TIME, THE ONLY THING WE HAVE Emma Bjurström



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PROLOGUE

The human being has in average about 30 000 days in the life time. Still most of us think we don't have enough time. During this time length we create time zones experienced as a waiting time till the real time starts. Material standard and technical innovations have contributed to an inner imbalanced rhythm making us mentally elastic in a way that can be detrimental. When being surrounded with such distracting factors we don't use ourselves as time setters, but rely on the machines accuracy. The humans inability to define time on the basis of his own mental qualifications has not been recognized strong enough in history. When Leonardo da Vinci made his drawings over the human anatomy, it was a geometric image with measurements. There was nothing else then lengths, surfaces and volumes. This maybe reflect how exactness in science, such as time, also influenced art in those days. In my perspective we need to change our picture of man as a "everything time measuring".

In early days of mankind we used time to prevent events from occurring at the same time, often in a long term perspective. This is not the case anymore. The long term perspective is not that important any more, maybe because we have lost ourselves in short time details and lost the ability to view the long time perspective.

When reflecting on my own work in relation to this I am interested in the alienation of being in relation to the outside world, the insuperable outside which can develop when losing track of time. In this gap lies my interest as an artist. That the existential aspect in this totality are repressed, becomes visible for some of us now and then and the way it shows is individual.

With this thesis I would like to put emphasis on the fact that time is the only thing we really have. This fact can be experienced in different angles. Although time is not visible, or we tend to push it away, I believe that how we think and live with time is the main reason for most of our decision making.

In the first part of the thesis I would like to understand how time was experienced in the old days and relate to the present way of living after time. I want to twist and turn the concept of time by reflecting the laws of physics, the origins of time and how we connect or disconnect with it today.



Emma Bjurström, Oil on canvas

THE END OF THE TALE A Reflection on J.R.R Tolkiens World.

When regarding my painterly work I am in a process of leaving the fairy tale behind to investigate in something closer to reality. Reality is always a rapid flux, constantly moving across space and time. The language in my paintings is still similar, but I shift focus by painting the present time or the future instead of the past. I am building systems of images which is a fictive, but possible result of the materialized world and culture we live in. An invitation to ideas. Neither is culture static. It is like an organism always growing, shifting and adapting.

The German philosopher Max Weber,1864 -1920, started during the last century to describe the modern world as being disenchanted. The old myths had lost their power and tales were only for children. Could it be that the writer J.R.R. Tolkiens¹ world, described in his famous trilogy, was a reaction against the disenchanted world? A revolt in which the fantasy became the domicile in an increased material society. In the essay Avförtrollningen av Midgård (The Disenchanting of Midgård) the author Tobias Harding argue that there is a clear connection between the world of Tolkien and our own world. Tolkien has often been interpreted as taking distance from the industrialized modern world in advantage to the pastoral fairy tale. It is, however, also argued that the fictive world of Midgård² seems to be in a process of disenchantment and so is also the world in the Lord of the Rings. What we observe is that years of magical forces where evil is evident will disappear to be replaced by a human epoch. The moment the powerful ring was destroyed not only the evil, but also the good magic forces passed from the scene. From that moment it is up to the human beings to be responsible for their own destiny. The trilogy ends with a melancholic farewell to the enchanted world and the mythic Midgård has transformed into a mirror of our own reality.

¹ J.R.R Tolkien 1892- 1973. British author mostly known for the fantasy trilogy *Bilbo*, *Lord of the Rings* and *Silmarillion*.

² Midgård is the village where the leading character of Tolkien's trilogy lives.



Leonardo da Vinci, Vitruvian Man

INDIVIDUAL TIME VERSUS THE CLOCK TIME

"If we want to create the absolute, unalterable unit for length, time and mass, we should not depend on our planets movement or mass, but stick to our own wavelength, frequency and mass of non-transient and alike atoms"

– James Clerk ³

How long does a quarter last? When I use myself as an instrument to explain how long a quarter lasts is it difficult to define the length of a quarter. According to the writer Bodil Jönsson in her book *Tio tankar om tid*⁴ we should separate personal time and clock time. They are both equal truths and its ensemble with human lies in the interpersonal.

In *Experimental Physic* the writer Nina Reistad⁵ made the conclusion that there is a reason why a second last that long, a meter has the length it has and a kilo weights what it does. These units are understandable and suitable for us. The time unit one second is the time between two heart bets, a human weight is a number of kilos and we are up to two meters in length. This could be called biological clocks or rhythms. Our main regulator is the brain with its various internal rhythms. In dance and music we express the rhythmicity of our whole structure. These arts are in my opinion tools we can use to relate to time and give it meaning.

How further extend can we our understanding of time? It depends on how long view we want to take. The Long Now Foundation believes that our preoccupation with here and now makes us loose the understanding of the time scale direct us to a too strong view on time. They are constructing a monumental clock that will last for 10 000 years. They are imagining a clock that "ticks once a year, bongs once a century and the cuckoo comes out once every millennium."6

What I find interesting with such clock is that it would change our imagination about time in a similar way that the photographs of earth from space have done for our thoughts about the environment. It reframes the way people think.

I think it is an all-absorbing interest to connect this long lasting clock to the laws of physics. The laws were not invented for short term studies. They have always had the same condition from the very beginning. We understand by now a lot about how the universe expanded in the Big Bang, but the underlying physical laws still do not seem to account for how the universe started. Should we understand the universe as a totality using physics or are there additional principles we need? Physics have so far always a set of rules which gives the answer if certain circumstances are include. Those laws do not depend on the absolute time. There is no historical question in physics asking how the laws developed in the way they did. The laws of Newton, about gravity for example, say nothing about how they are related to time. Therefore it may not be possible to apply these laws to the universe, because then you have to add information about how events start and end. Time is relative and applied to the circumstances on earth.

Another way to measuring time is off course the calendar. The way our calendar has evolved has been unpredictable. From the beginning it was a human construction loosely based on repetitive movements of the celestial bodies, where believes about the divine had a large impact in identifying who we were and how to act. In the future I doubt that questions of science and technology will have a large part to play. Our various calendars are part of the arts of human life, not the science.

³ Maxwell, James Clerk, 1831-1879, Scottish mathematical physicist. He did great achievement concerning electromagnetism.

⁴ Jönsson, Bodil, *Tio Tanker Om Tid*, Stockholm, Blomberg, 2000, p293.

⁵ http://www.arkiv.certec.lth.se/dok/expfysik/1_5_04_mass.html. Visited 4/11-2013

⁶ Hills, Danny, US computer scientist and the inspiration behind the project The Long Now Foundation. http://longnow.org/clock/5.Visited 20/12-2013



Emma Bjurström, 3D Printed Machine



Emma Bjurström, 3D Printed Machine

THE HUMAN BEING AND THE MACHINE

I find it suitable to bring in Isaac Newton into my text. In the book The Cambridge Companion to Newton the authors Karin Figala and William Newman goes through the pages of esoteric texts Newton wrote in relation to his work. It is important to remember that the 17th century was characterized of religion, so the inexplicable was something that influenced science. He was a man of the 1660 where chemistry was not a subject in the education, but books were written about alchemy. This introduced people to a new world that was in constant change. Later, the discovery of X-ray gave us more understanding about our body as a mechanism with its own need.

In 1976 the *Selfish Gene* by Richard Dawkins⁷ was published where he explains genes as replicators. We are made like machines who want to improve us further with time. The evolution theory of today believes that these genes are the reason why we exist. When did we start to see life, us, and nature as machines? In the time before Newton cosmos was seen as a machinery, but the human being was divine. After the discovery of DNA we became a part of the

circle and our feelings and actions could be analysed on the basis of this knowledge. Does it matter that we don't feel like this, like machines? It is ironic that Newton himself in 1697 was not a machine. His fundamental idea, the force concept, gravity, is not mechanical, so where did it came from? Which question did he answer? The only thing we know is that he added an invisible force. An invisible force that was a part of another tradition, the Hermetic tradition. He manipulated the outside world with magical forces, which made him the last magician.

In Giorgio Agambens essay "What is the Contemporary?"⁸ he remarks that to be contemporary and belong to a certain time one must neither really coincide with it nor fit to its demands. That means that you need to be out of phase to require enough perspective in order to truly get a contemporary perspective.

We should reconsider our relation to time, to relate experienced time to a conscious idea and I believe this becomes more natural when thinking about the past and our generations.

⁷ Dawkins, Richard, came to prominence with his book *The Selfish Gene* which popularized the gene view of evolution.

⁸ http://www.scribd.com/doc/21346236/What-is-the-Contemporary-by-Agamben. Visited 20/8-2013



Emma Bjurström, Oil on canvas

TIME COUNTDOWN

What happens if our technology just keep on accelerating?

The term Singularity metaphor answers the question when studying a black hole, a collapsed star. This is a region where light and everything else disappears from our universe into the black hole. It is called the Event Horizon and the centre of it is named Singularity. The Cambridge mathematician Stephen Hawking writes that at this Singularity the laws of science and our ability to predict the future would break down.9 The since fiction writer Vernor Vinge applied this metaphor in his novel Across Realtime from 1991.¹⁰ While the characters in the story were temporarily isolated and out of time in so called Bobbles, civilization and the rest of humanity disappear from Earth. The characters realize that technological advances were self accelerating. Innovations that had taken years to develop were made in days. Vinge calls this event the Singularity, a place where extrapolation breaks down and new models must be applied. Models that are beyond our intelligence.

In 1985 Vinge predicted that this *Singularity* would happen in reality, in the life time of his reader. A lot of people including the clock designer and co- founder of the Long now foundation Danny Hillis, have adopted this term as a way of referring to the technology acceleration. There is even a date set up for some enthusiasts, 2035 C.E.

Every time epoch has its own future disaster, the view of how the world and its inhabitants will come to an end. The human being seems to have a fascination for catastrophe scenarios and expect them to hit us all at once. It seems to me that the distance to this future is coming closer and closer, but is it really so? Maybe we are exactly where we should be in relation to a line of events through history. Like James Dyson¹¹ once said "I protested that the scientific revolutions turn over whole previous constructs of the universe. You need the space of continuity to have the confidence not to be afraid of revolution."12

⁹ Brand, Stewart, *The Clock of the Long Now, Time and Responsibility*, London, Weidenfelt & Nicoloson, 1999, p20.

¹⁰ Vinge, Vernor, Across Realtime, London, Millenium, 2000.

¹¹ Brittish inventor and industrial designer.

¹² Scwartz, Peter, *The Art of the Long View*, New York, Doubleday, 1991, p54.



Pierre Huyghes, Aquariums

LINEAR AND CIRCULAR TIME MEASURING

What is the clock actually here to do? A long time ago it was created to imitate universe. It was our way to create a representation of the travel of the sun. This method developed further and finally the digital clock was invented which has nothing at all to do with our universe. The actual idea about the clock is not about showing the natural time travel, it is an artificial invention.

In opposite to that and to understand the origins of time, it could be interesting to mention China where time was seen as an aspect of the dynamic basic principles of the universe. Time belongs to the Yang principle and Yin is associated with space. Together they manifest the Tao, the secret law which governs the cosmos.¹³

In China time has never been considered as an abstract parameter or as an empty time period. Time refers to a condition, favourable or unfavourable for action. Time and space were considered as an ensemble of occasions and places. Previous times, the present time, the morning and the evening are combined together to form duration.¹⁴

Even if time is seen as a duration of events in a circular measuring, it is hard for the individual to see it that way. It is easier to imagine a line of events that is measuring a time. Why does time have one direction with a before and after scenario? The answer can be find in that all past/ future distinctions arise because our environment is very far from a stabile condition. The order energy is transferred from one condition in an order sate to a disordered state and this is increasing every year.¹⁵

"It would be interesting if I could take this indifference towards something that will keep going over the course of a long period. Find a site to do things with no time frame and with no constraint or at least not the same constraint all the time. Not the constraint that is always directed by what the museums things you are going to do or perceive."¹⁶

The French artist Pierre Huyghes reflects on his work *Aquariums*. To free himself from the usual way of presenting work he is thinking about finding a platform to build something that he could see over the course of time, to deeply be transformed and materialized. That totality of conditions contained in an entire complex of surroundings.

Even for Isaac Newton there existed an absolute space and an absolute flux of time, which were both a result of God. In practical physics they had become parameters. This growing separation of divine time from measurable time is not unrelated to the development of the clock, our instrument of time measurement.

When the author C.G. Jung died, 1961,¹⁷ a female patient to the author had a dream that night: On a sunny day there were a lot of people on a meadow. Jung was among them. He wore a suit which was green in front, black on the back. At the meadow there was a black wall with a whole cut out exactly matching the outlines of Jung. He stepped into that hole,

¹³ Von Franz, Marie- Louise, *Rhythm and Repose*, London, Thames and Hudson, 1978, p11.

¹⁴ Ibid

¹⁵ http://www.slideshare.net/seanmcarroll/setting-time-aright

¹⁶ Art Review, vol 65 no 7, November 2013, p45.

¹⁷ Carl Jung is the author to the book *Memories, Dreams and Reflection*. It is a partially autobiographical book by the Swiss psychologist and it details Jung's childhood, his personal life, and exploration into the psyche.

and one now only could see a black wall, but she knew that he was still there, invisible. She looked at her self and saw that she wore an identical green black frock.¹⁸ In dying we may only step outside the "event horizon" of the living, but still exist in an unobservable state.

Albert Einstein regarded time as a flow of inner and outer events, and at the same time as he presented his thesis on relativity of time, C.G. Jung came across the same fact in his exploration of human unconsciousness. In dreams time also appears as relative and the before and after seems to lose its meaning. Time even seems to disappear completely. When we touch the deeper areas of the psyche we get a feeling of being in contact with something infinite. As Jung pointed out "Only if we know that what truly matters is the infinite can we avoid fixing our interests on futilities."¹⁹

The theory of Einsteins notion of space-time can be found in astrophysics. We never look at an object in space in its present state, but backwards in time. As I mentioned before, its most extreme effect becomes manifest in the black holes. It leaves nothing out when an event horizon is formed around the star, beyond which nothing is observable. The star walks out of time for us in a similar way Jung walked out from the dream leaving this "event zone" to another.

¹⁸ Von Franz, Marie- Louise, *Rhythm and Repose*, London, Thames and Hudson, 1978, p20.

¹⁹ Ibid.

TIME ROOTLESSNESS – OR THE CONTRARY?

Does the collective have an optimistic view on the technical acceleration while the individual suffer?

The world today presents itself as highly complex to the point of being unpredictable, interconnected and non-linear. I have been writing about the Long Now Foundations clock, which is for me a very symbolic work of art in the time we live. If art can be said to reflect the conditions of the world in which it is made, then art deals with the front line technology of an age and can perhaps give particular visions of the art in the future.

When looking backwards along various artists who provide a glimpse into our evolving speculation about our destiny. It is interesting to compare them to the current group of artists who have been lumped into the "post-internet" category. Interestingly, they have largely avoid this type of analysis and categorization.²⁰ This new work may be best contextualized in relation to the technology forward thinking artists of the '60s and '70s, by artists such as the German group ZERO or Experiments in Art and Technology (E.A.T). There reflection upon technology were optimistic back then in comparison with many predicting artists of the 21st century (artists like Alisa

Baremboym, Josh Line among others) They do not seem to have forecasted any optimistic vision of the future, but both technology and corporate culture are almost by everyone represented as handmaid of a post- human future in which our lives will become increasingly artificial and controlled.

What the history of life on earth tells us is that the climatic catastrophes and mass vanishing are always followed by the expansion of new forms. The human being is an "everything measurement creature" and so is our life length. A continuous changing rhythm that is acceptable for human is another measurement. Could the consequence of the technical acceleration be that we grow old faster and live shorter? Or can we adapt to it more easily then I predict? Like I said before I think it is the human alone who are suffering from the time we are in, when the collective support the affirmation. Like in Vinges novel where the collective got replaced by the singularity and the last people find themselves alone and left behind in the world.

²⁰ Art Press, 404, October 2013, P44



Melanie Bonajo, Screaming Dreaming

RESTLESS ENERGY

An artist I would like to highlight is Melanie Bonajo²¹ who is working with esoteric philosophy. Through her video works, installations and performances she explores the spiritual emptiness of our generation. She exposes subjects which the society prefers to hide, the concealed result of the post optimistic community.

She tries to understand the existential questions by studying our domestic situations such as concepts of home, gender and attitudes in contrast to their real value or meaning. The alienating force of our self-imposed institution, our sadness, depression and shame are the main themes in the work. Most importantly she works with our complex and troublesome relationship to objects and the natural world that surrounds us. She refers to the structural demands burdening the individuals and highlights the powers that control us.

An energy that is in constant movement according to Bonajo is restless energy when left uncontrolled is dangerous, a potentially destructive force, our counterbalance. This energy is in constant motion in order to eliminate the demons of our thoughts which threaten to take control over us.

The beginning of the 18th century there was a technical transformation which contributed to an ulterior aspect in the existence of mankind. The occult became more visible in the art and not much has changed till today. In the Swedish language there is a word for this condition, *Initationsmönster*.²² This term describes how a subject goes through a certain development. When Newton philosophized about practical chemistry I assume he made the conclusion that it was hopeless to try and understand what was happening in his test tubes. The meaning with scientific research is that the nature has laws. If the matter was apprehensible it must have been in a very sophisticated way. Maybe that was when he wrote these words: "Dissolved the fleeting green lion in cation and the green lion distilled from this essence. The blood from the green lion, Venus, the Babylonian dragon goes between his poisoning of everything, but conquer by the beaten from Dianas dove, Mercurius shackle."²³

The laws of physics manipulate our imagination in order to avoid answering the question about how to communicate with deceased people. These laws can not fill the gaps in our belief system. J.R.R Tolkien (like Melaine Bonajo and Isaac Newton) have a fundamental esoteric belief which is visible in his writing. Even if he express an antimodernistic rejection of science there is also an ethical parallel to science in the rejection to magic in the aim to win power. This could be regarded as a metaphor to the dominating thoughts in our society.

"Today there is no mythology around to help us understand the world. And the Catholic environment I grew up in had emptied its symbols long time ago leaving only a symbol of a dead man on a cross, which seemed really obscene to me. Disney seemed to be a good alternative, representing a life in which the world of man and animal were united. For me it was fulfilling that there was a value in life which was present but misplaced and alienated from daily reality."²⁴

²¹ http://melaniebonajo.com/index.php?/projects/dialogue/, p9. Visited 21:39 5/1-2014

²² Cornell, Peter, Den Hemliga Källan, Sverige, Gidlunds Förlag, 1988.

²³ Bernard Cohen, George E. Smith, *The Cambridge Companion to Newton*, Cambridge University Press, 2002.

²⁴ http://melaniebonajo.com/index.php?/projects/dialogue/, p9. Visited 21:39 5/1-2014.

Bonajos work do not represent any specific culture, but she focus on the rituals in various cultures. New religions attempt to strive for a cultural remake in opposition to our material world and search for an alternative to the rigidity of secular thinking. "I am interested in creating a more relational system that has the ability to redefine our coexistence with our environment."²⁵

²⁵ Ibid.

EPILOGUE

In Tolkiens fantasy world the magical world came to an end because of the destruction of *The Ring* and the victory over the evil. That introduced us to the epoch of humanity. I believe the human mentality has been more or less the same during our existence. Not much have changed in our understanding of time from a meta perspective. It is not the case that we suddenly have got new emotions or feelings never experienced before. This constant condition is defined by our physical chemistry and how it finds its expression in a cultural field. However we have a good ability to adjust to new conditions.

Could it now be that we are about to say goodbye to *The End of the World, the Apocalype*, and the way it has been depicted until now is about to change since we are accepting where we are. It would be more productive if we start to think more realistic about our situation and work from there instead of finding ourselves helplessly doomed to our destiny. We need to reset our minds and find a way to approach that consciousness to new habitual rituals with our objects and our time, and pay attention to how much efforts we give them.

During the time of the Greek number mythology the integer had a high value, specially the first ones. Number 1 to 4 represented the point, the line, the surface and the volume.²⁶ These were all spatial dimensions easy for the human to understand when compared with time dimensions. Number 10 represented everything they knew, when the knowledge was not deep enough they imagined a second Earth that was located behind the sun. That Earth was responsible for the dangerous truths, and that Earth had always been there because it had to. Therefore a truth was established that no one could question or control. Just like the laws of the physics have always been constant and just like our idea about time. To refer to where I started in the introduction, our notion that the time is not essential is not so overwhelming, but I believe when we give time power it becomes important.

²⁶ Von Franz, Marie Louise, *Time: Rhythm and Repose*, London, Thames & Hudson ,1978, p71.

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