



***Elgaa's Season***

# **DISSERTATION**

**BY**

**Zhinous Rowshan**

**Submitted in partial fulfillment of the requirements for the degree of  
Master of Arts in Art and Science**

**University of Applied Arts Vienna  
Austria**

**Supervisor: Prof Virgil Widrich**

**Summer Semester 2013**

## **To My Mother**

**For supporting me at all stages of my life**

**“During human progress, every science  
is evolved out of its corresponding art.”**

- Herbert Spencer

## **ACKNOWLEDGEMENTS**

I would like to express my appreciation to a number of people without whom this thesis would not have been realized. My special thanks go to my supervisor Prof Virgil Widrich for providing me with her useful comments throughout the conduction of this research. Furthermore, I would like to thank Dr. Bernd Kraeftner for his support and for sharing his knowledge generously. I would also like to express my gratitude to the Art and Science department members for all their help and efforts.

In addition, I thank the Deli department of Limnology (Vienna University) for their collaboration with an essential role of Prof Tom Battin. I also thank my colleague, Martina Adlboller, for the privilege of working with her and learning from her through the last three-semester partnership.

Most importantly, I owe a hearty gratitude to my beloved parents and my brilliant sister whose unconditional support, love, and understanding have paved my way for reaching my academic and professional goals.

## Table of Contents

|                                                   |    |
|---------------------------------------------------|----|
| Abstract .....                                    | 7  |
| Chapter 1- Introduction.....                      | 8  |
| Introduction & Motivation.....                    | 8  |
| Chapter 2- State of the Art.....                  | 12 |
| Autism.....                                       | 12 |
| Sensory System.....                               | 14 |
| Chapter 3- Related Works.....                     | 17 |
| Theory of Mirrors and autism .....                | 17 |
| Nature and Seasonal Life - Zendegi (Life) .....   | 20 |
| Visual Thinking .....                             | 24 |
| Chapter 4- Installation and Experiment Setup..... | 26 |
| Chapter 5- Conclusion .....                       | 29 |
| Bibliography .....                                | 30 |

## **Abstract**

“Elgaa’s Season” is a mixed media installation, made of petri dishes and mirrors in reaction to a quote by America's best-known autistic woman, Temple Grandin. Watching the movie and reading her book inflamed my curiosity and inspired even more research on the relationship between visual thinking and autism. She was quoting not everyone on the autistic spectrum has the same sensory experiences; for instance people with too much visual agitation may be viewing their perimeters like a cubist or mosaic.

My reaction from this is to create an installation which draw up the audiences in to seeing and feeling their surroundings in this way. Looking through Elgaa’s eyes to her only season of life, allows people seeing their images break up, some parts are larger than others, some are diffracted and out of place to their normal position. Her eyes open a door to the novel season they have never experienced before, seeing another dimension of the same life they have been standing and living in.

This study aims at performing the practical experiences that autistic people are facing, as well as having a close touch of a fifth season in their life cycle. The look and feel of Elgaa’s season in fifth color needs a lot of potentials in this area in order to understand, accept, communicate and help autistic people better.

# Chapter 1- Introduction

## Introduction & Motivation



Source: Snapshot from “Temple Grandin” movie by author

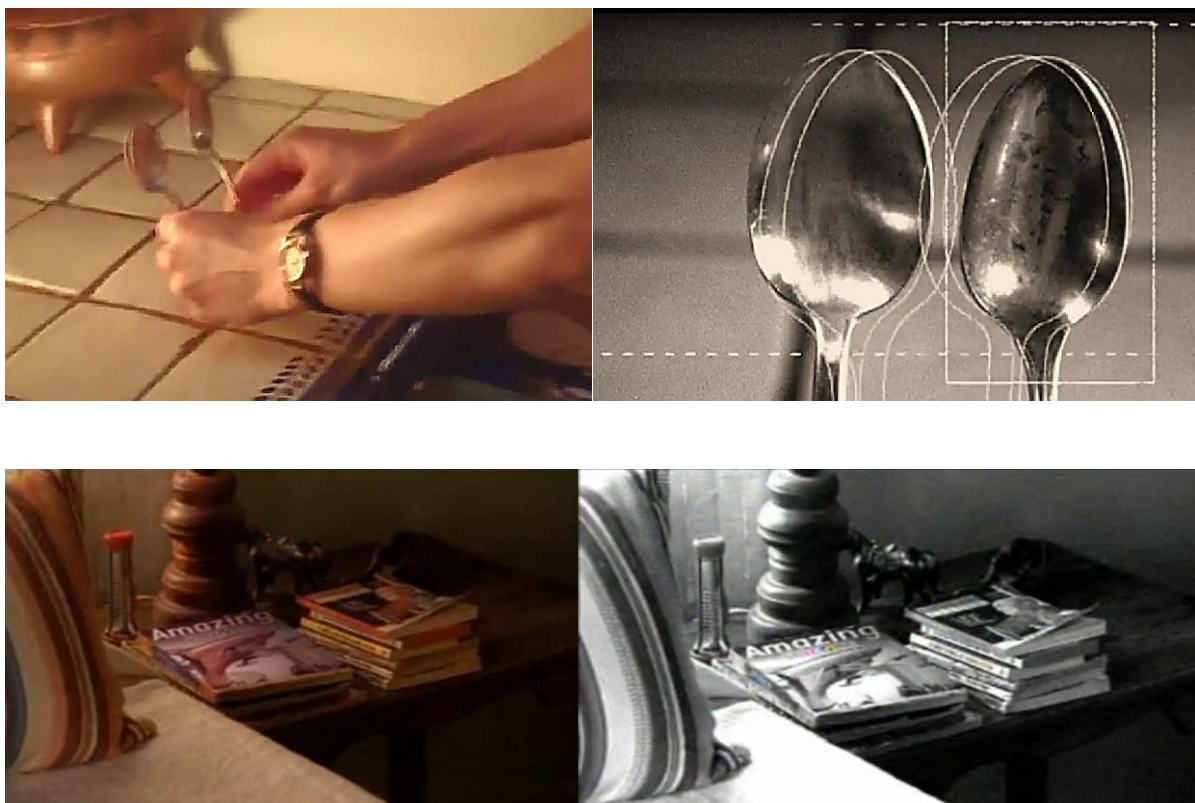
There are some special moments in life, which has to be captured by us because they have a profound impact on our life, like a movie with a touching story, which can influence our perception and thoughts. They can lead us to a new chapter, a unique vision, or a novel season.

Before watching “Temple Grandin” movie, I have never had such a close view and a clear picture of autism as a complex developmental disorder. The movie was a great opportunity to realize the autistic life as a fifth season. As an artist, I am trying to create a bridge that connects the audience to the autism world with the focus on sense of sight.

This autobiographical movie tells the story of an autistic icon “Temple Grandin” who was born on August 29, 1947, in Boston, Massachusetts. She was diagnosed with autism as a child and used her unique way of thinking to follow her goals to work in the field of psychology and science.

At the beginning of the movie, viewers are introduced into the mindset of Grandin, experiencing the world as she does. As she herself says in the opening scene of the movie (2010), “My name is Temple Grandin. I’m not like other people. I see things in pictures and I connect them.”

*Figure 1: Grandin observation*



Source: Snapshots from “Temple Grandin” movie by author

The movie tries to show how Grandin (Figure 1) composes and combines objects, and their associated details and specification to form and understand her surrounding world. She processes the environment by visual thinking and processing elements using bottom-up approach. For instance, she sees the “Yellow” (Figure 2) as a word in her mind and understands it by providing remarkable connection between elements related to the color yellow. In other words, she specifies details first and then forms broader concepts by composing pieces and elements since she benefits from fast and finer processing capability. As she describes, “I am able to see how all parts of the project will fit together and also see potential problems”.

*Figure 2: Autism View from the word “Yellow”*



Source: Google Image

In spite of having a great visual ability, she is suffering from being so sensitive in her communications and relationships with others. These issues will make her communication process much more complicated to establish therefore it might take her quite some time to be able to contact others.

Grandin credits autism as a base of achievement to where she is now; as a professor at Colorado State University, designer of “hug box”, writer, consultant, and autistic activist. She said, “I live in two worlds. I am a scientist and college professor first and a person with autism second. Autism is an important part of me, and I do not want to change, but my career is my identity, not autism” (Dr. Temple Grandin, 2012).

Grandin’s fascinating life story, with all its challenges and successes has been brought so much valuable features to one’s point of view. Temple Grandin’s fascinating life story with all its challenges and victories bring various meanings to the screen; it is like opening a new window to let audience feel like they are Temple (autism).

Overall, the movie allows audiences to experiment a new world like Grandin does; while it shows the story of her colorful life and her humongous achievements from her childhood to adolescence, it also shows a relationship between inside and outside.

This paper aims to establish a linkage between autistic people and non-autistics and, let observers visualize two environments, and thereby being introduced into the fifth season, a vision as a gateway for understanding autism.

## Chapter 2- State of the Art

### Autism

Stepping into the past, the word “autism” has been used since hundred years ago, which was derived from the Greek word “autos”, meaning “self”. Hence, the term an “isolated self” demonstrates situations in which an autistic person is removed from social interaction. Eugen Bleuler, a Swiss psychiatrist, was the first person that started using this term around 1911 to refer to a group of symptoms with schizophrenia. Later on in the 1940, researchers in the United States began to use the term "autism" to describe children with emotional or social problems. (webmd.com, 2013)

In fact, it was Leo Kanner who made the first formal documentation of autism in 1943. The work he presented was based on his observation research on a group of children with similar difficulties. He observed that these children had more interest to pictures and objects, rather than people, then he became aware of high level suffrage those children experienced from social isolation. In other words, they entered the world without ability to have affective social contacts.

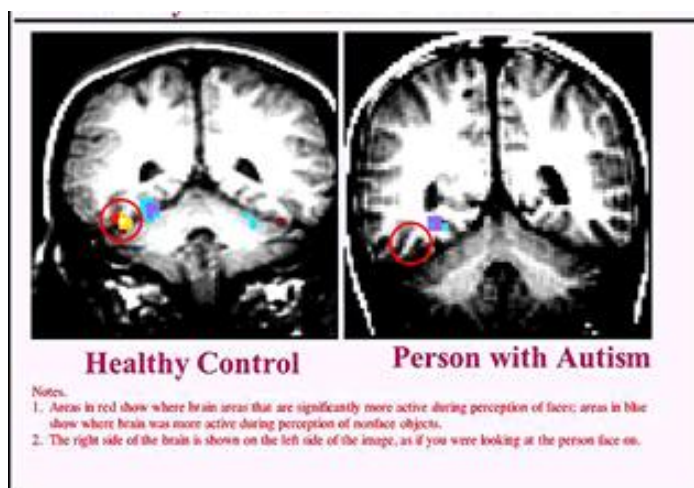


Source: Google Image

Ever since autism was introduced, it has gained a lot of attention and massive steps in today's society and has turned from the shadow of shame and anonymity to an important topic in research, education, and social reaction or interaction.

Autism by definition is a complex bio-neurological condition, a developmental disability that is associated with mental, emotional, and behavioral disorder in several areas such as communication impairments, social difficulties, and sensory processing. Autism typically appears during the first three years of life, and affects the brain's normal improvement of social and communication skills. (Wikipedia.com, 2013)

*Figure 3: Autism vs. Non-Autism*



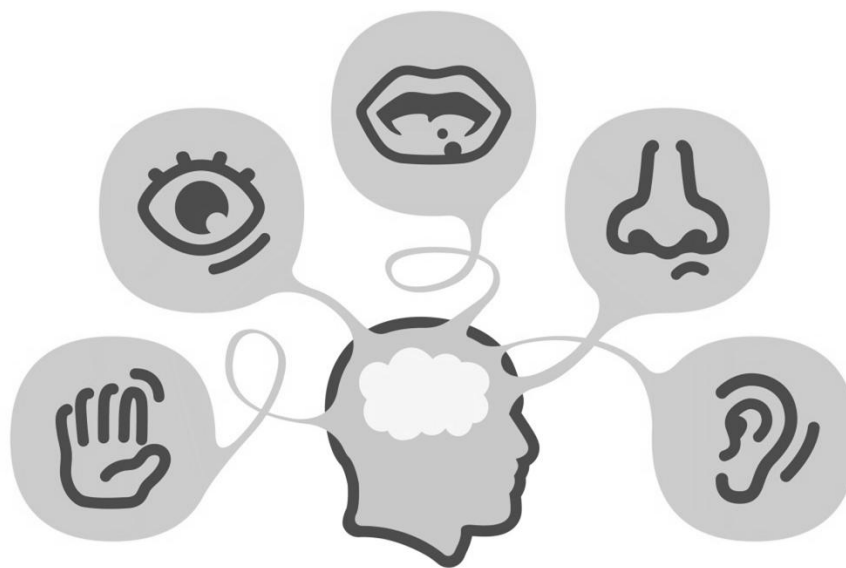
Source: Google Image

Autism is a disorder that has severely impairs improvement of a person's ability to communicate, interact with other people, and maintain normal contact with the outside world (Figure 3). Autism causes unusual behaviors, interests, and ways of learning and reacting to different sensations. Autistic people may also show high sensitivity to all their surroundings, which puts through a person's response to information in different ways. All these conditions differ in terms of broad severity of the sensory symptoms.

## Sensory System

Sensory system can be defined as a method of perception. It is a process that refers to our ability to take in information through our main five senses; vision, hearing, touch, taste and smell (Figure 4). As a system it organizes and interprets all information, and makes a meaningful response.

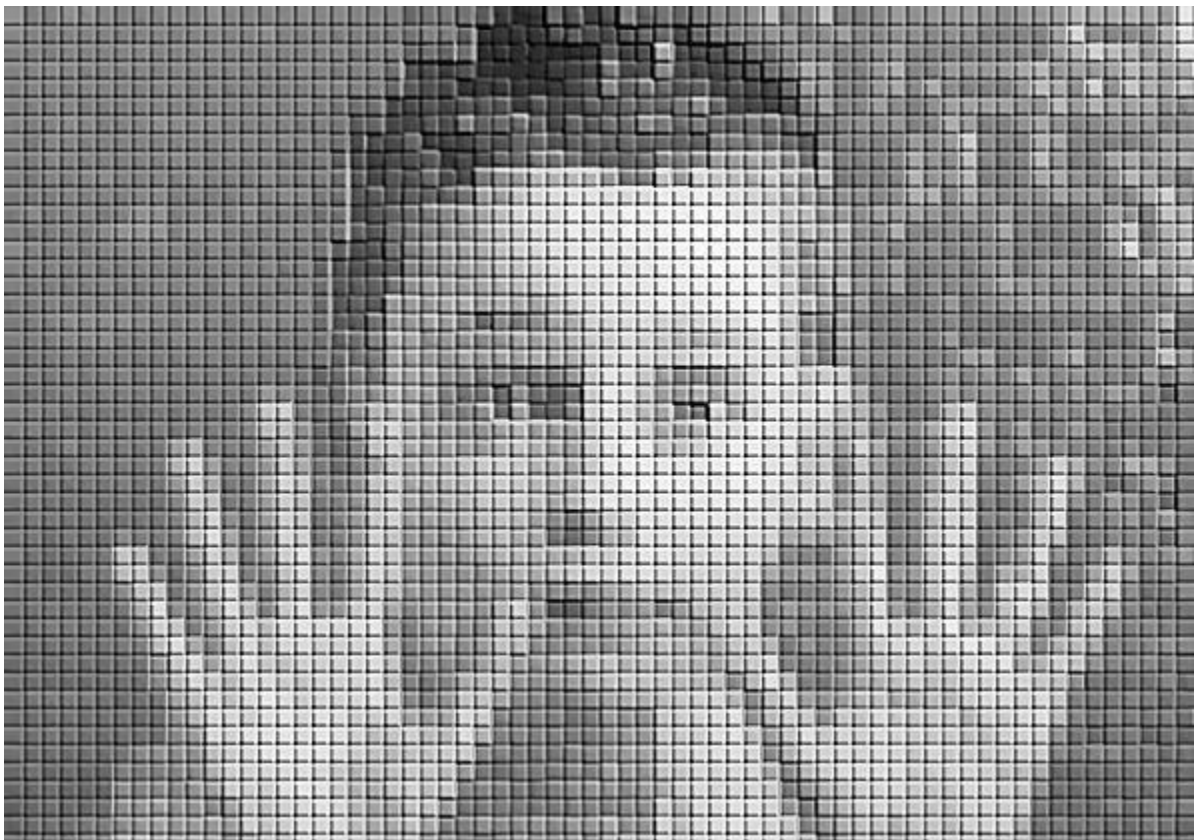
*Figure 4: Human Five Senses*



The most important sense in the human sensory system is vision or the way our eyes function; the ability and developmental process of meaning to what we see. So much of human learning is happening on a person's vision. Vision is identified as both a perceptual and a conceptual sense, which allows human to attend to, organize, understand and interact with his or her surroundings. Indeed, human vision system is the main operating system of the brain, which tells us when and where to do something. Therefore, we have the ability to match what we see to what we know and feel in order to have an identity match. As a matter of fact most of the brain's activity centers around vision and the main organ that it is associated with this sense is the eye.

At birth, most part of our eyes' structure, size and growth are almost completed which let our eyes start learning to function efficiently with our body and our brain. Therefore our vision skills automatically develop along our cognitive development. In comparison, the majority of autistic people have lack of the vision skills (Figure 5) which have not developed automatically. Certainly this can be stated by dr. Temple Grandin who says in her book (2008), *The Way I see it*, "I have been talking and writing about sensory problems for over 20 years, and am still perplexed by many people who do not acknowledge sensory issues and the pain and discomfort they can cause. A person doesn't have to be on the autism spectrum to be affected by sensory issues."

*Figure 5: Autism and Vision*



Developing the visual system automatically as a normal person consists lots of steps in order to direct the body and brain to visualize and learn the world, while as visual development is disordered in a person with autism. When the visual system is working properly, a person can see, understand what is seen and remember it at any time. But when the visual system is not gathering the proper information, person has mismatches in space and the visual system interferes with learning and understanding skills.

Many autistic people have an inefficient visual system, which can causes problems such as:

- Inability to pay attention
- Form stability (not able to recognize an object from another angle)
- Vision is reflexive rather than directive
- Lack of visualization
- Lack of integration
- Inability to move out in space very well

Through this study, it will be relevant to state from the author, Melvin Kaplan (2006), in the book called *Seeing Through New Eyes*, who says “...vision involves the brain as well as the eyes, and many disabled children suffer from neurological problems that prevent them from correctly perceiving what the eyes see. These perceptual deficits can translate into impaired social skills, poor language skills, motor problems, and a host of other severe symptoms.....”

Consequently, human visual system plays a main role in organization, orientation, and attention span, while as this span functioning differently in autism visual system. In general, every autistic person has a unique personality and combination of characteristics. All autistic individuals perceive the world differently at the sensory level.

## Chapter 3- Related Works

### Theory of Mirrors and autism

*“All my life I have been an observer, and I have always felt like someone who watches from the outside.”*

*Dr. Temple Grandin (1995), Thinking in pictures:  
My life with autism*



The first impression of this title for the reader is the word “mirror” itself, the transition that you see in it what you show in it. If we stand before the mirror and make a pleasant impression, it likewise looks back at us. But if we make an unpleasant gesture, an unpleasant gesture looks back at us. What we perceive from inside the mirror is created by us standing outside. Seeing is doing and what we expect to see depends upon our state of mind.

As people are mainly focused on having a clear image and relation in their surrounding mirrors, they pay more attention to know themselves instead of considering looking and understanding as a person with disability.

In his book (2006), *broken mirrors*, V. Ramachandran explores the theory of autism whose mostly have difficulties understanding other people’s intentions at a higher level, and they do not perceive other people’s gestures the same way we do. He argues mirror neurons and autism, and how they can be related.

One of the most important explanations of the mirror neuron theory is about action understanding concern autism disorder. Therefore this book, *Broken Mirrors*, is based on a following proof:

- The mirror system allows us to understand the emotions, intentions, and perspectives of others.
- The mirror system allows us to understand the behavior of others.
- Autism disability involves a lack of sensitivity to the emotions, intentions, and perspectives of others.

What emerges from this perspective is that autism disorder results from functional disconnection to the mirror system, that is, from "broken mirrors". Basically, broken mirrors understood as mirrors neurons. Human brain has multiple mirror neuron systems that specializes a potential mechanism for the imitation of actions as well as understanding social aspects.

During human development, mirror neurons are key elements to facilitate the early stage of developmental actions, administrative functions and many components of the brain, which is dismissed in autism disorder. Therefore, a failure to develop entire functions, mirror neuron system may damage the development of these important human capabilities. In other words, mirror neurons support the knowledge of how to perform an action that one is observing.

Certainly, being able to trace the notions of other people is far important ability for mans in their social interactions with others. In other words, mirror neurons help people understand not only their intentions of other people, but their feelings and emotions as well.

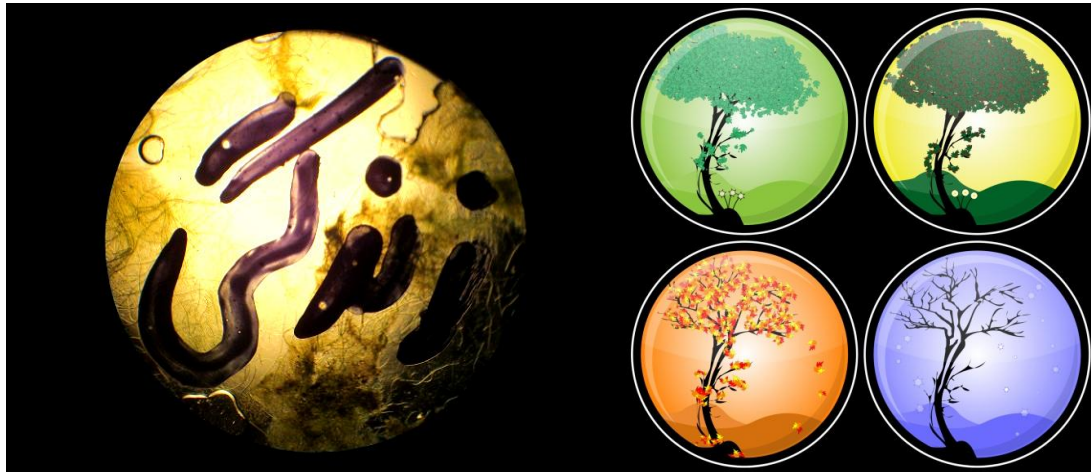
As a result, emotions establish one of the basic ways for a man to obtain knowledge about its situation, thus enabling to reorganize this knowledge on the basis of the outcome of the relations engaged with others.

According to Dr. Rizzolatti (2004), "Our survival depends on understanding the actions, intentions and emotions of others."

Through Elgaa's season artwork, the attention will be that our sense of vision is important, not only for observing, but in our relation, we need our vision to feel and interact the surroundings.

## Nature and Seasonal Life - Zendegi (Life)

*Figure 6: View of the word Life under Microscope*



The best way to understand the meaning of life is in the process of imaging, processing, and integrating. We gain meaning by connecting to the four seasons of the year; Spring, Summer, autumn, and winter. All four seasons cover different parts of life, with each having its own particular purpose.

Spring is the season in our life, which is known as the time of new growth. It is the moment in our lives when we clear out the past to make a path for new. It is a time when we create new beginnings for our lives and ourselves. With the dawning of spring, is coming summer season as a time to enjoy and to feel bright, happy, and positive. When autumn arrives, the season of our life when we recognize and feel the need for change comes. With the coming of winter we experience challenges and difficulties in our life. It can feel coldness and loneliness. Winter times provide us with important learning and understanding. It is through the challenges and difficulties in life that we learn our most valuable lessons. Seasons are the natural rhythm which we experience all of these seasons during certain stages of our life, and as they are important for the cycle of nature, likewise they are important in our own life cycle.

Therefore, four seasons: Spring, summer, autumn and winter come in various colors, and everything in nature still continues living. The same is true about humans; it does not matter how colorful the seasons are, besides all pains, happiness, sorrows, successes and failures they go through all of a year and life is still continuing with all good and bad things that happens.

This artwork, Zendegi, encompasses the compromise of nature (in this case; living algae) to human's life in four colorful seasons placed in four volumetric bottles. A word Zendegi (Figure 6) itself is minimized under microscope to let viewer understanding the other side of life evolution. As seasons come and go, they show us that all vital life is cycling through a year either in a laboratory glassware or human life. All are indicating a precious moment that matters.

As nature composes some of her loveliest creatures for the microscope, Zendegi (Life) as an art piece tells observer along a poem (Table 1) how precious it is our lives. It is because simplicity and vastness are both beautiful that we seek by preference simple and vast; that we take delight, now in precising with a microscope that wondrous smallness which is also a vastness. The vision for this artwork (Figure 7) was that the bottles in the laboratory would represent different four seasons in nature and also different seasons in our own humanity. Basically, when I stepped into the knowing of autism perceptual world, I could see and feel them through a fifth season alongside our four colorful seasons in nature.

Through this study, it will be relevant to state a quotation from the Temple's teacher, in the movie called *Temple Grandin* (2010), who says "Think of something as a door, a door that is going to open up onto a whole new world for you. And all you need to do is decided to go through it."

Table 1: Poem of Nature Element by Artist

*Pick colors, Colors of seasons*  
*This is life, life is art*  
*This is what a year is made of.*  
*Gazing into a pond*  
*Ripples away into darker waters*  
*Touching algae*  
*A creature water bound*  
*Too small to be visible to human eye,*  
*So delicate it may be carried on waves or winds,*  
*So fragile it depends on sunshine and water for life.*  
*They say, life can amaze you.*  
*Until you wonder how they ended up here,*  
*A life that has been reduced into a glass*  
*All we see is the busy life on the other side,*  
*Blurry but undeniably real through the glass.*  
*This is what a year evolution is made of*  
*The memory of confusion*  
*The beauty in delusion*  
*Moments of bravery*  
*Life consist a year of joyful ride,*  
*A dream, an ambition, it is all attainable,*  
*All we need to do is believe.*  
*All we need is an eye, to perceive.*  
*It is the life in your years,*  
*Not the years in your life that matters.*

Figure 7: Four Season Experiment



## Visual Thinking

*"What emerges in Thinking in Pictures is the document of an extraordinary human being, one who, in gracefully and lucidly bridging the gulf between her condition and our own sheds light on the riddle of our common identity."*



*-Deborah Tannen (2001), You Just Don't Understand*

The nature of visual perception of man takes part in a various range of human behavioral complexes such as balance, object recognition, navigation, and social interaction. It seems that the explanation of man's visual perception separates into three levels; the brain, the process, and the perception. Overall, this raises the problem of consciousness which is directly linked to human vision and its different functional specializations.

Therefore, this question arises: how is information from our eyes interpreted into the language of our brain, and reconstructed into experience of our surrounding objects? In fact there are multiple brain systems that deal with visual information, which are specialized, sometimes disconnected from each other.

Word conception and visual imagery are two separate facts of human's everyday cognition, while as in the context of autism, the combination of sentence comprehension and visual imagery processes are diverse. Dr. Temple Grandin stated in her book, *The Thinking Pictures*; that people with autism relate to the world by creating visual images in their minds.

In the opening of her book, *Thinking in Pictures*, Grandin (1995) she says: “I think in pictures. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures. Language-based thinkers often find this phenomenon difficult to understand, but in my job as an equipment designer for the livestock industry, visual thinking is a tremendous advantage.”

Recent studies have suggested that there may be an under connectivity among cortical areas in autism (Just, M.A., 2007), which impact negatively and slow the integration or communication in speaking and imagery processing in autistic people.

Hence, by studying and using visual elements the project Elgaa’s season will be defined in a way to present an idea of interaction and communication in fifth season as inside view of autism.

## Chapter 4- Installation and Experiment Setup

The installation design of the Elgaa's season is influenced by several factors, such as visual, social, and emotional factors. In designing this project, the elements in autism disorder and its relation to human's nature was studied and used.

The autism and non-autism sense of visions are defined as a context of perception and in a perspective of a life, based on the understanding and imaging of being in our presence, and the knowledge of autism. People with Autism relate to the world by creating visual images in their minds.

According to Grandin (2010), "...some people when they look at something the visual images breaks up like mosaic...". I am planning to benefit from her comment for designing the experiment to let observers see themselves like autistic people.

The intention of this project is to demonstrate an installation that performs visual perception to focus on two main elements of autism disorder; sense of sight and social interaction. Another major goal of this project is to create and encourage observers a unique response to the world of autism through Elgaa's season.

One of the main goals of Elgaa's season installation is enabling different visual perspectives between autism and non-autism relationship. Inviting people looking into pieces of mirrors, seeing themselves in a way they are not used to see. In other words, aside from looking, mirrors are responsible for connection and communication. Therefore, using autism social disability and human sense of vision can help the observer to achieve this purpose.

The installation itself is based on two basic materials, small mirrors and petri dishes which I am going to place and present them on the floor. Four colors of seasons are going to paste inside petri dishes plus related words while as Elgaa's season remains transparent, only filled with the word "me".

27 | Page

Mirrors located on the floor with different heights and the importance of their reflection in observer's eyes is a result to connect and interact with autistic people. In other words, observer as non-autism will be able to break the boundaries of disconnection and demonstrate new vision as a gateway for understanding autism. Therefore, connect himself to the Elgaa's season in a lifespan perspective.

Different heights between mirrors indicate broken images of a person who is looking at. By differentiating insect's eyes, like organized channels, the transformed images of mirrors reflection tells observers about disconnection of autism from functional base.

My aim is that viewer would be inspired to reflect upon themselves and the season in their own lives. I also wanted viewers to understand that in every season there is life and connectivity, even in the colorless season of Elgaa there is beauty and life. Observer perspective is what seems to be most important.

## Chapter 5- Conclusion

Taking a deep look on biographical movie “Temple Grandin”, readings, and researches, leads us to conclude that Elgaa’s season has shattered the misconceptions and expectations of what people with autism can experience and observe in their lives and become a conjunction bridge between them and non-autistic people. Understanding the connection between different aspects of visual perception help observers to have a closer attachment and more caring supports with autistic people.

This piece opens a new window for audiences to observe, feel, visualize, connect and interact with the world of autism sense of sight and introduce them to their only season of life, Elgaa’s. This brings opportunities indicating that autistic people are able to see and live in the same four colorful seasons of nature and deal with the same elements as others; but their perceptual views turns out to be totally different from non-autistic people.

As an outlook, however the fifth season differs from other seasons in terms of visualization for autistic people, but in fact, it is important that Elgaa’s season will be able to attain the views of social and emotional understandings in life of autism in the vision of experiencing their observation in communication.

In sum, observers broken image through looking at mirrors have led them begin to achieve and document outcomes that can be associated with effective influences across the lifespan of individuals with autism. It is like somebody who is now entering his or her fifth season, Elgaa’s, of involvement with autism awareness season.

## Bibliography

- Dr. Temple Grandin, (2012, October 14). Autism is Not My Identity. Retrieved from <http://www.takepart.com/article/2012/10/15/temple-grandin-autism-is-not-my-identity>
- Deborah Tannen, (2001), *You Just Don't Understand*. Retrieved from <http://www.amazon.com/You-Just-Dont-Understand-Conversation>
- Webmd.com. (2013). History of Autism. Retrieved from <http://www.webmd.com/brain/autism/history-of-autism>
- Wikipedia.com. (2013). Autism. Retrieved May 2, 2013, from Wikipedia.com: <http://en.wikipedia.org/wiki/Autism>
- Dr. Temple Grandin, (2008). *The Way I See it: A Personal Look at Autism and Asperger's*. Retrieved from <http://books.google.at/books>
- Melvin Kaplan, (2006). *Seeing Through New Eyes*. London, UK: Athenaeum Press, Gateshead, Tyne and Wear.
- Ramachandran, V. S., & Oberman, L. M. (2006). *Broken mirrors: A theory of autism*. Sci Am.
- Rizzolatti G., Craighero L., (2004). *The Mirror-Neuron System*. Annual Rev. Neuroscience, 27, 169-192.
- Temple Grandin, (2010). The Internet Movie Database (IMDb). Retrieved from <http://www.imdb.com>
- Grandin, Temple. (1995). *Thinking in pictures: My life with autism*. New York City: Vintage Books.
- Just, M.A., Cherkassky, V.L., Keller, T.A., Kana, R.K., Minshew, N.J. (2007). Functional and anatomical cortical underconnectivity in autism: evidence from an fMRI study of an executive function task and corpus callosum morphometry. Cerebral Cortex, 17, 951-961.
- Dr. Temple Grandin, 2010. Future Horizons, Inc. Retrieved from <http://www.templegrandin.com/>