perhaps combined with an inner sense of worthlessness, the mind could be seen to link these experiences together in a creative narrative that builds a sensation of media ‘talking’ to you. Telling you that it would be better, if you were dead, and implying how to kill yourself. As it were, media then mediates, or is actor within the build of a story.
Interpretation of meaning

Humans develop narratives to help organize and make sense of their experiences. Where the ‘normal’ person is capable of filtering signification of the mass array of stimuli and events of everyday life, a person in psychosis tends to interpret significance in everything. This is perhaps one of the reasons why so often the experience of psychosis is described as a filter being ‘broken’. When we begin to lose our common filters, the narratives we create to explain and bridge experiences might become intricate and increasingly bizarre. As patient Norma MacDonald wrote in 1960: ‘The walk of a stranger on the street could be a sign to me, which I must interpret. Every face in the windows of a passing streetcar would be engraved on my mind, all of them concentrating on me and trying to pass me some sort of message’. One finds more such sensations of connectedness in a description by a nurse who describes her first psychotic episode: ‘Every single thing “means” something. This kind of symbolic thinking is exhaustive... I have a sense that everything is more vivid and important; the incoming stimuli are almost more than I can bear. There is a connection to everything that happens – no coincidences. I feel tremendously creative’.

It is as if the mechanism in the brain that filters such information is indeed ‘broken’ and one unwillingly finds oneself paying attention to details that the brain would normally filter out:

‘Everything seems to grip my attention although I am not particularly interested in anything. I am speaking to you just now, but I can hear noises going on next door and in the corridor. I find it difficult to shut these out, and it makes it more difficult for me to concentrate on what I am saying to you. Often the silliest little things that are going on seem to interest me. That’s not even true: they don’t interest me, but I find myself attending to them and wasting a lot of time this way’.

In a sense, the brakes are off; the inner world goes haywire and too much meaning is attributed to the outside world. It is a form of creative over-interpretation. Pamela Spiro Wager, an accomplished writer and living with the diagnosis of schizophrenia, describes this process as follows:

‘Now I understand – it is an undertow beneath the ocean of other understandings – everything is connected, even the sharpness of my senses, all is part of what is happening. These things mean something, even though I am not sure what. [...] We turn the corner into a glow of light coming from the doors at the far end of the hall. I know suddenly that this is the Light of Truth that will make all things clear because it is made up entirely of shadows’.

In medical terms, this is described as apophenia or apophany, ‘an “unmotivated seeing of connections” accompanied by a “specific experience of an abnormal meaningfulness”’. It is a spontaneous perception of connections and meaningfulness of what is considered as unrelated phenomena.

Such experiences seem to begin because we humans rely so much on our senses; people are used to depend on the efficient organization and schematic processing of the information
relayed to their brain, but in psychosis, the automated routines that filter begin somehow to deteriorate, causing a person to misinterpret data without realizing it, a feature known as anosognosia. Anosognosia has an effect on how a person interprets his/her environment. In medical terms, it is placed under the header of ‘delusions of reference’: when things in the environment seem to appear to be directly related to you even though they are not. Thus it may seem as if people are talking about you or special personal messages are being communicated to you through the tv, radio, or other media. An illustrative example of this may be found in the museum of psychiatry, Het Dolhuys, in Haarlem, which displays the story of Pieter Overduin, diagnosed with bi-polar disorder, who experienced a psychosis, in which he thought he was Gandhi reborn based on the common traits he had with an image of Gandhi. Both were bald, both were skinny, and both had little round glasses. This was enough evidence for Pieter to make the conclusions and to begin organizing a trip to India, so that they may rejoice at his return.

A famous example of how natural this process can feel is summarized in the answer to a question posed to mathematician John Nash, diagnosed with schizophrenia, in the book A Beautiful Mind (1998 [2001]): ‘How could you, a mathematician, believe that extra-terrestrials were sending you messages?’ To which Nash replied: ‘Because the ideas I had about supernatural beings came to me the same way my mathematical ideas did, so I took them seriously.’

The question, then, becomes how to simulate this much more general, in fact, almost unlimited phenomenon of seeing meaning in everything, in a way that feels natural, and allows for a person to create narrative. How to simulate the experience of one’s surrounding as being pregnant with meaning that is there especially for you?

**Installation art**

In a sense, a spontaneous perception of connections is what the process of creativity is about. To understand psychosis, and relate it to ourselves, we might want to think of psychosis as a state of creativity. I learned that creative individuals and individuals diagnosed with schizophrenia, do share many cognitive traits. Neuropsychologist Peter Brugger describes:

> “The propensity to see connections between seemingly unrelated objects or ideas most closely links psychosis to creativity. Indeed, with respect to the detection of subjectively meaningful patterns, apophenia and creativity may even be conceived of as two sides of the same coin. One must keep in mind, however, that the term ‘detection’ as used here does not refer to a process of mere identification, to finding the solution to a perceptual puzzle. Rather, the assumption of ‘meaningfulness’ in randomness always involves a subjective interpretation of spatial or temporal configurations.”

This aspect of creative connections, in my opinion, could reflect a simulation of psychosis, in which the aim would be to support the phenomenon of apophenia, by constructing a surrounding that allows for the experience in a temporal or spatial configuration, that communicates the feeling, that all meaning is there especially for you. In the above-mentioned simulations, there is little to no room for the experience of a creative process. This is where I feel that installation art might be an appropriate tool for understanding this aspect, as I stated elsewhere:
‘To do this, one would have to look at installation art as an intricate system of experiences that is analogue to psychosis (a system being a set of connected things that form a complex whole). I consider this a possibility as installation art combines concepts, space and media to immerse the viewer in a sensorial and contextual network in order to create a physical as well as mental experience’.

When I design a space as intricate as an immersive installation, everything in that space is there for a reason, which is especially there, for the visitor to create meaning with, in a way that feels natural, as this is what is expected when visiting an artwork. What I think could be simulated with installation art, is what I would like to call the ‘emotional logic’ of psychosis, which I view as the logic of our associations and the emotions we have with them. When placing materials in my installations, I hope that a visitor’s own network of associations becomes an enlarged experience. Essentially, I hope to trigger the pattern seeking function of a visitor’s brain in a way that actively involves them in processes of unravelling their own inner complex narratives. It is precisely this aspect, the activation of the visitor, which I consider to contribute to an understanding of the subjective experience of being in psychosis that is different from the limited, technical and rather artificial simulations discussed above. Let me give an example of how I have been investigating possibilities to simulate this aspect.

**INTRUDER 2.0**

The work **INTRUDER 2.0** was made in the context of *Labyrinth Psychotica*, a practice based PhD of the field of artistic research. **INTRUDER 2.0** is a 60-m2 multi-media labyrinth experience. The work was presented and built in public at the Museum of Psychiatry, Het Dolhuys, in Haarlem, during a five-month artist in residency (2007-2008). Each week visitors of the museum would be able to see the labyrinth grow, engage in conversation and participate in the build. The walls of **INTRUDER 2.0** were about 4 meters high, hanging from a metal wire grid, reaching until the floor. The walls of the single pathway to the centre were about 20 cm wide and swirled from left to right in atmospheric patterns of light and darkness. Visitors had to move the walls with their hands in order to walk through. As they did, they could not escape making intense sounds with the crackling of the paper. Different types of material made each pathway sound different. Some walls were transparent. I attempted to not only simulate the experience of being in a space full of meaning, but also to capture the enlarged emotional experience of ‘the newspaper is communicating with me’ by creating a literal space of chaos, a world in which one traverses the walls of the labyrinth as if they are the pages of the news paper, expressing for me the sensation of getting lost in all the information. Let me share three aspects of the work that, I think, contribute to an alternative way of understanding the experience of media communicating with you:

First: I wanted to use a pivotal symbol that could play a role in a fictional psychotic narrative. I wanted to enlarge and make understandable for a visitor how, I feel as an artist, a person in psychosis could automatically derive evidence from seeing an apple in the media, that they are guilty of 9/11. In order to do so, I designed the labyrinth narrative around a ‘(green) apple psychosis’. To create this, I placed as many references to (green) apples as I could, throughout the labyrinth, which, I imagined, could help build a narrative of ‘emotional logic’ (a network of as-
associations) becoming enlarged and experienced as a real reality. ‘An apple a day keeps the doctor away’ (apples are important), Newton’s apple (apples carry messages), Snow Whites poisoned apple (apples are dangerous), Adam and Eve’s apple (guilt), William Tells apple (a shooter), New York (the Big Apple) etc. In order to build this, in part, I asked visitors to whisper their associations with apples, while recording them. I used the recordings by playing them back in small Apple iPods that were attached to fake apples (the ear buds formed the ears of the apples), and placed at different locations in the labyrinth. These whispers could be heard as layers over the already present crackling of the paper. In this I hoped to create an experience that would aid a sensation of apples being suspect carriers of meaning or messages.

Second: In the labyrinth I placed a set of surround sound speakers connected to a computer from which, while the visitor was walking in the labyrinth, I would slowly build up a soundscape, like a ‘DJ’, in order to be able to play sounds that reacted real-time to the actions of the visitor. The sounds consisted of the apple whispers, random music, and several versions of pre-recorded sounds of the crackling of the paper of a previous person walking through the labyrinth. I would play with the amount of layers of sounds and silences: the closer a person got to the centre, the more intense I would make it. I hoped in this way that it would feel like the experience of the installation ‘communicating’ with you, the visitor.

Third: I invited visitors in a process of ‘self-publishing’ in which I asked them to leave stories on the walls about their emotional reaction to the labyrinth, as well as their own personal stories with psychosis. By having real messages, with different handwritings and content, I hoped it would contribute to a more visceral experience of deformed explosive media, chaotic content, information overload, in which each visitor would see, and could make their own personal narrative, while walking the labyrinth.

In addition to this, I used real newspapers, as well as a real TV that played ‘white noise’ and with which I did small workshops of ‘seeing things in the noise’ when a visitor entered the centre of the labyrinth. There were much more aspects in the design of my installation, that I relate to psychotic phenomena, but this will have to be left unsaid. Whether or not I was successful in my attempt to simulate this aspect of psychosis is hard to say, but I hope it clarifies why I think that using installation art could contribute to an understanding of psychotic phenomena.

[Next page] Some impressions of the INTUDER 2.0 multi-media labyrinth experience in Het Dolhuys, Haarlem 2008
Conclusion

In the brief space of this article, I have shown that understanding psychosis is important; as it is prevalent, and its costs to society are high, yet it is hidden and science still does not know what causes it. I have also shown that understanding psychosis is difficult; finding words to describe it is a challenge, and making sense of the bizarre ways a person might act, think or speak is considered nearly impossible. In addition, communicational expression seems to happen, in part, with creative performative acts, in which metaphors are used that may be confused for literal experiences, causing misunderstandings. I have shown that empathy is tough, even for professionals, as one simply does not want to feel such levels of emotion. On top of that, the brain seems to ‘shut down’ when the experience of another person is too different from one’s own archive of experiences. In order to empathize with a person who is extremely different, one needs to consciously activate ones mind, one needs to be aware of ones imagination filling with immediate and easy stereotypes, and one therefore needs to consciously seek sources outside oneself.

I have thus argued that the practice of psychosis simulation is crucial, as it acts as a prosthesis for ones imagination in an active and involved manner. I have also argued for the need to be vigilant about the existing simulation designs. I illustrated this by referring to the classic ‘media is talking to me’ experience, and taking a closer look at how the experience is simulated, concluding that existing simulations need to be aware of alienating psychotic experiences from ‘normal’ experiences, and that simulating experiences, in a literal way, is problematic. To make my point, I have highlighted two aspects of psychotic experiences: how the senses are altered, and how meaning is generated, in order to show that these experiences are not alien from ‘normal experiences’. I then proposed how installation art may help contribute to the understanding of these two aspects and may help inform future design practices of psychosis simulation, illustrating this by referring to one of my own artworks, in which I represented an enlarged messy embodied emotional experience of media, as opposed to a distant literal illustrative approach.

Coming to the end of this article, I would have liked to elaborate on why I consider the form of a labyrinth significant for psychosis simulation, or how I think that embedding new sensor and sound technologies, could enhance experiences of a world communicating and reacting directly to you, which I developed in a project called ‘The Labyrinth’. I would have liked to explain the problematic aspects of taking a labyrinthine experience to the ‘real world’, which I think, could be addressed by using wearable augmented reality technology; allowing a person to view ones everyday environment through a cinematic labyrinthine narrative, that I consider to be analogue to psychotic experiences. And last but not least, I would have liked to talk about the perceived dangers and ethical issues, in which psychosis simulation is feared as psychosis stimulation. But sadly, there is no time. For this I refer interested readers to my thesis Labyrinth Psychotica.

What I can do, however, is leave the reader with a mental exercise that I created to help me to imagine what it is like to experience media sending you messages. Begin the exercise by deciding for yourself that an apple, wherever it appears, has a meaningful message that is there especially for you. Think about the colour of the apple; when it is red, what does it mean? When it is green, what does it mean? If you want, choose a different symbol; something, you think,
might not appear so often, like a dandelion, or a peacock, but has significance for you. You will begin to notice just how uncannily often that symbol starts to appear in your world, on TV, on your Facebook wall, etc. Now, link the moment you see the symbol, to what you are feeling, thinking and associating, begin to create a story, let the symbol ‘enter’ you, become more than a coincidence when you see it. Then, imagine your senses enlarged, your ability to create meaning expanded, imagine that the association you have in the moment, is so creative, that it becomes an ability to be experienced as a ‘real’ reality. What would media be telling you? And how would you act?

Draught of the labyrinth

Notes

1 R.J. van den Bosch, Schizofrenie, Subjectieve ervaringen en Cognitief Onderzoek, Bohn Stafleu van Loghum, Houten/Zaventem 1993, p. 76 (as cited from Wing, 1975), translation by author.
2 https://www.youtube.com/watch?v=74vTrbo5A, 2.04 min. (last viewed April 11th 2013).
5 Frith & Johnstone, Schizophrenia, p. 1, and: http://www.ypsilon.org/?page=6753919; Note: The numbers vary with different sources.
7 Fuller Torrey, Surviving Schizophrenia, p. 2-3.
98


14 The years given are approximations. The exact year of presentation to the public has been difficult to track down from official sources, some of the developers were unresponsive to emails, other parties of the same project gave an indication, but were not sure anymore. I determined the approximate year on what was reported in several press sources and educated guesses from indirect parties involved.

15 The project Janssen ‘Mindstorm 3D: A Virtual Hallucination’ director: Scott Whitham, director of photography: Tony Stewart. An online report about the project may be found here: http://www.behavioral.net/article/mindstorm-simulating-psychosis (last viewed October 1st 2012).

16 http://www.youtube.com/watch?v=b6oqPQ1vq4Q (last viewed, April 13th 2013).


18 http://www.youtube.com/watch?v=s33Y5n15Wbc (last viewed April 12th 2013).


20 Sechhaye, Autobiography, p. 23. Note: Renee’s experiences are often cited in medical literature due to the intricate vividness with which she is able to describe them.


23 J. Tukker, Meer dan dat, 10 portretten van mensen met schizofrenie, Tobi Vroegh, Amsterdam 2011, p. 37. Translation by author.


26 Van den Bosch, Schizofrenie, p. 21.

27 Fuller Torrey, Surviving Schizophrenia, p. 4-6.

28 Fuller Torrey, Surviving Schizophrenia, p. 5.

29 Fuller Torrey, Surviving Schizophrenia, p. 5.


31 Van den Bosch, Schizofrenie, p. 35 and p. 36 (citing Vonnegut, 1975).


33 This is cited from a personal e-mail interview with an individual with experience of psychosis, as it was written by a non-English speaker, minor spelling mistakes were corrected by author.

34 Roe & Lysaker, ‘The Importance of Personal narratives in Recovery from Psychosis’, p. 8.

35 Fuller Torrey, Surviving Schizophrenia, p. 27, and W. Kusters, Pure waanzin, p. 83.


38 Fuller Torrey, Surviving Schizophrenia, p. 7.

39 Van den Bosch, Schizofrenie, p. 35.


43 Van den Bosch, Schizofrenie, p. 23 and p. 35.

44 http://www.schizophrenia.com/diag.php (last viewed October 1st 2012).

45 On top of seeing this in the exhibition, I have also spoken personally to Pieter about his experiences.

47 Fuller Torrey, Surviving Schizophrenia, p. 389.
50 I have conducted artistic experiments with sensor technology in the collaborative project ‘The Labyrinth’: http://www.youtube.com/watch?v=uDt5UbyReQw (last viewed May 22nd 2013).
51 I have conducted artistic experiments with wearable augmented reality cinema in the collaborative project ‘The Wearable’: http://www.youtube.com/watch?v=fMQuEgy0m_8 (last viewed May 22nd 2013).
52 The thesis will hopefully be ready before 2014.