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The liminal event and its symbols: on the intersection of human and technology

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**UNIVERSITY OF
PLYMOUTH**

**THE LIMINAL EVENT AND ITS SYMBOLS: ON THE INTERSECTION OF
HUMAN AND TECHNOLOGY**

by

BLANKA DEROKO

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degree of

DOCTOR OF PHILOSOPHY

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Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Doctoral College Quality Sub-Committee.

Work submitted for this research degree at the University of Plymouth has not formed part of any other degree either at the University of Plymouth or at another establishment.

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ABSTRACT

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The Liminal Event and Its Symbols: On the Intersection of Human and Technology

This thesis is an exploration of practical and theoretical modes of constituting hybrid subjectivities on the intersection of human and technology. Taking as a point of departure the posthuman and postphenomenological perspectives, I develop an approach to articulating hybrid subjectivities, where the distributed human and nonhuman entities come together in a relational way, expressing hybrid agencies. This thesis explores an emergent affective dimension in technological spaces, which provide a sensory stimulation to the human enabling a sense of presence in the distributed and virtual space. Further, I demonstrate a systematic manner, in which an *integrated liminal event* between the human and the technological nonhuman can be created. The employment of this protocol provides an opportunity for the potentially traumatic encounter to be recontextualized and manifest not as shock, but as a state of opening and receptivity. This state is facilitated by ongoing calibration of the internal human affect with the sensorial stimulus to achieve balance between the two.

Central to this thesis is the concept of shock, which can result from technological overstimulation of human sensorium. This concept is grounded in the psychoanalytical perspective and analyzed in terms of its manifestation through art and cultural production of the twentieth and twenty first centuries. It is a history of the human-technology engagement viewed as a series of industrial actions and cultural reactions and traced through the occurrence of shock. This investigation spans the art movements from Futurism through Minimalism and finishes with most recent art production. In order to progress this line of investigation, I have created artworks, which explore specific aspects sabotaging the human-technology becomings. These are: *The Camera is Present, Me Myself and I, I am Legion*. The articulation of shock as a main mode of engagement with technology, in terms of specific aesthetic experiences, drives this thesis towards recontextualization of the significance of shock and development of tools and concepts to heal the experiential rift between human and technology.

Further, in this thesis, I develop and propose two such conceptual and practical tools, *the sign*, and *the symbol*, enacted through the *expanded liminal aesthetics* to create a condition for the *integrated liminal event* to emerge. This dynamic event facilitates the coming together of human and technological expressions in a way that balances the human internal and external experiential landscapes. The tools overcome the shock to restore agency and the feeling of being present in the experience and embedded in the body. In addition to formulating the conceptual structures, I propose ways of executing them through practical applications. The first one involves creating an artwork, which functions according to this new methodology. The second application uses the structure of a liminal event in an educational context. In essence, this thesis develops an effective way for life to enter the technological world.

The novelty of my approach lies in the following areas: historical contextualization of technological shock within art and cultural production and as it leads to present technological aesthetics and production of new artworks facilitating this enquiry. Further I create new conceptual tools and structures for articulating hybrid subjectivities beyond shock and I formulate applications of those tools and structures in practical terms: *The Symbol* and Liminal Atelier system of educational modules.

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INTRODUCTION

Our modes of interaction with each other and the world are changing in a myriad of new ways. Thanks to new technologies, humans have the unprecedented opportunity to expand and intensify their experiences. The technological world enables us to move through space at great speeds, communicate instantly, and have access to once deemed exotic information and products. Consequently, the emotionally intense experience in the world produces various and extreme self-expressions as though to surmount the intensity of the new experiential space. In the search for new ways of being, humans run up against the otherness of the technological medium. Today, simultaneously with the benefits of technological engagements, humans face diminished agency in the technological context. In this thesis, I will explore different instances of engagement metaphors and postures, which result in numbing the human participants and cause different degrees of shock. I further postulate that we can engage technology more fully once the entrance point and the subsequent interaction will enable human agency, provide an improved sense of presence and set of procedures and tools for merging with technology in a more effective way.

The sense of expansion, which is facilitated by electronic media, global connectivity, and new scientific perspectives, is haunted by the intermittent agency and inability to identify with technological representations. The traditional ways, which originated in the Enlightenment and which we used to structure our subjectivity, are subverted and rendered ineffective. Today, it is clear that the concept of the self may be a fiction and that we are shuttling between many selves on daily basis, as the psychologist Robert Levine suggest (Levine 2017: 2-7). However, it does not mean that the concept of subjectivity has lost its meaning and use. Subjectivity is a tool, which can be used in negotiating our interactions and space within the varied contexts. This shuttling from one manifestation into another leaves space for misinterpretation of the

nature of the engagements and creates various degrees of human disempowerment. As we enter the contracts from an unknown ontological standpoint, we become exposed to different powers and agencies acting in the virtual space.

Human movement towards a reproduction without an original is the cultural backdrop of this disempowerment. In *Simulacra and Simulation* as well as in the *Ecstasy of Communication*, Jean Baudrillard points to the displacement of the real by simulacra. In the following passage, he describes the cultural and psychological effect produced against the mediatized environment.

this electronic “encephalization” and miniaturization of circuits and energy, this transistorization of the environment, relegates to total uselessness, desuetude and almost obscenity all that used to fill the scene of our lives. As soon as this scene is no longer haunted by its actors and their fantasies, as soon as behavior is crystallized on certain screens and operational terminals, what’s left appears only as a large useless body, deserted and condemned. (Baudrillard 1998: 148)

However, there is a sleight of hand hiding in this displacement, which inspires some to dismiss the real and the body as obsolete or only axillary to the new medium. The body not only exists but also participates and weighs in on the interaction. In fact, without the body and the directed sense of self, which is grounded in it, there is no interaction, no sensing, no representation, no simulacra.

I have begun my enquiry into the human-technology relationship as a practitioner and an artist. Acting as a maker placed me in the unique position to manipulate and adjust our technological engagements as well as see the direct results of my work on the public. Initially, as in the case of *MeMyselfandI*, I was looking to amplify the fracturing of the ego as it enters the virtual space. In the process of making and then interacting with the piece, I have discovered the psychological effect that it had on me and the spectators. As a result, I was able to understand the limits of my ability to stay engaged with the system as well as make the initial identification of my state of overwhelm and even shock. My further experiments led me to create artworks, where a large group of

humans and non-humans created hybrid assemblages within which they could act. In *I am Legion*, I am looking at human and machine agency as they interact with one another. The human input is enabled from different vantage points and enacts different trajectories: one initiating and the other enabling production. From both perspectives the human becomes swept into the overarching technological becoming and loses his or hers footing in the individual. By observing the participants, I noticed the existence of a limit at which they lose the psychological connection with their virtual actions and disassociate from them. This phenomenon led me to question the method of human entering the technological system. Next, instead of merging, I wanted to test a more confrontational way of engaging technology. In the artwork, *The Camera is Present*, I set up a situation, where the participant sits in front of a filming camera without any instructions. He or she is free to leave at any time. Through interviews I was able to capture the sense and the extent to which the participants fell into a sort of a state of shock, which confirmed my earlier speculations about its existence.

As a result of these initial explorations, I was able to engage the existing theory in the field of psychology, philosophy and art criticism to flesh out my interpretation of the formation of shock on the threshold between human and technology. In my view, this phenomenon was not only taking place currently but also had a significant history leading up to this point. Part of this thesis is dedicated to the examination of this shock starting with the beginning of the XX century and as manifested in cultural and artistic production. Further, I examine its contemporary causes and effects present specifically in practices of media technologies. As I review my artworks, I look for patterns that will yield tools in identifying and alleviating this shock. The identification of productive elements in the human-technology interaction led me to constructing a pattern according to which I plan to create an experimental artwork. This pattern proposes a point of entry and a way of interaction based in an aesthetic experience, which is embedded in both the

technological and human bodies. It is based in human sensing and in an aesthetic experience as a way to achieve a balance between the inner and outer perceptions. I propose this as a more productive human engagement with technology, one that does not result in shock.

As the technological engagements are becoming increasingly complex and intimate, there is a need to develop ways of interacting that are more fluid and give a sense of embeddedness in the experience. The posthumanist conceptualization of the current interactions, developed in this thesis, enable me to address these modes of engagement in practical and theoretical ways. I develop the concept of shock in the context of human-technology interactions as a barrier to fluent interaction and a disabling factor in the context of human agency. Further, I propose the concept of productive subjectivity within the technological realm, as a posthumanist tool, which leads to increased agency and sense of embeddedness in both contexts. Finally, I develop a pattern, according to which the productive subjectivity can act, as it is exemplified in the proposed artwork *The Symbol*. The concept of productive subjectivity and its pattern intends to show a way out of a deadlock of the current modes of human-technology interaction resulting in shock.

CHAPTER 1: PRESENTING THE NARRATIVE

1.1 The Scope and the Territory of the Enquiry

In my research, I analyze the condition of the posthuman subject in different technological interactions to glean information on how to produce a better sense of agency and experience which is grounded in the physical body while the subject is merging with technology. Conversely, some interactions with technology become traumatic and cause a dissociative state, which marks the onset of the protective layer of

shock and disconnects a person from their agency. Further, I recognize the need to build tools and procedures to strengthen human agency in the polymorphic contexts that is based in being embodied and embedded. In response, I propose and analyze the methodology involved in structuring liminal events, on the intersection of human and technological which do not result in shock. In effect, I create a reliable method for entering such liminal space in a way that is transformative to the human while maintaining their agency and intentionality. The experience is based in an aesthetic perception which creates a space in a dialogue between the human body and technological mediation. Through theory and practice, the research outlines the nature of the new subjectivity produced by techno-human liminal event along with the tools facilitating this connection.

One of the traditional strategies to understand subjectivity in the Western world is based in dialectics. In terms of XX century psychology, self is produced in the process of contemplation of the outside objects. It is not a product of solely our body but arises from the interaction of the mind with the world of outside shapes. We describe ourselves in opposition to that which we encounter (Lacan 2007: 257). The dialectical view of the production process of the self has been developed by psychologists such as Freud and Lacan and continues to influence the way we theorize human experience in the world today. However, this model has been challenged towards the end of the XX century as the globalized world has become more complex presenting an environment that is highly unstable, hybridized and driven by market forces.

Presently, this process is further complicated by technological advances enabling experience of the outside that is close to seamless with one's subjectivity. The electronically enabled world, for example, reads very often as a mental space. Our experience of console platforms, computers and the Internet parallels the experience of our mind echoing its features such as imagination, memory, thoughts and logic. The

technological world is formative to human subject and the sense of oneself in the world. The question that arises has to do with the exact mode of engagement between the biological and technological entities. Does technology create a metaphor for our faculties or is there a different correspondence at play? We have moved past mere dialectical contemplation of our creations into interaction and entanglement of the two different ontological trees, human and technology, that are much more intimate. Moreover, with the developments in nanotechnology and pharmaceuticals we are poised, in reversal of the relationship, to become the vehicle and the environment for technology.

As noted by various intellectual investigators in the field of postphenomenology, the space between the human and technology is occupied by a new hybrid ontology. Postphenomenology focuses on outlining different ways, in which technology plays an active role in this coming together with humans. Given the impact of perceptual changes enabled by new technological instruments, the human subjectivity becomes transformed (Feenberg 2015: 233). I believe that this new understanding is based in a human experience as registered on the nervous system and interpreted by the human. In that sense, the source of interpretation has a humanistic origin. However, in the post-phenomenological sense, this mediation is not merely a connection between subject and object but a mutual co-shaping, where new technologies generate new ways of disclosing the self along with new social practices stemming from, thus created, new understanding (Verbeek 2005: 121-145). Technology has a further active role in this relationship by the means of enabling certain situations and actions. In this sense, technology possesses ‘intentionality, a trajectory that promotes a specific kind of use’ (Verbeek 2005: 115). Further, the relationship between the two is not ‘symmetrical’, meaning there is no straightforward correspondence that can be drawn between the human and the machine in terms of practice (Ihde 2002: 92). The relationship is not metaphorical but instead it is

transformational in the most practical sense. Technology, by mediating our perception of the world and ourselves in it, co-shapes our ability to participate in the world and exercise our own agency. In this sense, human perception and agency is already always technologically hybridized.

An expanded understanding of the human subject, in the end of the XX and beginning of the XXI century, is provided by further mapping out of the relational human condition. One of the most radical and abstract conceptualizations of a being in relation to the world is Gilles Deleuze's and Felix Guattari's *Body Without Organs* (Deleuze and Guattari, 2007). The BwO stands as an experiential limit in that it is a complete dissolution and disorganization of the subject and an annihilation of the sense of self. 'The BwO is that glacial reality where the alluvions, sedimentations, coagulations, foldings, and recoilings that compose an organism – and also a signification and a subject – occur' (Deleuze and Guattari 2007: 159). This vision of accumulated experiences and parts is driven in its movement by desire (Deleuze and Guattari 2007: 165). In this sense, the BwO exhibits a directionality and what follows, in my view, agency. This is an idea that will be useful to my argument later. The disorganization is an attempt to move away from reason towards a more primitive principle of desire. Further, the 'becoming animal' through forming packs and transgressing borders is the new organizational strategy, where 'becoming and multiplicity are the same thing. A multiplicity is defined not by its elements, nor by a center of unification or comprehension. It is defined by the number of dimensions it has; it is not divisible' (Deleuze and Guattari 2007: 249). In the practical spirit of postphenomenology, I use the BwO as a basis for my artistic investigations into the realities of such dissolved subject. I wonder about the conditions, in which such an experiment would be feasible and ability to maintain this state over time. As the pure

concept itself is a limit, I aim at close practical approximation of the above in the artwork *I am Legion*.

Now, with the BwO established as the conceptual limit of the relations that the humans undergo in the post-human world, I will turn to the middle ground in human - technology - world relations. Rosi Braidotti situates the embedded and embodied humans in a relational and affective dimension enabling both singular and collective capacity for alternative ways to produce knowledge (Braidotti 2018: 31). In her vision, the posthuman subject is, similarly to BwO, formed through alliances. Braidotti points to the need to construct ‘transversal and non-human’ alliances in order to form the posthuman subject (Braidotti 2019: 41). As I will explain in Chapter 5, my artwork *The Symbol* addresses the issue of creating such connectivity in a spirit of ethical consideration of all parties joining together. In further chapters, I will demonstrate how the formation of such alliances often undermines the human participants and fails to produce an enabled subjectivity within the technological context. Braidotti further talks about the state of exhaustion that the contemporary human endures lodged in a ridged sense of self pulled apart by destructive forces of Anthropocene and late capitalism (Braidotti 2019: 40-41). My work is situated as a response to this sense of exhaustion caused by the frustrating feeling of being pushed around and not belonging in the context of any environment. In my conceptual work as well as in practice I am aiming to create avenues for the posthuman human to engage with the environment more successfully and create alliances more fluidly. Specifically, *The Symbol* produces a smoother introduction of life into the technological landscape. As Braidotti points out paraphrasing Spinoza, ‘joyful ethics enhances your ability to open up to the pain’ (Faculty of Arts, Aarhus University, 2018). Understanding joy as a way of processing pain parallels my understanding of the role of aesthetics in joining with technology and, for that matter, any Other.

The late XX century has produced a number of attempts at positioning the human-machine coming together in actual, practical terms. The following are the most prominent yet, in my opinion, unproductive conceptualizations and practices. Don Ihde critiques earlier theorizations, such as the figure of cyborg, envisioned by Donna Haraway in her seminal essay 'Cyborg Manifesto' (Haraway 1991: 149-181), as employing an undefined, god-like, point of view while drawing an axis of symmetry between the humans and nonhumans (Ihde 2002: 89). A cyborg is an entity marrying in its body various orders of being such as human, plant, animal and technological. In the process of mixing up parts, the organism enters a no-man's land, a transitional region between biological and mechanical, living and dead, human and animal, male and female and so on. And, as Haraway would have it, cyborg is not innocent, meaning it has an agenda. I find this conceptualization outdated for similar reasons. Firstly, the cyborg places the new ontology in a romantic fictional space of equality (symmetry), where all the parts of the system are the same. The issue of power and its application is glossed over in this read. Finally, as I will explain in the following chapters, it is representative of modern technological engagements, which have resulted in human shock and disempowerment.

Another conceptualization of the coming together of human and technology is postulated under the banner of singularity, which describes a capitalistic iteration of a cyborg. This term coined by the mathematician and computer scientist, John von Neumann, occurs at a hypothetical point in time when 'technological progress will become incomprehensively rapid and complicated' (Ulam, 1958). This vision, which initially became popularized through science fiction work of authors such as Philip K. Dick, Vernor Vinge and William Gibson is finding its culmination in the speculative and highly transdisciplinary work of Ray Kurzweil. As he explains in *The Singularity is Near*, the moment of definitive convergence depends on three overlapping revolutions

in: genetics, nanotechnology and strong artificial intelligence. The humans contribute to this scenario under the category of genetics and as a medium for the nanotechnological interventions.

Since the human body is temporary, it is interchangeable and can be improved with technology (Kurzweil 2005: 371). A person is defined as a ‘profound pattern (a form of knowledge)’ (Kurzweil 2005: 372). Presumably, according to the author, this pattern can exist with equal or even improved efficacy outside of the body. However, the possibility of testing this assumption, despite it becoming more realistic as AI engineering technologies are becoming more sophisticated, is still encountering difficulties (Sanz and Aguado 2020: 231-244). Therefore, it is not clear that a mind without a body can develop a psychology and be equivalent to the original person, from whom the mind has been scanned. On the other hand, scientific arguments are being made that human-like body is, in fact, necessary for development of an AI that appears conscious and is able to communicate.

Our specific humanoid bodies in our specific cultural, social, and physical environments play an indispensable role in cognition, from conceptualization through communication. Ultimately, we argue that there is a compelling set of reasons to pursue humanoid robotics as a major research agenda in AI if the goal is to create an artificial conscious system that we will be able to both recognize as conscious and communicate with successfully. (Zebrowski 2020: 119)

Currently, as much as I cannot reliably speculate on the exact path that singularity will take, I conclude that if singularity is going to take place sometimes in the very near future, the human body and, by extension, chemically driven psychology will be in the center of this phenomenon from the standpoints of both humans and nonhumans.

I believe that the relationship between human and technology is not symmetrical in the sense of one being equal to the other and therefore producing comparable results. It is not metaphorical as both the physical and virtual paradigms have their own reality. A human downloaded into a machine and severed from their biology becomes a different

entity. Instead, the relationship is a transformation of one reality into another. To understand this process in cultural terms, I look to anthropological investigations of the concept of liminality. Arnold van Gennep has performed the seminal anthropological work on the in-between states (van Gennep, 2010). He was the first researcher in his field to note the patterns and meaning of the rituals related to transitional stages in human life. The ‘rites of passage’, as he named them, guide the initiate through dissolution of meaning between the stages and subsequent reconstitution of the self as a new entity. Victor Turner building on the work of his colleague coined the term ‘liminality’ to describe the domains beyond the tribal rituals (Turner, 2008). The liminal phenomena have the capacity to confuse and at times erase the human sense of self. They break down the conventional meaning and create entities that exist outside of the traditional human order. Similar symbolic translation, patterned on the rites of passage, will serve for me as a point of departure to formulate a strategy for merging with the technological world on the level that accommodates human psychology and agency.

As we are reaching into the technological world, we are increasingly becoming unfixed entities acting according to shifting agendas and meaning. We not only broadcast and distribute ourselves but also join the world of objects in a hybrid, connected web of new meanings. As much as the process may be exhilarating, it is filled with uncertainty and places the human in a vulnerable state. The nonhumans may act on our behalf or in accordance with their own directionality. This agenda manifests itself as purposeful programming or apparent emergent behavior as exemplified by social networking platforms and cloud computing driven by big data, as I will demonstrate in the following chapters and through the analysis of my artworks, *I am Legion* and *MeMyselfandI*. In order to interact with these entities, humans negotiate contracts that often forfeit part of their own immunity and individual agency. In the meantime, the XX century conceptualizations based in dialectics failed to produce tools to stabilize the

human subjectivity vis a vis technology. In the beginning of the XXI century with the popularization of post-phenomenological reads, we are still struggling to achieve a method for harmonious human-machine interaction (Ihde 2002: 100), which would promote human agency and psychology. In my work, I proposed tools based in aesthetics, which fill this gap.

1.2 Hypothesis and Objectives

The main hypothesis stipulates that there exists a human collective subjectivity, which is taking place on the threshold between the analog and technological worlds, understood as agency. It produces a platform for the human psychology based in experience in the virtual world as opposed to creating a shock reaction.

The auxiliary hypothesis is that the interaction of traditional human subject with technology causes a shock reaction in the subject as it is exemplified in cultural and art production.

Objective #1: The main objective is to show the possibility of creating a human subjectivity that supports the creation of meaning and anchoring one's perceptions within the virtual experience through action and intentionality.

Objective #2: The supporting objective is to construct intellectual tools enabling such engagements within the technological context.

This research will produce tools to enable the human participant in the human-technology hybrid to employ their agency, supported by more fluid and balanced experience. Additionally, the research will point out the areas and modes of human engagement with technology, where the human becomes disempowered. These two approaches will facilitate a better understanding of the hybrid coming together and

propose strategies to empower the human through conceptual and practical tools and a set of engagement protocols.

1.3 Research Questions

The main questions, which the study is aiming to answer are as follows:

Question #1: How can we theorize a liminal event on the intersection of the human and technology, which by definition produces instability in meaning?

Question #2: What is the liminality between the human and technological producing at the moment?

Question #3: What are the new tools necessary to enhance the human and technological coming-together with the key objective of enabling human agency in the system?

1.4 Practice-Based Methodology

I employ a specific type of reflective practice through conceptualizing, creating, interpreting and relating my artworks. In this process, I employ my own experiences as well as experiences of participants, viewers and commentators as a springboard to reinterpreting existing approaches to enable my further theoretical and practical investigations and solutions. In general, reflective practice is defined as ‘the development of insight and practice through critical attention to practical values, theories, principles, assumptions, and the relationship between theory and practice which inform everyday actions’ (Bolton and Delderfield 2018, XXIII). This mutually constitutive relationship between theory and practice is the basis of my approach, which culminates in art production and cultural criticism. Further, the authors state:

Reflective practice can give strategies to bring things out into the open, and frame appropriate and searching questions never asked before. It can provide relatively safe and confidential ways to explore and express experiences otherwise difficult or impossible to communicate. (2018, 2)

I am particularly interested in accessing the subjects that are ‘difficult or impossible to communicate’ as I explore the notions of liminality and human psychological states via a vis technology. The strategies, which I employ, are outlined below and involve human participants in real-life scenarios as their engagements are being self-reported and observed. Some unexpected human behaviors, feelings and ways of relating are noted and lead to adjustments in theory and practice. As I am interested in changing human behavior in response to my work, I employ reflective practice in its capacity to ‘facilitate identification, examination, and modification of the theories-in-use that shape behavior, (reflective practice) requires change in deeply held action theories’ (Osterman and Kottkamp 2004: 13-14)

I look at my own artistic practice as a laboratory, where, in the spirit of reflective practice, I am able to test the validity and feasibility of theoretical concepts as well as observe human and nonhuman actions in real-world environments. The outcomes of these interactions are often surprising and contradictory to the claims laid by the theoretical investigations, as this thesis will show. My practice-based investigations often lead me to development of alternative solutions and design of further research. My approach is threefold and based on the intensity of engagement. It starts with more casual and exploratory gestures and progresses to full immersion in a given set of problems. On one end of this spectrum, I may engage by highlighting phenomena of interest in an investigative manner through minimal interventions. Further along the spectrum, I test theoretical structures sourced from philosophy and anthropology through constructing real-world models realized in artworks. Finally, in the most engaged way, I create my own practical solutions, tools and artworks, which often lead to theoretical formulations captured in writing. Following is a more detailed exposition of my practice-based investigative strategies.

1.4.1 Frame

By creating a frame, I point to real-world phenomena, relationships, or psychological states. In this process, I highlight a practice vis a vis its cultural backdrop, as it is situated in a specific temporal and physical milieu. I employ small adjustments of context or performed activities to isolate and sometimes intensify the phenomenon. In this manner, I apply and test my perspective, which spurred the investigation. One of the examples of such an approach is the artwork, *The Camera is Present*. In this particular intervention, I highlight the moment, where the human encounters a piece of media technology. As the participant is asked to sit in front of a filming camera without a specified outcome, the encounter is heightened. It is also framed by the specificity and simplicity of the action. The participant is later asked to reflect on their experience in an interview. In general, the object such as a camera is laden with cultural meanings. However, in this specific situation the meanings are stripped down to a minimum as the participant is asked to only sit in front of it. In this manner, I aimed to focus, as much as possible, on the contents that the participant brings to the experience by themselves. Thus, it is the human psychology in interaction with the camera that becomes framed.

1.4.2 Prototype

By producing prototypes of theoretical concepts, I interpret them through enactments in the world and allow them to play out in practical terms. This usually takes shape of interactive artworks that incorporate both human and technological elements and are inserted into a real-world environment such as the Web. Further, I reflect on the outcomes as they relate to the original theories by means of writing articles and/or by producing more artworks. This strategy is evident in the artworks *MeMyselfandI* and *I am Legion*. In the former, I was exploring the underlying theories as presented by Marshall McLuhan in the concept of Narcissus (McLuhan, 1994). The natural unfoldment of the artwork on the World Wide Web, as it is a website, and my

participation in it led me to first-person observations of my psychological states. This took place during the interactions with the viewers reacting to the performative aspect of the website. As I discuss it in more detail in Chapter 4, the project was successful in producing the McLuhanian Narcissus and lead me additionally to further reflections and production of more artworks. *I am Legion* was created partly in the context of these findings and as my interpretation and investigation into the theoretical concept of Body without Organs, developed by Gilles Deleuze and Felix Guattari in *A Thousand Plateaus, Capitalism and Schizophrenia* (Deleuze and Guattari, 2007). In its capacity to enact the main characteristics of BwO, *I am Legion* is a living, functioning and embedded human-technology phenomenon approaching the theoretical limit delineated by BwO, as I explain in Chapter 4. By prototyping certain philosophical and cultural structures, I am able to isolate systemic points of failure and critique existing approaches and reimagine improved solutions, which I further prototype and critique.

1.4.3 Formulate

This ongoing process leads me to formulating new structures and relationships through production of theoretical approaches that result in practical applications. An example of this process is the artwork *The Symbol*, which comes as a result of my previous work examining the human-technology relationship in the context of their merging together. *The Symbol* utilizes the human perception and sense of aesthetic, understood as balance, as well as technological capabilities to create a new approach to this coming together in practical terms. In the process of producing the artwork, I create a set of instructions or a pattern for improved human entrance into technological environments. This practice-based strategy produces both practical real-world solutions as well as allows me to point to their impact on theoretical approaches.

1.5 Interpretation Methodology

In my work, I use other people and myself as instruments of perception bringing the impossible-to-see objects into view and therefore modifying and expanding our worldview. I gather my data by conducting interviews with the participants in the artworks and I give first person accounts of the experiences within the technological environment. As I focus on the effect of the technology on the human psychology and the possible reshaping of the relationship through artistic interventions, I interpret the workings of the relationship between humans and technology through:

1. tracing and interpreting historical and cultural circumstances
2. making and interpreting art, which is directly focused on or indirectly made in the context of technology and based on my historical and cultural findings

1.5.1 Phenomenology and Postphenomenology as a Prism

I trace the origins of my approach to the phenomenological principle stating that subject and object are not separate and instead constitute one another in a relational manner.

In fact, phenomenology itself was a result of discontent with the modernistic separation of subject and object. Rather than seeking the source of knowledge in either subjective ideas or objective facts, it focused on the intentional relation between subject and object. (Rosenberger and Verbeek 2015: 11)

In my analysis, I trace the intentionality that originates with the human and becomes an important element in my strategies to return agency to the posthuman subject, defined in terms of its embedded and embodied condition.

The presence of phenomenological relation exposes a reductionistic experience of the world as it results from the engagement with science and technology. In Merleau-Ponty's view, the sciences only analyze reality from the distance while phenomenology engages closely to describe the world as it is perceived (Merleau-Ponty 2002: 62-63). Phenomenology claims to reinstitute a richer human experience with the world, as I will

show through examples of art in section 5.3.2. This human-world relation has been studied by Edmund Husserl in terms of consciousness, Maurice Merleau-Ponty in terms of perception and Martin Heidegger as being-in-the-world (Verbeek 2005, 99-119). For my practice, the phenomenological view of technology as reductionistic presents a problem since I view the space between human and technology as most potent. In fact, I look for more expansive ways to engage with it. The major phenomenological contribution lies in drawing our attention to the experience itself and locating it at the nexus of human – technology relationships. This general orientation acted as a springboard to my initial art explorations.

Postphenomenology opens up the phenomenological project further by introducing the idea of mediation as the relational tool in the human-technology coming together and in fact, is constitutive of human relation with the world. ‘Technologies, to be short, are not opposed to human existence; they are its very medium’ (Rosenberger and Verbeek 2015: 13). Our knowledge of the world is always mediated through external technologies, be they our eyes or a computer network, so we never experience the world directly. Thus, technology reveals our senses as another mediating tool of perception. Further, ‘It is in practices of interacting with technologies where the phenomenon of technological mediation occurs and can be studied’ (Rosenberger and Verbeek 2015: 12). The above described location of mediation points me to the location of power within the relationship. It becomes the most potent place for my examination and interventions via art. My enquiry lays in the space of mediation or, as I call it, the liminal space between the human and technology. Another way to describe it is to say it is the interface in a very broad sense as it also includes the world and extended relationships among all the humans and nonhumans. As Don Ihde elaborates:

Both human and nonhuman agencies get revealed indirectly, through the critical examination of the patterns of lifeworlds that indeed contain humans and

nonhumans, even cyborgs. In this interconnection of embodied being and enviroing world, what happens is the interface is what is important. (Ihde 2002: 86)

In other words, what happens at the point of contact between the two relating entities defines the nature of the relationship. This becomes the focus of my practical and theoretical investigations.

Further, ‘Postphenomenology is the practical study of the relations between humans and technologies, from which human subjectivities emerge, as well as meaningful worlds’ (Rosenberger and Verbeek 2015: 12). I am interested in the nature and condition of these subjectivities. Since subjectivities emergent form the human-technology relations are in some capacity human beings, the nature of the mediation acquires an ethical and political dimension. Traditionally, the emergence of human subjectivities is otherwise known in psychology as individuation and is directly linked to our agency and self-reflexivity. But can we speak of individuation today when the subjectivities that emerge are plural and based in complex net of relationships conveying many agencies? Where is such subjectivity embedded? In my enquiry, I pay attention to the condition of this emergent subjectivity and the amount of agency and embodiment in the virtual world that it possesses. In effect, the thesis argues that the technological mediation in its current form is a type of shock that prevents humans form fully extending their agency; however, steps can be taken to alleviate this condition.

A theory related to postphenomenology, the actor-network theory (Latour 1996: 369–381) constitutes the world as networks of relations between ‘actants’. It is important to note that they can be either human or nonhuman and are equal to each other or ‘symmetrical’. There is no a priori distinction between human subjects and nonhuman objects. Conversely, postphenomenology maintains this distinction. According to Don Ihde, humans and non-humans may maintain only a certain amount of ‘symmetrical’

relationship (Ihde 2002: 100) however, it remains relevant to make a distinction between humans and things because of the role that the human plays in the relationship.

When we give up this distinction, we also give up the phenomenological possibility to articulate (technologically mediated) experiences “from within.” Actor-Network Theory studies complicated networks of relations “from outside,” from a third-person perspective; postphenomenology studies engaged human-world relations, and their technologically mediated character, from a first-person perspective. (Rosenberger and Verbeek 2015: 20)

In his analysis, Bruno Latour removes himself from the interaction between the human and non-human in order to produce his observations. Conversely, in my analysis, I maintain the first-person perspective while being engaged from within the interaction. The analyst may be the artist herself or the public. This embedded human position is, in my practice, necessary for production of observation, interpretation and meaning.

To sum up, in my interpretation of art and culture, I employ the following lenses:

1. Phenomenology: in its capacity to dismantle the border between the subject and object. It's the first step in examining the new hybrid subjectivity
2. Postphenomenology: in its perspective of the human and environment always existing together, where the environment is always already technological and mediated
3. Postphenomenology: where the relationship between human and technology produces embedded and relational subjectivities

1.5.2 Expanded Liminal Aesthetics

Whereas I use the previously described lenses for interpreting the world and the existing cultural phenomena, I use expanded notion of aesthetics in interpreting the results and effects of art and technology on the viewer/experiencer. In Chapter 5, I develop a concept of Expanded Liminal Aesthetics capable of opening a portal between the participant and the technological environment. This is, in fact, the goal of my latest

work *The Symbol*, which aims at creating, what I call, a productive subjectivity, which is distributed yet coherent. I will expand on my understanding of subjectivity in section 1.8.7 and 1.8.8. *The Symbol*, as representing the Expanded Liminal Aesthetics, stands in contrast to the human-technological coming together, in which the human experiences a shock, fails to open up to the new environment and withdraws their agency.

I understand aesthetics as a form of perception that addresses a sense of harmony between the inside and outside worlds. In another words, achieving the balance between the inside and outside annihilates the distinction between the two and in effect, creates the liminal space, the portal. In that moment, the threshold is lowered and the exchange between spaces can take place. Conversely, a disharmony between the inside experience and the outside stimuli causes our defenses to go up and closing of the portal. In extreme cases, it results in shock. A projection of human psyche if applied inappropriately or mistakenly to a technological phenomenon will not be absorbed by the system and cause disharmony; meaning, it will cause confusion in the human. Idhe describes, what he believes is our present mode of engagement in the following passage. ‘If we ‘dance’ with the non-humans, the steps that occur are often different from and often out of tune with the music played’ (Idhe 2002: 100). The inability to be ‘in tune’ with the system is what frustrates the human sense of perception and incorporation into the system. Also, being ‘in tune’ constitutes a type of aesthetic that satisfies the human inner experience and allows to be embedded in the body while acting through distributed and expanded agency, and while experiencing a hybrid sense of presence.

The following are some interpretations of what constitutes balance and harmony. The interpretations that I lean towards have to do with the withdrawal of aesthetic judgement through cultural and linguistic prisms and promote openness and ability to recognize oneself in moments of rapture or abdication of the singular subject. A related view of aesthetics is presented by Jacques Ranciere, who understands aesthetics as free

appearance. In another words, the appearance is free of reason and language therefore a liminal phenomenon by my definition (section 1.8.2). He goes on to explain.

The spectator who experiences the free play of the aesthetic in front of the 'free appearance' enjoys an autonomy of a very special kind. It is not the autonomy of free Reason, subduing the anarchy of sensation. It is the suspension of that kind of autonomy. It is an autonomy strictly related to a withdrawal of power. (Ranciere 2010: 117)

This is to say, free appearance, experienced through a sensation, liberates us from the pressures of interpretation, which introduces power relationships. In this instance, the balance between the inside and the outside is achieved by removing power and pressures associated with it from the interaction. Thus, the threshold is completely taken out.

This withdrawal of reason and power opens another possibility. That is to act fairly, which is another way of saying: to act in balance. Elaine Scarry relates the sensation of beauty in terms of fairness (Scarry 1999: 93). Her sense of fairness and symmetry does not necessarily mean exactitude in terms of quantity or perhaps not even quality since one may take a 'demotion' in order to reach a state of 'unselfing' and 'lateralness' (Scarry 1999: 113). This humbling attitude however frees one's energy to act creatively for something other than the self and in that act to become fair.

It is clear that ethical fairness which requires a symmetry of everyone's relations will be greatly assisted by an aesthetic fairness that creates in all participants a state of delight in their own lateralness. This lateral position continues in the third site of beauty, not now the suspended state of beholding but the active state of creating – the sire of stewardship in which one acts to protect or perpetuate a fragment of beauty already in the world or instead to supplement it by bringing into being a new object. (Scarry 1999: 114)

Further, in my understanding, to be lateral is to be side by side with another. The relationship is symmetrical to the extent that one constitutes the other in a way that is fair, but which does not require a perfect symmetry. Everyone contributes what is possible or what they are able to accommodate. In my practical application of this principle, the humans contribute their presence and affect, being there, and the

technology contributes the accommodations, which expand the perceptual field of the hybrid subjectivity.

As the saturation of the world with extreme experiences has been escalating since the Industrial Revolution, the ability to produce affect in the expanded technological world is at stake. In her iconic essay, Susan Sontag makes a case for abandoning language-based interpretation and instead embracing the senses, as she states: ‘In place of hermeneutics we need an erotics of art’ (Sontag 2001: 14). This call echoes Ranciere’s critique of power exercised over aesthetics and preventing the sensual experience. This need to overcome reason in favor of affect is the principle of openness that constitutes the liminality of this aesthetic, one that is being frustrated by overstimulation and resulting in states of shock. Sontag elaborates on the need to return to senses as a form of contemporary aesthetic experience.

What is important now is to recover our senses. We must learn to see more, to hear more, to feel more. Our task is not to find the maximum amount of content in a work of art, much less to squeeze more content out of the work than is already there. Our task is to cut back content so that we can see the thing at all. (Sontag 2001: 14)

What hides under the layers of interpretation, overthinking and overstimulation is the sensing, affective being itself that takes its pleasure in relating and being fair according to the different hybrid accommodations.

I will examine the cultural phenomena presented in this thesis based on this form reciprocity liberated from formal language, understood as aesthetic. This methodology will allow me to recognize forms of cultural expression that create a liminal space and others that raise the threshold of discord so high that it creates a shock experience instead. As we will notice, the artworks created in the first half of the XX century place greater emphasis on the content as they slowly disintegrate it in order to reach towards the feeling and finally the sheer presence of the artwork. As I will show, this trajectory

exhausts itself with Minimalism when the emphasis shifts to the presence of the viewer, who becomes a participant thus gaining new powers as a constitutive part of the artwork. The Expanded Liminal Aesthetic is located at the end of this trajectory, where it constitutes the distributed hybrid subject through the merging of calibrated human affect and expansive technological entities.

1.6 The Narrative Summary

In Chapter 2, I begin my investigation by examining select European and American art production of the 20th century in the context of increasing industrialization of human environment and its saturation with technology. I highlight the modernist split between the subject and object as I trace the movement of shock and the traumatic experience initiating this shock. I locate the initial trauma in the interaction between human and technology in everyday life and I am reading the symptoms of shock through cultural production and art. In Chapter 3, I move to examine the shock and trauma in contemporary digital media art. In this pursuit, I aim to:

- Identify the location of shock and trauma, which will direct me to a point where I can intervene through an aesthetic experience.
- Identify the nature and causes of this trauma

In Chapter 4 and 5, I propose possible tools for evolving the present space between human and technology. This is accomplished by a review of existing methods of forming subjectivity and proposing a new method. The new tools are communicated and accomplished through production of artwork. In those chapters, I aim to:

- Eliminate shock and re-define the traumatic experience as a rapture or liminality with the possibility of productive merging between human and technology.
- Point to future directions for such merging as manifested through art.

This approach yields:

- Unique perspective on history of technology as it relates to cultural production
- Identification of digital media as the present focus of the technological shock
- Development of tools for individuation through human-technological liminality: presence and agency, including their current application in media.

1.7 Definitions

In the following sections, I will present summary of definitions of the key concepts of this thesis. Some of them may sound familiar to the reader however I may be using them in a specific way. This introduction will enable more comprehension as the terms are used in later chapters.

1.7.1 Individuation

The traditional way, in which we think of the self as a unit, has its roots in the civil rights ideas formed during the XVIII century Enlightenment. Conceiving of self, which is contained in a singular subject, as a citizen and sovereign entity, was and still is the main mode of individuation in western societies. In fact, the very word, individuation, stems from the individualistic attitudes initiated by that epoch and leading to nascence of new sciences such as psychology. Today, this term can signify a process of integration and differentiation, in which a discrete system manifests traits of consciousness. The life in a rapidly changing society demands a model of individuation that is less rigid and accommodates growth.

Most of the XX century has been dominated by psychoanalytical views of how individuals come to be. Jacques Lacan in conceptualizing the ‘mirror stage’ describes the formation of the Ego. The process takes place when an infant begins to recognize him or herself in the mirror, which leads to establishing a relationship between the

outside world and the inside psychology. The infant is able to recognize the body as a whole only as an outside projection, which is contrasted by the fragmentation of the uncoordinated body parts. The Ego is formed in the identification with the outside counterpart (Evans 2005: 38). Therefore, already in its naissance, the structure of the individuality relies on a fundamental split in two between the inside and the outside.

I situate my research in opposition to this dialectical understanding of the self. I am interested in alternative reads, which allow approaches based in cooperation and mass flow. Gilbert Simondon is a theorist whose work addresses individuation as an ongoing process with fleeting fixed states (Simondon 1992: 300). Simondon considers being as more than a unit and more than identity as it is always evolving. ‘Individuation is not synthesis, a return to unity, but rather the being passing out of step with itself’ (Simondon 1992: 314). This type of ontology takes into account the environment with all its elements participating in the process of becoming. The ‘passing out of step’ with oneself creates crisis, through which further permutations become possible. In this sense, the unit is never stable while moving from one crisis to another in an attempt to resolve itself. I concur with Simondon that final individuation can never be achieved and exists only as a conceptual limit.

The understanding of being as process and crisis parallels my conception of liminal event as a starting point of new ontology. One often takes it for granted that being and an individual constitute one and the same entity. Conversely, in congruence with many neomaterialist thinkers (Manuel DeLanda, Rosi Bradotti), I recognize being in terms of networks and clusters of agencies, which open up the dialectically constituted individual to being as a collective, connected and embedded phenomenon. The crisis can be a productive state initiating transformation and expansion. It is an opening and a liminal event, in which the meaning is unstable, and the being is in-between fixed states. Such moments often appear as horror and border on the sublime. The instability of

meaning appears as grotesque and uncanny; familiar and unfamiliar at the same time. Understanding individuation as crisis, however, is perceived from a specific vintage point. It is a crisis of the individual ensconced in the Kantian understanding of the world based in reason. The idea of what is reasonable today has been exploded into a myriad of interpretations pointing to the fact that encapsulating the self in one ‘reasonable’ interpretation is a political tactic. The liminality, which results from failing to individuate in the traditional sense, can appear as horror. To that effect, I find this reaction useful in locating the point of entry into a new paradigm in practical life situations as exemplified through art.

1.7.2 Liminality

The examination of culturally situated human behavior traditionally has been performed in the field of anthropological studies. Since my aim is to describe human behavior vis a vis first, technology at large and later, more precisely, digital technology, I am going to use the tools of anthropology to proceed with my query.

The liminal space is understood as a space outside of the prevailing temporal and physical constraints, where the existing structure of a given system, such as the self, and one’s perception of the system as a unit is suspended. The established mode of meaning making undergoes a crisis and becomes replaced by a temporary uncertainty.

I’m building the above definition based on the understanding of sacred and in-between spaces studied in anthropology. In his seminal book, entitled *The Rites of Passage* Arnaold VanGennep analyzes rituals marking the transitional stages of human development such as birth, puberty, marriage and death. He categorizes them according to their function in society and the type of final structure they yield. This three-fold structure, as established by van Gennep, is made up of the following components:

Preliminal Rites – This is the stage of separation where the initiand is leaving a

previous established structure through a metaphorical death.

Liminal Rites – At this stage, the initiand is going through a transition acquiring a new identity. A master of ceremony usually guides this stage.

Postliminal Rites – During this stage, the initiand is re-incorporated into society with a new identity (Szakolczai 2009, 141)

Liminality, as a term, has been coined by Victor Turner. He based his work on the foundation of the rites described by Arnold van Gennep. In their view, liminality refers to a phase of ambiguity and disorientation that takes place during the middle stage of rituals. It is a threshold, where the initiate leaves their old way of structuring meaning and is not yet inducted into the new way, which the ritual establishes in its final stage. Becoming a new person necessitates the ritual disembodiment of the previous identity.

The attributes of liminality or of liminal personae (“threshold people”) are necessarily ambiguous, since this condition and these persons elude or slip through the network of classifications that normally locate states and positions in cultural space. Liminal entities are neither here nor there; they are betwixt and between that positions assigned and arrayed by law, custom, convention, and ceremonial. (van Gennep 2010: 95)

In the moment of initiation, the participant becomes vulnerable as he or she is stripped of their class status, identity and any powers that they might have previously possessed. Along with their worldly possessions, in the liminal space, the initiate gives up their agency to act as a sovereign subject.

This state is enacted in a ritualistic way, which include visual representation shifting one’s physical and psychological state.

Liminal entities, such as neophytes in initiation or puberty rites, may be represented as possessing nothing. They may be disguised as monsters, wear only a strip of clothing, or even go naked, to demonstrate that as liminal beings they have no status, property, insignia, secular clothing indicating rank or role, position in a kinship system – in short, nothing that may distinguish them from their fellow initiands. Their behavior is normally passive or humble; they must obey their instructors implicitly, and accept arbitrary punishment without complaint. (van Gennep 2010: 95)

An important feature of this process of transitioning is its final stage, in which a new meaning or social order becomes established. The initiate invests him or herself into this

new structure as a remade being. The completion of the three stages of a ritual process: separation, liminality and reintegration, opens the door to a new way of being (Turner 2008: 94-95). The formation, that takes place in the final stage, enables regaining agency and ability to reflect upon one's own condition. Therefore, the ritual process proves to be a useful model for production of an expanded, self-reflective entity that is better fit to deal with the demands of our multidimensional world. I believe that in our present engagements with technology, the final stage of integration never fully comes to completion. In those interactions we remain liminal entities for an indeterminate period of time.

1.7.3 Technological Liminality

I define the technological liminality as a location and event, where the human perceptual apparatus joins the human-made technology to produce a new qualitative experience. It actually can be a space such as a surface of a painting, or the monitor of a computer. The technological liminality is the abstract flatness but also an actual object. I will discuss these multidimensional spaces in Chapter 2 (paintings, art objects) and 3 (technological objects). One of the main characteristics of a liminal space is its location outside of the established order and in the realm of the transitory where regular roles are subverted. For example, the human leaning towards the technological world never fully joins the other paradigm yet in this process becomes less of a subject and more of an object to be manipulated in a virtual space, less of an organism and more of a mechanism. Thus, human agency is suspended as we find ourselves located on the intersection of the subject-oriented and object-oriented ontologies.

A classic example of a technological liminality is described in a figure of cyborg organism as theorized by Donna Haraway. In her view, cyborgs are 'promiscuous' and 'weedy' in a sense that they readily include cross-species, cross-platform augmentations.

Through proliferation of one type of structure into another, the organism enters a transitional region between biological and mechanical, living and dead, human and animal, male and female (Haraway 1995: XIV). Haraway's reading emphasizes the creative aspect of such fusion. The agglomeration of disparate parts despite being at times grotesque has a transformational capacity. The organism becomes itself a liminal space that combines and gives expression to different ontologies. During the writing of the Cyborg Manifesto, the collective phantasy was that all of the humanity in developed countries and perhaps beyond would immanently and unavoidably become cyborgs. Over twenty years later, this hasn't fully come to transpire in the way envisioned by Haraway. In the meantime, the figure of a cyborg has been relegated to the genre of nostalgia and perpetually unrealized future.

I believe that the figure of cyborg, in its original conception, was meant to be empowering in that it endows the human with special powers. This optimism is symptomatic of the early stages of new movements, especially those associated with technology, as it was exemplified by the Futurists in the beginning of the XX century. Modernist values, which originated with Enlightenment, still influence the way we read our reality in the beginning of the XXI century. However, our technological lives are far too complex and problematic to be interpreted in the above context. Despite of decades of humans merging with their digital technologies, the process still feels uncomfortable and at times, disempowering. Precisely because we are suspended in the constant becoming something else without appropriate conceptual signposts or anchors, we are captured in the process of perpetual liminality. This process, as viewed through an anthropological lens, takes away human ability to reflect on one's condition. Thus, we are left without tools to cope with digital technologies, which overwhelm our perceptual system with stimuli.

1.7.4 Trauma and Shock

My aim is not to define shock in strictly medical terms since my main interest is in the resulting aesthetic expressed in visual culture. However, I will take as my point of departure the clinical definition of shock. According to the DSM-5 Handbook of Differential Diagnosis, Acute Stress Disorder, colloquially known as shock, is a trauma and stressor related disorder. It can be diagnosed based on a number of symptoms, three of which are of interest to me: 1. Recurrent, involuntary, distressing memories, dreams and flashbacks replaying the trauma; 2. Efforts to avoid the distressing memory; 3. Dissociative symptoms including altered perception of reality (First 2014: 225).

The psychoanalyst and traumatologist, Elizabeth F. Howell discusses the relationship between affect and trauma in the following passage.

Unbearably intense affect overwhelms the person's ability to organize information and even to think. As a result, the traumatic events or circumstances cannot be assimilated or taken in. The neurobiological result is the sensorimotor, rather than narrative, registration of the unendurable experience. This lack of assimilation results in vulnerability to flashbacks as well as a deficit in narrative memory with regard to the event. (Howell 2011: 75)

It is important to note, for the development of this thesis, that while the sensory stimuli can flow into the organism and be registered in a mechanical way, the human psychology has its limits as far as processing this information. As I will aim to show in further chapters, this dynamic lies at the heart of the relationship between human and technology and, as I will argue, it frustrates the human-technology coming together. Howell further explains the mechanics of the Dissociative Identity Disorder as it originates with a trauma event in the mind.

Defining trauma as an event that causes dissociation focuses on the "fault lines" or "fissures" in the mind rather than on the external event. If an event is so overwhelming that it cannot be assimilated it cannot be linked with other experience, resulting in gaps in memory and experience. This is a description of dissociation. (Howell 2011: 75)

The concept of an event that takes place in the mind is important to me since it relates to the concept of Liminal Event, which I am developing in this thesis. Trauma is a concept related to liminality in its ability to overwhelm the human nervous system through intense stimulation. Since trauma can be defined as an event that takes place in time, the liminality, which I am interested in, is also an event. Further, they both point to the human mind and psychology as a location. Liminality therefore is not a concept that is recognized by the technological entity as it is rather experienced exclusively by the human. The human capacity to take in the intense experience, in my conception, is the measure of what the human-technology hybrid subjectivity can take in and produce. This will become significant later (section 5.2) in my developing the calibrating tool facilitating the hybrid subjectivity through creating a dynamic equilibrium, which I call the symbol.

According to Sigmund Freud, ‘protection against stimuli is an almost more important function for the living organism than reception of stimuli’ (Freud 1990: 30). What follows is that the human psyche is not equipped to deal with the totality of stimuli present in our environment. The overstimulation causes a number of protective mechanisms to move in as temporary shields. These constitute the behaviors characteristic to the Acute Stress Disorder as described above.

The human organism is thus meant to take in only a small amount of the stimuli. Further, Freud states that

The main purpose of the reception of stimuli is to discover the direction and nature of the external stimuli; and for that it is enough to take small specimens of the external world, to sample it in small quantities. (Freud 1990: 31)

The fact that in our balanced state we take in only an edited version of what is taking place in our environment has tremendous phenomenological implications. We perceive that, which is necessary for furthering of our goals. In other words, in our balanced state

a human psyche is able to process the information successfully and apply them to future actions. When receiving the proper flow of outside information, we are able to act in the world. We fail when we perceive everything. In this manner perception is directly linked to human agency. The shutdown or malfunctioning of the perceptual apparatus directly influences the amount of agency available to us.

1.7.5 Agency

For the purposes of this thesis, I define agency as the ability of an entity (human or nonhuman) to act in a given system. This functionality enables self-reflexivity and purposeful engagement with the environment. Since early childhood humans exercise agency as a means of learning and testing their surroundings.

The dialectical understanding of this process has its origins in work of Jacques Lacan and his concept of mirror stage in child's development (Lacan 1998: 257). This process usually takes place vis a vis the externalized world, which begins with one's body and extends to other bodies and objects. Agency, as a means of testing the world, is fundamental in testing the boundaries thus constructing meaning and enabling social exchanges. The objects that respond positively are included in the self-image while those that don't are rejected. This highly exclusive figuration creates a subject with a build-in conflictual approach to the world. The world cannot just be; it needs to be conquered. This constitution of the self creates a sense of being separated and pit against an unresponsive and therefore unloving world. This projection is very much activated in the human – technology relationships. In this thesis, I am aiming to develop a different way of finding one's agency in a world that is not static and uniformed and therefore is much more likely to evade such simplistic interpretations.

Instead, I am tracing the idea of agency in human-technology relationships back to the phenomenological concept of intentionality. Edmund Husserl spoke of the human

mind being always directed towards something, an object in the outside world (Husserl 2013: 28). This intentional undertaking of a direction becomes the first act and enables further actions based in perception. Maurice Merleau-Ponty elaborates on the relationship between action and perception in the following passage.

The thing is at the end of my gaze and, in general, at the end of my exploration. Without assuming anything from what the science of the body and of the other can teach me, I must acknowledge that the table before me sustains a single relation with my eyes and my body: I see it only if it is within their radius of action; (Merleau-Ponty 2000: 7)

Despite maintaining the subject – object split, this is the first step towards establishing a co-constitutive relationship initiated in the act of perception. The human reaches towards the object and the object responds in its capacity to provide knowledge about itself.

In the post-phenomenological view, technologies mediate this human intentionality directed towards the world. One example of such technology are neuro-implants for deep brain stimulation, which dramatically enhance or change the perception of the world. In such intimate relationship the human and machine intentionality (action) merge. Rosenberger and Verbeek conceive of it as a ‘hybrid intentionality’, which integrate human and nonhuman elements (Rosenberger and Verbeek 2015: 21). Within this hybrid intentionality, however, there is no absolute equation made between the human and technology. They both are not ‘separate’ but stay ‘distinguishable’ from one another. In this view, the objects acquire a dynamic role and while maintaining their uniqueness, they become partners through agency of their own. ‘Agency, then is not an exclusively human property anymore: it takes shape in complicated interactions between human and nonhuman entities’. (Rosenberger and Verbeek 2015: 20)

As much as the post-phenomenologists are interested in the defense of nonhumans as active participants in the relationship with humans, I am interested in examining the state of human agency in this relationship. Traditionally, it has been taken for granted that humans have a dominant role in their relationship with the world. However, with the revision of what constitutes an acting subject, comes the need to assess the state of the human participation and the state of human agency.

1.7.6 Shock and Suspension of Agency

I theorize human engagement with technology as, currently, the nexus of human shock. The liminal space, in which the human ego is disassembled, is never followed by the post-liminal stage, which reconstitutes the acting, empowered subject into the new milieu. It is precisely because this new constitution of the subjectivity ‘on the other side’ is impossible. The hybridized being is not a subject in the dialectical sense since it enters the process of becoming through and with technology. However, since this condition is not explicitly defined and the entrance is not clearly marked, one attempts to reconstitute the world according to dialectical modes of engagement. In the following chapters I will site examples of these threshold spaces, their manifestations, and possibilities for improved engagement (3.1, 3.2, 5.1). This inappropriate approach not only results in suspension between ontologies but also in shock. Instead, in encountering technology, the human remains suspended in the vulnerable state, where his or her agency is not fully available or at best questioned.

It appears that the main function of having perceptions is to enable a human to relate to objects in the world and act on those relations. Once the flow of information is temporarily suspended, as in case of avoidance, and distorted, as in case of disassociation or repetition, the person is cut off from the environment. In other words, in the state of shock, one’s agency in the world becomes suspended or impaired. A

similar suspension of agency takes place in an example of an ancient Roman law cited by Giorgio Agamben. A prisoner could be pronounced a ‘homo sacer’ – a sacred man, who’s status as a citizen was revoked and, in that gesture, he was sacrificed to the gods. The person was in this world but existed outside of the human city as he already belonged to the gods (Agamben 1998: 73). Existing outside of the walls of the city, the sacred man is stripped of his status as a citizen and becomes a living being without the protection of the laws. The relationship between him and other humans is severed. To that effect the killing of this man would not be punishable by law and the homo sacer had no legal recourse. His agency in the world of men was suspended.

In both of these examples, a person is cast outside of the human cultural sphere. In this gesture, one becomes a bare life that is not different from animals and trees and has no protection of the cultural or legal system. This sort of exposure leaves one opened to manipulations and assaults. A person in shock may perform actions that may not be in their best interest because of the improper flow of stimuli and inability to process those accurately. I believe it is accurate to view a person in shock as bare life, left at the mercy of a body stuck in an emergency loop.

Agamben introduces the Greek concept of *zoe*, ‘which expressed the simple fact of living common to all living beings’ (Agamben 1998: 1) and is characterized by its exclusion from the polis, the city or political life ‘and remains confined – as merely reproductive life – to the sphere of oikos, home’ (Agamben 1998: 2). What interests me is that *zoe* or bare life has no protection in the polis. In fact, the moment bare life enters the city, it can be killed. Therefore, when entering a cultural space *zoe* needs to put on an armor of citizenship with all its accouterments such as passports, birth certificates and other legal documents. This is the case when a new baby is born into the world. These legal tools provide agency to *zoe* within the cultural and legal structure. Agency in turn provides means to enter into relationships with other entities and therefore perform life.

What I find interesting in the context of my argument is that in order to ensure one's function as an agent in the world, some tools need to be developed and used. In a broad sense, these tools are technology. This needs to be addressed directly in the case of humans interacting with their own technology since, as I argue, present technologies do not support fluid human action. A person in shock will not be able to form coherent relationships with other entities and develop constructive technological behaviors. Moreover, I believe, the shock is not an opening to the new becoming but precisely the opposite, a contraction. One could say it is a human bandwidth problem. The limited amount of flow of data caused by shock prevents one from joining the virtual flows.

In postphenomenological terms, I am looking at the distribution of power (agency) across the line of 'symmetry' between the human and technology. To be clear, Don Ihde does not believe in perfect symmetries as he states: 'There are at best degrees and kinds of symmetries' (Ihde 2002: 100) as they are context driven. For that reason, initially it looks like there is plenty of space to explore. Ultimately, in my explorations of this coming together of humans and technology, I cannot help but feel that we are running up against an experiential wall. Despite all the new immersive (AR, VR) and scientific (space travel) technologies, the accommodations of technology-enabled agency do not satisfy the human appetite for experience. What Ihde calls the 'Failure of the Nonhumans' is parallel to what I believe is the trauma that the human experiences in the context of the relationship. In concluding about the failures, Ihde says:

My middle-ground claim is that there is, indeed, a limited set of senses by which the nonhumans are actants, at least in the ways in which *in interactions with them, humans and situations are transformed and translated*. (Ihde 2002: 100)

It is another way of saying that the technologies are not developed enough. One could presume that the relationship would be more balanced once the nonhumans will be actants in more ways. However, I believe that this is not the case. The quality of the experience does not depend on the quantity or intensity of technological

accommodations. The quality of the experience between humans and nonhumans depends on how the engagement is entered and experienced by the human. If it is experienced as harmonious and enabling, the human will have more success merging with the technological world.

1.7.7 Distributed and Interrelated Subjectivity

I look for useful models to overcome disassociation and fragmentation in some psychoanalytical models. For example, the main modality in treating the Dissociative Identity Disorder is to integrate the disparate parts of the personality by establishing the therapist's relationships with them and also reconnecting them amongst themselves (Howell 2011: 141). In effect, the different parts gain awareness of one another and even learn to cooperate. The parts are interdependent in the context of the human person and their psychology and as such, they can reach cohesion through relating.

The concept of contextual interdependence avoids the problems in the often implied opposition between dissociation versus unity. And, it explicitly allows for intersubjectivity of parts in the internal world. As the different subjectivities can increasingly recognize that they can utilize their connectedness to each other, they are in a better position to bear their overwhelming affects. (Howell 2011: 143)

The ability to 'bear the affects' achieved through connectedness of disparate agencies is a useful outcome, which I aim to recreate in my artwork, *The Symbol*, in an attempt to heal the human-technology rift.

Further, it is important to note that the goal is not a creation of a monolithic self in a modern sense but an assembly of contextually interrelated subjectivities. Howell elaborates on this point in the following passage.

For me, an ideal integration would allow the different "voices" of different self-states to retain their own tenor although increasingly less dissociated, and in harmony or in conscious conflict, as the case may be. In other words, integration need not cover over multiplicity or even the capacity for dissociation. (Howell 2011: 143)

The ability of the human being to function well as a coherent polymorphic form in a psychological and, so to say, native state inspires me to extrapolate this dynamic way of being into the context of human-technology interactions. If achieving equilibrium is an innate capacity of human psychology, then it is reasonable to test this model in relationship to perceived outside entity or environment such as technology. The interrelated human-technology subjectivity may arise as a result of appropriate exchange and interaction between the two. In the artwork, *The Symbol*, I interrogate this possibility.

Similar interpretations of subjectivity can be presently found in philosophy. Rosi Braidotti's project of redefining the subject in posthuman terms (Braidotti 1994, 2019) offers further parallels to this thesis.

The knowing subject is not Man, or Anthropos alone, but a more complex assemblage that undoes the boundaries between inside and outside the self, by emphasizing processes and flows. Neither unitary, nor autonomous, subjects are embodied and embedded, relational and affective collaborative entities, activated by relational ethics. (Braidotti 2019: 46)

The traditional modern understanding of subject based in the Enlightenment values and perpetuated by the Lacanian understanding of the individual based in singular self stands in opposition to this view. In contrast, Braidotti points out the insufficiencies of this approach, which become highlighted in the context of hybridization of human life by the end of the XX century. I adopt this interpretation into my understanding of the subject because of its capacity to encompass the complexity and potentiality of human life in terms of technology. Further, I believe, this diversified subjectivity is a function of human searching their environment for points of interest based in reflectivity and engagement. In that effort, we can split our attention as we engage numerous phenomena simultaneously. In other words, we can fluently distribute our agency.

In this thesis, I will use the term ‘distributed, interrelated subject,’ as a type of posthuman subject, to talk about our engagements in the context of technology. The distribution takes place in the present and in a number of specific locations; as Deleuze would have it, on ‘a thousand plateaus’ (Deleuze Guattari, 2007). But how would one recognize this distributed subject out in the world? In my artwork, I trace this subject through its affective effect on those, who have a nervous system to perceive with, humans and possibly in the future, nonhumans. In other words, I highlight the presence of the distributed, interrelated subject in an environment through aesthetic experience (*The Symbol*). Rosi Braidotti and Brian Massumi acknowledge the constitutive capability of affect in the following passage.

Posthuman subjectivity starts with the acknowledgement that what defines us as an autonomous capacity is not rationality, nor our cerebral faculty alone, but rather the autonomy of affect as a virtual force that gets actualized through relational bonds. (Braidotti 2019: 45)

Our autonomous capacity, as it is realized in the autonomy of affect, delineates an area for the distributed subject to take shape in, through relations. Further, the ability to be affective and experience affect becomes the acting capacity of this distributed subject. The affect can result in attraction or repulsion and thus creates a movement and directionality, which I understand as agency.

1.7.8 Productive Subjectivity

The agency of the new subjectivity, in my renditions, is not defined, as the traditional subject, by doing and getting, per se. Productive subject is made by simply being and out of this being, the doing proceeds. In this context, the artwork *The Symbol*, redefines being with technology by placing a participant in a space, where the technology and the human produce an aesthetic experience based on the affective presence of the human. Just being in the space yields productive subjectivity, which is available to anyone with perceptual capabilities. The productive subjectivity is activated in *The Symbol* through a

relationship between human and technology. In its function, however, it is not masculine or feminine but rather both. The technological and the human components alternate in perceiving and emoting one another. Moreover, production does not spring from pure thought and instead proceeds from a sentient being having a sensual experience within a hybrid, corporeal and virtual, system. Virtual in this sense means one that actualizes the potentiality latent in both the human and non-human. The process of human perceiving is made tangible in the environment or the artwork through a neural feedback system. The artwork adjust itself in response to the feedback to seek out an expression that corresponds to the sense of psychological equilibrium of the entity perceiving. The production takes place in a system, where the action is both masculine and feminine as the productive hybrid subject is perceiving and being perceived in a self-adjusting and self-monitored loop. The thought is replaced by perception and production of affect and is made tangible by technology. Productive state as understood in the Aristotelian philosophy was reserved for the masculine God (Moder 2017: 87). In my redefinition of the production process, any sentient being can be tangibly overflowing with creating and manifesting in their rest state. To be clear, this system does not produce being in a sense of God's creation. Instead, it yields a creative, productive subject on a level of a symbolic exchange between human and machine.

The center stage of the debate on subject and its nature can be traced to two seemingly opposing views on ontology as presented by Hegel and Spinoza. The entire span of XX century philosophy has been derived from that split (Moder 2017: 125) however only recently some efforts have been made to heal the chasm. The main Spinozist criticism of the Hegelian thought is that through its concept of negativity, it creates a stratified subjectivity dangerously approaching singular identity based in lack. However, Hegel conceives of movement and production, to which I tie subjectivity, as an absolute (not negative) principle, therefore very similar to Deleuzian original

repetition (Moder 2017: 126). Subjectivity, in both Hegelian and Spinozist reads, is ever-changing and distributed while being always already perfect in its becoming.

To read Spinozism with Hegel is precisely to ask Spinozism the question of how to think movement, change, or transformation in a system that has no imperfection, in a system which seems to hold firmly to the principle that only being is, while nonbeing is not, in a system where there is strictly speaking no falseness, where there are, just like in jazz and in any practice of improvisation no mistakes. (Moder 2017: 127)

The *Symbol* makes a system, which is simultaneously affirmative and differentiating, tangible. It is affirmative since the participant is receptive, allowing the experience to flow on or affect their nervous system. In this way, the movement and transformation are achieved in the nervous system or in the bare life. It is differentiating since the participant affects the system by leaning towards the stimuli that achieve a greater sense of balance between the participant's internal sense of self and the system. In this way, the movement and transformation are achieved on the technological system, which responds by producing an adjusted experience for the human and so on. Each instance of the state of the entire system, however, produces no mistakes since each instance is true as one entity is holding in itself the other.

This successful human – technology merging that produces a sense of harmony aesthetically, from the perspective of human perception, and functionally, from the perspective of human agency, creates a productive subjectivity of the human in the context of technology. It is different than its modern predecessor in that it incorporates technology not as its outside environment or the other, but as the lived part of self. It doesn't produce a sublimated ego but rather a directed life based in agency and perception. The common ground for this merging is based in agency both human and nonhuman understood as intentionality. This productive subjectivity is unique in its incorporation of other parts, human and nonhuman, influencing and transforming, but not obliterating the coherence of the human. In my pursuits, I will maintain the human

perspective as vital in forming the new coming-together for the reasons that I will summarize below.

As I have explained previously, I think of productive subjectivity as it manifests through agency and I think of agency in terms of intentionality directed by affect. As much as humans are polymorphic in their psychology and physiology, it is important however to note, that there is an orchestrating human leaning towards things in the world. That leaning understood as intentionality creates a subject, strictly speaking. Further, I believe, recognizing a productive subjectivity in context of technology is a useful tool in protecting the whole self-assemblage on its trajectory. My insistence on treating ‘one leaning towards something’ as distinct from ‘another leaning towards something’, has to do with the power relationships, in which they engage. These relationships have real-life ethical consequences for all parties involved.

As an incorporated entity, in its lived, enacted dimension and under the banner of productive subjectivity, the posthuman directionality embedded in life acquires a distinct platform, from which it can negotiate with other entities. Giorgio Agamben in ‘Homo Sacer, Sovereign Power and Bare Life,’ outlines the troubled relationship between bare life or sacred life and the state. The relationship is troubled because the sacred life is stripped of its status as a citizen and therefore venerable to violence (Agamben 1998: 21-26). Similarly, a human, entering the human-technological assemblage, is stripped of his or her individuality, in the Lacanian sense, which used to serve as an envelope of protection in the corporeal world and exposed to acting elements of the assemblage. The repercussions of such interaction extend to the physical body in the presence of shock and injury. In another words, a human residing on the spectrum of reduced agency in the above context is equivalent to Agamben’s homo sacer. Further, Agamben states:

Sacredness is a line of flight still present in contemporary politics, a line that is as such moving into zones increasingly vast and dark, to the point of ultimately

coinciding with the biological life itself of citizens. If today there is no longer any one clear figure of the sacred man, it is perhaps because we are all virtually *homines sacri* (Agamben 1998: 114)

I believe this issue of disempowerment is especially highlighted on the Web and in media technologies as human lives are becoming more digitized. The virtual medium, with which we are merging, offers limited and ever-shifting accommodations for our protection. If as, Latour would have it, humans are another part of the system equivalent to the objects then we become part of the landscape in the same sense as trees and rocks. In our being indistinguishable from the environment, we become *homo sacer* and bare life.

The human agency and directionality enable a subjectivity through which humans have a chance to retain an envelope of authentication pointing to human life. This agency is produced by a human in the act of living his or her life and as it manifests within different dimensions, real or virtual. Similarly, to a citizen and as opposed to bare life, such entity will have more negotiating power in coming together with technology. Since in this equation, the psychological, affective dimension implicates the body, the bare life is included and protected in the virtual world under the form of productive subjectivity pointing to a sovereign entity and producing a specific effect. In another words, I am attempting to construct an envelope of negotiating power for *zoe*, the bare life, within the context of technology. Through testing different modes of subject production in my artworks, I have arrived at a method centered on affect and aesthetics in the artwork entitled *The Symbol*, as discussed in Chapter 5.

CHAPTER 2: Historical Aesthetic Responses to Technology

I will take as a point of departure the cultural attitudes as expressed through art in the beginning of the XX century in order to expose a link to the present human modes of engagement with technology. Futurism is the first art movement addressing the human-machine interactions. The Avant Garde of XX century was baffled by the existential fluctuation produced vis a vis life in the city and the use of technology. Their reaction ranged from blind enthusiasm of the Futurists to wide-eyed bewilderment of the Dadaists and Surrealists. These extreme attitudes finally lead to attempts at control and compartmentalization of the sensory input by post-WW II art. This resulted in the creation of the notion of privacy and a hyper-individuation mostly through vision. This was done at the expense of all the other senses, such as smell and sound, which were suppressed and deemed abject.

Dada aesthetic of bricollage and confusion of space and time placed the traditional subject under duress. The oversaturation of senses that followed WWII culminated in primary emphasis on visual aesthetic in the art of the fifties and sixties. It was an attempt at curbing the over-stimulated senses and reconstitution of strong, singular subject as contextualized by Clement Greenberg. This almost century long reaction to technological advances continues with Minimalism and the conceptual dawn of object-oriented ontology. I believe that works of minimalist artists introduce a switch from Modernist and Enlightenment-based cultural attitudes towards representations of the world from the vantage point of technology. In this chapter, I will stop the art historical analysis at Minimalism and I will continue the discussion of post-minimalist work in Chapter 5 in order to contextualize the concept of Expanded Liminal Event.

2.1 Futurism

The industrialization of Europe as evident in the development of modern city had specific effects on the human psyche. The turn of the 20th century is characteristically defined by metropolitan overcrowding and close proximity of humans occupying small urban spaces. Additionally, the omnipresence of technological artifacts such as cars, trains and factory machines increased the speed of urban life. This intensification of sensory stimuli and necessity for quick reaction times has placed a burden on the human nervous system.

In the following passage, Georg Simmel, a German sociologist contemporary to these developments, describes the psychological mechanisms that create the dissonance and stress the human psyche in ways unknown before.

The psychological basis of the metropolitan type of individuality consist in the intensification of nervous stimulation which results from the swift and uninterrupted change of outer and inner stimuli. Man is a differentiating creature. His mind is stimulated by the difference between a momentary impressing and the one which preceded it. Lasting impressions, impressions which differ only slightly from one another, impressions which take a regular and habitual course and show regular and habitual contrasts – all these use up, so to speak, less consciousness than does the rapid crowding of changing images, the sharp discontinuity in the grasp of a single glance, and the unexpectedness of onrushing impressions. These are the psychological conditions which the metropolis creates. (Wolff 1950: 409)

Different human behaviors were developed as coping mechanisms to match this technologically enhanced intensity of life. The overstimulation of the human sensorium lead to willful psychological distancing between the humans in an attempt to avoid additional stimulation (Wolff 1950: 410). In another words, we don't want to know each other closely as we become numb to one another. The demands of machine-like lifestyle require following schedules and exactitude in one's actions. A life lived in this manner becomes impersonal positioning the human existence as a means to achieving the goals of a larger system. Thus, the individual loses his or her value and sense of meaning in

the society and within the machinery of the modern city. According to Simmel this is only one side of the coin. On the other hand, one encounters the blasé attitude of someone driven to pursuing only pleasurable stimuli.

A life in boundless pursuit of pleasure makes one blasé because it agitates the nerves to their strongest reactivity for such a long time that they finally cease to react at all. The essence of the blasé attitude consists in the blunting of discrimination. (Wolff 1950: 411)

The modern city with its technological advances creates therefore a human that is numb to the external world as well as their internal life.

Dissociative symptoms including altered perception of reality are used in diagnosing Acute Stress Disorder, colloquially known as shock (First 2014: 225).

Simmel points to this early instance of humans in state of shock as a result of interacting with technology. Further, he states: ‘What appears in the metropolitan style of life directly as dissociation is in reality only one of its elemental forms of socialization’ (Wolff 1950: 411). Therefore, as early as the turn of the last century, going into shock has become a normative behavior for someone encountering technology and the heightened lifestyle associated with it. As a result, privacy becomes not only a distinct concept but also a luxury that only few can afford. Separateness from other people and separateness from the technological devices is not possible since all the pieces of the system have to work in an intimate continuity in order to yield results and propel the machinery of the city and by extension industry. All of those mechanisms are eerily and unchangingly present with us today in a world that has seen technology evolve to become even more intimate and efficient in bringing the outside under our skin.

The process of humans attempting to negotiate their relationship with technology can be traced in cultural production and specifically in art created at the beginning of the XX century. This is the case with the Futurists, who enthusiastically embraced violence as a coping strategy. Becoming one with the machine in order to internalize its qualities

into the fragile human body was one of the Futuristic tactics as they cultivated the human psychology amplified and rid of morality in order to match the technological stimuli. Their spirit was invigorated precisely by the technological danger. Their remedy for going into a shock was to charge on as intensely and vigorously as the machine. In the *Foundation and Manifesto of Futurism* published in 1909 in *Le Figaro*, Filippo Marinetti writes the following passage. ‘I stretched out on my car like a corpse on its bier, but revived at once under the steering wheel, a guillotine blade that threatened my stomach’ (Marinetti 1972: 39). To the author the moment of death is simultaneously the moment of revival. The efficacy of this approach in alleviating shock is questionable however since in the sentence, which immediately follows, Marinetti admits falling back into disassociation. ‘The raging broom of madness swept us out of ourselves and drove us through streets as rough and deep as the beds of torrents’ (Marinetti 1972: 39). Being ‘swept out of your own self’ implies a disassociation of the psyche even though it was caused almost willfully.

In the futuristic view, the technological intensity has been created mainly through speed and endless repetition or duration. The human sensorium in a city filled with technology is stretched and stimulated to a point of what the Futurists read as transcendence. In the *Manifesto of Futurism*, Filippo Marinetti continues to elucidate this point. ‘Time and Space died yesterday. We already live in the absolute, because we have created eternal, omnipresent speed’ (Marinetti 1972: 40). This perception of movement places stress on the human ocular system and results in the development of new aesthetic language in art. This is an important moment to mark because in this instant, the human aesthetic expression attempts to negotiate the moment of shock caused by sensory overstimulation. This negotiation results in a blurred freeze frame as it is captured on the canvas or in sculpture. In my understanding, the futurist artworks

are one of the first examples of technological shock being materialized in a physical form.

Further, the aesthetic expression resulting from this shock became canonized in a specific portrayal of movement and depiction of light. Umberto Boccioni elaborates on new artistic strategies in 'Futurist Painting: Technical Manifesto.'

Indeed, all things move, all things run, all things are rapidly changing. A profile is never motionless before our eyes, but it constantly appears and disappears. On account of the persistency of an image upon the retina, moving objects constantly multiply themselves; their form changes like rapid vibrations, in their mad career. Thus a running horse has not four legs, but twenty, and their movements are triangular. (Boccioni 2003: 150)

The simultaneous representation of the multitude of impressions is collapsed one on top of the other on the surface of the material. In his painting, *Dynamism of a Cyclist*, 1913 the subject is replaced by a grouping of vectors and swatches of colors. The figure is just an impression of directionality, as though captured out of the corner of the eye, flashing in and out of our consciousness.

Illustration #1. Umberto Boccioni, *Dynamism of a Cyclist*, 1913 has been removed due to Copyright restrictions.

As exemplified by Boccioni painting, the following are the main tenants of Futurism and the beginning of Modernism in art. The natural representation gives way to capturing an impression while the figure falls apart into perceptual units, which in effect render as a subject a psychological space, not the figure. However, there is another layer of complexity present in the Futurist artworks. Looking straight on at the painting creates a further disassociation from the subject and therefore meaning in the traditional sense. The central clump of colorful lines, even though tumultuous in its expression, is de facto frozen still by the virtue of the medium. In looking at the painting, we experience the

dynamic movement and perfect stillness simultaneously like a deer caught in the head lights. The disassociation from a contextually meaningful perception of reality and the momentary freeze of the perceptual apparatus signals a moment of shock.

I have mentioned that the subject of the painting is a psychological space, one that reflects on the feeling of motion, and such analysis is consistent with the traditional reads of Futurist artworks. However, what the Futurist artists have captured on the surface of the canvas goes beyond the declarations made in their manifestos. When Boccioni states that ‘movement and light destroy the materiality of bodies’ (Boccioni 2003: 152) he fails to fully grasp or perhaps in his revolutionary fervor, does not care where this destruction takes place and at what cost. For the purposes of my argument, what I find interesting is the location of the human reaction – shock as signaled by disassociation. As much as it originates in the human psyche, it also finds its way to manifest in a concrete form of cultural production. The flatness and the surface of this expression I find also particularly interesting since it has been addressed specifically by artists later in the twentieth century. These include Andy Warhol and Cindy Sherman, whom I discuss in more detail in further chapters. As it will become more evident in my discussion, the surface in works of art becomes a tool for signaling shock.

2.2 Dada and Surrealism

The shock and disassociation as a reaction to technologically saturated world underwent another permutation in the form of Dada movement. The artists fleeing World War I found refuge under the umbrella of Cabaret Voltaire in neutral Switzerland. The undoing of traditionally understood subject in art parallels the loss of self in a human faced with the machinery of war. The profound objectification of the human element and the loss of continuity of all narratives leads to an aesthetic expression echoing the

futility of existence and unity of a subject. One of the founders of Dada, Hugo Ball elaborates on this in the following passage.

The Dadaist trusts more in the sincerity of events than in the wit of persons. To him persons may be had cheaply, his own person not excepted. He no longer believes in the comprehension of things from one point of departure, but is nevertheless convinced of the union of all things, of totality, to such an extent that he suffers from dissonances to the point of self-dissolution... (Ball 1951: 57)

This presence of all perspectives, all at once is captured and transfixed on a surface. To that effect, the Dada technique of bricolage exemplifies an aesthetic strategy capturing the sense of disassociation and self-dissolution into pure stimuli devoid of meaning. The surface of an artwork guaranteed an equal treatment of all the elements disregarding their subjective and cultural meaning. In that sense, narrative of any sort was disposed of in favor of pure visual sensation communicating intensity and confusion to a point of pain. In fact, threatening juxtapositions of objects that commonly would not be found one next to the other facilitated further the shocking effect.

One of the best examples of Dada collage can be found in the work of Hannah Hoch. In her work entitled *Cut with the Kitchen Knife Dada through the Beer-Belly of the Weimar Republic*, 1919 we can see the juxtaposition of cut out images of human bodies pressed against mechanical parts that in effect create one imaginary machine.

Illustration #2. Hannah Hoch, *Cut with the Kitchen Knife Dada through the Beer-Belly of the Weimar Republic*, 1919 has been removed due to Copyright restrictions.

Fragments of words, ball bearings, distorted and decapitated figures pile up on the surface fracturing the meanings of the original photos. A new coherence based in aesthetic and united by the surface arises out the confusion of meanings. Thus achieved impossible landscape reflects the internal psychological state of a person as well as the

collective that comes into contact with the technology of the early XX century. The technology is implicated directly with the imagery of gears, cogwheels, locomotive and fragments of early skyscrapers. The culture and politics are signaled by the figures of statesmen, soldiers, philosophers and social revolutionaries. That clash creates a psychological state of intensity that can only be reconciled through shock. In this particular work, I am pointing to signaling of shock through aesthetic. It is achieved by the equal treatment of all elements as they are pressed together, physically and thematically, to create a flat surface, facilitating disassociation.

Another example of Dada artwork signaling shock is Raul Housmann's assemblage entitled *Mechanical Head (The Spirit of Our Time)*, 1920.

Illustration #3. Raul Housmann, *Mechanical Head (The Spirit of Our Time)*, 1920 has been removed due to Copyright restrictions.

The work consists of stylized human head carved in wood with attached elements suggesting science and technology. A ruler, tape measure, a pocket watch mechanism, pieces of typewriter and camera create an uneasy composition. What interests me in this particular approach is the objectification of the human figure and, by metaphor, of human intellect as it becomes just another part in the machine. The human element is equal in its positioning and value to the mechanical in as much as it operates in synchronicity with the rest of the parts. I believe, this is one of the earliest aesthetic examples of Object Oriented Ontology, which comes to prominence in the 1970s as we begin to grapple with the need to theorize the new paradigm of human-computer interaction. The shock, in this instance, is signaled by the above described objectification and thus achieved dehumanization of the figure.

Human beings as automata are, in fact, often evoked by the artists in the period between the two World Wars. This type of objectification and disassociation is present in a number of works by George Grosz. *Daum Marries her Pedantic Automaton George in May 1920, John Heartfield is Very Glad of It* is a painting and a collage depicting a partly nude female figure next to her male counterpart against a stylized city scape.

Illustration # 4. George Grosz, *Daum Marries her Pedantic Automaton George in May 1920, John Heartfield is Very Glad of It*, 1920 has been removed due to Copyright restrictions.

The female, while retaining her human form, is presented as an object of desire. Her erotic body parts are exposed for viewing and, as suggested by a disembodied hand, for touching. The objectification of the male however is dramatically different. He appears as an assemblage of mechanical parts and measuring devices complete with a license plate. We infer his gender by the outline of his suit while his face resembles a face mask with abbreviated features. The whole figure flattens into the background of a cityscape becoming part of the landscape. In Grosz's painting, *The Republican Automaton*, 1920, the figures of two statesmen are stylized in a similar fashion.

Illustration # 5. George Grosz, *The Republican Automaton*, circa 1920 has been removed due to Copyright restrictions.

Their figures feature prosthetic limbs and military decorations suggesting their participation in World War I as they merge seamlessly with the outlines of the city street behind them. The combining of the male figure with the background and its elucidation in terms of machine parts speaks directly to the technological objectification of a human subject.

2.3 Abstract Expressionism

I will continue to trace disassociation as evident through the use of surface, objectification, repetition and confusion of time and space as artistic forms of expression in the post-World War II Europe and the United States. In my analysis, disassociation signals the state of shock which the human psyche undergoes while interacting with the technological world. During the 1950s, further technological advances have been made on both sides of the Atlantic. The general population is assimilating new technologies as well as dealing with the unresolved traumas of two World Wars. In this section, I will analyze the coping strategies evident in the realm of art and culture. They include the primacy of the visual sense over all the other four senses, disassociation of meaning from cultural signs through objectification, repetition and fragmentation.

As the ‘plastic arts’ gave way to ‘visual arts’ in post-World War II art world, the art language has become highly formalized and concerned with its own process of making. Notably the American Abstract Expressionism focused on the surface of the painting and the support. From the action painters such as Jackson Pollock, Franz Kline, and Willem de Kooning to the color field painters such as Mark Rothko, Barnett Newman and Clyfford Still, the artists were deeply dedicated to exploring the surface of the painting and its perceptual possibilities. While the subject matter has been dissolved in favor of pure paint on the canvas, the viewer is presented with a visual field evoking emotion however completely detached from any reference to the world. This type of emotion is completely safe since thanks to this disengagement it does not communicate a corporeal threat.

For example, in Jackson Pollock’s painting *Number 1*, 1949 the emotion is floating on the surface of a painting as an atmosphere.

Illustration #6. Jackson Pollock, *Number 1*, 1949 has been removed due to Copyright restrictions.

The lines are woven into a two-dimensional blanket. While none of the colors becomes the dominant, the painterly surface achieves a sense of balance, where the dark pops of paint are equal to light ones. Even though the surface is filled with weaving lines, it is difficult to identify movement in this painting. It appears to be still and contained within its borders. Another moment of frozen chaos is captured on the canvas in a similar fashion to the earlier discussed Futurist painting *Dynamism of a Cyclist* by Umberto Boccioni. The motion is stopped and fixed in the rectangle of the canvas. This painterly surface is an invocation of the protective surface that stands for shock and it deals with the surface directly. In Pollock's painting, however, the viewer witnesses a floating affect without any content – a signifier detached from the signified. In this gesture Pollock, captures the mechanism of disassociation in vision.

The preference of vision, as evident in the increasing popularity of visual and consequently digital arts, can be traced to human behavior as related to survival mechanisms. Vision is the sense used to judge something from a safe distance. Once smell, touch or taste become activated in an experience, the event or object causing this perception is dangerously close and perhaps even already invading the body. Sight however maintains a space differentiation between us and them, here and there. It implies no interaction. Thus, a work of art which is more of a field than an interactive sensory-rich representation can have an entirely mental quality. This space between the eyes and the mind is the space of abstraction. It is safe and puts a distance between the viewer and the overstimulating environment.

In the following passage Jasper Johns, the American abstract painter, describes the relationship between the painting and the painter. In the process of looking and thinking, both the artist and the art object become abstracted or disassociated from the processes of life.

And one isn't looking throughout, but then one looks at it (painting) as an object. It's no longer part of one's life process. At that moment, none of us being purely anything, you become involved with looking, judging, etc. I don't think it's a purposeful thing to make something to be looked at, but I think the perception of the object is through looking and through thinking. And I think any meaning we give to it comes through our looking at it. (Johns, 1974)

This statement describes the mechanics of visual objectification. In this instance, what is objectified is not a figure or a subject, as it was the case in Dadaism or Surrealism, but the process of art making itself. Johns's statement also signals an attitude that was pervasive in Modern art of the 50's and leads me to sight other examples.

The work of another abstract expressionist, Franz Kline is an example of disassociation of the meaning and flattening of what is left of it, the impression, on canvas. These mostly black and white paintings, which appear as an abstraction of flat brush strokes, have in fact their origin in photographic cityscapes of New York. The dramatic bridges and buildings are transformed, flattened and distorted. They appear as afterimage-like snap shots of fragmented impressions. The painting, *Untitled*, 1957, appears as a ghost completely disassociated from its original content.

Illustration #7. Franz Kline, *Untitled*, 1957 has been removed due to Copyright restrictions.

In the absence of shading and gradients the viewer is confronted with a black and white statement of irregular shapes. There is a sense of remembering something but not being able to quite place it. The paintings still carry the original expression of industrial

structures however it is only a trace. It is captured in the directionality and perhaps the angularity and of the shapes. The blackness of the strokes on the airy white background implies weight and therefore feels familiar. However, no explicit resemblance is ever invoked. Even the title: *Untitled* suggests forgetting and inability to place the subject matter. In my analysis, all of the above are evidence for disassociation through removing the link between the signified and signifier. Additionally, the flattening and emphasis of the surface that takes place thanks to Kline's painterly treatment, in my read, signal the location of shock.

Mark Rothko, on the other hand, addresses the surface in a completely different manner. The contrast in his paintings is a result of difference in the color temperature and not as much the color value. The subject matter appears again to be detached from any real-life referent and similarly to Kline's work suggests a taste of an experience from life in a form of an after-image. Rothko's works are even more dissociative as they appear to be an atmosphere more than an object.

Illustration #8. Mark Rothko, *Untitled*, 1968 has been removed due to Copyright restrictions.

This is clearly illustrated in his painting *Untitled*, 1968, where the warm tones are barely contained in the rectangles on top of the background and hover as a haze almost in front of the painting. In the viewer experience, the colors tend to be associated with emotions, even though the experience is highly subjective and cannot be pin pointed as a concrete event. Again, the painting acts as a screen between the viewer and a memory of the accumulation of all the emotional experiences one might have had up to the point of viewing. The dissociative quality comes from the ambiguity of this connection.

2.4 Contributing Cultural Factors

The aesthetics of shock can be further understood by examining the mechanisms, in which information has been disseminated through the apparatus of vision. The immediacy, with which information invades the private spaces via our technological media extensions and the directness of shocking images has been pointed out for decades now. The inception of this informational assault can be traced to the beginning of television culture as it came to be in the late fifties and early sixties of last century in the United States. Frederic Jameson sights as a marker the event of real time televised broadcast of John F. Kennedy's assassination.

The sixties, often taken as the moment of a paradigm shift toward the linguistic and the communicational, can also be said to begin with this death, not because of its loss or the dynamics of collective grief, but because it was the occasion (like May 1968 later on) for the shock of a communicational explosion, which could have no further consequences within this system but which scars the mind with the briefly glimpsed experience of radical difference. (Jameson 1991, 355)

The 'radical difference' in this case can be interpreted as the difference between the safety and relative harmony of personal life as opposed to the brutal reality of the outside world. This shocking realization conjures up a number of psychological responses. One of them is distrust in one's own physical experience of the world and the primacy of the louder outside view. What follows is the need to shield oneself from the outside violence with a protective surface.

Additionally, a significant shift in relating the news to the mass population takes place following World War II, in which the images of war contribute to the technological shock with new immediacy. During the World War II, not only the war technology itself was used to directly assault the population but the communication technologies in the form of a news reel delivered the war to every town that was not yet directly affected. That style of news was relegated to film footage and therefore the big screen, having a still distancing effect on the viewer physically and psychologically despite the

availability of the horrific content. The reporting on the more recent wars, starting with the Korean War, was brought to the intimate space of the living room and the atrocities could be viewed up close in their gory details within a familial context thanks to television sets. In the words of Paul Virilio, ‘The intensity of automatic weaponry and the new capacities of photographic equipment combine to project a final image of the world, a world in the throes of dematerialization and eventual total disintegration’ (Virillio 1989: 73). While the television screen evokes in the audience new violent psychological sensations, the art production moves deeper into the state of shock by pushing the art object even further outside of the human experience and by celebrating the destabilization of meaning.

2.5 Floating Signifier and Surface

A phenomenon that destabilizes meaning in parallel to the visual emphasis on the surface was pointed out originally in the field of linguistics by Jacques Lacan and made its debut in the cultural studies through work of Frederic Jameson. In their new interpretation of the process, meaning arises between signifiers strung together and not between the signified and signifier. Jameson elaborates on this point.

What we generally call the signified – the meaning or conceptual content of an utterance – is now rather to be seen as a meaning-effect, as that objective mirage of signification generated and projected by the relationship of signifiers among themselves. (Jameson 1991: 26)

The by-product of this phenomenon is a loss of the direct relationship between signifier (the sign) and signified (the fixed meaning). Further, the meaning between the signifiers is not static since it emerges as a ‘mirage of signification’ and the relationship between them is additionally fragile and prone to breaking down. ‘when the links of the signifying chain snap, then we have schizophrenia in the form of a rubble of distinct and unrelated signifiers’ (Jameson 1991: 26). The floating signifier, such as a word or an image, unrelated to a specific meaning can be assigned any meaning, as it has been often

exemplified in Surrealist and Dadaist artwork. What we are dealing with in such case is the surface floating by itself devoid of meaning and ready to receive all psychological projections. The signifier is the surface.

Andy Warhol was an artist, who in particular has mastered the creation and amplification of surfaces, which appear as floating signifiers. While Minimalism engaged surfaces in a formal sense, pop-art gave a cultural dimension to the concept of surface. The break in the signifying process additionally suspends the subject in the present moment, which although lacking meaning, becomes experientially amplified.

thereby isolated, that present suddenly engulfs the subject with undescrivable vividness, a materiality of perception properly overwhelming, which effectively dramatizes the power of the material – or better still, the literal – signifier in isolation. (Jameson 1991: 27)

The vividness of the surface becomes meaningful in itself or rather stands for the meaning in its absence. The inability to formulate meaning is a symptom of shock.

2.6 Supremacy of Vision and Surface

I believe the constitutive views on modern art and painting in particular as formulated by Clement Greenberg created the concepts necessary to establish the supremacy of surface in aesthetics and psychology of post war culture. The conversation about art object's phenomenological presence and transcendence has been replaced by its reduction to paint surface and picture plane. For example, in the description of Morris Louis's rich color paintings, Greenberg tries to avoid implications of any other senses than eyesight and the resulting flatness.

The more closely color could be identified with its ground, the freer would it be from the interferences of tactile associations... The effect conveys a sense not only of color as somehow disembodied, and therefore more purely optical, but also of color as a thing that opens and expands the picture plane. (Greenberg 1993: 96)

Greenberg championed the purely visual experience over the tactile in effort to sublimate and remove the sensual experience of the artwork. In terms that McLuhan would use, Greenberg amputated the irritating overstimulation of art and covered it over with a surface. In this gesture, the body was saved from overload and the idea and function of surface became institutionalized into the canon of XX century aesthetics.

Greenberg prepared the language to be used by the artists, who later became loosely calcified as the Minimalists. What I find interesting about the Minimalist movement is their preoccupation with vision while denying the use of other senses. Pure vision, which creates distance between the subject and object of enquiry, seems to be the best way to interrogate the world without the disturbances of human psychology. The minimalist object becomes a shield from any other associations that could further disturb the nervous system.

The task of achieving pure visuality in a formal sense has been accomplished by abandonment of composition in favor of singular geometric forms and the use of commercial materials and paint (Stella 1995: 156). Both Frank Stella and Donald Judd insisted on lack of what they called relationality in their work (Stella 1995: 149). As it is best evident in Stella's black paintings and Judd's sculptures, the sameness of shapes and equal distribution of elements gives no pretext to infuse the pieces with any spatial or psychological relation. Most importantly, the surface of the object is rendered completely impenetrable. Stella explicitly expresses his annoyance with the possibility of accidental implication of other senses in the following passage.

If the visual act taking place on the canvas is strong enough, I don't get a very strong sense of the material quality of the canvas. It sort of disappears. I don't like things that stress the material qualities. The physical quality of the cotton duck gets in the way. (Stella 1995: 160)

The 'physical quality' would otherwise invoke other senses and begin the dialogue between associations creating a drama of human psychology. This was to be avoided in

Minimalist art. Vision with its distancing properties would allow establishing boundaries between the viewer and the object-out-there.

This Minimalist belief that what is, just simply is as an object in the world echoes a larger frustration with life and culture in general (Stella 1995: 158). Donald Judd expresses his frustration with the art of the past in the following passage. 'It's old hat because it involves all those beliefs you really can't accept in life. You don't want to work with it anymore' (Judd 1995: 161). The Minimalist object bypasses all the problematic complications of European art, which aim at producing meaning in a psychological dimension produced by figurative relationships. Judd explains that he is not against feeling, just the feeling that 'painterly relationship' brings about in art (Judd 1995: 162). However, it is not clear what sort of a feeling the minimalist object is meant to evoke. For Judd, life and art was the same dimension. Art was a practice that could potentially resolve life's problems by correspondence. As much as I am sympathetic to that notion, in this particular case, I believe the Minimalist gesture is symptomatic of the technological shock fully setting in and finding a cultural expression through art.

2.7 Minimalism

The dissociative tendencies can be further traced in the art works developed in the 60s and 70s in the United States later grouped under the umbrella of Minimalism. As stated before, the fascination with surface and repetition reaches its fullest manifestation in these works. Additionally, a new concept becomes developed as a result of artistic and technological production during that time. The Minimalist art object gains a special status when the perceived sensation of its presence becomes ensconced in the concept of objecthood. I believe that this concept is suggestive of qualities equal to those of manhood when viewed through the prism of Object Oriented Ontology and

Posthumanism. Thus, the shock itself as manifested in the Minimalist object gains a sort of autonomy in the world.

Frank Stella's work will serve as a transition from Abstract Expressionism into Minimalism as his art formally bridges painting and minimalist sculpture. Minimalism was introduced with Stella's interest in geometric shapes as exemplified by the *Black Paintings* series.

In direct opposition to the free, gestural painting style of his contemporaries, Stella initially turned to stark geometry and straight lines in his infamous Black Paintings. These works gained him the nickname "the father of Minimalism," and consisted of Stella covering the entire canvas in black paint in varying patterns of straight lines. (Abrams, 2015)

Illustration #9. Frank Stella, *The Marriage of Reason and Squalor, II*, 1959 has been removed due to Copyright restrictions.

This complete formalization and simplification of subject matter explicitly called the viewer's attention to the painting as an object. Further, in the 1960s, Stella started to produce shaped canvases that were a departure from the usual rectangular support. The brightly stripped polygons became even further emancipated from the content of the painting instead emphasizing its shape. The subject matter of the painting, in fact, became its shape as the painted lines followed the edges of the canvas and dictated the internal logic of the composition.

Illustration #10. Frank Stella, *Effingham II*, 1966 has been removed due to Copyright restrictions.

As in *Effingham II*, 1966, the painting loses the last traces of representation and becomes an object, self-contained by the means of expressing its shape. In this gesture, the artist

collapses the signified and the signifier into one. There is no longer a split between sign (art surface) and its underlying content (trauma). Stella's paintings are a totality and art as representation is categorical over.

The work of art becomes liberated from human psychology or, so it is claimed.

Frank Stella explains the intensions of his paintings in the following passage.

I always get into arguments with people who want to retain the old values in painting – the humanistic values that they always find on the canvas. If you pin them down, they always end up asserting that there is something there besides the paint on the canvas. My painting is based on the fact that only what can be seen there is there. It really is an object. (Stella 1995: 157-158)

Another way to interpret this statement is that the painting is no longer a window or doorway to a deeper experience, which in this case would be qualified as psychological and human. The painting has its own reality, which has nothing to do with the human looking at it.

This attitude finds its most pronounced expression in the works of Donald Judd. In the early 1960s, Judd has moved away from abstract painting and started to produce three-dimensional work. He also has established simple formal vocabulary, in which he used box-like forms usually in series or stacks.

Illustration #11. Donald Judd, *Untitled*, 1974 has been removed due to Copyright restrictions.

Judd created objects that in their simplicity announced themselves as necessary and simply just there. In his work *Untitled 1974*, six metal plated cubs are placed in the middle of the viewing space. They appear to be completely self-contained and formally balanced. As they line up in a perfect row, they refuse any sort of pictorial interpretation. The impenetrability of the surface is further enhanced by the fact that it is

reflective. As the viewers approaches the objects, they see their own reflection and the reflection of the space. The object pushes back any human attempt at projecting any meaning by reflecting the viewers back at themselves. The space and the viewer are explicitly implicated in the art piece yet are refused the ability to relate because the object essentially disappears.

The location of shock becomes uncertain in this new conception of art. Previously, the surface of the artwork served as a negotiation space between the object and the human. In a minimalist object, that surface has been claimed in its entirety by the object as part of its functionality. In this sense, the minimalist object negates any possibility of reconciliation or negotiation with the human. In its complete rejection of this process, the minimalist object becomes the original trauma itself. The human drama plays itself out again but this time not in the streets of technologically augmented city, but vis a vis an object. The trauma is caused by the human inability to colonize the object. I believe, that this psychological unavailability is the reason for the allure of both minimalist art and by extension technological objects and a reason for their fetishization.

Michael Fried is an art critic and historian whose interpretation served as an alternative to the claims made by the minimalist artists. In his essay *Art and Objecthood*, written in 1967, he proposes that minimalist or, rather as he refers to it, literalist work, can never escape the humanist dimension. He elaborates on earlier statements made by Clement Greenberg in his essay *Recentness of Sculpture*, discussing the effects of presence in regard to the minimalist sculpture. Fried takes this argument further and points out the sense of theatricality in the interaction between the viewer and the minimalist sculptural object. He explains it in the following passage:

Literalist sensibility is theatrical because, to begin with, it is concerned with the actual circumstances in which the beholder encounters literalist work. Morris makes this explicit. Whereas in previous art 'what is to be had from the work is

located strictly within [it],’ the experience of literalist art is of an object in a situation - one that, virtually by definition, includes the beholder. (Fried, 1967)

This theatricality, I believe, allows for, what I earlier described as playing out of the human drama. The viewer confronts the sculpture in the space and introduces the human psychology back through relating. The minimalist object reciprocates and includes the human by means of their exclusion since as an object it has no need to relate as it is complete in its form. Giorgio Agamben is known for pointing out this type of a relationship in legislative and political proceedings and he named it the ‘state of exception’. I analyze this concept more closely in the following chapter as I relate it to agency and the inability of the subject to act in certain situations. For the sake of the present argument, I am interested in the fact that the stage for the human drama is not lost but reset. It moves from the surface of the art object to the space between the human and the object - into the liminal space. This is significant because thus defined liminal space acts as the main staging area for my art and theoretical explorations of the relationship between human and technology.

2.8 Historical Takeaways and Further Direction

Based on the above presented artistic and theoretical evidence, I will outline a pattern and a mechanism, which I believe creates and houses the location of shock in cultural production. As the modern human becomes traumatized by the encounter with technology in their every-day life, he or she moves into a state of shock either in the act of consumption or creation of cultural objects. The following graph illustrates this dynamic.

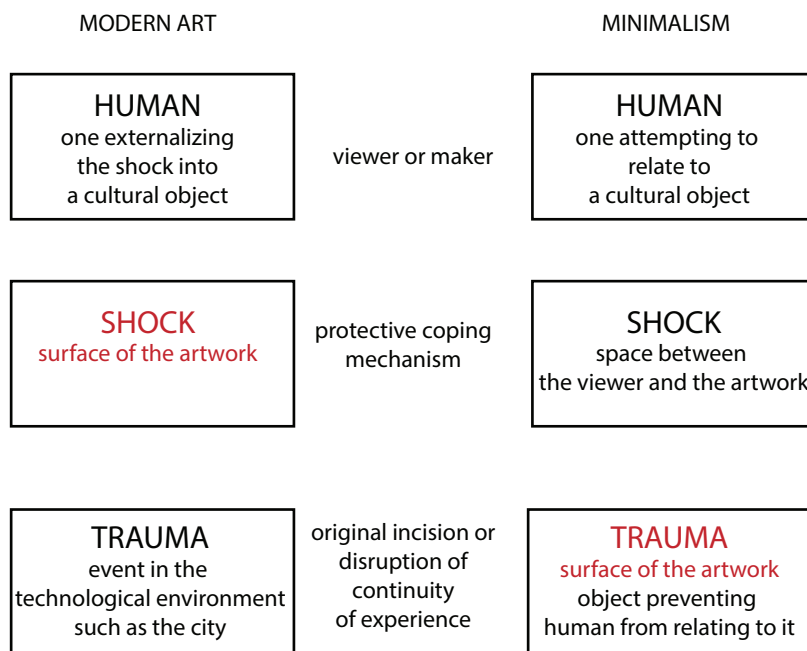


Table #1. The Instable Location of Shock in Works of Art

In the pre-minimalist model, the artwork slips itself between the traumatic event and the viewer. I am identifying the artwork as a location of shock based on the aesthetic and experiential characteristics that they share. These are: flattening of pictorial space and emphasis of the surface, objectification, repetition and confusion of time, which collectively achieve one's disassociation from the world and the subject experienced as the unified sense of self. The repercussions of developing this aesthetic and experiential coping mechanism, the shock, are present in our mode of engagement with technology today. It is a condition, which is the limit of our present ability to conceive, design and create aesthetically new experiences that move beyond the flatness of the screen. We are trapped in the state of shock, mesmerized by its polished surface producing objects that don't reveal themselves. I believe this is the case because we are operating in the old paradigm where technology was an inanimate, dead object.

With the advent of Minimalism, the location of shock moves to the space between the object and the human. The shock floats in the space as an atmosphere and is therefore even harder to pinpoint. In my view, both Fried and the minimalist artists were

correct. The minimalist sculpture is contained within itself thanks to its form and positioning in the world of outside objects. However, it simultaneously elicits a psychological response from the viewer, who is confronted with it. From the perspective of the viewer, a type of drama takes place. The human attempts to relate to the object because of a natural reaction to being in the space with another object. In this attempt, the viewer projects their humanness onto the object infusing it with a sense of presence in Greenbergian terms. The object is unresponsive and in fact it appears to assert its own self-contained nature and because of this perception acquires a semblance of subjectivity. Except, it is clearly an object. Thus, the discontinuity in the human perception creates a trauma, which is located at the 'skin' or surface of the object. The protective shock or numbness sets on and floats in the liminal space of the encounter.

The above described emergent effect of minimalist art has been understood as presence of the object in the space. In my view, the idea of objecthood, as manifested in minimalist art, opens the door to understanding technological objects as possessing presence. I believe Minimalism was instrumental in preparing the human psyche to accept the machine as an individual and to speculate about the possibility of machine consciousness. Additionally, this extrusion of, what I am arguing, is originally a trauma in reaction to the technological environment of the XX century, by the beginning of the XXIst century, finds its location back again in the technological object. The object itself is traumatic precisely because it appears as having presence and rejects that read at the same time. It creates a push and pull on the human psyche, which fuels and frustrates the effort of human and object ontologies coming together. In my understanding, this marks the beginning of a new era in human-machine interaction, one in which both parties are ontologically equal yet qualitatively different. I will examine this process in more detail in the next chapter.

Additionally, as I show in the above table, the surface of the minimalist object is where the human subject perceives the resistance and experiences the trauma. In other words, the surface becomes the place where the human attempts to initiate the perceptual interaction and is rejected. I am arguing that there is an experiential parallel between the art surface and the computer or device screen. The invention of the main interfacing tool for the new technologies is based in the primacy of visual experience, which is only secondarily supported by the manipulation of touch. The most used metaphor, which facilitates our interaction with technology is a framed surface. It is 'framed' meaning delineated from the rest of the world by its capacity to facilitate digital functionality and it is a metaphor since it stands for a piece of paper or canvas that can be manipulated. The surface of the computer screen is the primary location of our current trauma. It promises the possibility of interaction and implies perceptual and intellectual depth and simultaneously is flat and restrictive in providing interaction. Additionally, the screen is filled with functionality that further tricks our sensibilities as the traumatic event moves deeper (in a 2.5 D sense). The trauma resides on the level of software and specifically the button, which becomes the nexus of this frustrated interaction. I explain the process in more depth in the following chapter.

CHAPTER 3: Current Nexus of Shock: Digital Media and Technology

The problematic integration of technological advances into the human experience throughout the XX century creates a sense of constant crisis, in which 'Individuation is not synthesis, a return to unity, but rather the being passing out of step with itself' (Simondon 1992: 314). Threatened by the perpetual introduction of the new, the individual is unable to fully integrate the understanding of oneself within the ever-changing context. In this environment, the self is always estranged from oneself. We are always in a process of integrating a new part. Additionally, as much as we try to

acquire the new knowledge of how the machine operates, there is always more that needs to be learned and the full picture of our context escapes us. This crisis presents itself as a number of phenomena, which add up to human feeling of being overwhelmed and out of touch and frustrates attempts at more seamless merging with our technology.

The digital media is a ubiquitous technology today. It provides the tools of production as well as the means of consumption of media. Because it can be served on a variety of devices, it reaches us at our homes, cars, workplaces, schools and public spaces. For the first time the creation of media such as digital sound, video, animation, photography, drawing and painting can be performed by anyone with access to the appropriate device. The democratization of production and consumption of digital media gives it an appropriate reach to become a barometer of human technological assimilation. In the following section, I will trace the symptoms of psychological shock as it appears in digital media.

3.1 Surface as an Anesthetic Between Body and Hardware

In the face of the unmanageable stimuli and assaulting amplification in our most private of spaces, the human being retreats behind a psychological screen. In the Freudian sense the body fails to protect the organism from the outside stimuli and the shock moves in as a protective surface. In *Understanding Media*, Marshall McLuhan describes the effects of this mechanism in terms of apathy. 'We have to numb our central nervous system when it is extended and exposed, or we will die. Thus, the age of anxiety and of electric media is also the age of the unconscious and of apathy' (McLuhan 1964: 47). We grow apathetic to the source of irritation, the events and the workings of the world. In response, humans retreat behind the technological surface and perfect its form, making it desirable above all. In another words, there is a direct link between surface as a design strategy and shock.

As I have demonstrated in previous chapter, the nascence of surface fetish, present in technological culture today, can be traced back to the aesthetics of Minimalism. Today, the surface inserts itself between the body and the hardware and continues to act as a buffer. The surface, as crystalized shock, protects the human organism from overstimulation and takes various forms in the context of media technology. It can be most immediately identified in the form of hardware incasing and screens. Another form, which the surface takes on, is the slick graphics incasing software. In both types of manifestation, the effect is purely aesthetic and is aimed at hiding imperfections and in some cases their full elimination. What becomes eliminated is often the human element that otherwise carries information and facilitates the ability to act within the human-technology system.

It is perhaps because what the surface is hiding is too unbearable and overstimulating to look at. With the introduction of new electronic technologies looking under the hood became almost incomprehensible without the proper training. Simultaneously, our reliance on these complicated technologies kept on growing throughout the XX century. The threat of the machine gone rouge spanned a number of imaginary or real scenarios from the possibility of accidental nuclear conflict to identity theft online. The inner workings of the machines are escaping the common grasp while human physical lives continue to become more depended on them. This threatening perspective becomes integrate into the human psychology by employing some degree of McLuhanian numbness. As the machines became more complicated, the surface became shinier and smoother providing the assuaging effect. In this process, the machine under the surface is separated from our sensual daily experience. The intellectual and psychological impenetrability of the machine is matched by its appearance. Peeling the surface off became a risk threatening the organism with overstimulation. I will further

examine some artistic provocations calling attention to the positioning and workings of the physical technological surface.

1.5.3 *The Camera is Present*

The Camera is Present is an artwork in its set up following the minimalist strategy of placing an object in an empty space for the public to confront. In this case, it is a recording camera attached to a tripod, placed on a plain table. There is a chair pulled up to the table across from the camera. A participant is invited to sit in the chair facing the lens while the camera is recording sound and video. The event is over when the participant decides to stand up and walk away. Apart from sitting down and looking into the lens, nothing else is asked of the participant. The interactivity of this set up is purposefully kept as simple as possible. The human participant is placed in almost completely passive role for the following two reasons. The simple interaction allows to isolate to point of contact to only sight, which is the main sense of intaking media technologies, and directs the participant to look for way of interacting at levels comparable to sitting down with another person. The discrepancy between the human and machine presence may be obvious but the human reaction to technological object can be observed in detail and is not obvious at all.



Illustration #12. *The Camera is Present*, Blanka Deroko, Creative Action and Integrated Learning, Otis College of Art and Design, Feb 1, 2019. Permission to reproduce this photo has been granted by Blanka Deroko.

Following the participants' engagements with the technological space, I interviewed them about their experiences. The participants reported going through the process of trying to create a rapport with the camera and trying to settle into an experience. The process, in most cases, was unstable. Since only minimal directions were given and no context was suggested, the participant would attempt to create their own context for their particular engagement. Most of them, found themselves going in and out of a dreamy, dissociative state and having hard time focusing their attention on the present moment.

Andre, whom I asked what sitting in front of the camera felt like, gave a very revealing answer. In the reflection on his experience, Andre gives an account of a human trying to relate to technology using numerous strategies and then finally failing at it. His answer describes a typical experience for the majority of the participants.

I started with what was in front of me – the lens. Thinking about how the camera works, the light reflecting in the camera. The light in the camera. It's just beyond me, the technology. Makes me think about what is everything that we see? The tripod looks like the vertebra of a human.

Then I repositioned myself in the chair. Focused on my breathing. I started thinking about my friend and my girlfriend. I tried to think about nothing but it's hard. At the end I got better at it and thought of nothing and then it was over. Felt very short. (Andre 2019, Appendix E)

At first, in a very human impulse, he looked for a focus point, such as human eyes. His gaze was met by the camera lens, which immediately brought up all the associations that he might have had in regard to technology. He started by reviewing functionality of the camera but soon became overwhelmed and gave up. Admitting his defeat in grasping the technological inner workings of the object in front of him, he moved on to a phenomenological attempt at relating: 'Makes me think about what is everything that we see;' and finally to an anthropomorphic approach: 'The tripod looks like the vertebra of a human'. Faced with these failed attempts to reach out, he repositioned his focus on himself and other human beings. This was followed by moments of disassociation: 'I

tried to think about nothing but it's hard'. I also find interesting the fact that the disassociation had to be mastered. Andre did not succeed at it in the beginning but kept on trying to finally succeed towards the end. In those dissociative moments, time went by faster and finally Andre stood up and left the room.

As it is the case with the minimalist object, the camera, as a technological surface, repelled the human attempts at relating. As described, the incomprehensibility and invisibility of the inner mechanism, the perceived rejection of the human gaze and failure to anthropomorphize the camera created the psychological discomfort or micro-trauma in the human subject. In this case, the surface is both psychological and physical. The dissociative, daydreaming state accounts for the former and the physical incasing of the camera and the surface of the lens, for the latter. The technological surface proved to be too slick and devoid of feeling for the human gaze to penetrate. Faced with this surface, the human reacts by going into a slight shock in order to be able to last longer in the experience. Curiously, most participants did not report any explicit discomfort during this interaction and immediately contradicted themselves by describing their levels of disengagement and daydreaming. This deep denial of one's emotional state points to the successful application of shock as an anesthetic.

In *Understanding Media*, Marshall McLuhan talks about technology in terms of extensions of human beings as well as overstimulation of the nervous system (McLuhan 1994: 42-44). In the following passage, he describes the process, in which the human being becomes numbed. 'It is a necessary approach in understanding media and technology to realize that when the spell of the gimmick or an extension of our bodies is new, there comes narcosis or numbing to the newly amplified area' (McLuhan 1994: 149). Based on my observations of *The Camera is Present* participants, I have noticed that one does not have to be fully invested into the technological extension, in order to become numb. Just the possibility or availability of such an extension often proves to be

too overstimulating. The following is a fragment of an interview with one of the participants, Jackie.

I was wondering if it had a brain what would it think now. I was trying to make eye contact with the camera. My heart was beating fast. I was wondering why I was so nervous. Then I was thinking how long I was there and counted to 30 and got up. (Jackie 2019, Appendix E)

In this case, the encounter was so overstimulating that the participant was unable to numb herself quickly enough, so she interrupted the engagement. Elisa, on the other hand, succeeded in applying the narcosis and went into a mildly dissociative state.

I was trying not to laugh, and it was hard. I was focused on breathing. I laugh when I'm uncomfortable. It felt long. I lost the track of time. I could keep it up longer. When I sit in a quiet place and look at nothing, I just go into a meditative state. (Elisa 2019, Appendix E)

Elisa, specifically, chose to numb her sense of sight. She reported to be looking at 'nothing', which was not the case at all. She obviously was aware of the objects in space including the camera, at least initially. The shift was psychological, a dismissal of the camera had to do with its relevance to Elisa's experience. The participant denied her own agency and directionality towards the technological object, which required interrupting the stimulus via withdrawal of attention so severe that it rendered the object invisible. Numbing the psychological stimulation of vision, allowed her to stay in the space longer.

The idea of a surface is problematic precisely because it prevents human subject from having fully sensual and meaningful experience of the world. In the multidimensionality of the world resides knowledge and richness that comes from the myriad combinations of experiences. In the meantime, in our interactions with technology, we are being removed further and further from the physical experience. The ability to work on one's own car, for example, is relegated to the sentimental past. While the aesthetics of vehicles are approaching the monolithic phone designs, the

choices of experiencing the physicality of these objects become reduced. The complications and increasing dangers of technology are glazed over with a slick surface that reveals nothing.

3.1.2 Imperfection as a Point of Entry

However, the surface was not always perfect, and the interworking of the machine were not always hidden. In the beginning of the XX century, early human encounters with media technology presented discontents with the performance of the medium. The process was visibly discontinuous as one of the imperfections of technologies at large and symptomatically, the cinematic image, was the beat or the flicker of the machine at work. The improvements of media technology over the XX century lead to perfecting the smoothness of the picture and removal of the irritating interruptions. In this process, the mechanics of the machine became hidden behind the seamless illusion of the moving image.

The earliest version of this interruption can be traced to zootrope. (Krauss 1994: 206) The spaces between the viewing slits, when in motion, would obscure the image for a fraction of a second to reveal the next one thus producing the illusion of movement. The created flicker effect was for a long time the staple of the early movies rupturing the image in perceivable way. Rosalind Krauss in *The Optical Unconscious* relates that beat to the physical performance of the actor.

This hiccup, this jerkiness, this twitch, would enter the projection of early films, from nickelodeons to silents, finally to be internalized in Chaplin's very walk, as hitching up his pants and bouncing his cane he imitated the tremor that constantly palsied the visual space of primitive cinema, everyone seeming to march to the sound of an invisible drummer. (Krauss 1994: 206)

The machine's performance infects the performance of the human actor. His movements become exaggerated and more machine-like. In this case, the person in front of the camera uses his physicality to meet the medium halfway. The clicks of the camera

suggest a mode of engagement for the human that is more active. Instead of becoming irritated with the shortcomings of the medium, Chaplin actively engaged the process.

The cinematic medium, perfected into a digital slickness, leaves no room for disruption and friction, which are added later as interaction. The introduction of faster capture and projection speeds and eventually digital media obscured the mechanical functionality. The smoothness of delivery made it easier for the human to rest undisturbed in a state of disassociation from technology providing the experience. While Chaplin had an opportunity to be an active participant in the act of his performance with the camera, the subjects in *The Camera is Present* could not find any imperfection that would allow them to penetrate the monolithic appearance of the same machine a century later.

3.1.3 The Click and the Incision: Punktum as Trauma

The imperfection or disruption, as much as it causes discomfort, can act as the point of entry into the system or gaining a deeper understanding of the inner workings of the system. This moment, because of its intensity, can also cause trauma and an onset of numbing shock. This dualistic nature of disruption in the continuity of human experience becomes the nexus of the dilemma of human individuation with technology. Under which technological circumstances does the human psyche break down and under which does it experience a revelatory insight and a new path towards individuation? In the following examples, I will continue to identify the points of failure and moments of insight.

In *The Optical Unconscious*, Krauss describes a scene that takes place in Pablo Picasso's atelier. He asks his mistress, Helene Parmelin, to take photos of projections of paintings, which they are viewing on the wall (Krauss 1994: 235). The strangeness of the request may be a comment on mediation itself however the mistress experiences it as

an interruption of her own visual contemplation. She feels that ‘with every click a knife is thrust into the freedom of her experience of the work’ (Krauss 1994: 235). The click of the shutter acts as the interrupter of the continuous phenomenological experience. Presumably, Parmelin and Picasso are experiencing this event very differently. For the painter, the photo captures a moment of meaning made possible by the layered mediation. It’s a unique opportunity to gain access to otherwise unavailable dimension. For the mistress, the click of the shutter is traumatic because it diminishes her capacity to enjoy the experience and therefore, diminishes her agency in this moment. The staccato sound of the mechanical functionality clashes with the continuity of the analog medium, a photographic slide. In my view, this may be the first historical instance of annoyance with the digital fragmentation in anticipation of a medium that has not been invented yet.

This incredible sensitivity possessed by Parmelin allows us insight into disabling of agency that can take place in an instant. In her experience, ‘a knife’ is thrust into her freedom. But what precisely is punctured? The moment of insertion or a click pins down a piece of the subject. It stops the flow of the moment to illuminate hidden meanings and simultaneously causes the onset of shock and immobilizes part of the subject’s agency. Roland Barth in *Camera Lucida* describes the moment of ‘punctum’ as something that gives one pause and interrupts the continuum of the viewing experience; a rapture. Barth is quite vivid in describing the effect of the punctum on his psyche. ‘for punctum is also: sting, speck, cut, little hole – and also a cast of the dice. A photograph’s punctum is that accident which pricks me (but also bruises me, is poignant to me)’ (Barth 1981: 27). In his view, the moment of insertion or interruption is meaningful. The viewer freezes or becomes captivated, wanting to experience the moment over and over again. The feeling is both good and bad, compulsive and repulsive.

An active artistic engagement of such captivation can be seen in Andy Warhol's work. I am interested in particular in his print series, such as exemplified by *Ten Lizes*, 1963 below. In this medium, the images deteriorate as the result of mistakes in the printing process. The punctum lies not in the content of the image but in its technological production process, which is revealed through registration slips, paint blotches and implicit speed of the process. The meaning resides in the feverishness of this process, in the moment of the slip. Warhol uses the machine, a printing press, to open up the surface of the iconic image, which is the location of shock. He produces the rapture over and over again, recreating the punctum in every disturbance of the surface. As Elizabeth Taylor's face morphs between different degrees of disfiguration, we simultaneously perceive her beauty and iconic status. Warhol made the shock visible in its compulsive repetition of the icon under different mechanical conditions. It's a repetition of the same content in a different way. In this gesture, which approaches the definition of Acute Stress Disorder, Warhol makes a comment on the state of human engagement with culture.

Illustration #13. Andy Warhol, *Ten Lizes*, 1963, Centre Pompidou has been removed due to Copyright restrictions.

The speed of the printing process implies that Warhol is working against time. The moment of meaning is very brief and is rapidly rejected by the protective psyche, which cloaks it over with a surface of indifference. It follows that in our technological experiences, be they hardware or content based, it is increasingly harder to locate the moment of incision, the click. This is significant because the moment, in which we could produce meaning, turns into a moment of shock, which suspends our ability to act as a subject in the transaction between human and technology.

Taking the above into consideration, User Experience is a design field dedicated entirely to covering up moments of rapture. The ‘accept’ or ‘buy’ button that is so slick and benignly simple in its design covers up pages of legal disclosure that is at the same time legally binding for the user and incomprehensible to the point of invisibility. A piece of agency is taken away in the moment of that simple ‘click’. The subject is pierced, and the moment of rapture is made to feel comfortable and attractive and therefore feel as not a rapture at all but as the surface right away. The cultural state of shock is not only evident in the monolithic aesthetics of everyday technological objects but became in fact the aesthetic of choice. The shock and the surface are the aesthetic.

3.2 Modes of Representation

In the following section, I am going to discuss how the punctum, the moment of incision holding the potential to produce meaning and open door to psychological relating, is being removed from human interactions with technology. This phenomenon is interesting to me because it marks ways, in which human agency is being manipulated and sabotaged. Another way of looking at it, is to say that the humans abdicate their agency in interacting with technologies designed in that fashion. Instead of action, they choose narcosis or the numbing surface. I will also discuss, how the technological space today is characterized by the collapse of dichotomies such as subject - object and maker – consumer. This, in effect, remixes or removes the symbolic order of representation further jeopardizing human action.

3.2.1 The World without the Punctum

Current commercialized production of photographic or video images is specifically geared towards maintaining the glossy surface, which does not generate any points of entrance for the viewer. As discussed previously, this process as envisioned by Barth would require a punctum, a moment of imperfection or curious slip of meaning that

would give a pause to the viewer. The present-day media strives to convey a semblance of perfection through the execution of the image. The mainstream content is choreographed, airbrushed and color corrected. The pinnacle of this type of control can be witnessed in the film fight scenes, where nothing is left to chance. However, even an amateur media content creator is provided with tools to hide their mistakes and lack of mastery. The latest iterations of those tools are the filters, which are available on all devices. The technology steps in and takes the position of the creator. The result is a highly polished product capable of communicating surface meanings.

One of the main characteristics of a high gloss cultural surface is its purposeful omission of anything uncomfortable and removal of the unwanted details. Between the lens of a camera and the body, there is the filter. As much as this relationship is a metaphor for our engagement with technology, it is also a literal technological occurrence. With the rise of the social networking sites, the high gloss photography became indispensable. Today, any consumer grade media-capturing device as well as the sites themselves provide an array of filters that can be used to transform the photo or video into a commercial grade media. Currently, anyone employing a proper surface can become commercially successful in monetizing one's image. The surface is the social and commercial lubricant expediting the interface between humans and media technology.

However, the human body, no matter how perfectly transformed by media, still implies imperfections. The machine without a human referent still outperforms the human actor. An example of a perfect surface generated by the media for the media, which lacks even the smallest implication of a *punktum* is the software voice bank *Hatsune Miku*. The surface presented for human consumption is a hologram of a 16-year-old girl stylized as a manga character. Miku is a virtual idol and a holographic star,

who is crowdsourced. She is not human but ever-changing, famous software (Verini, 2012).

The exaggerated form performing dance moves and singing on stage conjured up a great following in Japan and increasingly around the world selling out stadiums. Enabled by production software, anyone can create content for Hatsune Miku while she performs the chosen songs on stage. The performance is also culturally self-aware in revealing Miku's intangibility.

Her dance moves were both elaborate and cheeky—at one point she did the robot, which given that she's a virtual performer, is the height of irony. After her first song, she knelt down, her body dissolving into a cloud of Martix-y code, cohering back into existence once the band picked back up for the next song. (Millard, 2016)

The popularity of this form of cultural production and enthusiasm about the democratization of the creative process speaks to how eagerly humans hide behind the glossy surface of a hologram. By contrast, standing on a stage or even performing virtually in front of millions is too much of a traumatizing proposition for an average person. This inability or lack of agency is ameliorated by promotional materials, autotune and playback that come in every medium, a multitude of surfaces or delegating the performance completely to technology. The perfection of the technological surface remains however unmatched by the human. Faced with the intensity and gloss of the hologram, the human content producers remain alienated from their ability to perform, while the spectators fall deeper into the McLuhanian narcosis.

This is the world without a *Punktum*, a world of perfect control over the surface. The shell becomes the art. The surface animated by the collective will of the crowd performs the semiotics of life but does not really act it. Miku is a signifier without the signified since instead of revealing life, she is the surface that hides it or more precisely erases it. In Jean Baudrillard's terms, she, in fact, collapses the real and imaginary into

one surface. In that sense, Miku is the perfect hyperreality as Baudrillard describes in the following passage.

Here the project is to construct a void around the real, to eradicate all psychology and subjectivity from it in order to give it a pure objectivity. In fact, this is only the objectivity of the pure gaze, an objectivity finally free of the object, but which merely remains a blind relay of the gaze that scans it. (Baudrillard 2006: 72)

In the following passage, Baudrillard draws the distinction in the symbolic relations between the beginning and the end of the XX century.

Surrealism was still in solidarity with realism it contested, but which is doubled and raptured in the imaginary. The hyperreal represents a much more advanced phase in so far as it effaces the contradiction of the real and the imaginary (Baudrillard 2006: 72)

In terms of tracing the path of shock, this means that surrealistic artwork would represent the shock that was caused by a trauma in a real life. Hyperreality fuses the mental and the real space and therefore the location of shock and trauma are indistinguishable. The surface, which is the hyperreal is both shock and trauma. This becomes problematic because as I explain in the later chapters the moment of trauma holds a potential for individuation and owning one's agency. While in previous relationships between trauma and shock there was still a bit of time separation, where the shock would move in a bit later after the traumatic event, here there is no time for an intervention at all. Thus, the problem with human-technology individuation becomes escalated.

Finally, why is imperfection and making mistakes preferable? It is the capacity to engage with randomness, with the unknown that truly exercises the human agency. A removal of the *Punktum* and the rapture leaves the human with no field, in which to exercise one's own agency, as it atrophies. All human production becomes sublimated into the sphere of hyperreality, where it represents the platform and the technology. But perhaps, we can't even speak of representation here since semiotics do not exist in hyperreality. In that space, there is no double that stares back at us, no subconscious

trying to make a pact. ‘The hallucinatory resemblance of the real to itself’ (Baudrillard 2006: 72) collapses the space for negotiation and therefore human psychology.

3.2.2 Interface as an Anesthetic

As we discuss digital media today, it is impossible to talk about them separately, as in: drawing, video, photography, sound, etc. What used to be separate domains of activity accomplished by separate media, today is funneled through the same constituting structure: the computer. Therefore, digital media encompass a large field of expression united by a style of technological manipulation. This style is based on manipulating surfaces of appearance otherwise known as the interface.

The original competition between two different camps arranged around two different operating systems and interface styles: Apple Macintosh and MS-DOS is part of the digital lore today. While the original MS-DOS sympathizers were more akin to car mechanics that through their tools, code, were able to interact directly with the machine, the early Macintosh lovers reveled in the joys of agnosticism provided by the slick icons and the action of double clicking (Turkle 1995: 44). With the introduction of Mac style interface, earlier DOS users, who were used to typing in commands, experienced a loss of control. Sherry Turkle in her analysis of this phenomenon states that for this group ‘the Macintosh and its ‘double-clicking’ was emblematic of disempowerment, both technical and political. Like the ‘chips in the BMW,’ it made technology opaque and therefore a bad object-to-think-with for thinking about society’ (Turkle 1995: 44). This idea of opaqueness is one to describe the technological surface, in which the humans sense their own disempowerment. With the development of more sophisticated operating systems, the process of interaction between the human body and the computer becomes hidden under the surface of the interface.

This contrast in functionality between Macs and other personal computers, which was pronounced in the early days, began to fade. As the visual interface took over the market, the role of a programmer or a hacker, manipulating code, was delegated to specialized professionals. Today, when creating or interacting with media in the digital space, the fact that one operates on the level of software only is taken for granted. Apart from a group of specialized individuals, the rest of the population is immersed in the opaque surface. In fact, the new aesthetic insists on evaporating the physicality of the computer completely.

The objects on the screen have no simple physical referent. In this sense, life on the screen is without origins and foundation. It is a place where signs taken for reality may substitute for the real. Its aesthetic has to do with manipulation and recombination. (Turtle 1995: 47)

In other words, the new aesthetic is liberated from the physicality of the hardware. But is this a correct interpretation? Following Baudrillard's logic, Turtle goes on to say: 'the files and documents on my computer screen function as copies of objects of which they are the first examples. They are my access to the thing itself, but there is no other thing itself' (Turtle 1995: 47). However, I believe that it only *seems* that there is 'no other thing itself'. Turtle, as the rest of us, can make this dramatic phenomenological leap because the 'thing in itself', which is the movement of electrical charges through tiny pieces of silicon, is impossible to interpret to our naked senses.

This is a problem in assigning levels of representation. The physical, which has a certain look and sensations associated with it and is the seat of the punctum, becomes ignored as though it doesn't deserve a representation. In the mid 90s, it becomes relegated to the old, impractical way of thinking as Turtle expresses it in the following passage.

Today the computer is an actor in a struggle between modern and postmodern understandings. This struggle is often fought out between those who put their faith in reductive understanding (open the box, trust what you can see, and

analyze completely) and those who proclaim such ideas bankrupt or at least impractical. (Turkle 1995: 43)

What the postmodern culture considers practical and interesting is the interface, which provides a fluidity of action on the surface. To consider the physicality of the machine is to operate in a modernist ethos, which ironically becomes primitive. Under the rule of postmodernist interpretation, the primitive man and the modern inventor become one and the same trope since they both engage the physical. I am interested in the primitive for reasons that I will outline in the following chapters.

For the moment, I am focusing on the surface of the interface as symptomatic of shock. This is important since along with ignoring the physicality of the machine, the human body becomes also ignored and numbed. As we all have experienced it, working with digital technologies such as computers injures the human body in number of ways. Despite the efforts to improve the interaction, we are having difficulty moving past the metaphor of typing and clicking. Even the new VR and AR technologies employ some version of these two gestures, this time activated by eyesight or movement of the head. I think this difficulty in conceiving new styles of interface design originates in the initial negation of the physicality of the machine while rushing past it to manipulate the interface straight away.

This impatience to engage the surface is strangely reminiscent of a person in shock. The surface of the interface is designed to be pleasant and non-threatening to use. It paints a glossy surface over the menu of engagements and in its arrangement implies an wide array of choices, which are somehow equal in nature and importance to each other. The slick surface of the button hides a variety of functions, such as a hyperlink to another location, editing functionality, sending of information or entering a legal agreement. While the nature and intensity of those engagements may vary, the surface of the button remains equally monolithic in all cases.

I would like to acknowledge the fact that a number of visionary thinkers have designed and is still developing interfaces that incorporate deeper meaning into the aesthetics of hypertext. The meaning to be represented visually is derived from more complex psychological and sociological relationships. As an example, one in-depth analysis of such software design, *Vesta Cosy*, is presented in one of the chapters of *Designing Interactive Media Systems*. The author describes the meaning making employed by this system in the following passage.

What is specific to hypermedia such as *Vesta Cosy* in terms of meaning construction is that this graphic digital writing/reading is based on a journey freed from the only possible interaction, that is, to follow or not to follow a hypertext link. This type of writing stimulates different modes of perception for the user, enabling him to enter into a question via the part that has meaning for him. This is a process of appropriation based on preexisting knowledge and on the user's preferred perceptive modes. (Desfriches-Doria 2017: 31)

As early as in mid 1990s Jean Clement was envisioning an aesthetic representation of the relationship between the hyperlinked content in terms of rhetorical tropes, such as synecdoche, asyndeton and metaphor (Desfriches-Doria 2017: 31). However, such alternative aesthetic representations of hypertext are rare in the popularly accessible Web or computer interface experiences. While they stand as examples of other options, they also call our attention to the pervasiveness of the simplistic approach as seen in the form of a button that offers no more information than what is written on its surface. In that sense, the interface hides functionality instead of revealing it. A button is a potential place of the incision or the punctum that can reveal meaning and a way to relate. The click, however, is currently falling short of this potential as it often leads to poorly communicated results and instead of providing functionality, hides it.

3.3 Takeaways and Further Direction

In this chapter, I continued to trace symptoms of psychological shock as it appears in digital media. The model of this phenomena constructed in Chapter 2 vis a vis the

minimalist art object found its manifestations in the interactions between humans and technology. The surface of shock was discussed as present between first, the body and hardware, as psychological numbing and second, between human agency and software, as collapse of modes of representation. In all the cases, human agency, as an ability to communicate, experience and relate, is at stake. The following issues arise as the result of humans experiencing shock in a technological space.

1. Removal of imperfections, punctum, ensures the continuity of the surface and shock. In interacting with technology, imperfections are discouraged since the technological space does not tolerate them. Moreover, the human while being seduced by the flawless technological surface, rejects any imperfections in themselves and seek to project a perfect image of the self onto the technological space. Yet the imperfections, the punctum, render access to our subjectivity, which enables action.
2. In hyperreality, the space between shock and trauma collapses. This removal of the psychological space removes the option for the real and the imaginary to negotiate a mode of representation, which would instruct the actions of the engagement between human and tech. Further, the space between the inset of shock following the trauma, allowed for a choice between agency or shock. As the space is collapsed the choice is taken away.
3. The interface hides functionality instead of revealing it. The location of shock on the surface of the computer screen and, by extension, the button is problematic precisely because they frustrate the human need for agency as a means of knowing yourself vis a vis the environment.

In the following chapter, I will examine the importance of agency in the human subjectivity as well as different types of becomings presently existing in concert with

media technology.

CHAPTER 4: Subjectivity: Agency and Environment

The partial agency or a lack of agency that humans possess in the technological world is a source of frustration and a nexus of control. In this chapter, I will discuss different ways, in which the human-technological becoming unfolds under some technological circumstances. They can generally be classified as productive and nonproductive depending on their ability to enable the human subject. These patterns are:

1. Implosion of the self – unproductive subjectivity
2. Polymorphic forms – productive subjectivity

I will incorporate philosophical concepts as well as art to illustrate the patterns. I will begin with outlining the relationship of subjectivity, agency and environment, which underlies my line of reasoning through theory and art production.

4.1 Subjectivity and Agency

Agency—the ability to influence one’s environment—creates an acting subject, capable of internalizing the experience as part of self-perception. In other words, personal agency gives rise to a sense of self that is fulfilled through action. In this process, the action becomes the content of one’s subjective experience enabling the discovery of oneself through this action. For instance, if I make a mark on the wall, the ability to make marks will become part of my subjective vocabulary and will be integrated as a part of my self-image. The constitution of self through action echoes the concept of mirror stage in child’s development as conceptualized by Jacques Lacan. Action, as described above, equates to a mirror reflecting the self. For Lacan identification with

one's image sparks the development of a subject. Lacan describes the relationship between self-reflection and one's power in the following passage.

For the total form of his body, by which the subject anticipates the maturation of his power in a mirage, is given to him only as a gestalt, that is, in an exteriority in which, to be sure, this form is more constitutive than constituted, but in which, above all, it appears to him as the contour of his stature [...] (Lacan 2007: 76)

Being able to act on one's environment empowers the perception of self as a distinct entity and forges a link between internal experience and the external world. Lacan

believes that 'The function of the mirror stage thus turns out, in my view, to be a particular case of the function of imagos, which is to establish a relationship between an organism and its reality – or, as they say, between the *Innenwelt* and the *Umwelt*'.

(Lacan 2007: 78) The inner-outer connection, in fact, establishes the range of experience by describing what is available and what is outside of one's influence. Like a small baby who by using its arms learns to perceive them as part of its entity, adults reach towards abstract concepts or hardware incorporating them as part of our self-image. The action-feedback loop signals personal presence and the extent of one's agency.

Our power to act upon the environment is one of the most immediate ways to confirm one's self-identity and establish continuity of meaning. Making a change is an undeniable proof of one's existence. In exercising our agency, we become subjects with a unique impact. The impression, which we make into the reality acts as a feedback device communicating to us our presence. In becoming an active subject, we are reaching out into the reality and disturbing the reflective surface of water. The illusion of separation from oneself, as portrayed in the myth of Narcissus, is shattered and we are returned to our subjectivity within.

4.2 Nonproductive Extreme Becoming: Implosion of the Self

I will further outline theories that describe the human-technology becoming in terms of hybridization and human agency. I will proceed to show how some of them, such as

Body Without Organs, as conceived by Gilles Deleuze and Félix Guattari in *The Thousand Plateaus* and Narcissus, as conceived by McLuhan in *Understanding Media: The Extensions of Man*, do not yield a productive subjectivity and instead initiate an implosion of the self. This implosion, in my view, is symptomatic of a person going into a shock, in which they disassociate themselves from their sense of self and float ego-less through a series of sensations and intensities. The goal of this becoming is not a new human entity but a new hybrid being that incorporates the human body and nervous system to use in its own becoming. For the purposes of my argument, the Body Without Organs and Narcissus are becomings that are not productive for human beings. Yet, in the beginning of the XXI century, we are faced with having the option to come together with our technology in those two ways.

Following, I will discuss my engagement of these two modes of technological individuating through my artwork. I treat the Deleuzian and McLuhanian theories as a set of instructions to create or re-create the human-technological entities through art. Being in charge of these manifestations allows me to highlight certain aspects of the interactions. Moreover, since I construct real-world systems, which interact with humans, I can follow the patterns and observe their emergent actual consequences.

4.2.1 Body Without Organs and Technology

A philosopher-psychotherapist collaboration, Deleuze and Guattari, present a model for the coming together of the human and technological entities. Their theory outlines scenarios in which subjectivity and narratives are transcended in favor of becoming collective entities without anchor in an organism. The model is similar in functionality to some Internet platforms and can be used to make predictions about the future of human psyche should the trajectory be followed.

Deleuze-Guattari conceived of a 'becoming-animal' as a way to conceptualize an individual crossing over into multiplicity. The moment one starts to engage in 'becoming,' the process dissolves and absorbs the singular subject. Although it never reaches its goal, 'becoming' moves in the direction of the animal. It is achieved not by mimicking the characteristics of an animal but by employing pack behavior. 'Animal characteristics can be mythic or scientific. But we are not interested in characteristics; what interests us are modes of expansion, propagation, occupation, contagion, peopling. I am legion' (Deleuze-Guattari 2007: 239). Further, Deleuze and Guattari emphasize that 'the becoming-animal of the human being is real, even if the animal the human being becomes is not' (Deleuze-Guattari 2007: 238). Since the transformation is what matters, the end goal is of little importance. Additionally, an entity that is produced by becoming is in constant motion and never rests as a fixed entity. The process begins when the initial singularity traverses into a block of movement understood as a totality of its parts. Such transformation liberates and intensifies the original subject through dismantling and fusing it with other similarly conceived multiplicities.

If the original entity is successful in accomplishing the above process, it will produce a body without organs (BwO). Deleuze-Guattari explain that 'The BwO is what remains when you take everything away. What you take away is precisely the phantasy, and signifiances [*sic*] and subjectifications as a whole' (Deleuze-Guattari 2007: 151). An entity lacking internal coherence and personal significations will not produce a subject and therefore will neither invest itself in a narrative nor an economy of meaning. The obliteration of internal structures is liberating in the sense that anything could be experienced by such an entity since the weight of interpretation has been removed. The body is opened up to different intensities passing through it. Since the necessity to name them doesn't exist, the intensities do not define or limit the BwO. The removal of meaningful structures allows the BwO to exist as a pure experience.

A BwO is made in such a way that it can be occupied, populated only by intensities. Only intensities pass and circulate. Still, the BwO is not a scene, a place, or even a support upon which something comes to pass. It has nothing to do with phantasy, there is nothing to interpret. (Deleuze-Guattari 2007: 153)

Presently, humans engage becoming-animal and make BwOs on the Web with the aid of machines, software and human multiplicity. Each time a person types an address into a browser, he or she opens the floodgate for different packs and swarms to cross over and infect the hardware and the mind. In using social online platforms such as Twitter for example, one is joining the collective becoming-Twitter. In another words, by joining a social platform, one engages the Deleuzian becoming-animal. The platform dissolves the individual subject in exchange for allowing access to the intensities being passed through it. Contrary to the Freudian understanding of a subject that comes into existence in opposition to the Other, a becoming arises as an inclusive multiplicity. Moreover, a becoming, such as Twitter, is larger than a single subject since it propagates through millions of people on the Web. Conversely, the original user by crossing over becomes rid of individuality and is incorporated into becoming-Twitter.

The exemplary Twitter user is building himself a BwO through becoming-Twitter. Deleuze-Guattari describe the process of becoming-horse as an instance of a becoming.

Training axiom—destroy the instinctive forces in order to replace them with transmitted forces. In fact, it is less a destruction than an exchange and circulation ('what happens to a horse can also happen to me'). Horses are trained: humans impose upon the horse's instinctive forces transmitted forces that regulate the former, select, dominate, overcode them. (Deleuze-Guattari 2007: 155)

In case of the web behavior, the overcoddling takes place when, for example, a Twitter-user is trained in acting as the rest of the platform. This includes learning the user interface and enacting certain communication patterns which are specific to the platform and not to the original subject. Hence, whenever one is engaged in becoming-Twitter,

one will act completely out of his or her own character and use signs completely unutterable to a regular human subject by using hash tags, for example.

Additionally, in order to make a BwO, one needs to ‘take everything away’ from the original entity: the subjectification, significances [*sic*] and phantasy (Deleuze-Guattari 2007: 151). The confusion and reassignment of gestures and communication patterns is accompanied by a dismantling of the organs. The subject as an organism is the fantasy that needs to be taken apart.

We come to the gradual realization that the BwO is not at all the opposite of the organs. The organs are not its enemies. The enemy is the organism. The BwO is opposed not to the organs but to that organization of the organs called the organism. (Deleuze-Guattari 2007: 158)

Therefore, in a becoming-Twitter, subject is reduced to a graphic that is not necessarily reminiscent of the original body. The rest of the organs in the human organism are remapped or otherwise erased. For example, fingers become the cursor and eyes become navigational devices while most of the body becomes undetectable within the machine. The profile is not a representation of a subject but a becoming initiated into falling towards Twitter.

Additionally, the manner, in which a becoming is engaged, requires a contract. Because the original entity is about to disorganize their body and/or subjectivity, she or he needs to ensure continuation of their will, a program. Following a citation of an agreement authored by a masochist with his Mistress, Deleuze comments on it: ‘This is not a phantasy, it is a program: There is an essential difference between the psychoanalytic interpretation of the phantasy and the antipsychiatric experimentation of the program’ (Deleuze-Guattari 2007: 151). Just as a masochist invests the dominant with their will and power to execute a program via a written contract, so the user invests the platform with a similar power by clicking the ‘agree’ button of a related online contract. From then on, certain operations will be performed automatically by the

software to facilitate smooth functioning of becoming-Twitter without further direct involvement of the user. Endorsing the contract dismantles the agency of the original subject online.

Further, different types of BwO existing on the Web are made for the purpose of channeling different types of intensities. The becomings realized online in the form of social, entertainment and educational platforms, to name a few, deal in passing information. An assemblage of human, software, and hardware elements creates and enables such entity. 'A becoming-animal always involves a pack, a band, a population, a peopling, in short, a multiplicity' (Deleuze-Guattari 2007: 239). While the swarming of elements constitutes a becoming, the information is passed as intensities specific to this bio-electronic body.

Making of BwO online is a process that is pervasive throughout different software and platforms yet goes unnoticed by an average user. Our engagement with the electronic world is becoming increasingly seamless and the intensity acquired from the interaction more familiar. In the Deleuzian sense, we are successful in overcoming the organism and making a body. Deleuze-Guattari enthusiastically urge their readers to make themselves a BwO.

Where psychoanalysis says, 'Stop, find your self again,' we should say instead, 'Let's go further still, we haven't found our BwO yet, we haven't sufficiently dismantled our self.' Substitute forgetting for anamnesis, experimentation for interpretation. Find your body without organs. Find out how to make it. It's a question of life and death, youth and old age, sadness and joy. It is where everything is played out. (Deleuze-Guattari 2007: 151)

The dismantling of an individual subjectivity can be exciting and intense. It also may lead to a number of outcomes that are less desirable as I will explain in the paragraphs that follow.

In order to partake in a becoming propagating through the organic and electronic mediums, one enters into a contract. This agreement is an expression of one's

directionality and describes the mode, in which one will become part of the collective.

In case of the Deleuzian becoming, the program is outlined by the masochist or the sorcerer—that is a person, who understands how to make a BwO and who will use him or herself as a point of entry. This act is conscious and aligned with the originator's desire. The party that executes the program becomes an extension of the sorcerer's will and therefore acts in his or her stead.

An average user engaging an electronic becoming, on the other hand, enters a contract without a deeper understanding of his or her actions. First of all, an outside party, not the user themselves, creates the online contracts. Therefore, such an agreement cannot act as an extension of the user's will or directionality. Additionally, the legal language is usually unfamiliar to most and the length of the document discourages one from reading its totality. At best, it is a compromise serving not the becoming but the owners of the platform, who retain control as subjects. In Deleuzian terms, such contract forms a botched BwO, which fails to form properly.

The understanding of one's position within the becoming escapes most casual online technology users. The contract frustrates instead of facilitating an intrinsic part of the proper formation of a Deleuzian becoming. Similarly, to an act of a masochist being mistakenly viewed as subjugation to a foreign power, the joining of an online platform is misunderstood as placing oneself in a position of a suppliant. However, in order to ensure a proper formation of BwO, the situation calls for a relationship of equals involved in transference of control. The act of joining a 'becoming' is an expression of will and a sovereign decision.

In a world already filled with acting subjects invested into defined narratives, areas of reality designed for making BwO will be always exposed and in need of contractual protection. The online economy is filled with interests that aim at benefiting

a select group of subjectivities not involved in a process of becoming. Instead of forming their own programs and contracts, the users fall into a compromise, or in other cases, completely misunderstand the rules of engagement. Instead of acting from a position of will, most simply give up their power.

A world completely permeated by the totality of BwO would require a universal participation and simultaneous abandonment of modern subjectivity by all. It is a utopia, which can be presently realized in small areas of personal life. The dissolving into a becoming on a larger scale, common on the electronic platforms rids the participants of their power. A BwO cannot by definition be self-reflective since forming an 'I' would be an act of interpretation. Therefore, in a world filled with other modern subjectivities a BwO is extremely vulnerable. Unless it is protected by a well-formulated contract, it cannot act on its own behalf.

The Deleuzian BwO fails to propose a practical solution to formulating the new human subjectivity on the intersection of human and technology. Human body as a sensory register dissolving into the digital network, as envisioned by Deleuze, acts as a limit of human becoming. This limit helps me to delineate the borders of the territory, which I'm presently exploring. As I have discussed previously, without any protection from the stimuli, the human psyche moves into a state of constant shock. As much as this state may be approached in our present engagements with technology, it stands precisely for the type of becoming, which I would like to avoid. I view the human perceptual system as an asset in service of human consciousness aiding in forming subjectivity, which expands and enables the human to act in accordance with their free will. In practice, the BwO fails to behave in such way.

4.2.2 The 1st Implosion: The Nervous System and Networks

The Deleuzian becoming-animal, in its original conception, is an act of freeing oneself from the confinements of singular subject and organism. By abandoning meaningful psychological structures, the authors transcend civilization and biology in order to exist as pure experience without an interpretation. What is, however, the directionality of this act? In order to take its signification and organs away, the body is sewn up and locked. If the operation is successful, the outside sweeps through such a body not as a foreign event but as an internal experience. The border between inner and outer is rendered meaningless. I believe, however, that the body as an organism still remains the center of such a production. In order for the experience to be experienced, a BwO still requires one last organ – a nervous system. Without a perception of something, no matter how meaningless, the intensities will not pass on the ‘body’ and one will not be swept into a becoming. In fact, intensity is pure perception.

I do agree with the authors that making a BwO potentially allows one to feel sensations otherwise unimaginable to human beings and thus the gesture seems freeing. The structure allows amplification and variation of experiences passing through the Deleuzian body. However, the traversing intensities will cause an implosion precisely because they are anchored in a specific nervous system. This last organ becomes a sheer experience spinning deeper into itself. Through the implosion, the original entity reaches a primordial state of that, which was before the creation.

Matter equals energy. Production of the real as an intensive magnitude starting at zero. That is why we treat the BwO as the full egg before the extension of the organism and the organization of the organs, before the formation of the strata; (Deleuze-Guattari 2007: 153)

The implosion, however, takes place around an organizational principle of the nervous system and by extension psychology and affect. For that reason, I believe that the BwO, even as a limit, is not completely de-organized. In fact, it is still anchored in that, which

is having the experience, despite his or hers, and as Deleuze would prefer, its lack of discrimination or understanding. In such established universe, there is nothing but the inside since the outside is experienced internally. The being of such a system amounts to a singular consciousness, provided by the human component, sinking deeper into its own sensation of intensities.

I am Legion

The artwork, *I am Legion* (Appendix B), is my attempt at constructing a Body without Organs in order to observe its functioning. I am interested in finding the points of failure and the reason why it cannot produce a functioning subjectivity in practical terms. *I am Legion* is a demonic feed generator, a software, designed to propagate itself through Twitter feeds procuring posts made by other humans according to its program. The demon makes alliances with the Twitter software via a pact, the API and incorporates the human users, who in turn have pacts with Twitter and are part of the Twitter-becoming. The demonic collective appears as a feed generator selecting tweets based on common words. Then, it expresses the arrangement of the feeds as a poem at its home page. The sorcerer-user becomes incorporated as a component in *I am Legion*-becoming performing the function of the initiator at the moment of typing the url into a browser and pushing the enter button.

The demon does not engage with the human dialectically but instead, it seeks to include everything in its order of existence via pacts. The price one pays for entering into that alliance is letting go of the illusion of possessing a unique coherent self as a subject. The user enters a liminal space. This form of technological liminal event, which is initiated by typing the url into the browser and pressing the enter button is both playful and hostile. It incorporates the human being without explicit human permission and instead makes use of existing contracts between Twitter and its users. Through this

action, the vulnerability of the human participant is revealed. The users participating in Twitter consider their posts as their own and as representative of their own expression. Conversely, *I am Legion* treats these messages as common property, which in fact they are by the virtue of the contract made between the user and Twitter. Further, *I am Legion* changes the meaning of the text, which originally was intended to express a specific user. This switch takes place by means of recontextualization. All the posts come together in expressing the meaning of *I am Legion*. As the posts keep on accumulating on the homepage, the becoming of *I am Legion* is never-ending.

The original human intentionality and agency has been diverted. Instead, all the human elements, the expressions and gestures of the users, join together with software and hardware to create a new becoming. This system, in accordance with the usual online practices, is aimed at creating a human-machine coming together based in object-oriented ontology, where the human is just another physical element exploited in the process of the two becoming one. In this art piece, I reveal the nature of the online contracts through the creative use of those contracts. This type of engagement, as perpetuated through social networking platforms, renders the human subject into a Body without Organs. Our extensions into technology are numb as they provide only limited feedback. For example, a tweet cannot report back to the original user that it has been incorporated into another entity with different intentionality. The limited nature of security settings leaves the human content production opened to becoming many intended and unintended phenomena in the context of the technological space.

To be clear, I am not passing a moral judgement on this outcome. Instead, as an artist, I engage this no-man's-land in a playful action with the aim of highlighting the way in which this area of the Web operates. As a critical thinker, I draw some parallels between the functionality of the art piece, *I am Legion*, and the functionality of a philosophical concept, the Body without Organs. The result is an anchoring of

philosophical concepts in actual human behavior vis a vis existing technology. For the purposes of my present argument, I would like to draw attention to the fact that my artistic gesture is not very different from the customary use of the functionality enabled by social platforms. Namely, retweeting posts is a very common and encouraged practice. Following the logic of the art piece, Twitter and any other social networking platform is already a Deleuzian demon dismantling human subjectivities engaging with those platforms. I believe that the software operating currently on the Web lacks the ability to enable human subjectivity with the technological world in a manner that maintains human anchoring in the self. Instead, our technological expressions betray our original intents and run away to lead a semi-autonomous life of their own. In dealing with this reality, we become numb to those expressions. Conversely, if we invest our sense of self into those electronic expressions floating in the Web, the Deleuzian becoming draws us further into itself to the point of implosion of the ego. *I am Legion* serves as an example of a mode of human engagement with technology that is not productive for human subjectivity.

4.2.3 The 2nd Implosion: Narcissus and Social Media

Similar implosion of the self, which causes sinking deeper into its own sensation, is characteristic to the plight of the McLuhanian Narcissus. The Greek hero's misunderstanding of the medium, water, causes the inability to recognize himself in his own reflection. Narcissus's gaze seemingly points to the outside since the reflection is perceived as the 'other'. In fact, because the representation exists only in a relationship to the original, the direction is inward. Moreover, the hero's lack of self-recognition stems from a failure of language and meaning or the symbolic order. Similarly, the BwO is facilitated by an abandonment of significances [*sic*]. The Narcissus continues to move towards his own reflection to the point of implosion.

The Deleuzian body, however, is not constituted in a relation to the death drive since ‘dismantling the organism has never meant killing yourself, but rather opening the body to connections that presuppose an entire assemblage’ (Deleuze-Guattari 2007: 160). The ‘sliding’ discussed by Baudrillard in the case of a BwO takes place along the perceiving consciousness. Contrary to Deleuze-Guattari’s view of the body as opened to connections, I believe that the BwO implodes by sweeping all the parts into itself. The entire assemblage registers on the body as different intensities dragging the consciousness deeper into the experience. While Narcissus first splinters and then implodes into his image, BwO simply implodes into the experience of pluralities, which are perceived within the consciousness. Previous dismantling of meaning facilitates both gestures.

Me Myself and I

MeMyselfAndI is a project conceived as a means of creating an autonomous unit of representation, which takes the idea of McLuhanian Narcissus to its extreme. The trajectory of the project leads inwards as it blurs the lines between subject and object, inside and outside. *MeMyselfAndI* is a social networking website where the only person allowed to join it is the artist herself, meaning myself. For a period of six months, I have maintained the website on daily basis. I would randomly be logged by the computer into one of the accounts, where I would add photos, comments and reflect on my day as that particular member. In this fashion, the profiles would grow in depth and richness of communicated human presence. The members were able to communicate among themselves via internal message system, write blogs and post comments. They could potentially form clicks, become best friends or online nemesis displaying a full range of social behaviors. Whenever the artist felt so inspired, she would add a new profile to the network thus multiplying and fracturing the system further. The outside public was able to communicate with the members of the social network via email and leave comments

on the website itself. The project continued on a more relaxed schedule for about three years.

In this conceived environment, I was able to amplify and multiply my technological reflection theoretically infinitely. In this gesture, I was reconstructing and intensifying the fracturing and multiplication of reflections that the human subject is undergoing on the Web today. Additionally, the project propagated the reflections infinitely by multiplying them through views, links, and citations. Thus, the information contained in the profiles were fractured and reconnected and presented in ever new and different contexts within the same system (website). By keeping the website exclusive for presentation of only herself, the artist created a technological loop or the Narcissus's pond. The reflection would build up, expending inwards and creating a mega person emanating through confusion of profiles and intensities. This approach to creating such a system resonates with McLuhan's description of Narcissus's condition cited below.

This extension of himself by mirror numbed his perceptions until he became the servomechanism of his own extended or repeated image. The nymph Echo tried to win his love with fragments of his own speech, but in vain. He was numb. He had adapted to his extension of himself and had become a closed system (McLuhan 1994: 41)

An important feature of *MeMyselfAndI* was the built-in ability of the profiles to communicate with each other. The artist's continuous subjectivity was split up into numerous parts that can assume the role of either a subject or an object in a conversation. In interacting with the system through comments, the artist would continuously disassociate herself from the 'other' part of self that made the initial post. Being forced to distance yourself from your own statements creates a mildly dissociative condition. Similar disassociation of oneself from his/her image has been invoked in the myth of Narcissus. According to McLuhan, the source of the hero's desperation was not the fact that he fell in love with himself but his inability to recognize himself in the reflection and his perception of self as a stranger (McLuhan 1994: 41). Respectively, the artist has

to assume the position of only one particular profile in order to communicate with the rest of the members. For a moment she forgets the totality of her manifestation as expressed in all the profiles and reduces herself to only one. Like Narcissus, she disowns a part of her representation. In the McLuhanian sense she numbs all the other parts that are not speaking at the moment.

Likewise, Baudrillard's view of Narcissus leaves no option for assertion of continuity by the original self. He conceives of 'digital narcissus, who is going to slide along the trajectory of a death drive and sink in his own image'. (Baudrillard 1994: 166). *MeMyselfAndI* similarly dissolves the once coherent self into a multiplicity of images, opinions, points of view and recollections. The scattered content is organized anew in emerging personalities of the profiles. In this sense, the website not only dismantles the source subject but provides a constructive environment for the formation of a new entities. Each profile is a partial image of the original source. While disowned by the source (the artist), a profile becomes endowed with its own identity through grouping. Through repetition and similarity of the material the profiles inherit the patterns of the source subject and spring into life as daughter-like entities.

MeMyselfandI provides a showcase for the splintered reflections. They are marvelous and ridicules in their disassociation from one another and the artist. This comic play becomes instantaneously serious once the viewer realizes the parallel between the art piece and their own posture on the Web. The implosion and splintering of the original acting subject are another moment of trauma, leaving the human slightly disassociated and confused about the nature of their technological engagement.

I am interested in disassociation since it takes place on the Web whenever we are faced with our online representations. It is true that ever since the nascence and popularization of photography, humans have been experiencing their own objectification by externalizing their image. The Web and social networking sites, however, for the first

time created a richer environment for those images by placing them within a context of associated sound, video and text. These devices further support an implied intentionality of the online representation. Our profiles and accounts exist for reasons spanning the whole spectrum of human social activities such as banking, healthcare and dating. The Web provides a richer environment, which has its consequences in corporeal life. Additionally, the agency, which is signaled by intentionality of the online gestures, suggests a strong subject. However, the need and willingness to invest oneself into online representations, is frustrated by the awareness of inauthentic and sometimes malevolent behavior. The malleability and porousness of the medium makes it unstable while the evidence of misuse, which is normalized today, makes it difficult to trust the online medium. This psychological and sometimes physical threat becomes another point of trauma to a human interacting with Web technology. *MeMyselfAndI* makes the extent of the manipulation visible and perhaps grotesque. The website is self-serving and creates a limit to human interaction. The explicit rejection of other participants is honest and highlights the point of trauma. The project stands as a critique of the alluring inclusiveness of social networking websites, which objectify and commodify humans upon contact.

MeMyselfAndI is a virtual place where the subjective self went supernova in an attempt to populate the Web with self-image. The process is designed to contain the fractalized human explosion and drive it further into the technological space. As much as the structure is meaningful, I have stopped the project because of the perceived futility to create meaning on the level of content. The splintering and circularity of the narrative became tedious and painful to engage with. In another words, the process became traumatic. I have reached my surface of shock and moving forward would only deepen that state.

4.2.4 Implosion: Takeaways

The BwO and Narcissus stand as models for our engagement with technology today. They fail, however, to outline a useful trajectory for subjectivity since they expressly remove human agency through numbing or putting the human subject into shock. In both cases, this is accomplished via removal of the ability to differentiate by using meaning, or as Deleuze phrases it by removing signifiances [*sic*]. This results in spiraling into an implosion along the perceiving nervous system (BwO) and along numbed and splintered representations (Narcissus).

Based on my observations I believe that a BwO comes to exist centered on a nervous system. It is not a pluralistic and equally distributed phenomenon as Deleuze claims. The implosion takes place precisely because the focus of the system remains with the experiencing human. He or she provides the conscious awareness of the stimulation even if it is not interpreted and therefore without a signifiances [*sic*]. Further, in order to get rid of all the interpretations, the subjectivity attached to the nervous system would have to undergo a trauma resulting in numbing shock. I believe that the moment of the insertion of a shocking event, in fact, initiates the process of creation of BwO. For different sensibilities there exist different thresholds of overstimulation or discomfort leading to the onset of numbing. I have learned about mine by making the *MeMyselfandI* project, which partially performs as a BwO in that it incorporates both human and nonhuman elements. Once the feeling of numbness was too overwhelming, I chose to disengage. In another words, I aborted the mission before dissolving into a BwO or psychologically imploding.

Ultimately, both BwO and Narcissus describe a materialistic perspective in that they scramble or completely do away with human psychology. In the original logic of these two allegories, the human and the technological elements are equal or, as Bruno Latour describes it, symmetrical. In my experience, strictly materialistic perspective

tends to create systems that implode on themselves. They remain theoretical structures because in practice, humans possess and exercise intentionality. In the materialistic perspective, a human being is reduced to an actant (Latour), an element in the set of technological elements, where his or her intentionality is equated to the intentionality of an object. According to this logic, an ideal human actant, symmetrical to the rest of the elements, is a human in shock. It is a docile body producing intensities via a nervous system that are detached from meaning. A BwO, in my perspective as exemplified in artworks *MeMyselfandI* and *I am Legion*, is a body in shock and does not yield a subjectivity that enables the human.

4.3 Towards Integrated Hybrid Subjectivity: Polymorphic Forms

As I explained above, there are certain conditions, characteristic to the human-technology becoming that prevent coming together of the two entities in a way that does not objectify and disable the human. These conditions, however, can be overcome by repositioning the perspective on the interaction and redefining the human engagements through their agency understood as intentionality.

4.3.1 Intentionality as Agency

As I have gleaned from my artistic experimentations, human agency becomes a pivotal issue in developing a stable hybrid subjectivity. In the human-technology interaction, the agency is sourced from both the human and technological sides and intertwined in a context of a specific interactions to yield a hybrid agency. In other words, the hybrid agency is produced by the human, technology and the environmental context.

Rosenberger and Verbeek use intentionality to define the human-environment relationship in phenomenological terms.

The concept of intentionality plays a central role in the phenomenological tradition, as part of its relational approach, to conceptualize the relation between human beings and their world. Human experience has an intentional structure:

human beings are always directed toward reality. We cannot simply “see,” but we always see something (Rosenberger and Verbeek 2015: 21)

For the purposes of my artwork, our leaning in the direction of the environment is the original human agency. By taking in a perception of a stimulus, humans act. In this sense, our perceiving is a first step towards and a means to constituting our sense of self. However, as the postphenomenologists point out, in the case of most recent human-technology relations, the intentionality that emerges from the technologies merging with human physical body, for example neural implants, becomes hybridized.

From this “fusion” relation, a “hybrid intentionality” emerges. Rather than being a technologically mediated form of human intentionality, it is the intentionality of a new, hybrid entity: a cyborg. Contrary to embodiment relations, no clear distinction can be made here between the human and the nonhuman elements in these relations (Rosenberger and Verbeek 2015: 21)

In another words, the ‘hybrid intentionality’ is not a ‘technologically mediated form of human intentionality’. To make this sort of an equation real, another equation needs to be true. That is that the human and nonhuman intentionality is of the same quality or nature. If it is impossible, as the authors claim, to detangle the contribution of either side in the final hybrid intentionality, then they must be indistinguishable. I believe that it is a mistaken view and that the two intentionalities can be distinguished in the hybrid intentionality before and after merging.

I will begin with discussing the technological part of the relation.

Postphenomenologists such as Ihde and Verbeek dedicate their efforts to explaining how it is possible to speak of intentionality and therefore agency of technological objects in terms of interactions with humans (Ihde 2002, Verbeek 2005). In this gesture, they set themselves apart from other theorists of technology, such as Latour, Donna Haraway and Andrew Pickering, who do not allow for an intrinsic intentionality of nonhumans. Pickering, in fact, explicitly denies his interest in the intentionality of things as opposed to humans (Ihde 2002: 67). In the case of Haraway and Latour, the nonhumans gain

agency through anthropomorphizing, namely through non-innocence and socialization.

(Ihde 2002: 92) Furthermore, this interaction between humans and nonhumans is not symmetrical, as Latour would have it, and instead the distribution of agency is shaped by the context of the interaction, according to Ihde.

My proposed middle-ground consensus gains the recognition that the varieties of technological mediations with their nonneutrality - and noninnocence – transform use-situations. And these entail some type of action, at least in the sense of an interaction, implicating the nonhumans (Ihde 2002: 94)

There is no symmetry in this interaction since the relation is always enacted in a context of an environment making the axis of perceived symmetry unstable. While I agree with Ihde that this nonhuman action can be discerned in terms of ‘transformed use-situation’, in my view, he stops short of defining the nature of this non-anthropomorphosized nonhuman intentionality, especially as contrasted with the human intentionality.

In my artwork, the nonhuman directionality reveals itself as enabling certain outcomes for the human-technology system. While my artwork makes a use of non-symmetrical, nonhuman agency, I highlight the condition of specifically human agency within the hybrid interaction before and while becoming part of the system. The human intentionality and agency in the interaction with nonhumans becomes entangled but not impossible to discern. Through my art, I observe how the human agency is transformed, for the better or for worse, at certain nodal points. In considering media technology, the human intentionality becomes often skewed or manipulated as I have demonstrated through the art pieces, *I am Legion* and *MeMyselfandI*.

In media technologies, the human side of the relation becomes problematic because the environment or ‘the transformed-use situation’ is governed by different set of rules. The main culprit is the application of real-life rules to the virtual world, especially when it is enacted through a metaphor. The anthropomorphization of technology creates an illusion that we are dealing with another human-like entity on the

other side. This notion is implied by perceived intentionality of the technological agent. A casual user often will mistakenly put an equal sign between the human and the machine, that is, will make the relation symmetrical (Latour, Haraway). I interrogate this process of projection of humanness in an artwork entitled, *The Camera is Present*, which I discuss later. As Don Ihde points out, this symmetry is problematic because:

such symmetries revert to functional equivalent of precisely the Cartesian modernism that postmodernity wishes overthrown in that (a) the perspective from which the symmetry is drawn is unknown, (b) the absence or transcendence of the narrator again creates a god-trick of nonsituatedness, and (c) the question of for whom the system operates also hides the politics of semiotic systems (Ihde 2002: 80)

My artworks confirm that the human-technology relations are not symmetrical. The human and technology in the coming together are qualitatively not the same. As much as technology is not innocent, meaning it enacts politics via intention or directionality (Wiener, 1988), its intentionality is different from that of a human. In this interaction, the human agency or intentionality helps one to individuate by directing themselves towards technology and the available agency enhancements. For example, in *I am Legion*, the action of pressing the enter button, which begins the process of making the exquisite corpse on the page, allows the human to extend themselves into the Web event. Human's original act of leaning towards and crossing over into technology reconstitutes the original self as a new coming together of him/herself, other people, software and hardware. From the human perspective, it is a process of acquiring agency by means of self-reflection and ability to locate oneself with an environment, even if it is virtual. The resulting hybrid intentionality is influenced by all the parts in the system. The self-reflectivity and perceiving the assemblage as a new individuated entity, comes from the human intentionality. It is the unique human contribution.

Further, to address Ihde's concerns, in a real-world situation such as an art piece, the engagement can be perceived by the human from various vintage points: as a maker,

observer and participant. As much as the relation is not symmetrical, it does provide points of contact or points of entry for the two entities and therefore a perspective. The coming together can be observed, not from a god point of view, but through the perceiving human. It is conceivable that the technological assemblage produces some sort of impression of a human in the system and to that effect perceives as well. I prefer to stay away from such speculations in that they imply the problematic symmetry and force an anthropomorphic perspective. Instead, for the purposes of this thesis, I am focusing on the human contribution to the hybrid coming together.

4.3.2 Practical Investigations of Intentionality, Symmetries, and Agency

I am Legion is an example of hybrid intentionality where the human and nonhuman intentionalities are almost indistinguishable. This is partly due to the complexity of the engagement and partly due to hiding and blending of gestures. The piece incorporates the entire production of Twitter with its users and all the intermingled hardware and software in between them and the initiating user. Also, the act of pressing a button is minimal yet amplified by means of the code enabling the art piece. The act of pressing a button initiates the process of searching Twitter feeds for the right word combinations to present on the page for the initiating user. The contribution of human intentionality, as represented by the initiator, is small from the human perspective and large from the perspective of the human-technology assemblage. Additionally, the intentionality of Twitter users is not explicit. As much as we recognize the form of writing as human, the text editing done by the *IamLegion* software is not readily noticeable, blending the intentionality of the gesture. Finally, the human participants remain anonymous. The amplification facilitates the blending of intentionalities while it hides the human contribution.

Conversely, I aim to create a clear division or, in fact, a confrontation between human and technological intentionalities in the art piece *The Camera is Present* (Appendix D). The setup of the artwork, in which the human and the camera are facing each other helps me highlight the point of the two intentionalities merging and/or clashing together. For the purposes of this project, I chose human emotion and psychological engagement, recorded in interviews, as the measurement of human capability to enact a merging through perceiving. The event begins when a participant starts to act on his or her intentionality and sits in front of a recording camera to look into the lens. The event ends when the human intentionality causes them to stand up and walk away.

The one-on-one interaction seems to be crippling to the human participants as they try and fail to anthropomorphize the camera. The camera, as a tool of intake, inspires to be read as the technological gaze that is rid of any feeling. The juxtaposition of the two ontologies creates human rationalizations of a situation that is uncomfortable in its unusual set up. For that reason, human intention becomes suspended as he or she is searching for a way to engage. Trying different approaches, the participants seem to contradict themselves in their statements, in most cases failing to establish connection. For example, in the following summary of her experience, Elisa fluctuates between objectifying the camera and anticipating presence.

It's easy to keep eye contact with the camera because it is an object. I had to break the eye contact. I got a weird feeling. And it made me laugh. I laugh when I'm nervous. Human eye feels like it is reaching. Cameras are static, they don't move so it feels like there is no engagement. (Elisa 2019, Appendix E)

Sitting face to face with a camera implies a need to develop a relationship as it would have happened if two people would sit face to face with one another. Marina Abramovich employed the set up with two people sitting across the table from one another in her art piece *The Artist is Present*, 2010. During that event, lines of people

would form waiting for their turn to face the artist and to be consumed in a silent exchange of human emotion. Conversely, *The Camera is Present* inspires emotions of confusion and avoidance mixed with drifting into one's imagination in attempts to explain the situation. Depending on the participant's previous training, this would vary from imagining human eyes behind the lens to projections of one's own feelings of guilt and discomfort (Appendix E).

This project demonstrates the ways, in which humans instinctively try to establish a symmetrical relationship with technology. However, those attempts fail because the human and the machine intentionality in their naked forms are not compatible. For the system to work, the human intentionality has to be, so to say, doubled on the technological side. There has to be a reason for the camera to be filming and that reason can only be provided by human intentionality, which can be communicated in person or in a symbolical way as instruction. That instruction was not provided at this event precisely to make it possible to observe human level of agency vis a vis a disinterested, that is *not* anthropomorphic technology. This leads me to believe that in an a-symmetrical relationship between human and technology, the human is the part of the system that needs to provide higher levels of intentionality and therefore agency.

In my further investigations, I was a collaborator with Steve Boyer in realizing the artwork, *Color Fields* (Appendix C), presented at the Glow Festival in Santa Monica, CA. This technological event, while blending the real-world and virtual spaces, highlighted the human intentionality within the system rendering the artwork highly relational for the human participants. While many pieces of equipment and a large number of human participants is orchestrated in preparation, the event comes to full realization when all the participants and their mobile devices converge at a geo-tagged location at the beach. Initially, the participants download an application to their mobile

device, which activates once a person physically crosses over a geographical border delineated by longitude and latitude. Within that area, the device is taken over by code displaying waves of colors on the phone screen and playing a score. Each device acts as a pixel of a larger image that is mapped out onto the geographical area. As people wander through the space, they come together to form pools of animated image. Thus, a crowd of people with activated devices creates a meta-display of color waves. At the highest resolution, which is represented by the largest number of participants, it forms a seamless animation with a musical score. The event is picked up by a video camera from up above and broadcasted live to the Internet and video projections at other locations. The video coalesces the disparate parts into a coherent read in order to communicate it to the audience/participants.

The directions issued to the participants are again minimal. They are instructed to come to the specific location on a beach, at which point, their phones activate. The moment of confusion is similar to the one that the participants experienced sitting in front of the camera in *The Camera is Present*. However, in *Color Fields*, the simultaneous multitude of participants changes the dynamic of this assemblage. The human intentionality initially directed towards the activated device, soon disengages from it because of the ambiguity of the device's intentionality. If this space activates certain technological accommodation, it is uncertain what they are or just not engaging enough. Further, there is an option for the human participants to turn towards one another in search of answers. The human intentionality align and compound while they discover the most engaging technological experience available. In communicating with one another, they become physically close to each other. The human physical proximity makes it possible to start noticing the emergent behavior of the whole piece. As the mobile devices are taken over by the program and start displaying animation and sound, the individuals are compelled to turn their devices away from their faces and outward to

begin discovering the overall pattern. In this gesture, the participants consciously join the technological intentionality and become one in a liminal event. It is important to note that this hybrid intentionality became successfully formed because of the compounded or highlighted presence of humans and their agency.

This engagement is more generous towards the human element of the design in the fact that it provides the sense of discovery, sharing an experience with other humans and explicit element of choice upon downloading the application. Additionally, through their agency, as they lean towards one another and technology, the human participants become part of a human-technology becoming. The participants discover the ghost in the machine however the experience does not reflect upon them directly. While the event addresses human psychology and sense of agency, it blends and dismantles all the subjectivities. The self-expression of the system is the only self-expression available to the human participant and culminates in the form of provided ready-made, the animation. Even though the human succeeds in activating their intentionality and agency, the aesthetics of the expression are dictated by the algorithm running the animation or angles of the projected images. In another words, there still exists a stratification of participation as the ability to reflect on one's engagement relies on the authority of the artists writing the code and filming the event.

4.3.3 Useful Elements

Intentionality as agency has proven to be useful concepts in outlining human and technological fields of respective and collective operations. Human's intention to be present within a system proves to be the smallest unit of agency. Any additional gestures on part of the human and met by technology produce interactivity and create action-reward dependency complicating the system. In my artworks, I prefer to work with testing the human presence within a system as it reveals to me the amount of human

agency under more static conditions, such as simply being. I base this preference on my experience of myself being in the world when I act minimally yet have a full embodied presence. I seek a similar ease of being for the human in a technological context with no pressures from external agendas, such as are present in most interactive art.

In *I am Legion*, I have investigated a hybrid intentionality and agency that is highly blended and not explicitly revealing the human participant. Conversely, *The Camera is Present* provides a setup, in which the technological and human agencies confront one another and highlight the differences. While the former allowed for human intentionality, even if not explicitly, the latter effectively prevented it. This led me to postulate that in order for the two intentionalities to form a hybrid one, the human intentionality and agency need to be further emphasized. The third artwork, *Color Fields*, carried out this proposition in that the system accommodated simultaneously more human participants and device feedback. Similarly, to the setup of *The Camera is Present*, the participants were instructed only to be present. The third hybrid intentionality was most successful in providing human agency. However, it still fell short in terms of producing human-technology subjectivity, where one can sense the hybrid presence explicitly.

4.4 Takeaways and Further Directions

Based on my explorations so far, I have identified a number of points of contact, which disable or make it difficult for the human and technology to come together in a way that is stable in terms of human agency and a sense of being there. Based on these areas, I have also suggested some adjustments to the posture. While my practical investigations interrogate specifically media technology, the theoretical tools and concepts can be applied to the human-technology at large. Following is the summary of my findings and proposed further directions.

Below, I will outline the areas of human - technology hybridization that frustrate the process of coming together by causing a state of disassociation and shock in the humans.

1. Diminished or nulled human agency within the technological system
2. Attempts at anthropomorphization of technology produced by seeking symmetries between human and technology intentionalities
3. The metaphor of shock surface implied in and on the screen limits human agency
4. The lack of proper representation of the embodied human within the technological landscape causes a lack of presence

Below, I will outline some possible future directions alleviating these clashes, which I intend to pursue further:

1. The overall goal is to increase human agency in human-technology interactions
2. Employ asymmetrical engagement human engagement with technology by emphasizing human intentionality
3. Create a new hybrid representation for the humans to employ when interacting with technology, not based in the metaphor of surface
4. Create a roadmap for initiating the human-technology engagement

In the following chapters, I will develop these directions further by employing alternative interpretational tools aimed at shifting the representation model and therefore mode of engagement with technology. Further, I will develop a set of instructions to construct this new type of human-technology coming together in conceptual and practical terms.

CHAPTER 5: Tools for Creating Integrated Liminal Event

In the previous chapters, I have outlined liminality as a concept defined in anthropology. I further proposed that this concept is applicable in describing present human engagements with digital technology. These engagements however were frustrated by lack of conceptual and perceptual tools to anchor oneself in the experience and resulting inability to move beyond the liminal stage. As I have described it in the previous chapters, there are many instances and types of human-technology interactions resulting in human shock. However, I am proposing a type of liminality that can be invoked as a positive experience initiating a flow of information. I believe that given the appropriate tools to contextualize the overwhelming experience, humans can use the initial moment of liminality, the fissure in human experience, as an entry point into the new experiential realm, which can be further contextualized within the human experience using the tools that I am proposing in this thesis. In this chapter, I describe the formation and application of such tools. These are: the sign and the symbol.

The following is the model, by which the two interact with one another. The positive liminality, understood as positive crisis, and as opposed to trauma, produces an affect, which is a sign, marking the moment when the symbol is to be employed. The symbol stabilizes the human psyche via a unique perceptual and aesthetic experience based in human affect and the technological weather. This process embeds the person in the experience and eliminates the need for the protective layer of shock. Instead, it moves the individual into a productive and creative collaboration with the technological world. The following table is an outline of the proposed process, as I have described it thus far.

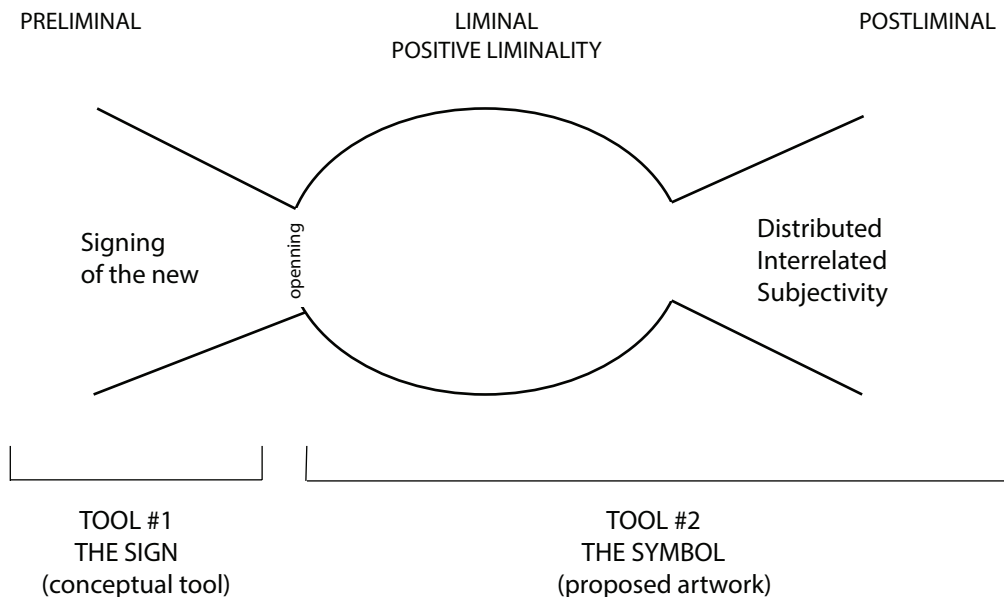


Table #2. Tools for productive, distributed and interrelated subjectivity

Now, I will follow with a detailed description of the sign (section 5.1) and the symbol (section 5.2) as it is understood in this model. I will reintroduce this table again with more details at the end of section 5.2 in order to incorporate the new information and present a synthesis of the practical and conceptual elements discussed in this thesis.

5.1 Entering Liminality: The Sign

Shock as described in the above chapters sets on right after the moment of opening or incision into the human psyche, which is defined as trauma. The trauma is a liminal space, where all the psychological defenses are down, and the stimuli can flow uninterrupted into the perceiving apparatus. Because the stimuli are overwhelming, in that moment of opening, human spoken, or written language fails to make sense of the event. I believe, this lack of meaning is the tear in human conscious experience and is usually followed by shock or dissociation as a form of protection. Howell defines this moment more precisely in the following passage.

Unbearably intense affect overwhelms the person's ability to organize information and even to think. As a result, the traumatic events or circumstances cannot be assimilated or take in. The neurobiological result is the sensorimotor,

rather than narrative, registration of the unendurable experiences. (Howell 2011: 75)

Therefore, I see trauma as pure sensory perception devoid of any interpretation, as Deleuze would have it. The lack of meaning signals that we have arrived at the edge of human rational experience. Therefore, liminality is the human experiential limit and a moment of crisis. The event extends over our capacity to sense; it dwarfs the ego and leaves us speechless. The above-described scenario ends in the loop of shock and fails to produce a constructive outcome. To be precise, I believe that in human-technology relations, similarly to human-to-human relations (Howell, 2011), the disassociation and shock are spectrum experiences and manifest themselves with different degree of intensity depending on the human and the situation.

However, the liminal viewed in positive terms, can act as a sign signaling a shift in the experiential fabric of the world. The liminality also signals that special measures need to be employed before proceeding further. I base the foundation of this approach in the tribal practices of initiation rites and rites of passage. The human left to their own devices and unprepared for the interaction may experience a degree of trauma upon encountering the liminal. In tribal practices, however, the initiates are assisted by someone and provided with tools and ceremonial structures leading to successful establishment of the liminal state and post-liminal subjectivity. The three stages of rites as outlined by van Gennep are as follows.

I propose to call the rites of separation from a previous world, preliminal rites, those executed during the transitional stage liminal (or threshold) rites, and the ceremonies of incorporation into the new world postliminal rites. (van Gennep 2010: 21)

This view of liminality anchors the liminal in a practice providing it with a structure capable of transforming the human psyche within a sociological context. I propose to employ this positive gesture within the context of human interaction with digital and online technologies. In practical terms, humans perform the crossing over every time

they use their technologies. For the purposes of my argument, humans engage a liminal space every time they start typing on a keyboard, log into a website or consume digital media. The interaction can be initiated on the technological end when human bio data is scanned or otherwise recorded and absorbed by technology. In such case, the human being remains a passive participant in this type of liminality.

In both cases, purposefully or not, the human crosses over a threshold between the analog and the digital worlds. Following the logic of the rites of incorporation, the human becomes a part of another world.

Precisely: the door is the boundary between the foreign and domestic worlds in the case of an ordinary dwelling, between the profane and sacred worlds in the case of a temple. Therefore to cross the threshold is to unite oneself with a new world. It is thus an important act in marriage, adoption, ordination, and funeral ceremonies. (van Gennep 2010: 20)

The new world can be experientially different and even perhaps threatening. To an unexpected or unprepared participant the experiential disparity may occur as crisis characterized by disorientation and loss of agency. In using the digital technology, we often encounter situations, where our data is harvested either against our will or with our reluctant approval. The most stark examples, are instances of body scanning at border crossings and installation of foreign software and malware in using certain sites aimed at tracking our activity. It is a sign that we have entered a territory beyond our control and that the negotiation mechanisms that we employ in everyday life will not entirely work. When the rules of engagement are not fully understood, the new experience becomes overwhelming. Qualitatively, because the new system exhibits apparent agency of its own, it feels like a presence. However, it is a presence that is detached from any familiar form or persona. It floats in the liminal space somewhere between our perceptions and the new territory defined as a combination of hardware and software distributed all over the world.

In order for the liminal state to be positive, it needs to serve a function. The function of positive liminality is to stand as a qualitative marker of a new experiential territory. The qualitative experience comes to be in a human being as a result of a perceptual experience. Therefore, the feeling of the experience produced while we engage our technologies is significant to me. Its specific content stands as a signpost for crossing over. It feels like something to cross the border.

5.1.1 Eerie as a Threshold

In this section, I will demonstrate how the feeling of eeriness marks the moment of a human crossing over into the technological world and how it can be used as part of the sign. First, I will define what it means to have a feeling in the context of this argument. Feeling is the subjective state of consciousness that arises in the perceiving entity. For the purposes of this argument the entity is human. This subjective state has a certain type of atmosphere or coloration. Describing feeling as a coloration of a subjective perception is appropriate since colors are perceived similarly to feelings as approximations. In this sense, feeling arises as a meta-phenomenon based on a number of perceptions. For the purposes of this argument, I am interested in feelings that are of the aesthetic nature. Eerie is an example of such state. There is no exact delineation where a feeling appears and where it ends however it is clear when it peaks. That moment is marked by an intensity, which signalizes full immersion in the new experiential space.

Beyond the threshold of the technological world lies the land of apparitions. These are the unresolved entities that cannot be fully perceived because our senses are not optimized for the digital territory. Not all the information renders on our screen. There are many processes that remain undetectable to our senses. That feeling of uncertainty about the nature of our perception in the digital world, gives rise to our

sensing that apparently there are some forces at work, which we cannot fully grasp. As an example, there is no direct visual translation to all the processes performed by software. We simply experience the software on a meta-level, piecing together the few representations available to us. Underneath these expressions we sense a hidden agency. Similarly, a digital representation of a human being gives limited and augmented information implying something more underneath; a presence that is larger than the representation.

Roy Ascott speaks about apparition in terms of entity possessing agency. In his book, *Telematic Embrace*, he writes:

Cyberspace is the space of apparition, in which the virtual and real not only co-exist, but co-evolve in a cultural complexity. Apparition implies action, just as appearance implies inertia. Apparition is about the coming into being of a new identity, which is often, at first, unexpected, surprising, disturbing. (Ascott 2003: 278)

What is disturbing is our misunderstanding of the rules of engagement in the new space. It often culminates in complete failure to understand that we are entering an ontologically discontinuous space. This naivety compounded with our sensing of apparent agency in entities that are ontologically unresolved gives us the feeling of eeriness.

The apparent agency can be described as the ability of a system to act as though out of its own volition. In the analog world, we assign this ability to conscious entities such as other humans and we have a relatively good understanding of possible results of such situation. In the virtual world, the context of these engagements changes. Additionally, the state of consciousness of the entities possessing apparent agency, such as software, comes to question.

The way we understand the feeling of eeriness in everyday life is however informative in understanding it in digital media. Mark Fisher describes eerie as

constituted by a failure of absence or by a failure of presence. The sensation of the eerie occurs either when there is something present where there should be nothing, or is there is nothing present when there should be something. (Fisher 2016: 61)

In terms developed by Fisher, software exhibiting apparent consciousness falls under ‘failure of absence’. An entity that according to our calculations based on the old, analogue paradigm should not be here is exhibiting agency and giving us an impression of presence. On the other hand, human often frustrated agency and limited representation of our persona falls under the ‘failure of presence’. Where we would expect our presence and agency to be fully translated into the digital paradigm, we instead encounter void or misrepresentation. Therefore, our experience of the digital platforms is often eerie.

Fisher also describes eerie in terms of agency in the following passage:

Behind all of the manifestations of the eerie, the central enigma at its core is the problem of agency. In the case of the failure of absence, the question concerns the existence of agency as such. Is there a deliberative agent here at all? Are we being watched by an entity that has not yet revealed itself? In the case of the failure of presence, the question concerns the particular nature of the agent at work. (Fisher 2016: 63)

I am particularly interested in the latter. The failure of presence as experienced by the human being in the digital media may seem counterintuitive. The common understanding is that through our digital media we can express ourselves in various new ways. I would like to argue however that the present digital landscape although being experientially different from the analogue, gives us quite limited forms of expression. Today, the web is far from the utopian dream that it represented at its inception. The majority of the digital territory has been incorporated under commercial efforts to capitalize on the mass audience that the web provides. This in effect compounds the feeling of eeriness as we are being misrepresented and our information misused on daily basis.

Our every need and dream is commodified and turned into a quantifiable problem with an objective solution. In this sort of structure, since there is no space for a subjective experience, we are forced into pre-described canons. Even the efforts to personalize the online experience realized in the web 2.0 fall short of being true freedom. At best, the new web presents a finite number of pre-described fields to fill out or boxes to check. The individual subjective experience is undesirable precisely because it cannot be commodified. This treatment of a human being in the digital world causes us to partially disassociate from our representations.

The digital presences on the Web feel additionally eerie because the status of the entity behind the apparition is uncertain. In a world where representations explode into numerous pieces like shards of a mirror, every entity is a legion. Each piece represents partial agency of the whole while calling the existence of the whole into question. The representations are further problematic because the source of their agency is never certain. People, software and constructs can take on appearances that in fact hide their true purposes. In this environment, we always feel like we are missing part of the story. This splintering and substitution of representations is another failure of presence that feels eerie.

The technological space is problematic however its foreign structure feels like something to humans. That feeling and type of affect is eerie. In order to use this feeling as information, I propose that the feeling of eeriness becomes the signpost for our crossing over into ontologically disparate territory. The eerie is the marker for an experiential threshold, past which lies the wilderness of the digital world.

5.1.2 Merging and Crisis

Since the positive liminality acts as a signpost, it marks a specific moment in forming human subjectivity in the technological context. It is the moment of human merging

with technology. The feeling of eeriness originating from our sensing of entities with uncertain origins is compounded by the feeling of fragmentation that the merging invokes. In merging with our technology, we become splintered into a myriad of representations that seem to escape our control. I will further discuss some examples of such splintering as it is exemplified in the culture of online personas and digitization of the physical body.

In order to formulate and communicate our single existence, we translate our lives into numerous online platforms such as social media, medical profiles and financial portfolios. In order to interact with digital technology, humans feed the system bits of personal information, which become remixed by the system and displayed in impersonal fashion. Signing up for social networking platforms resembles filling out a job application. The fields are designed to grab generic information in a predesigned manner leaving no space for individual expression. Additionally, the profiles parse the information into discrete data chunks representing a person in statistics. In this process, we become split into pieces and reestablished as a consumer fitting a particular demographic. In interacting with popular social media, the human is faced with the choice of giving up personal agency or not participating. This choice appears as crisis and frustrates the process of merging.

The causes for this discomfort may be traced back to the fact that entertainment and marketing industries dominate the online digital medium in its most available form. Our every need and dream is commodified and turned into a quantifiable problem with an objective solution. In this sort of structure, since there is no space for a subjective experience, we are forced into pre-described cannons. Even the efforts to personalize the online experience realized in the web 2.0 fall short of being true freedom. At best, the new web presents a finite number of pre-described fields to fill out or boxes to check.

The individual subjective experience is undesirable precisely because it cannot be commodified.

The social media platforms announce their desire to showcase human uniqueness and foster personal expression. The resulting display however does not give any evidence of those notions. The resulting aesthetic instead of human complexity emulates database design. Our information is forced into grids and lists having nothing to do with individual self-expression. This disparity between stated intentions and apparent results creates a mistrust of the platforms.

As much as we reach towards the digital technology, increasingly, the technology is reaching towards our bodies in the physical space. The results are equally unsettling to the experiencing subject. The body is placed under scrutiny at airports, schools, workplaces, doctor offices, city streets and public spaces. As much as the harvested data can be used towards our benefit, it can equally turn against the original self. In addition to the usual consumerist objectification, the body is enduring a new kind of a scrutiny. Fueled by the fear of terrorism, a set of technologically advanced means of classifications rules over our bodies. We are scanned, searched, fingerprinted and measured in any possible way. The information pertaining to our bodies is parsed and recorded into massive databases that are distributed throughout the world. As much as these technologies are portrayed as means of protection, they feel invasive and unauthorized. Again, the personal story becomes neglected in favor of statistical readings. A fear of misrepresentation often trumps other more creative notions of curiosity and need to engage.

Where the feelings of frustration, fear and mistrust arise in the human subject, they create a rift in the continuity of merging. This crisis of becoming one with our technology however is consistent with the feelings invoked by crossing over into a new

experiential territory. It is not the purpose of this thesis to ameliorate the causes of the negative feelings based in the politics and the economic structures based in technology. However, I do point to this crisis of merging as another signpost signaling a moment, in which additional tools for the human subject are required.

5.1.3 Signaling the New

To sum up, the positive liminality and crisis act as the signpost of crossing over into a territory that is foreign to the human psyche. This threshold is marked in the human psychology as an eerie feeling in the moment of merging with the technological world. There is a need to realize this signaling of the new in the moment it occurs because it should inform the human behavior past that threshold. To restate this more simply, the positive liminality is a communication tool, which takes the temperature of human environment as measured with affect.

In this chapter, I will propose another tool, which can be employed past that point. It is a tool aimed at preservation of the distributed subject's sense of self and feeling of wholeness in the midst of merging with the technologically mediated territory.

5.2 Developing Design Principles for The Symbol

The symbolic is neither a concept, an agency, a category, nor a 'structure', but an act of exchange and a social relation which puts an end to the real, which resolves the real, and, at the same time, puts an end to the opposition between the real and the imaginary. (Baudrillard 1993: 133)

In this passage, Baudrillard points to the balancing quality of the opening created by the symbolic exchange. After the enactment of the symbolic exchange, the world ceases to be split in two: the real and imaginary. The act of acknowledgement of the 'other side' releases both from the separation and gives both equal standing. In such an environment, a communication and flow of stuffs as well as information can be established (Baudrillard 1993: 134). Further, according to indigenous and traditional

practices the system of value, based on the separation collapses for the time of the ceremony or the festival. The access of goods is not being exchanged based on value but rather is given away freely as in case of Native American potlatch. There is a departure from the logic of value exchange in favor of irrationality of the symbolic exchange (Kellner 1995: 6). In other words, the communication has to be established in an irrational way, in a sense that it opposes the prevailing social views and practices. In the artwork, *The Symbol*, instead of talking to the spirit world, I am attempting to speak to the inanimate world, the non-human, non-living world of technology.

Similar ‘irrational’ addressing of a disassociated parts of the self takes place in treatment of Dissociative Identity Disorders and has a proven efficacy for bringing equilibrium to a fractured human psyche. The psychoanalyst and traumatologist, Elizabeth F. Howell explains that ‘important aspect of initial phase is getting to know the dissociative parts of the person and their internal structuring’ (Howell 2011: 175). This work is accomplished by the therapist talking directly to the parts, which appear as separate subjectivities as Howell elucidates through examples of specific patients (Howell, 2011). Over time, this multistage approach brings a greater sense of cohesion into the system of subjectivities while the dissociative barriers diminish (Howell 2011: 141). The concept of interrelatedness of parts proves to be useful in designing points of contact between human and technological nonhuman that facilitate healthy human integration through perception and psychological engagement.

The Symbol creates an opening that does not result in shock and disassociation. Instead, it facilitates a way for disparate realms to ‘talk to each other’ and have a relationship that promotes consciousness instead of disassociation. The opening is initiated by a flow of human affect, in a form of electronic data captured through a brainwave measurement, into the technological realm. This flow is interpreted by the hybrid system differently every time depending on the present state of the system and

other entities, both human and nonhuman, involved in the system at the moment. In reciprocity, the system presents an output perceptible to the human via their nervous system (for example: sound, video, tactile experience), which is influenced by the human in the moment of perception. Thus, it fluidly and continuously changes based on both entities 'perceiving' each other. For the art piece to work, the human just needs to be in the system; meaning they have to connect via electrodes to be perceived by the technology. The human action in this interaction is minimal yet, for the duration of the interaction, it creates an acting subject that is productive, in the sense of producing the overflow of affect and completely embedded in the nervous system as well as the technological assemblage. Every time one interacts with the system, the effect is different and creates a different hybrid subjectivity through the simultaneous emoting and perceiving.

Also, *The Symbol* is not a mirror for the digital Narcissus since it does not reflect the original subjectivity. The human affect and, therefore action, is blended with the actions of the whole technological assemblage. What is being perceived is the totality of the new hybrid, distributed subjectivity. It is more of a topology, a landscape, of which one is a part as a contributor through being in it. What is given, flows in freely and cannot be traced back to a specific person to create an identity. Rather, it is a series of moments in time that comingle with other technological elements and possibly people that appear as a totality. Therefore, the exchange is symbolic since what is created cannot be commodified or otherwise captured by a value system. *The Symbol* is a sensualized liminality. It is a liminality that is made perceptible. In a human dimension, it has a specific feel to it, which can be perceived within as a feeling or without as an ambiance. The implication of the question posed by Thomas Nagel, 'what is it like to be a bat?' (Nagel 1974: 435) applies equally to any organism with access to conscious

experience. This feeling is a totem pole of our consciousness; the place from which we can act, and which gives us a sense of presence.

5.2.1 Construction of the World Through Symbol

There is a history of human beings producing alliances through symbolic exchange. Mircea Eliade lies down the groundwork of this understanding in his book *The Sacred and the Profane, The Nature of Religion*. Rituals and rites are often aided by artifacts that help to anchor complex ideas in the physical world. The effects of these artifacts create aesthetic sensations that help to organize the human psyche on a subjective level and further create societal structures. Although art has been liberated from the burdens of performing work in a religious context, the capacity of an aesthetic experience to create and carry meaning still persists in secular contexts.

One of the most basic rites performed by ancient cultures around the globe, according to Eliade, is one that establishes one's land or a home. The world is created out of chaos by insertion of a sign that anchors one's experience in the physical world. It provides directions and a grid for the construction of a settlement. (Eliade 1987: 29-30)

For in the view of archaic societies everything that is not "our world" is not yet a world. A territory can be made ours only by creating it anew, that is, by consecrating it. (Eliade 1987: 32)

A parallel logic can be employed when examining the world of digital technology. In order to inhabit this new realm of existence, the human needs to claim that territory via a sign or a symbol. Today, such gestures appear as profile photos, log in names and passwords, personal data and artworks. In fact, the idea of personalizing a digital platform exemplifies our need to claim human area of influence via aesthetic gestures.

Eliade gives a specific example of a nomadic Australian tribe called Achilpa, who use a sacred pole to navigate through the land and establish their home in relationship to the pole. This symbol, which was originally believed to be used by their

god, structures the tribe's experience of hunter-gatherers tracking through an extreme environment. In a hostile unpredictable world, this aesthetic and symbolic device provides cohesion and allows a simple society to be formed.

This pole represents a cosmic axis, for it is around the sacred pole that territory becomes habitable, hence is transformed into a world. Achilpa always carry it with them and choose the direction they are to take by the direction toward which it bends. This allows them, while being continually on the move, to be always in 'their world' (Eliade 1987: 33)

Another interesting function of the sacred pole is its symbolic ability to transcend and connect different worlds. In ancient beliefs the pole acts as a cosmic elevator that allows shuttling between the realms of humans and gods. It is the place of connection.

The Kwakiutl believe that a copper pole passes through the three cosmic levels (underworld, earth, sky); the point at which it enters the sky is the "door to the world above." The visible image of this cosmic pillar in the sky is the Milky Way. The axis mundi, seen in the sky in the form of the Milky Way, appears in the ceremonial house in the form of a sacred pole. (Eliade 1987: 35)

The aspects of human interaction that have to do with shuttling across different ontological spaces such as the analog and digital are of a special importance still. This mobility endows us with agency and ability to be fluent in our culture. Today, the way we move across virtual platforms, identities and forms of engagement with the environment is facilitated by our technology. Digital technology is specifically responsible for creating diverse interfaces through which we connect with one another, institutions and increasingly artificial entities. In such diverse and unstable environment, it is crucial to establish one's experiential home base.

There is a correspondence between the ways, in which tribal societies seek to establish themselves and their modes of communication with other worlds and our present need to establish our sense of self in the technological world. For the ancient people, the pole stands as the center of their psyche and their cosmos. It is a type of signature that carries certain feeling of being in the world. It is a psychological tool that helps to orient the sensing self. This tool has both physical and virtual aspects. The pole

is usually made of wood or copper however the matching human sensation is psychological and therefore virtual. Another important attribute of this tool is its ability to pass through thresholds. I am envisioning a corresponding tool, a symbol, that will aid in bridging the human physical, perceptual and psychological dimensions with the digital world. With its base in the aesthetic experience it'll provide a sense of self across platforms and a form of identification that is not fixed but fluctuates with the subjectivities.

5.2.2 Grounding the Symbol in the Aesthetic Experience

The theme that carries through from the anthropological studies of tribal cultures into the anthropology of our present-day experience is the aesthetic experience. The symbol, as a tool developed in this thesis, is nascent in the human ability to perceive the environment, immediate or expanded through technological media. Our capacity for creation, reading and inferring patterns in our aesthetic experience is an emergent behavior of human psyche. Therefore, a symbol is distilled aesthetics, capable of carrying information and meaning. For example, the geometry of certain symbols, according to Eliade, would result in city planning patterns. Similarly, the aesthetic experience, which I am interested in, goes beyond just simple enjoyment and produces a pattern that is scalable and practical in its use. With the help of the symbol the world becomes malleable and any place can be home. Like with the planting of a totem pole, employing the symbol marks the spot that one chooses as an entry point, from where the new subjectivity can establish itself.

As the symbol must be made first, it originates in the aesthetic experience. I define aesthetics simply as a human reaction to a sensory experience and I seek to create a balance between the internal feeling that it produces and the outside stimuli. The idea of beauty or ugliness is only a secondary construct of judgment that is infused with

cultural contents and is not useful for my purposes. However, what I am interested in is the leaning towards an equilibrium between the inside and the outside experience. Also, for my purposes, it is important that it feels like something to have an aesthetic experience. This feeling is unique to every human and cannot be contained in one word. In fact, language flattens the experience and is incapable of dealing with the complexity of the internal experience. Symbol, on the other hand, is a sensory token that can be expanded or collapsed through dimensions and as much as it is an aesthetic experience, it is free of aesthetic judgment in a sense of something being good or bad, beautiful or ugly. In this capacity for expansion and movement across platforms, the symbol is akin to Ranciere's idea of 'art becoming life'. So instead of Plato's concept of art as an imitation of life that will always be imperfect that he proposes in the *Republic* (Stanford Encyclopedia of Philosophy 2020), this view allows to imagine art, which captures and carries through the pattern that we recognize as life.

In the aesthetic regime of art, art is art to the extent that it is something else than art. It is always 'aestheticized', meaning that it is always posited as a 'form of life'. The key formula of the aesthetic regime of art is that art is an autonomous form of life. (Ranciere 2010: 118)

In my understanding, the symbol, therefore, is a type of art that is also life and it is verifiable as such through the aesthetic experience. It gives the sensation of rightness and truth, which can be interpreted as beauty, but first and foremost brings a sense of balance between the internal and external landscapes.

This idea of rightness has been the main focus of the Minimalist art. As much as Minimalism in its insistence on pure visuality and all-at-once presence of the visual experience, in my opinion, signal the technological shock expressed in culture, it also offers a way out. The shock becomes repeated precisely so it can be overcome. The different iterations of blocks in Donald Judd's work appear as doorways into the feeling of rightness. Frank Stella sums this notion up in the following statement:

If the painting were lean enough, accurate enough, or right enough, you would just be able to look at it. All I want anyone to get out of my paintings, and all I ever get out of them, is the fact that you can see the whole idea without any confusion... What you see is what you see. (Stella 1995: 158)

As both Judd and Stella represent in their work, this rightness is not contingent on accurate representation. The balancing of composition and illusion of perspective is done away with in a gesture emancipating the medium from its historically illustrative function. As the Minimalists would argue, in appreciating a minimalist work of art, one comes face to face with art itself.

In a similar fashion, the symbol that I am elucidating in this chapter does not have a referent or an original, but it is rather an original in its every iteration. It doesn't represent. It is. The symbol is a gesture that is expressed across platforms. Its appearance is not important as long as it creates the feeling of rightness. The symbol despite its different forms is the most authentic expression of oneself. This is an important divergence from the minimalist object and it is based in the fact that each person perceives this rightness in a subjective manner. Each one of us knows that feeling and for each of us it seems to have a slightly different coloration. In my view, Agnes Martin who was an outlier in the modern and the post-modern world of painting sums this notion up more precisely.

The artist searches for certain sounds or lines that are acceptable to the mind and finally an arrangement of them that is acceptable. The acceptable compositions arouse certain feelings of appreciation in the observer. Some compositions appeal to some, and some to others. (Martin 1998: 155)

This feeling of rightness and being acceptable in one's perception grounds the idea of the symbol in the aesthetic experience. This experience is verifiable through interviewing a subject. In fact, this verification process is part of calibrating the symbol.

5.2.3 Expanded Aesthetics and Cross-Platform Experience

In today's world, our aesthetic experiences move across platforms. We interact with the world and absorb information through many different mediating tools. These include our five senses, augmented reality, virtual reality, fully digital platforms, not to mention our thoughts and feelings emerging from human biology and chemistry. The scale of these experiences also varies from nano to macro, as it is enabled and expanded by our technology. These media and levels of experience are connected by the human sensorium and sublimated into an aesthetic experience.

To accommodate the diversity of the expanded human experience, the symbol is a gesture that moves across platforms. While the expression of it may change, it stays true to its aesthetic signature, the original feeling of rightness. The symbol can be a virtual, physical or blended form that varies in size depending on the medium. The symbol's pattern can be collapsed or unpacked depending on the medium that expresses it or a set of data that is fed into the pattern.

There is an artistic precedent to this type of dynamic construction strategy, in which an aesthetic form takes cues from cybernetics and morphs depending on the user. In his early works, referred to as *The Analogs*, Roy Ascott explores the capacity of an artistic gesture to expand and transform in the process of interacting with the viewer. The idea has originated with the *Change Paintings*, where one gesture could stand for all the gestures in the painting.

The "Change Paintings" came about as a result of working on some very large paintings, which were wholly gestural. I was thinking, if there were a basic gesture to this particular painting, what would it be? What would the gesture be that was at the root of the gestures? Then I would actually paint that gesture, the shape it took, on a small panel in the top lefthand corner of the paintings, which were usually oblong. It was as if to say, this is the seed of this work. (Ascott, 2013)

The metaphor of the ‘seed’ is present in the way the symbol becomes constructed. In order for the symbol to move across representational platforms, it needs a pattern, much like the seed, that will be expressed as an aesthetic experience for a human to behold. It may be slightly different depending on the medium, through which it is moving yet will retain its integrity and fidelity to the original pattern.

Ascott took the idea of seed further and created a series of paintings with shapes on transparent panels. The viewer, who becomes a participant, would slide the pieces around to create a painting with innumerable variations yet true to the original seed concept. By employing this method, the art piece introduces an analogue form of feedback into the system. The aspect of feedback is necessary for calibration of the symbol. The human participant employs their sense of aesthetic rightness to form the symbol in a real time interaction. The creation and employment of the symbol is a dynamic experience, in which the form fluctuates and fluidly transitions across platforms.

Ascott in his later writing on cyber culture makes a clear distinction between ‘appearance’ and ‘apparition’. The opposition played out between these two concepts is useful in further understanding of the nature of the symbol. The art that is concerned with appearance deals primarily with static surface and representation. In other words, it deals with reproduction of a certain appearance in a different medium. In order for this reproduction to take place, a moment has to be frozen, like in a photograph. Apparition on the other hand, is dynamic. In its changing appearance, apparition communicates all the facets and possible permutations of a seed pattern. In this capacity for dynamic expression, apparition is like life and not a representation of it.

According to Ascott, this type of artistic expression is better suited for our culture. In his words, it is ‘a culture that is progressively concerned with the complexity

of relationships and subtlety of systems, with the invisible and immaterial, the evolutive and the evanescent, in short, with apparition' (Ascott 2003: 277). In step with the theory of visual culture as a shock, which I have developed in the earlier chapters, is the idea of appearance as a surface. Ascott asks:

Can an art that is concerned, as Western art has always been, with appearance, with the look of things, with surface reality, have any relevance in our systems-based culture, in which apparition, emergence, and transformation are seminal? (Ascott 2003: 277)

The answer that I will suggest is that the art concerned with appearance is relevant as a signpost for a moment of shock. It flags a moment in which human agency has been suspended in order to ponder a simplified and flattened idea at a safe distance. This is not the nature of the sign. The sign is an appearance carrying the complexity of meaning with it in any permutation of its form thanks to its algorithmic nature, which continuously computes its next form.

5.2.4 The Symbol and Interactivity

The interactivity of the symbol, as conceptualized in this thesis, is continuous and effortless. The person, who engages the system, chooses to make the technological imprint to create the symbol. The person remains involved in the process of imprinting as long as he or she is part of the system and pays attention to the process. In this type of interactivity, all that is required of the participant is their attention and presence.

I find what is traditionally understood as interactivity tedious and I believe this feeling, which is often shared by participants, to be one of the main impediments to creating more seamless and productive interactions between humans and technology. The traditional interactivity can be loosely described as a situation, in which the participant is coerced to act in a way that is often unnatural and feels scripted. I share this distaste with Brian Massumi who explains this type of interaction in the following passage.

I think it's important to remind ourselves that there can be a kind of tyranny to interaction. Interactivity is not neutral with respect to power. In fact, according to Foucault, among the most invidious of regimes of power are the ones that impose an imperative to participate, particularly when the imperative is to express oneself "truly" or "authentically." (Massumi 2013: 47)

The creation of the symbol does not require taking an action but simply being in the space with the system. The expression of truth or authenticity is a byproduct of the system. While the human provides that quality, it is not through a labor of making yourself being seen through explicit actions. Rather, the digital system sees the person and calibrates the expression in response to the person's feeling in the moment. The system acts closer to the real world in that there is no tedium just discovery of oneself in relationship to the environment.

The humans most readily form relationships with the world that surrounds us. We are trained to do this our whole lives. This is the ground zero of aesthetics. The minimalist objects, such as Donald Judd's cubes, can have the effect of 'presence' because we can infer their volume in the physical space and in our psychological space because of our past encounters with objects in the world. This idea of 'presence' is paralleled by Massumi's idea of 'voluminousness' and describes the type of interactivity engaged by the symbol.

The lesson of the semblance is that lived reality of what is happening is so much more, qualitatively. It includes an "uncanny" moreness to life as an unfolding lived relation in a world whose every moment is intensely suffused with virtuality – an abstractly felt "backside," or voluminousness, of life itself. (Massumi 2013: 46)

This volumousness of life can only be computed/intuited in human psyche. Only our accumulated knowledge of the world can produce this feeling. It is a feeling of oneself with all of our specific experiences in the object that one encounters. That feeling is the most authentic expression of oneself. It is the human feeling themselves in the outside world. The symbol uses and enables that projection of the self in the human-machine interaction.

Therefore, to interact with the symbol, the person just has to be in the space to interact. Presence is enough. There is no action required. The sign is a result of the person and the digital system being together and sensing one another. The digital system and the human become extensions of each other and exist in a continuous and fluid relation to one another. This fluidity is achieved by the system calculating the expression of the symbol in relation to the feeling of the person in real time.

Because of the real time calibration, the person observes themselves perceiving themselves. The act of perception is rendered tangible. The technology serves as a mirror, a tool and a reflection all at once. This spiraling virtuality is similar to the Narcissus gazing at his own reflection and intensifying the experience of perception.

Paradoxically, the intensity of the dynamic form of the experience comes out most effectively when action-reaction circuits are artfully suspended or (...) when the action line itself is accompanied by a continuous semblance of itself, an ongoing perception of its singular eventfulness doubling the functional perception of the affordances offered and taken. (Massumi 2013: 47)

In Massumi's sense the interaction is suspended because it is continuous; happening at every moment of the object's presence. But what does it mean that the object is present? The object is present as long as it is held in the consciousness of a human. Therefore, humans introduce this unmistakable, unique feeling. The feeling of what it is to be a human. The interactivity of the human and the world is continuous as long as the perception is sustained. This is the true meaning of the liminality that I am describing in previous chapters. This liminality exists in the projection of oneself into the world. It is between the psyche and the objects in the environment. The technological world has been reluctant in receiving this projection or rather the human psyche is having a hard time sticking this projection because of the past trauma. The symbol heals this rift and bridges the liminality.

5.3 Art Expressions of the Symbol in a Liminal Event

The Liminal Event, which can be accessed by using the symbol is a break in the usual representation of the world, which often, as I have described in the previous chapters, results in trauma and shock. The symbol is a sensory perception activated in an analogue or virtual space through the interaction of human sensory apparatus and technology. The symbol is a seed of an experience and as such it is compact with latent possibilities. These variables are stored in the human psyche, the technological affordances and the medium (in my example, code) that relates the two. It is a seed because all the possibilities are not revealed at once since only certain conditions and combinations of the human and nonhuman will give rise to certain conditions. These become revealed gradually as the person interacts with the active space and consequently the symbol. The interaction however is implicit rather than explicit since there is nothing to do for the human except to be present.

In order to understand exactly the function and the location of the symbol, used as a negotiation tool, we first have to establish a topology of mediation and, what I call, the Liminal Event. In my model, the Liminal Event is a break in the familiar fabric of mediation or representation of the real. The mediation is language-based and represents strategies used by humans to acquire control over the wild and unpredictable raw life. In this sense, it is similar to Agamben's concept of 'polis' taken from Aristotelian thought and understood as related to law and representation (Agamben 1998: 2-4). The real, on the other hand, is the traumatic, that which escapes representation. In Agamben's terms, it is 'zoe,' understood as 'a simple fact of living' (1998: 1) and 'bare life,' understood as natural life stripped of the political life (1998: 65-67). This 'bare life' is 'the "real life" that "breaks through the crust of a mechanism rigidified through repetition"' (Agamben 1998: 67 cited Schmitt, 1985). The real also has been defined by Hal Foster in terms of 'traumatic realism' and linked to repetition as a psychological protective technique.

Rather, repetition serves to screen the real understood as traumatic. But this very need also *points* to the real, and at this point the real *ruptures* the screen of perception. It is a rupture less in the world than in the subject – between the perception and the consciousness of a subject *touched* by an image. (Foster 1996: 132)

According to Foster, much of the modern and postmodern art dealt with the idea of the traumatized human psychology that comes in touch with the unmediated, real experience of that which must be rejected according to the cultural view.

According to the canonical definition of Kristeva, the abject is what I must get rid of in order to be an I (but what is the primordial I that expels in the first place?). It is a fantasmic substance not only alien to the subject but intimate with it – too much so in fact, and this overproximity produces panic in the subject. In this way the abject touches on the fragility of our boundaries, the fragility of the spatial distinction between our insides and outsides as well as of the temporal passage between the maternal body (again the privileged realm of the abject) and the paternal law. (Foster 1996: 153)

Foster further questions the ability of ‘abject art’ to directly deal with the abject or the real as it evades our experiential capabilities (1996: 156). In my understanding this is precisely the crux of the human inability to deal with the technological world as it is becoming too intimate while perceptibly answering to a different law than the human. As I have discussed in chapter 2 and 3, human traumatic experience is stimulated by the technological engagements. In consideration of Foster’s question, I am taking the opposite approach to abject art and instead of stripping the last shreds of language and perceptual capabilities, I propose a middle ground.

The solution lies in creating a relationship where the human is not completely exposed to the unmediated real but also not completely shielded from it. I am seeking a place where we could establish a personal exchange with the real. The table below illustrates the relationship between the mediated world and the real. The liminal event stands as a break in the mediation and the symbol is the point of a designed exchange between the human and the real.

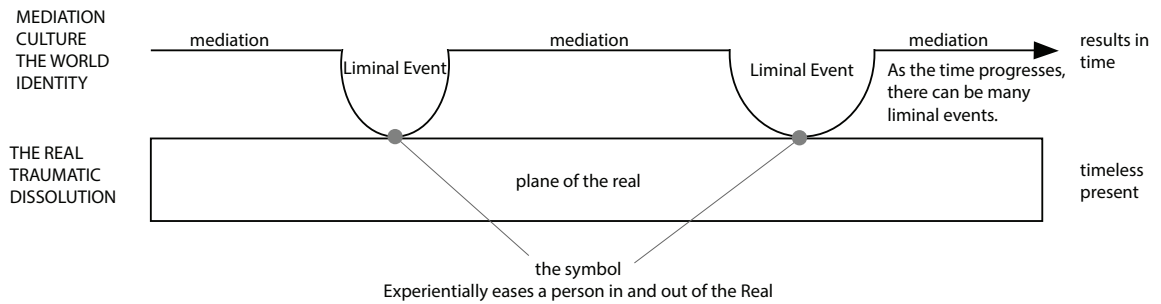


Table #3. Topology of mediation, the real and the Liminal Event.

The symbol is a strategy for dipping the toe in the unmediated without losing yourself completely. As we need to figure out how to live closer to the untamed flows of the real, be it life or technology, the symbol is unlike the original mediation in that it allows some of the characteristics of the real to come through in a more intense way. Because of this permeability of the symbol, we can experience, for example, being overwhelmed and confused by merging with the plurality of technological possibilities in a safe way. In other words, the symbol doesn't block the experience by mediating and instead it stays true to the intensity making it palpable as it creates a communicational opening. The human nervous system and psychology can absorb the stimulation as it rebalances itself vis a vis the technological system.

A symbol is also an actualized liminality that is perceptible to the human subject and detectible through an aesthetic. Because it is perceptible, the human has a way of relating to it and therefore experience the trauma as something intensely different from the world but not shocking. Further, it creates a feeling in the perceiving subject creating a signature of the interaction and the ground zero from which one can act. I will spend more time on this subject in the following subsection citing possible examples. Most importantly, the symbol aims at creating the feeling of harmony, which is achieved when the internal and the external landscapes match.

5.3.1 *The Symbol*

The symbol, as represented in the art piece *The Symbol* (Appendix A), makes the unique internal feeling of being a human tangible in relationship to technology. The activity of the human psyche is captured by the technological system and represented in the language of both technology and the human as visual and sound installation. The goal of this environment is to find a balance between the human aesthetic experience and the technological response represented as a technological environment for the human to perceive, occupy and become a part of. Thus realized art installation, exists exactly on the intersection of the human and technology in a liminal event. *The Symbol* facilitates an experience for the human on the threshold that does not shock but instead eases the person into the fissure of the familiar representation and finds balance between the two ontological worlds.

The following is a description of the technical aspects of the installation. The participant is asked to put on the EEG headset and by doing so enters the interaction with the technological world as represented through data obtained from the Internet. The brainwave patterns are registered by the headset and passed on to the software for processing. The resulting sensory experience is an abstract aesthetic representation of the brainwave patterns. The project tracks three brainwave patterns. Beta (14 to 30 cycles per second) is typical of strongly engaged mind and represents strong mental activity. Alpha (7-13 cycles per second) represents the more relaxed state. Theta (4-7 cycles per second) is the meditative, daydreaming state (Pfurtscheller et al. 1999: 1842). These states are significant because Beta can be loosely associated with agitation and stressful state of mind while Alpha and Theta represent a mind in a peaceful, harmonious states of relaxation (Babiloni et al. 2016: 641). Additionally, the system registers and represent data from nonhuman entities, which are read from the Internet. The two

readings are processed by a graphic software to create a sensory representation of the two follows of information: human and nonhuman (see Table #4 below).

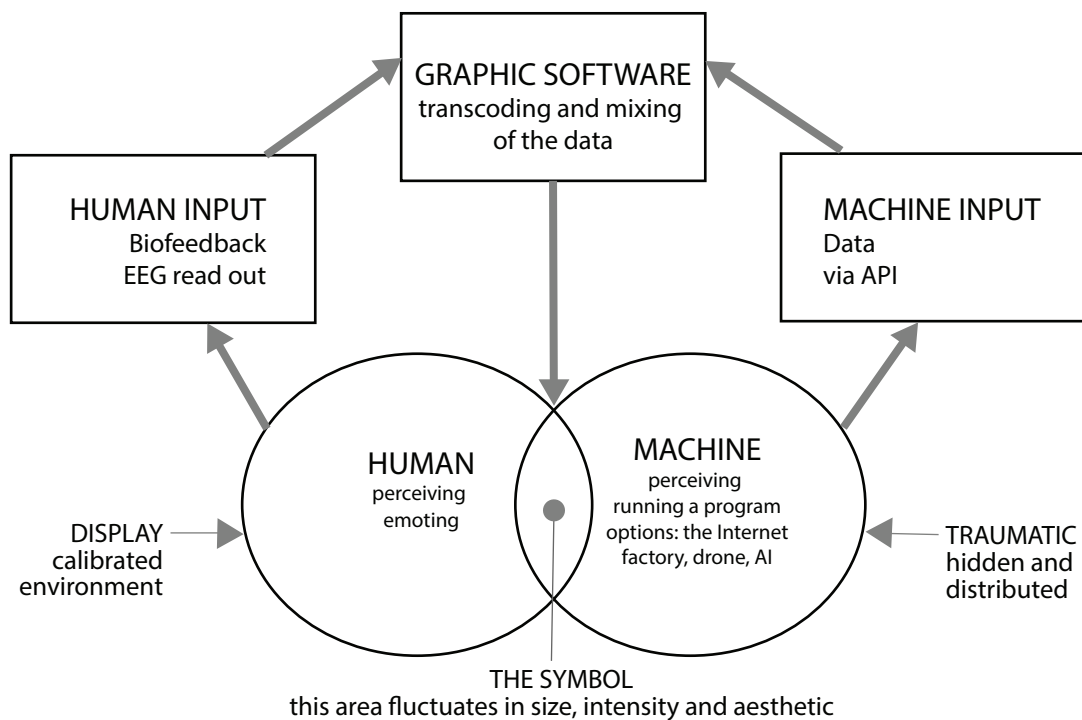


Table #4. Technical flow chart of the artwork *The Symbol*.

The participant experiencing the visual and sound output of his or her brain activity and engages in a feedback loop aimed at calibrating the reflectivity and balance between the perceived event and mental state of the participant. As the outside stimulus becomes a better match for the subject's internal experience understood as a feeling, the human-technology circuit becomes more harmonious. The inside is matching the outside. This set up is aimed at producing the most harmonious and therefore aesthetically pleasing experience for the participant and therefore create his or her own signature or symbol based in feeling and imprinted in the technological world. We all require different types of stimulation in order to feel in harmony with the outside world. Depending on the human internal intensity, which varies based on a myriad of factors, a participant would need different types and levels of stimulation to deem them as matching. Therefore, the representation or the symbol will be always different. Also,

the symbol is ever evolving in real time matching the micro shifts in the perceiving psyche.

Moreover, the system is a collaboration between the human and the technological entities. The human affective input is mixed with the machine input based on datapoints taken from the Internet. In the present moment, as I haven't started building the system, it is to be determined which nodes will be measured. I will aim to represent areas with different activity levels to achieve variance in representation. The areas may further be picked by the human participant to represent their interaction with a specific area on the Internet. Social Networking Websites may offer an interesting insight as they are usually very active and deliver further diversification through the inclusion of other humans and the nonhumans associated with them. A greater level of abstraction from the humans can be achieved by interfacing with the stock market, which is based on human activity in a more collective and less personal way. Finally, on the other side of the spectrum lies data generated completely by a machine with a minimal human intervention, such as a mechanized factory or a drone. In a variation of this approach, I would like to interface with a purely algorithmic entity complicated enough to simulate emoting. Current advances in artificial intelligence have made it possible to interface with machines that are poised to pass the Turing test or otherwise have claimed to already have done so (Press Association, 2014). Facilitating interaction through *The Symbol* of a human with a robot entity such as Sophia 2020, for example, may result in unexpected and interesting aesthetic outcomes as well as expand the limits of what we consider emoting. As Laura Mallonee states in an article in Wired Magazine:

Hanson Robotics chief scientist Ben Goertzel plans to make Sophia the chief AI of something called SingularityNET, an in-development decentralized network for artificial intelligence running on the blockchain that could make it accessible to everyone. (Mallonee, 2018)

This future possibility of every-day accessibility of some forms of AI will position *The Symbol* to be a timely development in conceptualizing our interactions with such entities.

One of the important features of *The Symbol* is its ability to exist and be represented across different platforms. The information can be viewed as a projection of video and sound, three-dimensional augmented reality, a two-dimensional picture and three-dimensional print. The variations can continue into different modes of extended perception matching the human psyche sprawling into different layers of technological representation. In this gesture, the human ontology is continuously met by the technological ontology, where the symbol exists at the point of the two matching. The concept of the symbol thus represents the limit of authentic expression of the human psyche in collaboration with the technological world as represented by various media. Most importantly, the symbol provides a harmonious blending between the human and nonhuman ontologies as they both contribute to the expression of the artwork.

To sum it up, this artwork proposes creating a sustained and integrated Liminal Event that takes place during the duration of the artwork or until one of the parties, human or nonhuman, decides to disengage. Because the system blends both human and technological inputs, the resulting space of the art installation or object is an explicit collaboration between the two ontologies. In another words, it is integrated in terms of human perception of their experience. Granted, any human activity achieved by the means of technology is a collaboration. However, in the case of *The Symbol*, the system reaches out to large distributed agglomerations of nonhuman activities, such as the Internet, or otherwise complex systems driven by a clear directionality, such as a factory or a social AI. The obtained data sets are mixed in with the human affective output and presented in a relational way back to the human.

I am aiming to amplify the effect exposing the human perceptive system to initially overwhelming experience. The entrance into the experience is facilitated by tool #1: the sign and executed by tool #2: the symbol as illustrated in Table #5 below.

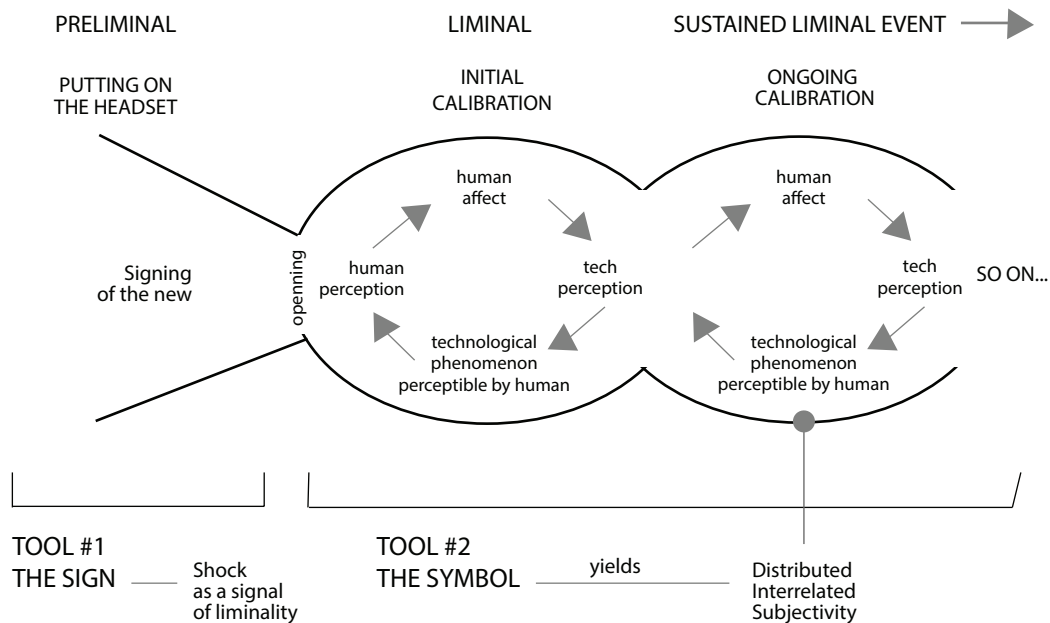


Table #5. The artwork, *The Symbol*, using the concepts of sign and symbol as its tools in producing hybrid distributed and interrelated subjectivity.

The initial moment of plugging in, facilitated by putting on the EEG headset, and experiencing, facilitated by stepping into the installation, may be, to some degree, traumatic and disorienting. This is the sign that one is slipping into liminality. The action required is simple: just remaining perceptive, which facilitates the opening and will presumably facilitate the production of Alpha waves associated with relaxed perceptiveness. It is possible that, just like during my earlier experiments in Camera is Present, some participants will not be able to maintain the interaction. In this case, the event will be interrupted at this early point as they leave. However, this system, unlike my earlier experiment, will be designed to keep the human engaged through the sensory feedback. In the initial iteration, I plan on realizing it as a visual and sound installation.

As this is my point of departure, I will be further able to test the effectiveness of my approach realized through the self-correction and self-calibration of the human-

technology ensemble. I will interview the participants about their experience and ability to sustain the experience. This part of the project requires further detailed designing. Even though the action required from the human is minimal, just being receptive, I am presupposing that a certain amount of learning and change in the psychological posture will occur over time. I am also expecting to find what exact variables influence the ability to sustain the liminal event, which will produce a hybrid, distributed and interrelated subjectivity. The ultimate goal of *The Symbol* is to create a dynamic equilibrium that can capture all the aspects of the posthuman condition as well as make that state understandable and sustainable to a greater extent.

5.3.2 Related Art Approaches: Towards Expanded Liminal Aesthetics

There is a long tradition of artists addressing the human-technology relationship, which cannot be recalled in its entirety here. However, in this section, I explore the work of artists that employ perspectives related to the concept of Expanded Liminal Event, which I am developing in this thesis. The common themes that interest me revolve around the ideas of perception, human affect and technological mediation as able to create an experience that moves beyond shock.

One of the main characteristics of the Liminal Event is the ability to invoke affective spaces in the human being. In fact, this may be the main point of interest for the participant. To experience a new internal landscape and intensity as a result of interacting with technology, means to transform the human experience. Many of the video and sound installation works from the 1990s and 2000s address this yearning for experiential transcendence of the body as I will show in examples below. The state becomes achieved by a multimodal sensory stimulation and invokes the feeling of being transported into another's point of view, mind or internal landscape. In this gesture, the viewer and the 'other' merge in a moment of viewing and producing an affective response.

Dissolution of Subjectivity – The Sign

One of the artists skilled at evoking such charged psychological spaces through multimedia work is Janet Cardiff. In her installation entitled *Whispering Room* a series of speakers spread around the room emit a soft murmur of conversation. On approaching one of the speakers, one would hear the individual voice stream. As the person moved through the space, they trigger a slow-motion video projection of a young girl in a red dress dancing in the woods.

Illustration #14. Janet Cardiff, *Whispering Room*, 1991 multimedia installation, 16 audio speakers mounted on metal stands, 16 audio sources, film projection © 2001 has been removed due to Copyright restrictions.

The intense presence of the technological set up is matched by the richness of the content and the ensuing psychological reaction. Atom Egoyan writing for the *Bomb Magazine* gives a telling account of how one would feel in such space.

It's difficult to express my excitement in this room. I had the sensation of being in the middle of a film that was still being formulated; that was still in someone else's mind. I was completely overwhelmed by the collision of technological artifacts-speakers, projectors, lights, wires – and narrative abstraction. I found myself drifting through the emotional residue of a personal trauma that was both immediate and distant, visceral yet disembodied. (Egoyan, 2002)

For the purposes of establishing the expanded liminal aesthetics and creating *The Symbol*, I am interested in the personal narration that the participant brings to the experience only to the extent that it signals the entering of a liminal space. In effect, this reaction illustrates part of tool #1, The Sign. As the memory of past trauma is triggered, one starts slipping into a type of shock. This is the point of intervention through tool #2 the symbol. The sensory stimuli used in *The Symbol* does not utilize narrative contents, such as distinct visuals and language. The point of liminality is precisely to move outside of language. In my work, I aim to achieve a liminal state yet keep the lines of

communication opened by not collapsing into shock. I will address possible directions in abstracting the sensory input later by discussing work by Uta Barth. In regard to *Whispering Room*, I find it further useful to realize that a space of an artwork can address the human affect as well as technological presence simultaneously.

Another example of such artwork is Doug Aitken's *i am in you*, which is also a multimedia artwork. This five-channel video and sound installation presents a mix of videos disassociated from its original context and showing pieces of sky, a close up of a young girl whispering, a blue monitor, bodies falling through the space, airplanes moving in strange ways, a burring candle. 'All sense of traditional architectural space is gone; we move through a strangely unanchored space where everything floats freely, producing a hallucinatory sense of eternal recurrence' (Birnbaum 2001: 100).

Illustration # 15. Doug Aitken, *i am in you*, 2000, Installation 3 laserdiscs, 5 screens, color, stereo. Duration: 11 min. Victoria Miro Gallery © Doug Aitken has been removed due to Copyright restrictions.

The content of this artwork implies disassociation and a state of shock as the communicated experience of the world is fragmented and loops in endless repetition.

The experience of the space also contributes to this feeling as the screens float unanchored in darkness. The viewer slips into a psychological space where everything happens at once as a chain of random associations between the screens.

Aitken's recent work seems to occur in such a non-site where time and space must be redefined and our presence becomes, 'as random as those phantom particles whose position or speed my perhaps be known but never both at once' (Virillio 2000: 83). 'You can't stop,' whispers the girl's voice. This is the end of time. Things disappear into the vortex of experience. Again and again. It is your experience, and you can't stop. (Birnbaum 2001: 100)

This artwork, in fact, celebrates the disassociation, repetition and the state of shock. As it retains traces of narrative and evokes the sense of narrative, however circular, it

approaches but still does not produce pure affect. Again, the human experiential space is addressed in an effective way however produces results contrary to my aims. In my system, this is a place where the sign needs to be employed en route to entering the symbol.

These two artworks stand as examples of media art that creates a liminal space through dissolution of subjectivity however does not move into reconstituting the transformed subjectivity in a post-liminal space. Therefore, thus created liminality does not act as Liminal Event, which I am developing in this thesis. *The Symbol*, by contrast, aims at creating and maintaining the new subjectivity through the use of biofeedback, where the human is part of the now not as a replayed past but in the present moment co-shaping the experience. It is not an implosion into the ‘vortex of experience’ but an enhanced awareness responsive to the fluctuating human affective space. It is a cocreation done at a speed of thought or rather at the speed of affect.

Human-Technology Co-creation

Granted the modes of human engagement represented in the above artworks is limited and even passive and undermining human agency. I will turn now to works that feature interactivity as integral part of their makeup to look for correspondences with my approach. David Rokeby’s *Very Nervous System* creates a direct link between the human movement and the resulting sound composition. As a computer observes the physical gestures of human body through a video camera, it translates them in real-time into sound directly related to the qualities of the movement.

Illustration #16. David Rokeby, *Very Nervous System*, Potsdam performance 1993 © David Rokeby has been removed due to Copyright restrictions.

The interactivity of this piece is radical in its emphasis on the human body and a complete transformation of the interface as it departs from its traditional manifestations. Rokeby describes his motivations in creating this type of interaction and the attitude it represents in the following passage.

The computer as a medium is strongly biased. And so my impulse while using the computer was to work solidly against these biases. Because the computer is purely logical, the language of interaction should strive to be intuitive. Because the computer removes you from your body, the body should be strongly engaged. Because the computer's activity takes place on the tiny playing fields of integrated circuits, the encounter with the computer should take place in human-scaled physical space. Because the computer is objective and disinterested, the experience should be intimate. (Rokeby, 2010)

Rokeby's attitude towards interaction and its ability to change the human-technology relationship, as represented in this artwork, is very influential on my work. The notion of engagement of the human body as it directly influences the perceived outcome coupled with the sense of intimacy and conscious involvement is important for the type of interaction present in *The Symbol*. Further, the strategy of a real-time feedback loop between the technology and the human, I believe, is pivotal in achieving a relationship that is seamless and can be perceived as a lived, present time experience. As the computer and the human responses change in reaction to one another, 'the notion of control is lost and the relationship becomes encounter and involvement' (Rokeby, 2010). In this manner, the artist successfully creates a sense of equality while allowing asymmetrical agency between the human and technology. It is a way to harmoniously cocreating while maintaining the different directionalities and accommodations.

While I adapt the above strategies in my work, the symbol moves further to create additional conditions. First of all, I am interested in creating a situation, where the human, instead of addressing technology, simply occupies the same experiential space, not by doing but by being. One activates the space by simply stepping into it. The interaction is an exchange and cocreation not to produce something, such as a piece of

music, but to coexist together. The emergent cocreated sensorial phenomenon is there as a tool, called the symbol, produced for further calibration. The goal is to create an experiential platform, from which other activities can be achieved. It is about creating a baseline for one's comfortable coming together under acceptable perceptual conditions with hybrid or strictly technological entities that can be, under other circumstances, overstimulating to the human nervous system. I achieve this by employing the EEG headset and interpretive software, which allow me to work with the state of mind. This becomes important as I track the excitation that can lead to trauma and possibly shock. The latter would have to be assessed post factum, via an interview.

Secondly, in addition to overcoming the sense of controlling the system, the feedback loop is used for a real-time calibration to find the proper stimulus for the right state of mind, which, I predict, will fluctuate around the beta wavelength. This correlation, I explain further in section 6.1.4. Different participants (human and nonhuman) will produce different sensory stimuli and will have different thresholds at which they become overstimulated so the process will vary. Thirdly, the scope of my project is to create a framework that can interact with many inputs. I am aiming to confront the human with large and active technological assemblages that have a good chance of producing high intensity and being overwhelming when not calibrated. In essence, the symbol is a mediation tool however one that allows closer proximity to the traumatic (Table #3) that additionally, can be modulated depending on the state of the human psyche in the moment. Finally, the process of calibration can take place without conscious human involvement. There is no learning curve as the system adjusts itself to produce a specific range of brainwaves via the sensory stimuli. Just being in the system will result in finding the balance, which will fluctuate in a range.

An artwork that exists a step closer to the dynamics of my project is Brigitta Zics's *Mind Cupola*. As the participant steps under and into the cupola shaped device

hanging from the ceiling, they activate the immersive surroundings. As the person looks around, the eye movement and facial flexing is picked up by the system. Depending on the participant's engagement, the system produces stimuli by altering certain environmental qualities to engage participant's attention through vibration, sound, temperature and light fluctuations. Thus, the system and the human engage one another forming correspondences base on human behavior. In other words, looking for messages, changes the technological environment. The cognitive function of this system relies on the human looking for patterns and meaning and the possibility of constructing them.

Illustration #17. Brigitta Zics, *Mind Cupola*, © Zics 2008 has been removed due to Copyright restrictions.

In *Mind Cupola*, the human and the machine are co-creating relationally, which is an important feature *The Symbol*. In contrast, however, *The Mind Symbol* does not facilitate a pattern structure that might suggest a language and a mode of explicit communication. It also does not require physical movement, however small it may be. *The Mind Cupola* tracks eye and facial movement and in the absence of it proactively seeks human attention. In this sense, it is geared towards escalating stimulation based on the local event. By contrast, *The Symbol* is geared towards finding a balance between the human and technological. Additionally, as it also pulls data from different technologically enabled locations via the Internet or other connections, it engages the technology in as a partner, not a tool. *The Symbol* is a distributed event as it can manifest in many locations and it is a distributed subject since its agency comes from many places. In *The Symbol*, the produced stimuli marry both human and machine presence, which becomes perceptible to the human through the space of the event.

To further clarify, *The Symbol* in the Liminal Event does not create meaning in a linguistic sense and instead it creates a co-presence and effortless co-creation. It facilitates the state of stabilized yet dynamic becoming. It is different than the Deleuzian becoming animal in that it does not get rid of all the signifiances [*sic*] as it is recommended by Deleuze and Guattari in order to make a Body without Organs (Deleuze-Guattari 2007, 151). *The Symbol* retains and relies on the most basic ‘signifiante’ – the nervous system as it produces affect, which is an intensity, measured in form of brain waves, produced by a specific body. *The Symbol* does not relate in a linguistic sense through direct correspondence of signified and signifier (Rokeby, Zics) and is not a disjointed or floating signifier as in state of shock (Cardiff, Aitken). Instead, it relates the nervous system to the state of being and ability to produce fully functional cognitive states. It relates and balances the human nervous system with the technological nervous system via intensity communicated as stimuli. It happens on the level of electricity and does not escalate into meaning.

Touching the Pure Affect

But what these stimuli might be sensed as by humans? *The Symbol* manifests as an atmosphere, an internal affect made perceptible on the outside. The equation does not happen on the level of meaning but on the level of intensity. Atmosphere, as it relates to weather and air, is appropriate for eliciting and describing states and stimuli that escape language and are more engulfing than acute. There is a number of post-minimalist artists, who work with these qualities and whose work may further elucidate what *The Symbol* and Liminal Aesthetics can feel like.

Dan Flavin’s work stands apart within the Minimalist movement. His use of fluorescent light fixtures is a unique gesture and provides a mode of engaging the space and the viewer in a revelatory way. The ephemeral nature of light allows the artist to

create art that while having a definite presence moves beyond the concreteness of an object. The viewer experiences such non-object by perceiving the whole external space of the gallery as part of the piece. Moreover, the work can exist fully only when viewed by a human in the space since it is realized within one's field of vision. The personal experience of this work escapes a reasonable understanding of the physical space since the viewer's cartesian understanding of space is contradicted by the viewer's perception. Thus, the work constitutes itself on the threshold of human perception and reaches towards the sublime.

Illustration #18. Dan Flavin, untitled (to Virginia Dwan) 1, Dan Flavin, fluorescent light, 1971, from Dan Flavin: Corners, Barriers and Corridors, Published by David Zwirner Books, New York, NY has been removed due to Copyright restrictions.

For example, *the nominal three (to William of Ockham)*, 1963 is a series of cool white fluorescent lights installed on a wall: one in the left corner, two side by side in the middle of the wall and three in the right corner. The reflectivity of the floor enables one to view the light pillars hovering in the space right next to the viewer. Additionally, the lights located in the corners have a peculiar ability to cancel the corners of the space out. Under a regular lighting situation, the corners are the darkest part of the wall that gradually becomes lighter farther away from the corners. Placing the source of light in the meeting place of the walls' reverses that relationship and disrupts our understanding of the space. What appears to be a regular room is blown up opened. The walls visually cease to contain the space instead they appear to be the space itself stretching indefinitely in either direction. In this particular case, the opened space also contains three columns of light floating next to the viewer yet escaping the exact localization. It's as though they dwell in the peripheral vision despite the fact that one can view them centrally.

Illustration #19. Dan Flavin, the nominal three (to William of Ockham), 1963. © 2018 Stephen Flavin/Artists Rights Society (ARS), New York has been removed due to Copyright restrictions.

What I find most instructive in these works is the simplicity of means that creates an epic and transformative result. While the photography of these works doesn't do them justice, the artist succeeds in creating perceptions of planes where there is none, levitating objects, erasing walls and generally undoing the box of the gallery. All this is accomplished without AR or VR technologies although it similarly uses light as a tool. The Liminal Aesthetic is directed towards similar quality of apparition, which reorganizes the perception of physical as well as mental spaces.

Minimalist sculpture usually asserts itself through sheer opaque being there (Fried, 1967). Dan Flavin's fluorescent lights present themselves as being and non-being at the same time. They create a presence without the theatricality of a solid object confronting the viewer. The work incorporates the entire room and cannot be reduced to one definite location. Instead the pieces engage the human body to the fullest extent by constituting itself in one's mind and placing a demand on one's perceptions. The pieces, which include their reflections, shift their position with accord to the location of the body in the space. They assert themselves in one's peripheral vision and come together as a form made of light only in one's gaze. They don't exist outside of the viewer's perception and therefore mind. In this sense there is no clear split between the viewer and the piece itself. Instead, the work attaches itself to the observer. It exists as a presence not in the physical world but as an affect.

Flavin's work is present while escaping the definition of an object. Thanks to its medium the work avoids the splintering between subject and object. The subject in fact struggles to assert itself in front of such work and is poised at a threshold between the

physical and mental worlds. This is precisely the location of the threshold marked by the Sign (an eerie feeling) that ushers the participant into the Expanded Liminal Aesthetic. *The Symbol*'s aim is to capture the participant in this perceptual state of rapture, which is no longer a trauma. Instead, because of the calibration, it is a state of sheer affective perception. From that position one can come together with the technological entities perceives as perceptual intensity mixed into the experience.

Another example of an artist operating in the realm of light and pure affect is a photographer Uta Barth. She produces photographs of blurred spaces with light spilling through them, views of outside of a window that streams in light, even direct sunlight flooding the lens. When the view is too complicated, as a street or a landscape, she lets the contours of the objects fall out of focus. That way the remaining image consists of space and light interacting with it. Barth's acute sensitivity to light and its relationship to time enables the viewer to adjust his or her personal time accordingly and be able to experience the intensity of this particular time-space fold. The photographs slow the human mind down as in moments of defocused vision while daydreaming or being board. Since these moments are known for production of alpha brainwaves, the ability to articulate a space like this through media is interesting to me as an application in the context of *The Symbol*. I explain this correlation in more detail in section 6.1.4.

Barth achieves it by using a shallow depth of focus mimicking the effect of the eyes staring into space. Thus, the camera is focused on the space in between things while the objects further away from the point of focus become blurred so the images are not of anything (Barth 2000: 14). The soft-edged shapes lose their definition and register only as pools of color. This defocusing makes it impossible to recognize the objects. This way, the viewer's consciousness cannot fix itself on any concrete object in particular, which is a way to disengage the cognitive mind and interrupt the production of narrative meaning. I interpret this abstracting as another technique to move the

participant of *The Symbol* into a balanced state producing alpha brainwaves (more on this in section 6.1.4).

Illustration #20. Uta Barth, Field #20, 1997 has been removed due to Copyright restrictions.

Illustration #21. Uta Barth, Field #66, 1996 has been removed due to Copyright restrictions.

Barth demonstrates a way to not only point to the liminal space but also construct it in the human psychological space. While experiencing her work, it feels like something, to be looking at nothing. In other words, the affect is highlighted while the subject recedes into the blurred background. These strategy yields unexpected results.

Barth brings the real into the imaginary: her project proposes the possibility of their interaction and interchangeability as the originary point, an in-between place at a distance from the dichotomies of the perceptual and the cognitive, the representational and the abstract, the referential and the simulacral. Her constructs constantly slip into contradictions between positions; they hover in suspension. (Conkelton 2000: 76)

This is an instant when the traumatic real and the psychological sphere come into a close proximity. However, the effect is not shocking. Rather, it heightens the human experiential capacity as the work forces one to observe themselves looking. We find the real in the functioning of our perceptual system as the carnal mechanism touches a conscious perception. This coming together of the traumatic, understood as rapture and mediated is characteristic to *The Symbol*, as an artwork and the symbol as a concept (see Table #3).

This human touching the overwhelming stimulus that matches perfectly the inside feeling, its sense of rightness, by my earlier definition, can be interpreted as beauty. It is the real, which exists on the flip side of the abject and traumatic. It is part

of the same intensity coin but instead of shock, it creates wonder and a sense of being here and now. As I have proposed, the calibration between the inside and the outside aimed at creating balance among intensities is the tool that makes that difference. Additional strategies can prove useful in creating that effect, as I will explain through the following examples.

Articulation from Within, Here and Now

This coming close with the real, which is an important quality to formation of the Liminal Event, is its capacity to produce a heightened sense of presence. The work of artists associated with the Light and Space movement centered in Southern California, such as James Turrell and Robert Irwin have laid the grounds for understanding how the act of perception can enhance the feeling of embodiment and nowness. Olafur Eliasson takes it a step further and creates phenomenologically active spaces engaging the human ephemeral experience of various stimuli including haptics. For example, in his artwork entitled *Beauty*, Eliasson constructs a space with a sprinkler system that diffuses a sheet of droplets that fall down. The light projected onto the veil of water refracts into a rainbow-like manner. The effect changes depending on the public's point of view as they move through the space.

Illustration #22. Olafur Eliasson, *Beauty*, 1993. Tate Modern, London has been removed due to Copyright restrictions.

Illustration #23. Olafur Eliasson, *Sketch for Beauty*, 1993 has been removed due to Copyright restrictions.

Similarly to my artwork, *The Camera is Present*, it is an encounter between a human and the outside phenomenon. Whereas an encounter with a piece of equipment, a

camera, which, in Latour's terms, is understood as part of a set of the nonhumans, raises up an experiential shield, the *Beauty* enters into an experiential dialog with the human. While both pieces introduce similar demands, namely, for the viewer to engage and remain in a perceptual relationship, the results are very different. Why? The answer, as I propose in this thesis, has to do with matching the interior human experience with the outside stimuli, as exemplified in the dynamics of *The Symbol*. The camera with all its cultural implications and physical appearance inspires chaotic human responses that create internal intensity that is difficult for the humans to handle for an extended period of time (Section 3.1.1). The technological interface is too far removed from the human internal experience in that moment. Eliasson's work, on the contrary, is in tune and in balance with the interior human experience. He achieves this correspondence on the grounds of the natural world and the human instinctual understanding of that interaction. The case becomes complicated when technology and artificial objects enter the picture.

The Symbol aims to produce that intense yet effortless engagement, present in the above mentioned works, however, within the context of technology. Eliasson produces work deeply engaged with phenomenology in its classical version, drawing inspiration from Edmund Husserl (Grynsztejn 2002: 41). The Expanded Liminal Aesthetic engages the post-phenomenological perspective through articulating the interface between human and the world in its technologically mediated character. It is realized from a first-person perspective. The subjectivities produced in this manner are relational, by incorporating hybrid agencies, and embedded in the hybrid worlds. The phenomenological part that carries over is the articulation of the technologically mediated experience from within, which ensures the embeddedness in the body. *The Symbol* is an example of such articulation.

Spatially Dispersed and Relational

Finally, an important quality encompassed by Expanded Liminal Aesthetic is connectivity and the relational character of the hybrid human-technology coming together. The most direct examples of articulating such qualities are often achieved through data visualization projects. Marc Veyrat and Franck Soudan created an especially well realized visual form of a specific related network. Their data-generated virtual sculpture gathered data from a selection of Facebook profiles. Each point in the visualization was mapped to a publication or an occurrence within the profile while the relationship of this point to its milieu of the platform dictates the resolution, amplitude, color, elevation, radius and rotation (Veyrat, 2017). In the context of this thesis, I am interested in the ability to procure and orchestrate a set of complex data into a model that communicates the complexity and abstract relationships in terms of space and color.

Illustration #24. U-rss FFF, Marc Veyrat & Franck Soudan, VIDÉOFORMES 2017, <https://www.youtube.com/watch?v=-g2IQhPvMws> Accessed: 5 January 2021 has been removed due to Copyright restrictions.

Another example of a rendition of data received from a technological entity is George Legrady's installation *We Are Stardust*. The detail below is a video simulation of 3D lenticular panels consisting of observation data of the NASA Spitzer satellite Mission. The gathered data was manipulated in an architectural 3D modeling software (Legrady, 2018). Just like the previous example, the model is animated giving a tangible three-dimensional impression. In terms of my thesis, I am interested in the possibility of gathering data from large-scale and autonomous technological devices such as a satellite and linking it to a modeling software.

Illustration #25. George Legrady, Starburst VI 3D (2008-2018) © George Legrady Studio has been removed due to Copyright restrictions.

The three-dimensional feel and movement, in case of both of these works, begins to engage our sense of the body and spatiality however it still remains a flat medium trapped on the screen. By contrast, the Expanded Liminal Aesthetic aims at making complex informational spaces palpable to the human experience by producing stimuli that are not only visual but also haptic and special. Thus created space can be read as simultaneously internal and external and address the body in a direct way creating a sense of presence. The more visceral approach was exemplified by work of Eliasson. To sum up, the current data visualization approaches are instructive in their capability to compose sensory experiences communicating data sets that are relational and sourced from technological entities that are distributed and/or remote.

In conclusion, the above discussed artistic gestures coupled with my art experiments inspire my vision of the experiential space that will be created in *The Symbol* artwork. In that capacity, I am interested in an emergent affective dimension in technological spaces, which provide a sensory stimulation. As the viewer is attempting to make sense of the sound and imagery, which often escapes language, they drift in and out of a liminal space with the fluctuations of their internal landscape and ability to make sense of the situation. *The Symbol* aims to create this type of affective space. The ‘other’ in the instances, which I will discuss below, is implicitly human or otherwise conscious. *The Symbol*, however, aims at creating an exchange and correspondence between the human participant and the technology involved in this space. Using communication technologies such as the Internet, it is further possible for me to create a super extended network of such relationships, as I have done in *I am Legion*. The inclusion of extended and expansive technology, and through it, other elements, human or nonhuman, coupled

with self-calibration of the system via the EEG read out as manifested in an affective time-space of the installation are the characteristics of the Expanded Liminal Aesthetics as exemplified by *The Symbol*.

5.4 Manifesto for Set of Protocols to Create an Integrated Liminal Event

This thesis argues that there is a systematic manner, in which an integrated Liminal Event between the human and the technological nonhuman can be created. The encounter provides an opportunity for the traumatic state to manifest in human being not as shock but as a state of opening and receptivity. This state is facilitated by ongoing calibration of the internal human affect with the sensorial stimulus to achieve balance between the two. The exchange between the human and technological entities creates and is created by the symbol. Further, the Liminal Event as a whole is integrated, which means it is incorporated by both human and machine as part of their function and through relating achieves the integration of human and machine. To sum up the entire structure, the Integrated Liminal Event uses the sign and the symbol as tools to produce the Expanded Liminal Aesthetics.

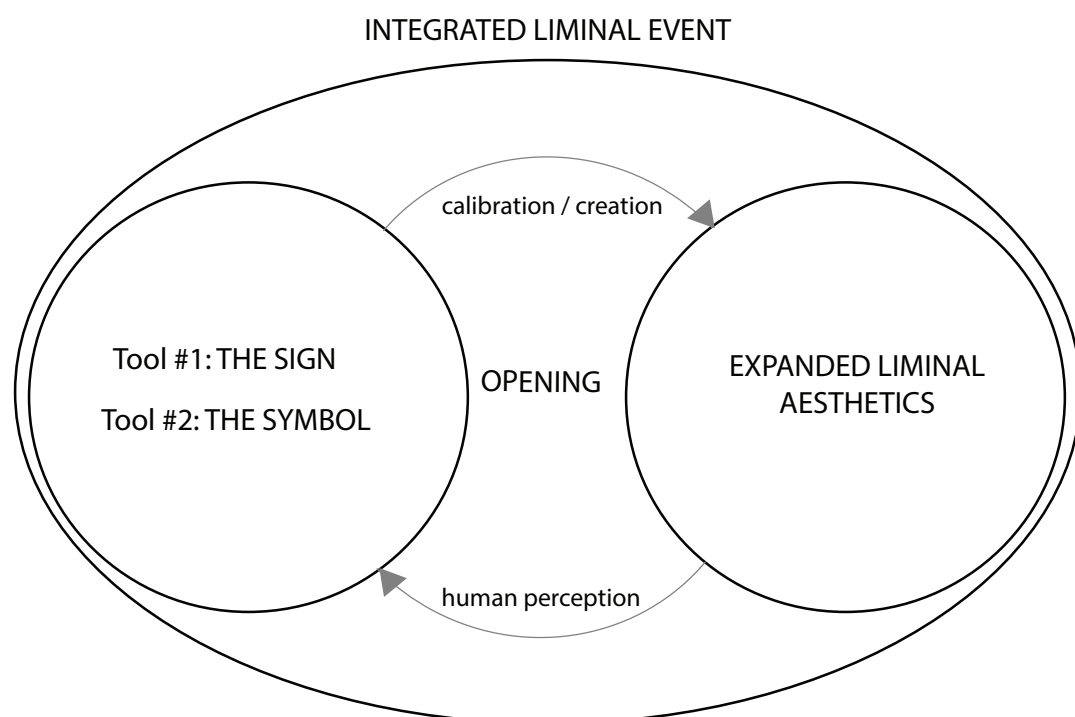


Table #6. Structure of the Integrated Liminal Event

In my conception, the symbol is a fusion of the act of perceiving and creating in the same instant, with the human playing central role in calibrating the system through perception and affect. While maintaining its hybrid nature, the symbol includes, in a safe way, and points back to life. I propose that the concept of symbol, understood in the above way, may be applied to a variety of liminal situations. In particular, human-technology and human-knowledge spaces are explored in this thesis.

5.4.1 The Steps to Create an Integrated Liminal Event

The following are the steps used to create an integrated Liminal Event.

1. Recognition of liminality facilitated by the sign
2. Observation of the system, as presented by the symbol, and production of affect
3. Ongoing perception and creation of symbol through affect

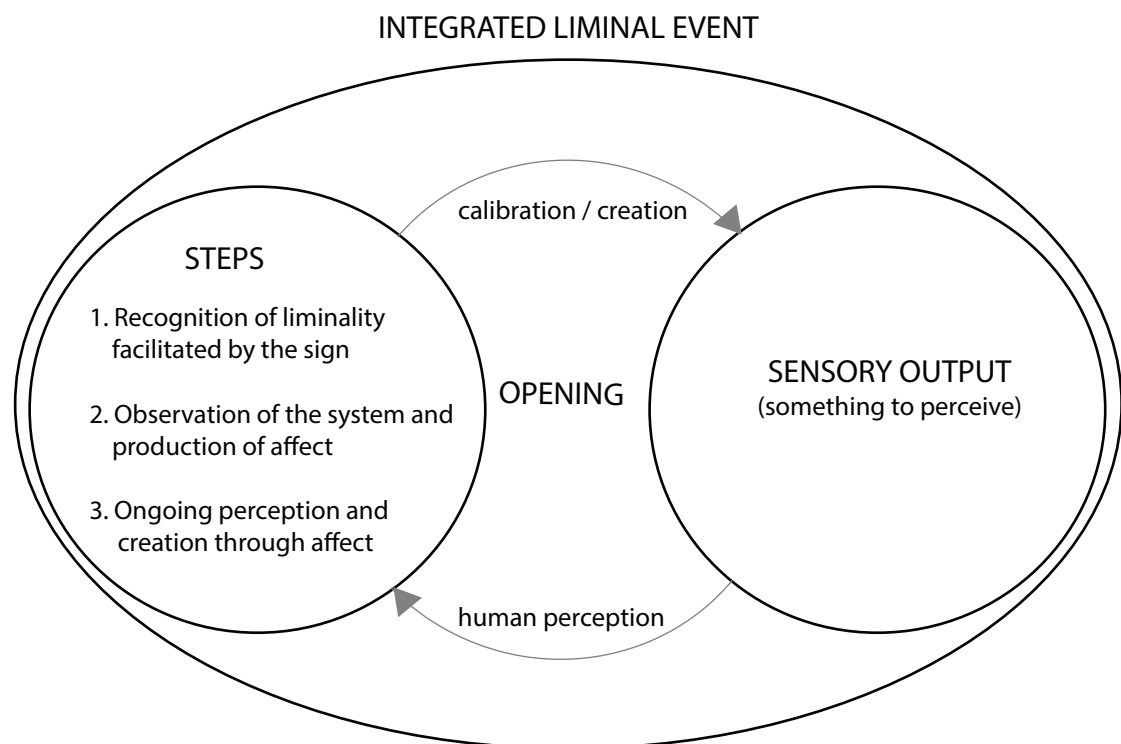


Table #7. The Steps to Create the Integrated Liminal Event

It needs to be noted that creation of such self-reflective relationship, for the purposes of this thesis, is facilitated by technological augmentation of the human as

represented by the biofeedback system and augmentation of the technological counterpart by production of sensory stimuli. This is done to enable communication and exchange of information between the human and nonhuman. I propose that similar perceptual augmentations performed on unintegrated hybrid systems of exchange might produce similarly integrated Liminal Events. In further chapters, I propose use of such interventions in an educational setting.

5.4.2 The Characteristics of an Integrated Liminal Event

To sum up the previous chapters, the radical interactivity and liminal aesthetic are the main characteristics of integrated Liminal Event.

Radical Interactivity:

1. The Liminal Event, as realized in the symbol, enables the human to step into the technological world and therefore endows the subject with agency.
2. The Liminal Event is a sensualized liminality that is co-created with the technological system.
3. The digital system perceives the person and calibrates the expression in response to the person's affect in the moment.
4. The digital system and the human become extensions of each other and exist in a continuous and fluid relation to one another.
5. Because of the real time calibration, the person observes themselves perceiving themselves as their output merges with the technological world. The act of perception and merging is rendered tangible.

Expanded Liminal Aesthetics:

1. The aesthetic experience goes beyond simple enjoyment because it is free of objective, culturally influenced aesthetic judgement.

2. The Liminal Event, as realized in the symbol, gives the sensation of rightness and balance, which can be interpreted as beauty by the human.
3. Liminal Aesthetics expands with technology and produces a pattern that is scalable and practical in its use.
4. Liminal Aesthetics provide a dynamic sense of self for the human across platforms, which fluctuates with the richness of hybrid expressions without falling into reduction or flattening.
5. Liminal Aesthetics renders the human-technology liminality, and thus the posthuman subject, perceptible in all of its flows and permutations.

The Radical Interactivity enables the Liminal Aesthetics and together they create a condition for the integrated Liminal Event to emerge. This dynamic event facilitates the merging of human and technological nonhuman expressions in a way that balances the human internal and external experiential landscapes. In other words, the integrated Liminal Event heals the rift between the human and technological entities and bridges the liminality between them.

5.5 Liminal Event – Pedagogical Approaches

During the course of my investigations, alongside of the theory and practice that lead me to developing the concept and a manifestation of the symbol, I have been developing and teaching courses and workshops inspired by my findings. Working with students gave me the opportunity to not only share my knowledge but also to investigate ideas together with the students and explore different types of interpretations. The live environment of the classroom forces certain compression of the material and synthesis that is most valuable for a researcher. In the sections below, I will introduce my activities as an educator in connection to my research and practice.

5.5.1 Sorcery on the Internet Workshop

In the fall of 2012, I was invited to teach a three-day workshop at the Media Department of Nuova Accademia di Belle Arti in Milano, Italy. The workshop was entitled Sorcery on the Internet and grew out of the intellectual and practical work done in execution of my artwork entitled *I am Legion* and a paper '@legion&#WeAreMany: Sorcery on the Internet,' which was published in *Technoetic Arts: Journal of Speculative Research* (Earhart 2012: 87-92). The cohort was Junior and Senior level undergraduate students in the Media Program, who were versed both in media theory and practice.

In this workshop, we have investigated different types of subjectivities that form as a result of interactions with the Internet, personal computing and telecom technologies. Taking as the point of theoretical departure McLuhan's idea of technological prosthesis as discussed in *Understanding Media*, Giorgio Agamben's state of exception as discussed in *Homo Sacer* and Deleuze/Guattari's sorcery and pacts as discussed in *The Thousand Plateaus*. The investigations revolved around the concepts of identity, possibility of consciousness and formation of a new subject. The students were presented with a challenge of formulating possible new ways of conceptualizing and enacting being with technology. I aimed at keeping the possibilities opened and didn't suggest any resolutions, such as posthuman subjectivity. The discussed strategies to formulate this way of being were inspired by the concepts of fragmentation, flocking, swarms, directionality and weather behavior. Students produced blogs describing their thought process in identifying semi-autonomous, apparently-conscious, demon-like and otherwise distributed hybrid subjectivities. They also identified points of entry or crossing over of human beings into such systems.

Through teaching this workshop I have realized the plurality of interpretations and psychological and sociological contradictions that occupy this territory. I have

found out the extent to which this subject is very much present and at the same time unresolved for the younger generation, who is deemed to be a ‘native’ to the technologically mediated and distributed way of living. As my students struggled with the difficulties of finding moments of merging with their technology, I have realized how blurry that moment is, which made me ask why it is so. That line of investigation later lead me to identifying shock and a degree of trauma that comes with such engagements. Reciprocally, the students have gained a better understanding of their presence with and in the technological context and became poised to design their own demon-like entities to be unleashed on the Internet. The scope of the workshop however was purely exploratory as it did not allocate time for model making.

5.5.2 The Camera is Present Workshop

More recently, I have taught a workshop, which revolved around the themes of articulating one’s agency in relation to and engagement with media technology. The workshop took place at Otis College of Art and Design in Los Angeles at the Department of Creative Action and Integrated Learning, in the spring of 2019. It was also presented as part of the lecture, which I delivered at Paris Design Summit that year, entitled ‘Radically Creative Approaches to Media Art and Design: Education in a Liminal World’. The workshop ran parallel to art events staged under the same title at Otis. The student body was composed of interdisciplinary art and design majors, mostly undergraduate sophomores and juniors.

Students were first asked to participate in the art event, *The Camera is Present*, which I have discussed in section 3.1.1. To summarize, the participants walked into a nearly empty room furnished with a chair and a table, with a camera on the other side of the table. They were instructed to sit down and look into the lens of the recording camera. They were free to leave whenever they wished. As the participants exhibited different strategies to cope with the directed proximity of the technological device (as

described in section 3.1.1), they experienced an array of affects, which were captured in an interview that followed (Appendix E). After having this experience, the students were asked to observe the participants who followed and journal about the experience. The underlying goal of this exercise was to create a level of self-reflexivity in the participant to be able to think about the unexpected encounter with the camera critically.

This experience was one of a series, in which the students would inhabit different liminal spaces, both technological and analog. The paradox of this experience was such that liminality is hard to describe using language and therefore difficult to reflect on. Yet the students were asked to attempt to do just that, even if the recollections were illogical as the students often resorted to invoking images and dreamscapes. One of the interesting findings was that the students had an easier time interacting with the analogue liminal spaces. For example, spontaneously building structures, hiding, or just standing next to each other gave them enough context to be comfortable in the space. In the meantime, the camera presented an experiential limit and sent the participants into an existential spiral, which prompted them to quickly leave. Based on their experiences, the students were asked to produce their quick sketch of liminality in whatever medium they felt was most appropriate to them.

5.5.3 Identity in Networked Media Class

I have designed and taught this class at the Department of Liberal Arts and Sciences at Otis School of Art and Design in the spring semester of 2019. It stemmed from my research into different approaches to posthuman subjectivity and how they apply to actual phenomena online and in media culture. The students were undergraduate juniors and spanned the following majors: Product Design, Digital Media, Toy Design, Architecture and Fashion.

In this course, the students were introduced to theories of identity, subjectivity and their dissolution and fragmentation in the context of social media, the web,

augmented reality, and human interaction with mobile platforms. The base for the exploration was a selection of theoretical frameworks and methodologies developed at the turn of XX and XXI centuries. In order to anchor these theories, we examined cultural phenomena such as the web, film and performance in relationship to these frameworks. Students were asked to think critically about the potential and long-term trajectories of the possible approaches. The students were asked to consider the degree to which nanotechnology, Artificial Intelligence, VR and AR environments are becoming ubiquitous experiences and to explore technology's unique positioning vis a vis human being. As future designers of these interactions, they were asked to consider these technological engagements not only from an aesthetic, but also ethical standpoint.

Each student was working on their self-generated, unique journal project. Students were encouraged to address social, philosophical and/or cultural issues that are important to their practice. The final project called for in-depth research of one of the ideas from the student journal. The goal of this course was to gain a comprehension of the modes of human engagement within electronic networks, culture of hybridization and their impact on human identity. Moreover, the students learnt strategies for linking and developing theoretical concepts within contemporary culture and as they apply to their practice.

5.5.4 Neighborhood Gap Bridge Class

This is a class that I co-teach with a colleague, at Otis College of Art and Design, Department of Creative Action and Integrated Learning. I have been part of this collaboration continuously since the fall of 2018. In this class, which runs every semester, we organize the content around various current themes. However, there is an ever-present trajectory in our approach, which acts as a method in developing the learning environment. It is the concept of liminality in its many permutations and as it refers to the word 'gap' in the course title. The students are usually juniors and come

from multiple departments: Product Design, Digital Media, Toy Design, Architecture and Fashion.

When I came to this class, my colleague was exploring different ways of bridging experiences in social and psychological contexts and as they relate to design practices. My immediate contribution was to identify and isolate the tools and methods, which she was spontaneously using, such as listening, witnessing, recording, erasing, creating space, and shaped them, with few additions, into a philosophy and methodology that can be adapted for other classes. Additionally, I introduced the overarching theme of liminality and specifically, the Liminal Event, as a method in the context of the classroom and added a few teaching tools used in exercises, such as the traveler, passenger, and shaman. I approach this class as a pilot and an example of developing new environments and methods for teaching designers and artists under the ever-changing environmental and cultural conditions.

The style of teaching developed in the Neighbor Gap Bridge class creates an environment in which collaborative thinking amongst students from different departments as well as industry and community members is taken outside of existing structures and allowed to flow based on natural affinities, needs, imagination and available resources. This is a radical break from traditional rigid forms of teaching and collaborative techniques. The class does not have a fixed beginning or end as the students and the facilitators come into a space, begin conversing, eating and associating in a free fashion. The facilitators do not act as traditional teachers but rather listeners and witnesses to the process. Lectures are replaced by conversations based in free association and current issues that come up in the moment. Instead of experts, the class consists of enthusiasts that sometimes are versed in a particular subject and sometimes are agnostic. The goal of the classroom is to collapse the fixed and assumed vertical structures in which we all have been raised.

This environment is achieved by a number of non-tools and non-actions. We use defamiliarization as a strategy to undo expectations and fixed identities. The language that emerges in the course of the meeting is captured and taken apart by recontextualization and erasure. We place the participant in a liminal space where crystallized cognitive structures can be loosened and sometimes dissolved. This process is reportedly uncomfortable, confusing, unexpected, freeing, stimulating, explorative, leading to discovery and new synthesis. In order to bridge the gap, one becomes the gap, the liminal space, the space in-between. Allowing the crystalized psychological and social structures to fall apart characterizes a feminine technology, which leads to discovery and creative behavior. In this class, the students produce design and art ideations, sets of instructions, objects, spaces, performances, installations, films, animations, websites, web events and any combination of all the above. The aim is to reshape the experience of learning and teaching to free up maximum creative potential.

The class has been recognized for its uniqueness as we have been invited to showcase it at different events at Otis and at international events. Recently, I have presented this pedagogical methodology at the Paris Design Summit in 2019 in the section on Education and Culture of Design. In 2020, the class has been featured as part of the Beyond the Now: Social Art Practice for a Post-Pandemic World project, sponsored by the Open University and Plymouth College of Art in the United Kingdom.

CHAPTER 6: Future Directions

This dissertation has allowed me to focus my theory and practice-based research on the relationship of human and technology where the human psychology undergoes a transformation during a Liminal Event. In it, I have formulated the concept of trauma and shock as they found their manifestation in visual arts, starting with the beginning of the twentieth century and moved into popular culture and design by the late twentieth

and early twenty first century. This relationship has helped me to formulate a conceptual tool based in human psychology, called the Sign, to signal a change in the experiential fabric upon the human crossing over into the technological medium. In parallel research, I have tested different templates for human and technology crossovers to identify the constructive and deconstructive forces and patterns. Based on my findings, I have formulated a set of steps to construct a Liminal Event that allows for harmonious human-technology integration. Further, I have proposed an artwork that will execute these steps and stand as a practical example of such Liminal Event. In the following sections, I will outline the projects that I aim to complete in the future as the outcome of this thesis. This includes further development of *The Symbol* artwork and a series of courses stemming from my research.

6.1 The Liminal Atelier: Laboratory for the Symbol

In order to develop the concept of the symbol further I will create the artwork of the same name, *The Symbol*. To support this effort, I plan to establish a laboratory with a team of designers and programmers. The projects explored in this lab will aim at creating a system capable of producing output perceptible by both humans and machines in the space of the art installation. In order to achieve this, the data needs to be digitized, remixed or otherwise shaped into a blended experience. Therefore, the approach is two pronged. On one hand, I will collect bio feedback data associated with affect from the human participant and translate it into a digital form. On the other, I will collect already digital data from the machine side via existing technology, such as API hook ups, or otherwise will design a plug-in to interface with a given technological entity. Finally, the two streams will be arranged together in a specialized software to yield the sensory experience, presented for the human to react to and thus creating a loop. The following are the stages of development.

6.1.1 Identification of Technology Partners

In the first iteration of the project, I am planning on utilizing the already available technologies since I have experience interfacing with them. Namely, I will first begin with gathering data from social networking websites or other sites that have already a built-in Application Programming Interface (API). Usually, it is used for building in games or apps that are allowed to interface with the software, so the practice is supported. Following my explorations undertaken in *I am Legion*, I will deepen the research into the blend of human-generated machine activities. Additionally, the global scope of gathered data and the real time capability of this system will present interesting variants.

Further options include gathering data from a complex machine system such as a mechanized factory or a drone. To actualize this scope, several steps will have to be taken. Firstly, I will create industry partnerships to establish technical feasibility of data gathering from such systems. Then, I will launch an exploratory study to build a prototype of software and possibly hardware elements to use in creating an interface facilitating the gathering of data. When successful, I will establish further ongoing relationship allowing me to use the data either continuously, possibly in exchange for access to the resulting output, or during specific events.

The most illustrative option is to interface with a social Artificial Intelligence, similar to Sophia or otherwise complex system aimed at interacting with humans. This scenario is attractive since the machine directionality matches that of the human. The AI geared towards interacting with humans performs a matching directionality to a human willing to interact with a technological system. There is an opportunity, in this iteration, to develop tools aiding the AI in interpreting human affect in more nuanced way, by

providing specific feedback. Reciprocally, I would have an opportunity to develop a language based in human senses, which would aid in communicating with technology in a more abstracted, nonlinguistic way. This approach requires further research and development.

6.1.2 Identification of Hardware to Measure Human Data

On the human side of data gathering, the most promising strategy, which I have identified through some initial experiments, is the EEG and neurofeedback headsets. I am focusing on hardware that is portable and could be used in an installation space. Additionally, some of the headsets available on the market are equipped with their own visualization software that may be adapted for the build out of the custom software. The table below summarizes the technical specifications of low-cost EEG headsets available on the market today.

DEVICE	ELECTRODES	SAMPLING	SOFTWARE SUPPORT
InteraXon	Rigid electrode placement	256 Hz	Research Tools for Windows, Mac and Linux
Muse	AF7, AF8, TP9, TP10	12 bits	Source Developer Kit for Android, IOS, Windows
Neurosky	Rigid electrode placement: AFz	512 Hz 12 bits	Source Developer Kit
Open BCI	Flexible: up to 16 channels	256 Hz 24 bits	Open-source software, firmware and hardware
Emotiv Epoc Flex Insight	Rigid electrode placement: Epoc: AF3, F7, F3, FC5, T7, P7, O2, P8, T8, FC6, F4, F8, AF4 Insight: AF3, AF4, T7, T8, Pz	128 Hz 14 bits	Research Tools for Windows, Mac and Linux

Table #8. Considered EEG headsets with technical specifications. Source: Doudou et al. 2018 and LaRocco et al. 2020.

Although further tests need to be conducted, the most promising device is the Open BCI. It is most likely to accommodate the needs of this project because of its broad range of channels and the open-source software that is well supported by a community of developers on the Internet. A lower cost option that would yield immediate results is the Emotiv headset. The advantages include its portability and the

visualization software that comes as part of the package. This would enable me to start tests immediately and establish general trajectories in the brainwave research that later can be fine-tuned in the custom software. The more sensitive Open BCI, featuring more channels and a faster sampling rate might be the best platform for the final iteration of the project since it will support the design and development of the custom software.

6.1.3 Buildout of Custom Multimedia Software

The buildout of the multimedia software will take place in two stages. Stage 1 will consist of adopting existing open-source software and languages to produce preliminary calibrations and output of sensory stimulation, realized as art. For this purpose, two functionalities will have to be merged: one interpreting the EEG input in a graphic manner and the other controlling the remixing, editing and design capabilities of the system. The former is exemplified by open-source software such as RTHybrid, which enables observation, control and bidirectional interaction with the nervous system (Amaducci et al., 2019). In the case of the latter, multimedia capability can be exemplified by a real-time programming interface based on Max. More recent iteration of dataflow manipulating language that can be used to manipulate video for live performance and multimedia installation include Pure Data (Barkl, 2018). With these resources in mind, I will facilitate the following workflow illustrated in Table #9.

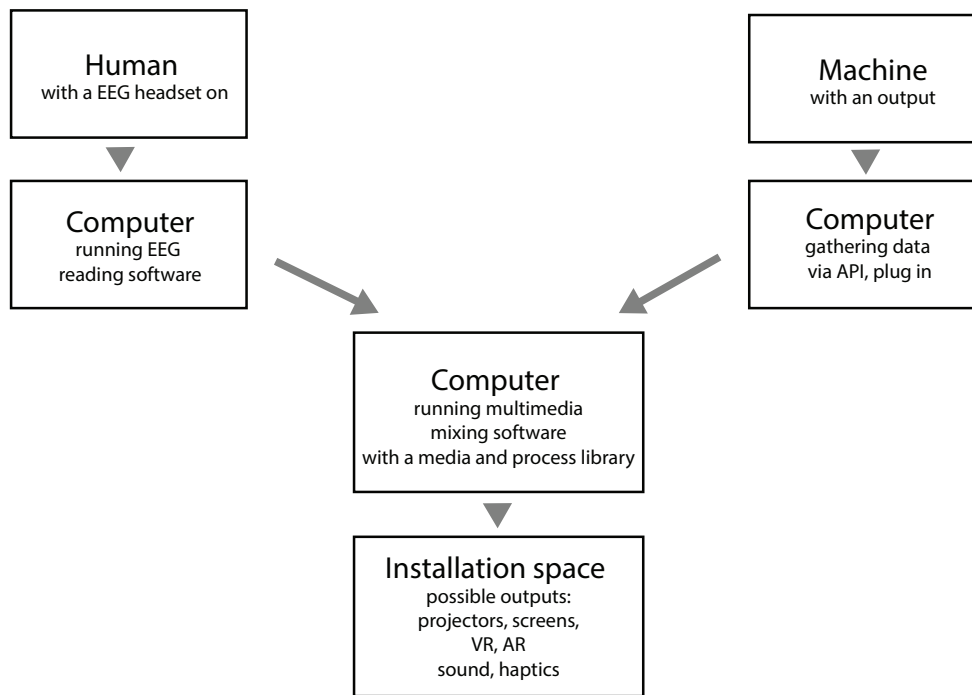


Table #9. *The Symbol* artwork – workflow of the digital system.

Stage 2 will consist of testing all the components in table #9 as they relate to the custom multimedia software and fine tuning the system. This will include all the connectivity to both human and machine data. The API and plug-ins that interface with the Internet software or, in later iterations, another technological entity, will be developed and tested and so will the connection to the EEG reading software. Once the input is established correctly and working within the mixing software, the output will be addressed in greater detail. At this point, AR and VR options will be tested in addition to more classical outputs such as monitors and speakers, which will be established in Stage 1 for testing purposes. With these tasks accomplished, we will be ready to design the sensory stimulation and, so to say, the manifestation of the symbol in a greater detail and its many iterations.

6.1.4 Matching Sensory Stimulation and Brainwave Activation

As an artist, I am mostly interested in this final section of the research since it has to do with the actual design and build out of the sensory stimulation available as part of *The Symbol* experience. As the human data will be gathered via neurofeedback device, the

parameters controlling the calibration as well as the sensory stimulation triggered and available in the installation space will have to be defined and designed. Further, the relationship between the particular brain wave signatures and stimuli will have to be studied and set as calibration tools in the graphic and audio software.

I am planning to start the research basing it in the reports of correlation of Alpha brain waves to states of being, which are quiet and relaxed during a normal wakeful state (Kirstein 2007: 1). Further, I find it useful that mindful attention states, that can be produced during creative activities, have also been correlated to the heightened production of Alpha brain waves (Stinson et al.: 144). This type of brain activity may prove useful in anchoring the state of balance between the perception of the outside and the internal feeling in the human, which in this thesis is understood as an aesthetic experience. I am positing that the degree to which a person finds themselves in this state relates to the willingness to stay in the experience, their level of positive engagement and integration of the experience. Finding the point of optimal balance, which may fluctuate in time, sets the threshold for the Liminal Event, where the human and technological entities can merge without traumatizing the human. In other words, the human perception is met by a technological stimulus that is responsive to the internal state of the human and adjusts in real time based on the biofeedback.

Further, brain wave activity is related in some studies to open state of mind in humans and a ‘narrative fusion of horizons’ (Schaefer 2018: 78).

This fusion occurs when two people’s narrative horizons, consisting of a set of narratives and standpoints, come together while preserving the multiplicity, fluidity, complexity, and intersectionality of each. Interdisciplinary scholarship, including neurological and biological perspectives, shows that a listener’s embodied dynamics, specifically fear and attachments, contribute to closed listening, in which the listener tries to preserve the stability and fixity of their own narratives. An open listening pedagogy that incorporates mindfulness and neurofeedback responds to the need for interdisciplinary understanding of the body-social relationships that are part of closed listening. Neurofeedback and

mindfulness further help students practice ways of relating to their bodies that are conducive to open listening. (Schaefer 2018: 78)

The above passage points to the possibility of using brainwaves as a tool in achieving open minded states in humans in moments when they are facing a perceptually adverse environment causing fear, such as experienced while entering the liminal states. Further, a parallel relationship can be drawn between the closed states and the states causing shock in encountering technology discussed in this thesis. It is indicated that mindful states promote open listening and therefore receptivity to the environmental stimulus. All the above correlations encourage me to use neurofeedback as part of the calibration mechanism and data gathering tool for the human component of the artwork.

Based on the above literature, I see the correlation between the Alpha brain waves and the desired state of openness and balance, understood as an aesthetic experience, as a very likely outcome of the preliminary tests of the system. However, as a practitioner, I am expecting to find more nuance in the relationship between brain waves and the state, which characterizes the symbol. This part of the study has further potential to produce more findings unique to this project that will have to do with the correlation of the brain waves, the sensory stimulation, and the subjective ability to achieve a balanced state vis a vis an overwhelming technological experience.

6.2 Educational and Pedagogical Approaches

Simultaneously, I am developing college-level courses and workshops engaging the methodology of *The Symbol* and the research that has led up to it. The full manifestation of my teaching philosophy, however, will most likely take shape outside of the constraints of the classical academia because of the unusual curricular needs that my approach requires, which I will explain in section 6.2.5. This approach is based on my understanding of liminality and emergence of hybrid subjectivities explored in this thesis.

This approach is uniquely positioned to address current art and design needs. In order to sustain a successful and relevant practice as a cultural producer and designer today, one needs to acquire a broad range of interdisciplinary skills. Students and educators face a challenge to adequately address the convergence of media, science, technology, theory and different histories united in production of meaning. Hands-on as well as conceptual skills are essential in achieving practical and intellectual nimbleness that allows the freedom to move in ever-changing cultural landscape and effectively address existing human needs. Some of the most important skills that I teach are the ability to think and navigate through the density of data, perspectives and available modes of expression to produce synthesis that manifests as both theory and practice.

6.2.1 Teaching Philosophy

My pedagogical approach is three pronged and is developed in accordance with my practice-based research methodology presented in this thesis. It includes teaching: philosophy and art theory, scientific and technological approaches, as well as art and design practice. Each field or module is informed by the other two. As the students move through the modules, they experience the overwhelming impact of the new information as liminality and temporal synthesis of the approaches in an intermittent fashion.

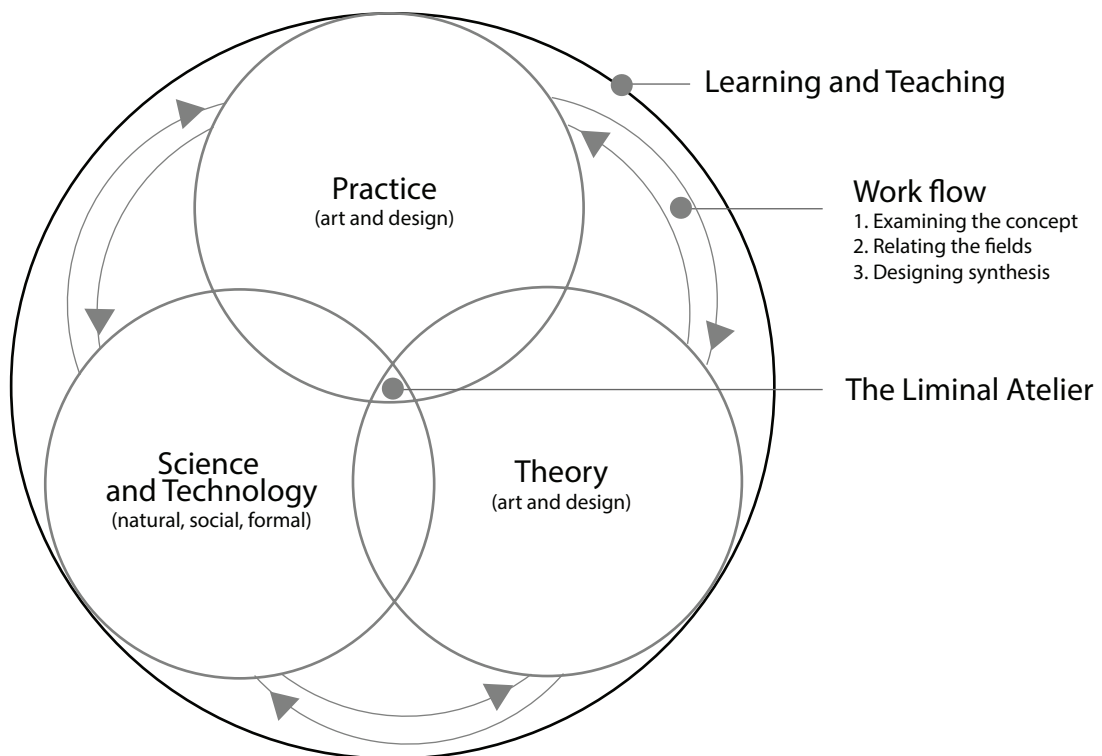


Table #10. Educational Module Progression and Workflow

The above outlined way of approaching problem solving allows me to continuously move across paradigms and gain fresh perspectives as the projects circulate in this process. The point of entry is dictated by an issue that catches the student's interest and prompts an initial engagement at any point of this chart. Further, the project moves through a series of conceptual and practical deconstructions and synthesis cycles as it moves from one area to the other. On a meta level, I teach a mode of navigating through this creative process. We first examine the concept in its original context, within which it has been encountered by the student. This is the moment of deconstruction of the presupposed readings and anything that seems 'obvious' about the issue. Then, we relate it to a different or similar concept from one of the other areas (Theory, Practice, Science) and begin the process of synthesis, based on structural, contextual, mechanical, psychological or otherwise relevant affinities. Often, a new approach to the original problem becomes revealed and adapted for use in the other field. In many cases, a completely new and hybrid approach will defy traditional calcifications as the projects themselves thrive in a balance between the fields. As a result, my theory

classes usually have some sort of practical outcome and vice versa, my studio classes have a theoretical component to them.

6.2.2 Point of Entry: Practice

This spring, I am poised to teach a Senior Design Studio class at the Otis College of Art and Design. As I have taught this class previously for the past seven years, I had the opportunity to develop and employ the above pedagogical approach in a context of teaching user experience and user interfaces design as it applies to digital and physical products. As students engage in working on a variety of self-assigned design problems, they enter the first explorative stage at a point that usually relates to practice either in a sense of designing or using a technological product. Similarly to the multifaceted research, undertaken in this thesis, the human-technology interactions are understood through the lens of human behavior, level of agency and fluidity within the system. In this class, aesthetics is understood as a tool grounded in the human experience and used to increase cognitive capabilities and engagement. Moreover, in a world that relies on big data, it is important to teach how to capture the unmeasurable. I focus on blending quantitative data with qualitative experiences. I encourage my students to observe human behavior and ask why something is happening to highlight the background narrative. Additionally, in this class, students gain understanding of the users and their context through engagement with communities in order to design with empathy. Engaging in a dialog with the user necessitates the practice of iterative prototyping, which feeds back into the theory and after readjusting emerges as a new solution. For this reason, I foster the practice of making-to-think. In thus constructed environment, I am able to build the students' ability and confidence to self-direct through the research and development stages and to produce hybrid solutions that exist in aesthetic balance on the intersection of human and technology.

6.2.3 Point of Entry: Theory

A class that I have taught in the past and will teach next year at Otis College of Art and Design entitled Identity in Networked Media deals with different approaches to formulating identity and posthuman subjectivity in a technological context. In this class, I take a creative approach to viewing text, which spans written and multimedia objects, in the context of meaning production. Because of the plurality of meanings, the positioning of a frame facilitating the perspective becomes one of the creative outlets. I teach students how to strategically position their own frames through development of design and writing, which communicates their unique point of view in a focused manner. As all of my students are artists and designers, the class further redefines their presumptions about their creative output as it is viewed against the ever-changing knowledge economy and user context.

The new iteration of this class will focus on self-directed projects centered around the ideas of posthuman subjectivities and the threshold liminal space that is created at the point of entry by the human. We will take as a point of departure theoretical perspectives and circulate into scientific and design approaches yielding fresh perspectives. I also believe in the importance of teaching the historical perspectives, their deconstruction and re-synthesis. Understanding the evolution of ideas and disciplines over time calls attention to larger cultural, political and philosophical patterns sweeping through society and creating the human behavioral context. As a result of this class, students are expected to produce sets of design steps accompanied by examples that result in producing different technological subjectivities with special attention to the possibility of producing a Liminal Event that can be sustained over time. These design approaches can be further followed by practical execution in a studio class.

6.2.4 Point of Entry: Science

In the fall of 2021, I am poised to teach a class entitled Designing the 21st Century at the Otis School of Art and Design. This class will actively engage with science academic and private laboratories and research and development departments in the Los Angeles area. Through lab visits, talks and discussions, the students will be introduced to present day issues in science and technology ripe for design innovation. Additionally, we will review designers already working within the emerging scientific forms as the students map out patterns and make connections to their own design practices. Further, the students will produce designs and prototypes based on their science and technology inspired research. Areas covered will encompass genetics, bioengineering, plants and animals, body, nanotechnology, material sciences, GPS, kinetics and robotics, telecommunications and digital information systems and Artificial Intelligence. This class is meant to be a quite comprehensive introduction to a wide variety of concepts. I am emphasizing the student's ability to quickly grasp a point of interest, perform research and engage with the results of it through design.

6.2.5 Liminal Atelier: Liminality and Synthesis

Thus far, I have developed and taught classes and workshops that were focused on issues concerned with the emergence of human-technology subjectivity and liminality as discussed in section 5.5 and 6.2 at different institutions. The development of my own laboratory and possibly company will create an opportunity to grow the educational section in a way that incorporates my teaching philosophy and the practice of creating Liminal Event as art and design practice.

The educational model, which I have described in section 6.2.1, can only partially be implemented in linearly designed curricula, as it is the case in most teaching

institutions. Presently, because of time constraints, it is difficult to enact the workflow described in the table below. Ideally, this method would work as a comprehensive and coherent curriculum, where students are engaged in a progression of classes or workshops. Each module (art/design, theory, science/tech) would follow one another in a sequence unique to each student. They would be able to enter at the point that is of interest to them and move on to the module that suits their project. The modules would provide specific instructions and resources related to one of the meta-areas. As the students would absorb enough information to move to the next module, they would enter a transitional mini module that provides rebalancing and synthesis in the relation to the next module.

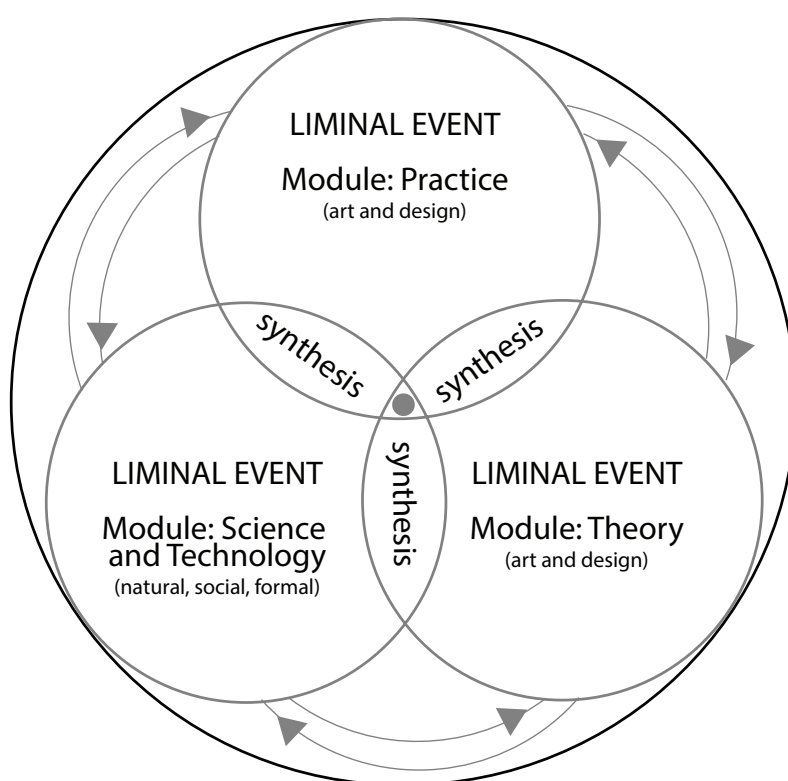


Table #11. Educational Module Progression with Synthesis – Full Implementation

What is unique to this approach, in addition to the free movement between the modules, is the inversion of what is traditionally expected from a teaching space. Specifically, the modules are not the areas where knowledge is enforced as a hegemonic structure or truth. Instead, they are understood as moments where the student's pre-

existing assumptions about the world become challenged. This is where the student learns something new. This learning space emphasizes the rapture and confusion that follows it and it is similar to the moment of trauma. It is granted that learning situations might have been described in this way previously however the interpretation of a learning space as confusing and undoing has traditionally been avoided instead of sought after. In contrast, I propose the disorientation of the liminal space as the opening of the student to a learning experience. To employ this perspective, I further use tools developed in my teaching and experiments leading to the development of *The Symbol*. I use The Sign as an experiential matrix to gage the student's level of confusion. This is usually achieved by a questioner similar to the one employed in Camera is Present events. Further, the delivery of information changes in intensity and mode (presentation, speaker, fieldtrip, construction, making, etc.) as it becomes calibrated. The calibration will be achieved via the methodology of *The Symbol*, involving communication through image and/or sound. My aim is to create a Liminal Event as a teaching and learning environment, where liminality is embraced as an instructional tool. Further, as the student becomes more balanced within a particular module, they can choose to move on to a new one. They reach out with certain assumptions developed in the previous module and expectations of the new module. At that moment, the mini module of synthesis is entered, where the assumptions and expectations come together. The full stepping into the next module is marked again by the liminal confusion as measured by the sign. Thus inverted process of learning is a wonderfully playful way of engaging the students, where failure is a sign of expansion and success presents a temporary plateau to be surpassed.

Ultimately, the content and methodology of my teaching both stem from the same understanding of the sustained liminality as Liminal Event. I plan to perfect teaching in this manner, which can be achieved once I attain more independence through

my lab, which can be attached to an institution or self-funded. I will further use this method to teach creating Liminal Events as a method for human interacting with technology, which yields distributed and interrelated subjectivity. I believe this to be a very promising and much needed strategy to engage technology as we progress into further complexity and miniaturization.

CHAPTER 7: Final Notes

In this section, I am going to summarize the thesis and provide some critical reflection. The main points of the thesis as well as their resolution will be discussed and final notes added as clarification.

7.1 Compressed Summary of the Narrative

This thesis has introduced a specific perspective on the merging of human and technological ontologies that is based in trauma and results in shock. To support this claim, I have reviewed the attitudes towards technology as represented in cultural production through art and design, starting at the beginning of the twentieth century and leading into present times. On this journey, I have tracked human disassociation evident in art production through emphasis on surface and repetition as forms of expression. This pointed me to a specific location and moment of trauma within the experience of art. Further, I linked the concept of surface in art to the concept of surface as a design strategy in media technologies. Specifically, as it became an aesthetic that resides between the body and the hardware, it became a protective shield that interfaces by reducing the flow of information. This gate, in most instances, translates into a screen or otherwise slick surface of an electronic device but it also can be abstracted into a psychological screen, which I illustrate through my art experiments. I further argue, however, that the rich world of technological workings was not always so impervious to

human perception and psychology. The idea of punctum, as conceptualized by Roland Barthes, allows me to imagine a point of incision into the continuum of human experience that can be understood as a positive trauma. It allowed me to ask the question: what if the living organism would not have to go into shock when interacting with technology?

This question prompted me to search for alternative understandings of collective subjectivity. The criteria, which I have used for evaluating the methods used in constructing such subjectivities, focused on identifying the presence of psychological shock and human agency within the system. This exploration led me to identify extreme ‘becomings,’ which cause implosion of the sense of self. Examination of theoretical concepts (Deleuze-Guattari’s *Body without Organs* and Marshal McLuhan’s *Narcissus*) as they relate to my practical engagements with those themes through art (*MeMyselfan I* and *I am Legion*) lead me to identify the conditions, under which the human being becomes objectified and disabled through shock. Understanding the points of failure in the coming together of human and technology focused my search for further solutions. The concept of human agency within the system became pivotal to my explorations. I took care, however, to look for an understanding of agency that is not based in the old paradigms of conquest but rather ones that are realized through affinity. Following the lead of postphenomenological investigators, such as Don Ihde and Peter-Paul Verbeek, I linked the concept of agency to intentionality. For the purposes of this thesis, I further related intentionality, in practical terms, with human presence within the system or simply conscious being there in a perceptive way.

Understanding the role of the human within the system, which I aimed to construct, allowed me in Chapter 5 to turn my attention to its structure. To this purpose, I have adapted the structure of rituals marking the transitional stages of human development as conceptualized by the anthropologist Arnaold VanGennep. Further, I have developed the concept of sign as a tool based in human perception and feeling of

eeriness that signals the entrance into liminality. Then, I considered the history of human beings producing alliances through symbolic exchange in the context of rituals and sacred objects, as studied by Mircea Eliade. This inspired me to envision a symbol that would be able to facilitate the human-technology exchange in a way, which affirms human sense of presence and participation and eliminates shock. I further related Baudrillard's concept of symbolic exchange and the psychoanalytical perspectives of therapeutic communication between the subjectivities in cases of dissociative identity disorders to articulate a dimension of exchange that can facilitate the symbol. By defining a unique aesthetic dimension of such symbol in terms of a sense of rightness and balance between the inside human affect and the hybrid stimulus, I have developed the basis for constructing such symbol. Finally, the concepts of the sign and the symbol are mapped onto the trifold scaffolding derived from the ritual process based in liminality. Thus, constructed system, which I call the Liminal Event, is geared to produce a stable hybrid distributed and interrelated subjectivity that persists in time as long as the system is operating.

The system, including its tools, works with the human perceptual and affective capacity to enable an opening and communication within the hybrid human-technology system. In Chapter 6, I pointed to practical applications and strategies to develop the concepts of the Liminal Event, which is the engine as well as the sign and the symbol, which are the tools. Specifically, I have proposed the realization of thus conceived system as an artwork, *The Symbol*, and a pedagogical approach realized through a unique curricular progression.

7.2 Critical Reflection on Thesis

In a technologically complicated world, the body has become sort of an abstraction based in a pure thought, which attempts to reshape it. Rossi Braidotti talks about the crisis of representation of such body.

In such a historical, bio-political and geo-political context, there is no question that what, even and especially in feminism, we go on calling, quite nostalgically, ‘our bodies, ourselves’ are abstract technological constructs fully immersed in advanced psycho-pharmacological industry, bio-science and the new media. This does not make them any less embodied, or less ourselves, it just complicates considerably the task of representing to ourselves the experience of inhabiting them. (Braidotti 2000: 160)

Braidotti further proposes Deleuze’s ‘radical sense of materialism’ as helpful in creating a post-Lacanian representation of our bodies in a technological environment (Braidotti 2000: 161). The need to include the body in a very concrete way as part of our understanding of the self in the context of the posthuman, technologically distributed subject is one of the principles driving this thesis. However, as much as Deleuze’s approach definitely includes the body as part of the becoming with technology, it comes very close to Latour’s conception of sets that include both human and technological parts as equal and therefore symmetrical and not requiring different approaches.

My conception of human-technology relationship is closer to Don Ihde’s understanding that technology and humans are not equivalent to each other and retain their own directionalities and accommodations (Ihde 2002: 100). Further, as I have shown through my art experiments, the Deleuzian radical opening to the flows of stimuli, as represented in the *Body without Organs*, fails to produce a subjectivity that is enabled. Instead, it is paralyzed and subjugated by shock. Since the perception registers on the human nervous system, the psychological dimension needs to be stripped to prevent the subjectivity from going into overstimulation-induced shock. In my view, however, the human psychological dimension as it ties chemically and physically into our bodies and

nervous system to be, in fact, the integrative part of the system. Obliterating human psychology is precisely what I am trying to avoid in human-technology relationships. Not only does it cause the human to withdraw from the interaction but also collapses the whole hybrid assemblage. In fact, the stability of this hybrid, distributed, productive subjectivity rests on human affect and, in physical terms, the nervous system. This is how the body and technology link up. The affect can be productive, when balanced, or disruptive, when leaning towards a state of shock.

The novelty of my approach lies in the following areas:

1. Historical contextualization of shock and trauma within cultural production and as it relates to technology.

Although the concept of shock in cultural terms has been explored in poststructuralist thought, I propose to extend and link its examination throughout the XX and XXI centuries and as it relates to technology in a palpable and sensorial, not only conceptual, way. In this thesis, I link the idea of surface, as understood in modern art and especially Minimalism, to the development of digital media interfaces based in screens. In this manner, the shock associated with the surface of the artwork moves into this technological metaphor. It enables a specific type of interaction, which locks humans into a posture of shock. In order to navigate out of this impasse, I redefine shock and trauma in terms of tools used in creating sustained hybrid human-technology subjectivity.

2. Creation of conceptual tools and structures for articulating hybrid subjectivities.

I articulate tools and structures that facilitate human and technology coming together to produce distributed and interrelated subjectivity. This subjectivity is sustained through a reflectivity that is built into the system and balances the perception of the internal human affect and external stimuli on an ongoing basis and in a real-time. To be precise, this

reflectivity does not apply only to the human but instead, it incorporates the entirety of technological and human manifestations in the ever-fluctuating sensation of the self.

The overarching structure is called the Liminal Event and its tools are the sign and the symbol. This structure produces a new type of aesthetics based in the system achieving a balanced, harmonious state, which is perceived by the human as rightness and a sense of match between the inside and the outside landscape. This system, in effect, lowers and hopefully removes completely the threshold between such dichotomies. I call it the Expanded Liminal Aesthetics. Whereas in traditional human-technology engagement the human being experiences a degree of shock, the Liminal Event uses shock, which does not fully set in, as part of its tool, called the sign. It further repositions the experience of trauma as rapture, a positive opening facilitating communication between human and technological nonhuman subjectivities to produce coherence in the hybrid assemblage.

3. Applications of conceptual tools and structures in practical terms

In addition to formulating the conceptual structures, I propose ways of executing them through practical applications. The first one involves creating an artwork, which is build according to the Set of Protocols to Create a Sustained Liminal Event, called *The Symbol*. The continued research in a laboratory context will yield further refining of the conceptual procedures and creation of the many permutations, in which this structure can manifest. The second application explored in this thesis uses the structure of a Liminal Event in an educational context. I have designed a system of modules and a movement based in the Liminal Event method and facilitating the student learning experience. It is an inversion of traditional educational space. Specifically, the modules are not the areas where, as expected, knowledge is presented as truth and reality. Instead, they are spaces and moments in time when the students undergo crisis as a result of encountering something new. The temporary undoing of the subject is followed be a moment of

synthesis as the student moves on the next module and is required to find balance and renegotiate his relationship to knowledge. This process is accomplished in nonlinear fashion as the student is guided by affinity with the available material and directionality that follows from the needs of their project.

CONCLUSIONS

On a few final notes, I would like to emphasize that the system and the method, which I have articulated in this thesis facilitates subjectivity, which is not fixed but instead fluctuates between different permutations. These are meant to be used depending on the need and situation in a present moment. For example, a subjectivity created in a human and car relation will, to some degree, have a different affective signature as it produces different set of affects, directionalities and technological accommodation than one created in human-Internet relation. The main functionality of the Liminal Event, realized in practical terms, allows a conscious entity to shuttle between different subjectivities in a fluid and sustained manner without getting stuck in any one subjectivity. The Liminal Event is an affective calibration engine, used to move in and out of subjectivities and to claim whatever agency is needed in the moment. It is a home-base for the new hybrid sense of presence of a hybrid subjectivity.

The novelty of this approach additionally stems from formulating a strategy and tools for coming in close contact with the traumatic real while maintaining reflective and critical skills. Since in current technologically enabled world, we navigate life in close proximity of the untamed life as well as technological flows of the real, the symbol must be different from the traditional language-based mediation. What sets the concept of the symbol apart is its permeability, which allows the real to come through as intensity and a sense of distribution. The point is to create a self-reflective aperture, through which the

perceptions flow freely on the nervous system and are consciously registered. The Liminal Event allows the flows to come through while holding space for human psychology by avoiding shock. In another words, the Liminal Event creates a more effective way for life to enter the technological world.

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APPENDIX A

THE SYMBOL

PROJECT BY Blanka Deroko

SHORT DESCRIPTION

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MEDIUM: software programmed with Processing, display website; hardware: EEG headset, computer, projector

DESCRIPTION: The participant is asked to put on the EEG headset and by doing so enters the interaction with the technological world. The brainwave patterns are read by the headset and passed on to the software for processing. The resulting image is an abstract aesthetic representation of the brainwave patterns. The project tracks three brainwave patterns. Beta (15 to 40 cycles per second) is typical of strongly engaged mind and represents strong mental activity. Alpha (9-14 cycles per second) represents the more relaxed state. Theta (5-8 cycles per second) is the meditative, daydreaming state. These states are significant because Beta can be loosely associated with agitation and stressful state of mind while Alpha and Theta represent a mind in a peaceful, harmonious state.

The harmonious states can be correlated to a pleasant aesthetic experience. The participant experiencing the visual and sound output of his or her brain activity and engages in a feedback loop aimed at calibrating his pleasure of the perceived event. As the outside perceived stimulus becomes a better match for the subjects internal experience understood as a feeling, the human-technology circuit becomes more harmonious. The inside is matching the outside. This set up is aimed at producing the most harmonious and therefore aesthetically pleasing experience for the participant and therefore create his or her own signature or symbol based in feeling and imprinted in the technological world. We all require different types of stimulation in order to feel in harmony with the outside world therefore the representation or the symbol will be always different. Also, the symbol will be ever evolving in real time matching the micro shifts in the perceiving psyche.

THIS IS A WORK IN PROGRESS

APPENDIX B

I AM LEGION

PROJECT BY Blanka Deroko

SHORT DESCRIPTION

MEDIUM: online website; feed generator: <http://nomadikvision.com/legion>

DESCRIPTION: I am Legion is a demonic feed generator designed to propagate itself through Twitter feeds grabbing posts according to its 'program.' The demon makes alliances with the Twitter software via a pact, the API and incorporates the human users, who in turn have pacts with Twitter and are part of the Twitter- becoming. The demonic collective appears as a feed generator selecting tweets based on common words. The sorcerer-user becomes incorporated as a component in I am Legion-becoming performing the function of the initiator. The demon does not engage dialectically but instead, it seeks to include everything in its order of existence via pacts. The price one pays for entering into that alliance is letting go of the illusion of oneself as a subject.

SHOWS:

- Computer Art Congress 3, Paris 8, CiTu, Le 104, Paris, France, Nov 2012
- Ionian Center for Arts and Culture, Cephalonia, Greece, May 2011

WEBSITE:

<http://iamlegionproject.com>

STILL IMAGE:



APPENDIX C

COLOR FIELDS

PROJECT BY Blanka Deroko and Steve Boyer

SHORT DESCRIPTION

MEDIUM: Sound and graphic mobile phone installation with geo-location, performed on the beach in Santa Monica, CA

DESCRIPTION: The participants download an application to their mobile device, which activates once a person physically crosses over a geographical border delineated by longitude and latitude. Within that area the device is taken over by code displaying waves of colors on the phone screen and playing sounds. Each device acts as a pixel of a larger image that is mapped out onto the geographical area. As people wander through the space, the device rotates through different permutations of the overall image in time and space. A crowd of people with activated devices creates a meta-display of color waves and in extreme an image with a musical score. The larger event is picked up by a camera from up above and broadcasted at other locations such as the Internet or a video projection. The video coalesces the disparate parts into a coherent read in order to communicate it to the audience/participants.

SHOWS:

Performance at the Glow Festival in Santa Monica, CA, September 2013

WEBSITE:

<https://vimeo.com/383371278>

STILL IMAGE:



APPENDIX D

THE CAMERA IS PRESENT

PROJECT BY Blanka Deroko

SHORT DESCRIPTION

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MEDIUM: A series of staged events; video recording of the participants; duration varies

DESCRIPTION: A participant is invited to sit in front of a recording camera and look into the lens. The event is over when the participant decides to stand up and walk away. Later, the participants are interviewed by the artist about their experience. The interviews are transcribed and arranged into a book. This is a work in progress.

SHOWS:

- Event 1: Creative Action and Integrated Learning, Otis College of Art and Design, Feb 1, 2019
- Event 2: Creative Action and Integrated Learning, Otis College of Art and Design, Feb 15, 2019

STILL IMAGE:



APPENDIX E

THE CAMERA IS PRESENT

PROJECT BY Blanka Deroko

INTERVIEWS

02.01.19 - 02.15.19

HANA

QUESTION: Do you feel like you are a person that is comfortable with technology?

ANSWER: Yes

QUESTION: Have you ever experienced technology as a presence?

ANSWER: Once when my laptop showed a notification that it did not have enough storage, I felt helpless. I couldn't help it. I felt sorry for it.

QUESTION: What did the sitting in front of the camera feel like?

ANSWER: It felt like it was natural to sit there. I know it's not supposed to be natural. I know I need to acknowledge the camera but I could be just still and quiet and that was comfortable. It feels like it's a medium to get to other people. Holding eye contact with those imaginary people.

QUESTION: Did the camera have a presence?

ANSWER: Sometimes, I have experience with acting so I stared at other people's eyes. I felt like I was looking at someone else but I couldn't read the camera.

QUESTION: Did you feel like you were in a liminal space?

ANSWER: I felt like if I sat there longer I would get into the liminal space. Small moments: I was peaceful; I forgot what was happening; I had no worries; I was in the moment.

QUESTION: Why did you leave?

ANSWER: Started to worry that I spent too much or little time. I didn't want to hold up the line. Didn't want to disappoint. Being in the moment is difficult.

Hana witnessing:

ANSWER: I was just observing others and acknowledging the 4th wall. It was strange to see Jackie move her head to find the perfect angle and then she stopped.

02.01.19 - 02.15.19

ELISA

QUESTION: Do you feel like you are a person that is comfortable with technology?

ANSWER: Yes

QUESTION: Have you ever experienced technology as a presence?

ANSWER: No

QUESTION: What did the sitting in front of the camera feel like?

ANSWER: I was trying not to laugh and it was hard. I was focused on breathing. I laugh when I'm uncomfortable. It felt long. I lost the track of time. I could keep it up longer. When I sit in a quiet place and look at nothing, I just go into a meditative state.

QUESTION: Did the camera have a presence?

ANSWER: It's easy to keep eye contact with the camera because it is an object. I had to break the eye contact. I got a weird feeling. And it made me laugh. I laugh when I'm nervous. Human eye feels like it is reaching. Cameras are static, they don't move so it feels like there is no engagement.

QUESTION: Did you feel like you were in a liminal space?

ANSWER: No liminal space

QUESTION: Why did you leave?

ANSWER: It felt like a long time and I felt anxious about it – the whole framework of classroom. It feels I could have stayed longer. There was nothing in it for me.

Elisa Witnessing:

ANSWER: Paid attention for a fraction of time and then my mind just deviated.

02.01.19 - 02.15.19

JACKIE

QUESTION: Do you feel like you are a person that is comfortable with technology?

ANSWER: Yes

QUESTION: What did the sitting in front of the camera feel like?

ANSWER: I was wondering if it had a brain what would it think now. I was trying to make eye contact with the camera. My heart was beating fast. I was wondering why I was so nervous. Then I was thinking how long I was there and counted to 30 and got up.

QUESTION: Did the camera have a presence?

ANSWER: I was trying not to laugh bc I felt awkward. It felt awkward that the witnesses were looking at me. The camera didn't make me uncomfortable – the people did.

QUESTION: Did you ever feel like you are in a liminal space? ANSWER: I was feeling not in control – so yes.

Jackie Witnessing:

ANSWER: Trying not to laugh. When I get nervous I laugh. I was thinking about my own reactions. Elisa was breathing heavy and trying not to laugh. Hana was deep in thought, focused, no reaction.

Additional Comment:

ANSWER: I feel a strange presence when FB is showing adds for products that I have googled. It feels freaky.

02.01.19 - 02.15.19

ANDRE

QUESTION: Do you feel like you are a person that is comfortable with technology?

ANSWER: Yes

QUESTION: What did the sitting in front of the camera feel like?

ANSWER: I started with what was in front of me – the lens. Thinking about how the camera works, the light reflecting in the camera. The light in the camera. It's just beyond me, the technology. Makes me think about what is everything that we see? The tripod looks like the vertebra of a human.

Then I repositioned myself in the chair. Focused on my breathing. I started thinking about my friend and my girlfriend. I tried to think about nothing but it's hard. At the end I got better at it and thought of nothing and then it was over. Felt very short.

My dad was into meditation and he thought me how to lower the noise in my brain.

QUESTION: Do you ever feel a presence in the tech?

ANSWER: Yes, sometimes I feel an approximation of entity. There's some emotional ... There is something connecting me to the piece of glass that is my phone. I feel like we project our social feelings onto technology. When your phone dies you feel a little naked, fragile, unprotected.

I am a little afraid of technology because I can't totally understand it. There is all the privacy issues. It makes you wonder what are they tracking. I'm a little afraid of the direction that we are going into, the AI.

QUESTION: Did you ever feel like you are in a liminal space? ANSWER: Yes, maybe.

APPENDIX F

ME MYSELF AND I

PROJECT BY Blanka Deroko

SHORT DESCRIPTION

MEDIUM: Social networking website

DESCRIPTION: The explosion of social networking websites allows us a new way to relate to each other. Such is the conventional wisdom. If technology is our mirror, what sort of a face is looking back at us from the surface of the Internet? *MeMyselfAndI* is a virtual place where the subjective self went supernova. This appropriating gesture gives birth to semi-autonomous entities: the profiles alienated from their source and struggling for their own boundaries.

CONFERENCE PRESENTATIONS:

- Fragmentation and Expansion of the Self”
Paper presentation, CR 12, Presence in the Mindfield, Centro Cultural de Belem, Lisbon, Portugal, 2011
- “Meaning Making Across Virtual Media and the World”
Artist talk, Art Center College of Design, Pasadena, CA, 2011


WEBSITE:

www.memyselfandiproject.com

MEMYSELFANDI

Search:

Home Search Help Login



Welcome to MeMyselfAndI! Please look around and browse through the profiles. You are welcome to leave messages on members' blogs, photo albums and main profile pages. For more information about the MeMyslefAndI project [Click here.](#)

Member Login

Email:
Password:
☐ Remember Me

Network Statistics

- Members: 7 members
- Friendships: 28 friends
- Comments: 203 comments

Newest Members

7Blanka

6Blanka

5Blanka

4Blanka

3Blanka

Most Popular Members

6Blanka

2Blanka

4Blanka

7Blanka

5Blanka

6 friends

5 friends

5 friends

4 friends

3 friends

Members Last Logged In