

Duration of Difference in the Eternal Return  
Sofy Yuditskaya  
Masters Degree Candidate NYU/ITP  
721 Broadway, 4th floor  
New York, NY 10003  
yud.sofy@gmail.com



## ***Durations in Difference of the Eternal Return***

Durations in Difference of the Eternal Return is a structure for co-creation of narrative through the manipulation of difference and projection at a given site. The nature of objects are examined as well as the presence of the body and it's digital representation within the virtual matrix.

Deleuze says of Nietzsche and Kierkegaard that it is their aspiration to be

*“producing within the work a movement capable of affecting the mind outside of all representation; it is a question of making movement itself a work, without interposition; of substituting direct signs for mediate representations; of inventing vibrations, rotations, whirlings, gravitations, dances or leaps which directly touch the mind.”*

[p 8 Difference and Repetition]

This piece is reacting to the propensity of infinite reflections in the mirror world of digital art today, turning record and playback into physical experience by repositioning the digital screen directly on sites of action. It creates an augmented reality that can be seen by anyone without any special apparatus, creating a spectator driven, but not spectator centered installation.



Durations in Difference of the Eternal Return is an interactive installation consisting of one table and two stools. Above the table hang a webcam and a projector. The projector re-projects events and objects occurring on the table top back onto the surface of the table. The table is short, small, and covered in white chalkboard paint. On the table there is a small ceramic bowl with colored chalk. Flanking the table are two stools, inviting people to sit down and make use of

the chalk provided.

The furniture objects in the installation have minimal details, the white paint they are covered in evokes both the white page and the blank slate, the possibility of creation and affect, and with it, erasure and re-invention. The pieces were hand tooled in the late 20th century, purchased at a Brooklyn flea market, and stripped and re-finished by the artist. They have a quotidian and domestic feel. Their small stature harkens to the experience of childhood, yet they are big enough to comfortably accommodate adult bodies. Their hand-finished quality exudes warmth, while the white finish conveys a certain amount of structure and creative possibility.

The small ceramic bowl of chalk transforms the table. It invites viewers to draw on the furniture. Color chalk was chosen because of its connection to education, childhood, and play. The chalk board surface pulls from the idea of the blank slate as a theory of the mind, and Buddhist sand paintings that can be swept away with a dash of the hand.

The table and stools change from a conversational space into one that begs to be affected. The chalk allows for inscription, tagging, and leaving messages and cues for future spectator. Through the use of chalk, the object becomes a medium for the transmission of spectator inscribed message. The skin of the object transfigures the thing itself, the object becomes transitional.

The surface of the table once inscribed also immediately conveys erasure and overwriting. This transmits a sense of precedent and history, the ability to change the course of precedent and history, and the ability to erase it completely. This speaks to the idea of the impermanence of life, and action in general. Even something physical like an inscription can be undone by those

that come after us.

The physical piece conveys message and form, inscribing on it is an action, allowing the spectator to read and write to it. It is a proposed action that the viewers will or will not take upon the table. It is an action that can be observed by those not participating. It is a physical experience that is a take away from the piece. It is also somewhat aggressive, as it is an action that asserts the viewers affect against that of the object. I imagine that if left on display for a long time, someone will eventually inscribe onto the table with a pocket knife, or a permanent marker, piercing the skin, and leaving a scar.

The projector above the table records actions occurring on the table and re-projects them onto the table surface. The medium of projection was chosen for its ability to transform the site without physically affecting it. It was also chosen because, in psychological terms, to “project” means to unconsciously ascribe attributes to the outside world. The setup of computer connected to projector and its emitted beam of light, finally casting image onto the installation was chosen for the way it mirrors the above relationship structurally.

Tools often determine how things made with them will look and behave. It is common for graphic design history teachers to start their classes with something like “No notable event in the history of graphic design happens without a major technological shift preceding it”. For example, it is the advent of phototypesetting that gave us post modern graphic design. This hypothesis can also be applied to the motion picture. Silent film is acted out with such theatricality specifically because there is no way for actors to use language to convey how they feel. In *Durations of Difference in the Eternal Return*, consumer technology, the standards of film-making and the picture plane are specifically chosen to convey a sense of ubiquity and

transformation of the image through technology.

The technological and therefore aesthetic qualities of the projection serve to filter the visual experience, and experiential flow on the table top. The projector breaks the processed image up into a grid of 1024x768 pixels that falls on the table top and the objects on it. The digital image creates a flattened and delayed double of the table surface, that is nonetheless to scale with it. This image highlights and isolates the differences between the present and past states of the table top.

Re-projecting onto the site of action was a choice made for three reasons. The first being to minimize the transpositions involved in experiencing the digital mirror that the sculpture sets up. A normal mirror gives us a reflection of the thing itself allowing for no opportunity to compare the two side by side. Not being able to see the thing itself and its reflection in one space causes us to project the anticipated reflection onto experience as it is happening. Experiencing the two at the same time affords us a situation in which we can have a more present awareness of the here and now, with the aide of the digital mirror.

The video mirror gives us a reflection, on a delay that adds the speed of computing to the speed of our body awareness. The video mirror is a vortex that we fall into, that hypnotizes us and causes us to lose sense of our own presence. It reflects our presence but denies the body. It is narcissistic in the literal sense of the word; the reflection casts the self as other, and our attraction for this other causes the body to be lost, and an erasure of the self to occur.

The second reason for re-projecting onto the site is to take advantage of the possibilities of locative video. Rather than abstracting the recorded and manipulated image of a plane of

action and observing it from a detached point of view, re-projecting gives us simultaneity of experience. This uses objects as mediums for the transmission of image and information, rather than the abstracted picture planes we call screens. This also gives digital information a reality that it's usual confines of the screen or augmented reality (ie virtual and subjective) worlds deny it.

The final reason for re-projecting onto the site is to compel a conflation of experience and the digital reflection. The objects and actions on the surface of the table are always and forever changed by their constantly re-inscribing digital interpretations. They cannot escape their digitized past. Their past is sampled and made discrete by media, and it forever trails behind them, to the extent that media can recall it. All of reality is by nature a conflation of our own subjective experience and the ways in which we externalize, sample, store, and recall that experience. Difference of Duration in the Eternal Return provides a chance to experience all the above recalls at once.

The re-projections themselves are short durations of actions occurring on the table as recorded by the web cam. A long standing question of the motion picture field is what constitutes an action. Besides, that has been a long standing question of the fields of philosophy, dance, and sampling. Durations of Difference in the Eternal Return provides a direct experience of this question. For further discussion of action see appendices "On Infinite Regression", "On Duration", "On the Eternal Return", "On Duration in Dance".

Actions on the surface of the table are captured at 30 frames a second. The trigger to begin capture is frame differencing that leaps above a certain threshold. The frame differencing is simply accomplished by counting pixels and comparing the rate of pixel difference/frame

over time. The threshold is determined by subtracting pixel values of the latest frame from the frame before it. If the difference is over 33% we record and playback previously recorded clips as per a stochastic selection process. In order to highlight the difference between our subjective experience of time and framerate, the durations are reprojected onto the site of their occurrence.

The software used to do the processing on Durations of Difference in the Eternal Return is called Pure Data. It was important for me to use an open-source piece of software, because logic itself is open-source. There is no part of the logical process that cannot be accessed without enough prodding. Pure Data is also a graphical representation of computer logic, allowing for a smooth transition from the logic of the piece to the logic that runs the piece.

It is also important that the software is open source and cross platform because the computer in this case is used for it's ability to record, process, and re-project. Should the project need to be re-built in the future, it could ostensibly be re-built solely with instructions. It is first and foremost a piece of conceptual art and the differences that would emerge as a result of being re-built would only further serve to reflect the differences between a past technological state, and a present one. For more discussion on instruction based art see appendix "On Instruction Based Art".





right now, are the most interesting stories that exist. These are the stories of our own experience, the perspectives that define our universe. As such we cannot be sensitive to the perspective of the other while immersed in our own, or vice versa. Durations of Difference in the Eternal Return conflates two perspectives, creating an ever changing narrative, co-authored by our context and ourselves.

# Appendices

## ***On the Digital Mirror***

The Digital Mirror is a concept from Baudrillard's *America* on p35 he writes:

"...no performance can be without its control screen. This is not there to see or reflect those taking part, with the distance and magic of the mirror. No, it is there as an instantaneous, depthless refraction. Video, everywhere, serves only this end: it is a screen of ecstatic refraction. As such, it has nothing of the traditional image or scene, or of traditional theatricality, and its purpose is not to present action or allow self-contemplation; its goal is *to be hooked up to itself*. Without this circular hookup, without this brief, instantaneous network that a brain, an object, an event, or a discourse create[sic] by being hooked up to themselves, without this perpetual video, nothing has any meaning today. The mirror phase has given way to the video phase."

Video is also a re-mediation, a mechanism for capturing moment, and transforming it through encoding and output screen. The differences built into video are difference in texture (the pixel, the mpeg algorithm), and time (30 frames a second, the cpu of the computer it is played on). There can be applied differences such as compression for sites like youTube, the overlays of youTube's own user centered advertisements within the video.

The digital mirror does not only come in video form. Our friends take pictures of us at a party, and upload them to Facebook. When they "tag" us in the picture we get a notification. Our presence is searchable by machines, announced by friends and acquaintances. Rather than the taker of the photograph giving the artifact, or a reproduction of the artifact to the person in it, the image gets uploaded to the cloud, where the individuals depicted in it, the author and anyone else has a passing influence on it.

The digital mirror abolishes authorship, broadcast, celebrity. It creates a perfectly world where content is pitted against those accessing it. It creates a subjective experience of a collectively authored database, simultaneously exalting and eradicating point of view and agency.

The mirror world in the digital age can also be interpreted as the propensity we are slowly accumulating for making works where the feedback is removed from the site of action. We act in front of a camera and expect the processed results of our actions to appear on screens facing us like mirrors, or removed screens, transposed onto buildings, walls, etc. Most projects that employ this paradigm are not about the abstraction from the body that it creates, making a fine if inadvertent comment on becoming cyborg in the digital age.

### ***On the Archive***

Archives are collections of records, and retrieval systems for the call back of those records. The retrieval system often so strongly influences the way that the records are interpreted that the data contained within the records takes a backseat to the structure of retrieval system itself. This relationship is parallel to the relationship between medium and message posited by McLuhan. Archive systems of organizing information however, are closer related to network theory and the massive data that it allows us to deal with. The cloud and its digital mirror is a type of archive that is quickly overpowering through use, any other kind of archive. The internet is our library, our museum, our diary, our phone book and our calculator.

Content is pitted against users and producers through the archive. Every time we view a bit

of information we make a copy (write it to the screen). In this sense we take ownership and authorship over the information. If the gaze ever had the power to possess that moment is now, and that moment is also already gone. In a world where every record can be copied an infinite amount of times, what difference does it make, if an individual has a personal copy, or not?

The experience of this archive occurs in a subjectivised way. We use free association to enter search terms, those terms are matched against every word in a given document, algorithms massage the process, eventually computer vision and audio analysis will take care of other media. User centered statistics will return results “optimized” for us. We are never made aware of the underlying systems, from our point of view we are interacting with a magical (since its internal operations are unknown) call and response system, that gives us what we didn’t know we wanted.

### ***On Narrative***

Human beings will create narrative, no matter how decentralized, multifaceted and simultaneous our experience of media becomes. The mind is a machine for stories. First something happens, then someone falls in love, then somebody gets hurt. The mind experiences the world linearly, necessarily linking the past, with the present. It naturally creates point of view.

It is in the beauty and poetry of the mind, that it can conceive of multiple points of view. It can even live in multiple points of view seemingly simultaneously. It can conceive of worlds without time, or mind itself. It can flip a thought. Thoughts can contain other thoughts, the mind can even flip itself.

The now has no narrative and no point of view. So long as we remember a previous state of self, a previous point of view, in the now we are still comparing. Letting go of previous points of view is Nirvana.

The inherent choreography of space, the cues provided by objects in it, will cause actions to emerge. They drive our creation of narrative.

The constant point of view that is being in one body for the span of one life time, pits that body against everything else, effectively creating the other. This constant point of view also gives us something to be the first repetition and the second repetition (as per Deleuze's definition of Difference), thereby allowing us to create time.

Augmented reality often confuses this point of view since it is user centered. We wear 3d glasses that resolve the image to our perspective, we look through our smartphones to see an augmented reality that is generated based on our own location in space, we see advertisements that are generated based on our unique browsing history. The act of re-projecting onto the site of action means that every observer will experience the singular digitized playback in a specific way to their location in space.

### ***On the Body as Difference Engine***

Daniel C. Dennett posits this idea in *Consciousness Explained*, and Gilles Deleuze posits it in *Difference and Repetition*, Eric Rosenthal posits it in his theory of vision [Session 14 of Digital Imaging Reset, taught at ITP Spring 2011].

On a cellular level our mind compares the state of a cell from one moment to the next. The end

of change truly is death. On a greater, cognitive scope we could not tell the difference between our mothers and a soccer ball if we were not comparing the two against each other.

On p.24 of *Difference and Repetition* Deleuze says “The first repetition is repetition of the Same, explained by the identity of the concept or representation; the second includes difference, and includes itself in the alterity of the Idea, in the heterogeneity of an ‘a-presentation’.” One of the readings of this thought is that it is difference over repetition, or difference over time, or narrative that allows for perception. In comparing, we are always comparing the first thing experienced against the second thing. This consistency of flow from unit to unit necessarily creates narrative.

### ***On Infinite Regression***

In optics, the image within two oppositely facing mirrors. In cosmology, the uncaused cause, or the cause of the big bang, which begs the question, what could be the uncaused cause if the big bang came out of nothing. The “turtles all the way down” story is also an example of infinite regression. This works for cosmology: what is outside our universe? Or physics: what is smaller than a particle? One possible end/beginning point is the *Tabula Rasa*. The *Tabula Rasa* an epistemology of knowledge, would be the last step up the chain of infinite regress if there really was “nothing” at the beginning.

My favorite description comes from the song “Bahamut” by Hazmat Modine:

The entire known universe  
Floats suspended in a thin silver bowl  
Which rocks gently on the back  
Of an immense blue-green tortuga  
And the tortuga's scaly feet  
Are firmly placed on the topmost  
Of seven craggy mountains

Which arise from a vast and arid plain  
Of drifting, fetid, yellow dust  
And the plain is balanced precariously  
On top of a small thin green acacia tree?  
Which grows from the snout  
Of a giant blood red ox  
With 50 eyes that breathes flame  
The color of the midnight sky  
And the ox's hooves are firmly placed  
On the single grain of sand  
Which floats in the eye of Bahamut  
Like a mote of dust  
No one has ever seen Bahamut  
Some think it's a fish  
Some think it's a newt  
All we know is that the lonely Bahamut  
Floats endlessly through all time and all space  
With all of us and everything  
Floating in a single tear  
Of his eye

### ***On Sampling***

Sampling makes discrete the singular flow of experience (though our body too has a refresh rate). It also re-mediate experience, creating simulacra. The regular size of slices which are used to sample, whether by the human body, a machine of some kind, create repetition. They give us sense of time. The difference between these repetitions is what tells us that something is changing. The pacing of these slices gives rise to rhythm. To the narratively inclined this rhythm can give rise to arc, even if it is a relentless thrust in the style of David Lynch's *Eraserhead*.

### **On Difference and Repetition**

Difference and Repetition is the title of a book written by Gilles Deleuze in 1968. In this book Deleuze posits that when we compare pre-existing events/objects we notice their differences. Differences emerge from being. Being is life lived, and as some would say\*, and that *is* life understood. Difference is every mental model and subconscious impulse ever had.

Difference is the thing that allows us to see. The periphery of our vision for example responds exclusively to difference. We compare events based on motion more than texture. The famous trick with the invisible gorilla is achieved solely based on motion. Because the gorilla moves like the basketball players, we never notice it is entirely covered in long black fur ([www.theinvisiblegorilla.com](http://www.theinvisiblegorilla.com)).

It is through repetition, looking back and forth between one thing and the other that we become aware of difference. That is the magic of the mirror. In my thesis project, I super-impose the mirror onto the thing itself, transposing repetition to time, rather than object.

\*Timothy Speed Levitch, Waking Life, Frédéric Beigbeder, Nouvelles sous Ecstasy

### ***On Duration***

Henri Bergson came up with the concept of duration as a defence of free will. Duration returns to us the ability to exercise free will by dissociating causality from event. Duration is a slice of time containing within it a single action, therefore nothing inside the duration can be the cause of anything else inside it. Which begs the question; what is a single action?

A single action that is clearly composed of other, smaller actions is not a duration according to



Bergson's definition, but it is a useful analogy for motion studies.

### ***On the Eternal Return***

From Wikipedia:

"Eternal return (also known as "eternal recurrence") is a concept which posits that the universe has been recurring, and will continue to recur, in a self-similar form an infinite number of times across infinite time and/or infinite space. The concept initially inherent in Indian philosophy was later found in ancient Egypt, and was subsequently taken up by the Pythagoreans and Stoics. With the decline of antiquity and the spread of Christianity, the concept fell into disuse in the western world, though Friedrich Nietzsche resurrected it as a thought experiment to argue for amor fati."

An event, if discrete, is alone in the flow of experience. If alone in the flow of experience, that discrete event may as well be the whole universe. Thereby becoming infinite, since from within its boundaries can never be known. If our universe is infinite, probabilistically every event within it can happen an infinite amount of times. Its a tautology, it is unprovable, its poetic symmetry is singularly alluring.

### ***On the Blank Slate***

The blank slate is an epistemological theory of mind that states that humans are born with no inherent knowledge, that all knowledge is gained through experience or perception. It is a kind of antithesis to infinite regress. It says that everything starts from an empty vessel. The vessel is itself a thing, something. How exactly does that thing determine the shape of what will form within it? Or from it? What a priori knowledge does its makeup give us?

### ***On Duration in Dance***

Valeria Maracco, experimental dancer, and my oft time collaborator, describes duration as action catalyzed by intent. Generally action is a translation made by the body from intention,

belief or impulse into movement. This movement immediately enters into a feedback loop with the inherent choreography of the space it is occurring in and objects it is occurring with. The direct correlation of intent to action results in agency.

Agency is hard to identify and describe. The border between free will and the illusion of it is imperceptibly thin and vascillating. My thesis displays and highlights agency on the table top through its recording and re-projection of objects and action. What amount of agency does the viewer/actor have when stepping into a predetermined action based system where they are the variable?

### ***On Instruction Based Art***

Sol Lewitt was a conceptual artist that believed the planning and decisions are the meat of a work and the execution is a perfunctory only. To use his words “The Idea becomes a machine that makes art.” [from “Paragraphs on Conceptual Art” by Sol Lewitt]. By extension the bodies of the assistants or robots that execute the art are machines.

Ironically most, if not all of his works are a series of repetitive motions, that create traces, which through the difference in their repetition create the necessary interest that justifies them as needing to exist in the physical plane.

My piece is designed to be reproduced as a set of instructions. Thereby it will always reflect the current techno-gestalt through the aesthetics of the technology of the time it is enacted in. This is organized in such fashion not only for conceptual reasons, but also for the practical reasons of needing to maintain and update art work made with technology.

The piece will change with time, but it will also be able to go on through time, many new media pieces have been unable to. Since the premise of much of interactive art is to create a subjective and user centered experience, the fact that the materials and devices will change, that the piece can be “updated” makes total sense. It need not be a relic that must be idolized. It can become a ritual to be re-enacted, in full awareness that time marches on. That the past can never be redeemed exactly as it was. But that while things change, they also stay the same.



Sol Lewitt-- Star

### ***Bibliography***

Deleuze, Gilles. *Difference and Repetition*. New York: Columbia UP, 1994. Print.

Dennett, Daniel C. "Consciousness Explained." *Scribd*. Web. 13 May 2011.

<<http://www.scribd.com/doc/9787203/Dennett-Consciousness-Explained>>.

### ***Thank You***

Thanks to Red Burns without whom I would never have been able to come to ITP. Thanks

to my advisor Marina Zurkow, and to Hans Christoph Steiner and Greg Shakar. Thanks to Geraldine Guarez, Chris Sugrue, and Zach Lieberman for having faith and pushing me to follow my dreams when I started out on this journey. Thanks to Damian Stewart and Dan Wilcox for keeping it real, even across oceans. Thanks to Dan'O for not failing me, and Tom Igoe for never turning away. Thanks to Eric Rosenthal, Alexandra Kuechenberg, Giamberto Vanni, and Norman Sanders for showing me the light. Thanks to Matthew Ganucheau for always being there for me, no matter the crazy situations we found ourselves in. Thanks to Tamar Ziv for the late nights talking about everything under the moon. Thanks to the entire thesis class of Amy Chien, Chris Alden, Aiun Wang Huddleston, Lucas Wertheim, Julio Terra, Emily Ryan, Young Tek Oh, and Niel Hickey for all the support and effort throughout this process. Thank you to Igal Nassima for the support and the space, and Nahana Schelling for the love and friendship. Thanks to Michael Edgecomb and Mark Triant for the unreality check. Thanks to Eric Mica for the credibility. Thank you to the entire ITP community, you have given me what years of psychotherapy would have never been able to achieve. And finally thank you to my parents Boris Kelerman and Tatyana Yuditskaya, my step father Eugene Zhilinsky and my little sister Theodora Yuditskaya for being the craziest free spirits I have yet to meet in my life.