Contemporary Urban Media Art – Images of Urgency

A Curatorial Inquiry

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Contemporary Urban Media Art – Images of Urgency
A Curatorial Inquiry

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Subject description:	The dissertation inquires into urban media art and how we may consider this media aesthetic art form in the urban context to be *contemporary* – emerging from, responding to, and co-existing with time. From a combined curatorial and theoretical approach, I examine the art's contingent relations with our communicative existence and media aesthetic conditions of experience in our contemporaneity at large.
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Academic advisor:	Professor Martin Zerlang
Assessment committee:	Professor Frederik Tygstrup, chair (University of Copenhagen) Associate Professor Nanna Verhoeff (Utrecht University) Associate Professor Ava Fatah gen. Schieck (University College London)

For Magnus

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Acknowledgements

This dissertation has been a challenging mix of pain and pleasure. I honestly had no idea what this journey would entail, the thinking and brain modifications it would source, the people it would introduce me to, the places it would take me, the (ultimately, productive) frustrations it would release, or how it would affect my attention to the world. But here we are. I am grateful to the Department of Arts and Cultural Studies at Copenhagen University for granting me my Ph.D. stipend and providing me with the framework and freedom that has enabled my research to come about. Also, to the two additional institutions that have hosted me as a guest researcher during my doctoral studies, the CuratorLab program at Konstfack University in Stockholm and Columbia University's Graduate School of Architecture, Planning and Preservation (GSAPP) in New York City.

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As I describe in the Foreword to this dissertation, about one and a half years into my studies I experienced that life can present unforeseen obstacles. This dissertation has been written during a long period of recovery from post-traumatic stress disorder and I want to thank my beloved partner, Magnus and your family for supporting me throughout this time. Thank you for inspiring me to pursue my doctoral studies in the first place and for traveling with me to New York City, São Paulo, Nuuk, Berlin, and other places that have hosted my research and exhibitions. Thank you for assisting my work and thinking, and for offering yourself as a thoughtful partner for discussion on ideas, themes, global situations, artistic freedom and discourse. Thank you for pushing my thinking into deeper concerns for the world's urgencies and, in the final stages, for reviewing and giving feedback on the dissertation. Thank you for inspiring me to become a more considerate, caring and indignant academic and human being.

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Foreword: The Crash

About one and a half years into my Ph.D., one early morning in April, I crashed - with an airplane. I was returning to New York City after an exhibition opening in São Paulo. I did not actually crash. There was a fire onboard the plane in the luggage room, the pilot said, and we were informed that this was a very unusual and serious situation. We had to prepare for an emergency landing. As I gradually realized the urgency of the situation, my senses went on alert mode. I heard the voices of passengers translating the pilot's message to each other, some crying; voices of flight personnel – some of them crying, too – mechanically guiding people through the emergency procedures and preparing us for potential explosions. I sensed the temperature in the cabin and the nervous energy among other passengers. I watched people hide money notes and their passport under their clothes. I tried to measure our falling height through the darkness outside the windows, the distance from my seat to the emergency exits and potential obstacles to get there, and the amount of water left in my water bottle, considering how long I might be able to survive from this. I also noticed that there was no smell of smoke in the cabin. All these impressions were mixed with memories, of my beloved Magnus, my mother, family, and friends, as in an incoherent and constantly interrupted multi-layered filmic sequence of all kinds of memories of experienced situations blending into one. I remember thinking that if this was the end, at least I'd gotten much out of it – life. Then came some irrational and absurd mental imaginings of Magnus seeking what was left of me in some deserted piece of land in Virginia.

We didn't crash. We didn't burn up or explode either. At around 6:20 in the morning we went through an emergency landing, not informed when it happened, that this was in a small domestic airport in Virginia (so, on a landing strip and not uneven terrain, as I had understood). We waited for twenty minutes or so at a distance from the airport, in case of explosion, quickly surrounded by fire trucks. They found no fire. We waited in the airport for seven hours for the visa control to arrive, without receiving any explanation, before we continued to New York City on another plane, identical to the one we had arrived on; like making us relive the experience in which we thought we were going to die. No one got hurt, physically. We were never told what had actually gone wrong with the plane, if there had even been fire onboard, or what the cause of the panic of the pilot, the flight personnel and

eventually the passengers was caused by (I later tried to investigate this with the airplane company but had to give up and accept a voucher as an apology for the time delay to my travel). I was only able to find scarce information on the weather blog WAVY.com.

Even though we did not crash, my memory somehow thought that we had. When we arrived in New York City it felt as if this actual outcome of the situation was not real. The event of the 'crash' happening had manifested itself in my memory as a "real" event, resembling a possible situation. Projecting backwards, the situation of the 'crash' seemed to assert that it had happened – in a kind of parallel reality. The memory of the 'crash' might have been an abstraction from the real situation on the plane, abstracted from my realization that "this *might* go wrong"; perhaps similar to what Henri Bergson would call a "sterile double."[1] This was a sterile double of a future that *could* have been possible but did not come to take place: a kind of pseudo actuality of a possible fall-out of the situation by which an image of the crash had come to seem real in my memory. In any case, my mind-body-nervous system reacted as *if* I had experienced and felt this situation to be real, to an extent where it seemed to verify the intensity of a moment I had actually lived out and could remember. The experience had activated an extreme internal alarm response which resulted in my perception register being 'dissolved' in the days and months that followed, as if a filter had been removed without which I could not distinguish sensible impressions from one another.

Research in neurology explains such reactions as symptoms of "trauma related disorders" as mediated by neurobiological mechanisms. Trauma can affect the brain, in particular the hippocampus, amygdala, and medial prefrontal cortex.[2] For non-medical experts like myself, the hippocampus is a two-part component in the human brain that plays an important role in the consolidation of information from short-term memory to long-term memory, and it is responsible for spatial memory and navigation.[3] The amygdala is involved in memory registration with regard to emotional attraction or aversion to events, and plays a critical role in the acquisition of fear responses."[4] The media prefrontal cortex is a brain region in which thoughts and actions are orchestrated in accordance with internal goals. It is involved with

[1] Deleuze, *Bergsonism* (New York: ZONE BOOKS , 1991), 98.
[2] J. Douglas Bremner, "Traumatic Stress: effects on the brain," *Dialogues Clin Neurosci* 8(4) (2006).
[3] Anthony Wright, "Chapter 5: Limbic System: Hippocampus," *Neuroscience Online*, The University of Texas Health Science Center at Houston (UTHealth) (1997), accessed February 17, 2016. www.ncbi.nlm.nih.gov/pmc/articles/PMC3181836/
[4] Bremner, "Traumatic Stress: effects on the brain."

complex cognitive behavior, personality expression, decision-making, and with moderating social behavior.[5]

In *A Note Upon the Mystic Writing Pad* (1925) Freud exemplifies with the device of the Mystic Pad how one can leave a clear mark on a translucent sheet of waxed paper by writing on a layer of celluloid placed on top and thus acting as a protective sheath for the waxed paper below. The celluloid serves to prevent unwanted marks or tears which could occur from directly writing on it with a stylus. In Freud's theory, the celluloid serves as metaphor for a protective sheath against stimuli; a protective layer to diminish the effects of the world and protect the underlying layer in our perceptive apparatus from external excitations.[6] Now, *if* we do possess such a shield protecting us against stimuli, following the 'crash' I experienced the world as if having lost it – every impression seeming ten times stronger than normal. At the time of the crash I had been living in New York City for almost five years in the noisy industrial area of South Williamsburg. I was used to sounds and impressions from the city – the kind that exhausts tourists and newcomers at first but which you eventually get used to. However, after the crash I could not filter everyday impressions of the concrete physical environment I was in. Someone had 'tuned up' everything. Perhaps I experienced something like a temporary technogenic setback? N. Katherine Hayles has examined how humans mutate epigenetically through changes in the environment, especially neural changes in the brain, the central nervous system, and the peripheral nervous system.[7] It felt as if I had taken a step back, having to learn anew how to cope with my everyday environment.

During the period that followed the crash, it was difficult for me to organize work, deadlines and future life events. I was terrified of thinking of the future. I felt a disturbance in my perception, struggled to keep sentences straight, and could not keep my thoughts in place. I could not tolerate multiple simultaneous sources of sound. For months, restaurants, bars and other social forums were impossible for me to visit. I struggled with frequent exhaustion just from everyday impressions and moderate workload. I developed a persistent form of tinnitus that kept me awake at night – it still does. I became particularly sensitive to visual impressions, to fast-moving images, intense colors, light, and large, bright screens. About half

[5] Yaling Yang and Adrian Raine, "Prefrontal structural and functional brain imaging findings in antisocial, violent, and psychopathic individuals: a meta-analysis," *Psychiatry Research* 174(2) (2009).
[6] Sigmund Freud, "A Note Upon the "Mystic Writing Pad" (1925)," *General Psychological Theory, Chapter XIII* (New York: Touchstone, 1997), 210.
[7] N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis* (Chicago and London: The University of Chicago Press, 2012), 103.

a year after the flight experience, I returned to Brazil for the third São Paulo Urban Digital Festival, which I had curated together with my Brazilian colleague Marília Pasculli. I remember standing on Paulista Avenue, across the street from the FIESP/SESI building that has the SESI Digital Art Gallery covering three of the building's façades with LED lights, during a late night testing of artworks. The bright colors, which I had experienced so many times before at previous exhibitions, felt this time as if they were burning into my forehead through my eyes. If it is so, as Deleuze writes, that "When we perceive we contract millions of vibrations of elementary shocks into a felt quality,"[8] then I experienced how that 'felt quality' is not fixed or constant but dependent on the sense-perceptual condition of our sensible system in relation to the momentary, particular environment of our perceptive experience.

Also, part of my post reaction to the flight experience was that my situational and spatial orientation was weakened. I would feel the ground to be unstable and sometimes briefly lose my balance. My proprioception was disturbed – the sensory information that contributes to the sense of position of self and movement which is the kinesthetic 'picture' we get of the body's position.[9] This was the first time I was confronted with how my body is its own temporal domain that can get out of rhythm with the dominant time-space of one's environment or the world. I felt a discrepancy between the physical world that I know is supposed to be 'real,' and a possible, altered condition of this world: a form of *discontinuity* between actual and possible levels of reality. Sometimes this would announce itself in sudden, brief moments of feeling like everything is a fiction or a dream.

The architectural historian and theorist Dalibor Vesely points at a close analogy between discontinuity[10] in human experience (disturbances to our perception of the world and sense of spatiality in the world) and the phenomena of "mental blindness," which he locates in neuropsychology.[11] William James first describes the phenomenon of mental blindness in *Principles of Psychology* (1890) as a cortical disorder or an inability to understand visual

[8] Gilles Deleuze, *Bergsonism* (New York: ZONE BOOKS, 1991), 88.
[9] See Elizabeth O. Johnson and Panayotis N. Soucacos, "Proprioception," in *International Encyclopedia of Rehabilitation,* eds. John Stone and Maurice Blouin, accessed August 10, 2016, www.cirrie.buffalo.edu/encyclopedia/en/article/337/
[10] Vesely also refers to discontinuity of situational orientation and disturbing tendencies in modern culture, such as ethical disorientation, alienation, loss of meaning and nihilism. See Vesely, *Architecture in the Age of Divided Representation*, 56.
[11] Vesely, *Architecture in the Age of Divided Representation*, 57f.

stimuli.[12] In the 1920s and 1930s, the German-American neurologist Kurt Goldstein contributed to the understanding of mental blindness as a psychological concept in presenting an early criticism of the simple behavioristic stimulus-response theory. Goldstein's approach to mental blindness, referred to as *organismic psychology* of brain-mind relationships, applies the figure-ground principle from perception to the whole organism. His holistic theory of the human organism challenged reductivist approaches that dealt with "localized symptoms." He rather claimed that experience is not a product of mind or brain functions alone but always connected with the external world. Based on a fundamental assumption of Gestalt psychologists that an organism must be analyzed in terms of the totality of its whole behavior and its complex interaction with its environment, Goldstein's theory presumes that the whole organism serves as the ground for the individual stimulus forming the figure.[13] In this, the disturbance in human behavior is not only a matter of "brain defect" but must also be understood as a phenomenon occurring in relation to the world. Goldstein was especially concerned with human adjustment to the environment.[14] In a sense, looking back at my recovery path, I describe this as a gradual readjustment to my normal environment much more than a matter of coming to terms with a trauma related to flying, as I did not develop any anxiety in this regard. I simply struggled to cope with everyday sensible impression. Perhaps I was confronted with an intensified sense of presence – experienced in terms of extreme pressure on my senses – or with how intense our sensible, mediated environment really is.

Vesely, however, reminds of how neurology has often been engaged with the "deficit" – the incapacity of neurological function, such as for example the loss of a sense. In evoking the studies on visual agnosia by the neurologist Oliver Sacks, concerned with the impairment of a person's physiological or psychological ability to recognize visually presented objects, Vesely considers a different, more optimistic perspective on the "deficit." In *The Man Who Mistook His Wife For a Hat* (1985), Sacks focuses on the human ability to find a way to make sense of and thrive in an 'altered' world, presenting a somewhat 'optimistic' perspective on brain damage as an alternative to brain damage considered as dysfunction or deficit. Through detailed, narrative interviews with his patients, he shows how people with "deficits" find new

[12] William James, *Principles of Psychology* (1890) (New York City: Dover Publications, 1950).
[13] Shiraev, Eric, *A History of Psychology: A Global Perspective* (Thousand Oaks: SAGE Publications, 2011), 311.
[14] Dalibor Vesely, *Architecture in the Age of Divided Representation. The Question of Creativity in the Shadow of Production* (Cambridge: MIT Press, 2004), 57.

ways of coping with their environment without the damaged function, and often this proves to be a source of originality and creativity.[15] Inspired by Sacks, Vesely, in his philosophical counter of discontinuity of 'disturbance of perception,' points at things we can *learn* from mental blindness: "First, the world as it is given to us in our experience is structured as an articulated series of mediations between the given conditions of our existence and the possibilities of freely developing these conditions through our imagination, language, and thought."[16] In other words, our sense of experience is not fixed; it depends on a *mediation* between what conditions our experience and our perceptual abilities to make sense of and act back on the world. "Second, the mediated unity of the result – a coherent world – is rather fragile and more vulnerable than we are usually prepared to accept. And finally, the unity and coherence of our world are neither given, as ready, nor constituted in our experience only." He continues: "The discovery of the situational structure of the world may help us to distance ourselves from the fictitious, artificially constructed representations of the world as external and only loosely related to the interiority of our existence."[17] The world is a construct of representations and these need maintenance in our perceptual system to be upheld. According to Vesely's theory, through experiencing disturbance in our perception, we might become aware of the instabilities in our seemingly coherent world and realize that our inner experience of being, and the world as it is represented to us, are only aligned insofar as we stay 'blind' or 'undisturbed' to the fact that our experience is a situational structuring of the world. Vesely's point is that experiencing the deficit of a sense, by which we have to find a different way to cope with the world, actually might spur us to think and imagine freely.

My experience of the emergency landing is neither one of visual agnosia nor one of an explicit loss of a sense or a mental or physical function. Rather, a psychical shock triggered a loss of structure of my perceptual system, which caused me to experience a severe intensification of sensible impressions. This led to a sense of discontinuity in my situational experience, by which I became 'out of joint' with the space-time-condition of the world, and lost a sense of future perspective and direction. I spent the most of two years – the first one intensively – trying to understand how my mental state is related to my physical state and

[15] Oliver Sacks, *The Man Who Mistook His Wife for a Hat, and Other Clinical Tales* (Mono: Summit Books, 1985). On visual agnosia, see also Macrae and Trolle, "The defect of function in visual agnosia" (1956); Andrew Kertesz, "Visual agnosia: the dual deficit of perception and recognition" (1979); and A. R. Damasio, "Disorders in Visual Processing" (1985).
[16] Vesely, *Architecture in the Age of Divided Representation*, 58.
[17] Ibid. 58.

'sense of presence,' and how images in my memory – whether experienced or only imagined – directly impact my experience. It was a mystery to me how a shock could cause such a physical impact on my senses, nervous system, energy, concentration, balance, sense of physical presence, my coping with physical and social environments, confidence, world image, and ability to grasp and envision future events and accomplishments (such as writing a Ph.D. dissertation). My research was delayed by almost a year and I had to relocate from Brooklyn to Copenhagen – a city of less stimuli and a better healthcare system. I went through recovery treatment with meditation, mindfulness, spiritual reading, physical exercise, conversation therapy, cognitive psychology, craniosacral therapy, and eye movement desensitization and reprocessing therapy (a form of cognitive behavioral therapy). On the verge of signing up for holistic psychotherapy treatment (two years later and still dealing with post concussional symptoms), I decided to leave the rest to be repaired by time, and replace treatment with philosophy.

My purpose in sharing this personal experience in light of cognitive-psychological theory, is to explain how my aesthetic and philosophical position in this dissertation has been established. The experience of the crash and the long recovery process of regaining a sensible foothold in the world became an unavoidable point of departure for writing this dissertation; it has enhanced my attention to the sensitivity of my sensory apparatus as being deeply intertwined with psychological, environmental, and mediated impressions. This has affected my research inquiry and caused me to reformulate some of my initial research questions, mainly concerning the relation between aesthetics and human experience. I can describe this overall as a movement from questions pertaining to more formal aspects of urban media art (what the art *is* or might *mean*) to questions of deeper concern with human experience with media aesthetic encounters (what the art *does* and what consequences that may have). More than object or construct, I have come to consider the aesthetic experience with the art from a perspective of environmental aesthetics, as composed by intensities of impressions derived from both the artwork and the aesthetic, sensible qualities of the entire environment that the artwork engages. Therefore, my inquiry with urban media art has come to concern media aesthetics in our contemporary urban environments also beyond the art, and how these affect our human experience. Certainly, our ability to cope with mediated impressions in the world is something we have developed, something that is constantly changing, and something that is fragile.

”An American Airlines flight from Sao Paulo, Brazil to New York’s John F. Kennedy Airport made an emergency landing in Norfolk on April 12, 2014.” WAVY.com, April 12, 2014, 8:17 am.

Introduction: A Curatorial Inquiry With Urban Media Art

It is pretty common, from conversations with various psychologists, that people who experience shock end up somehow seeking new truths in their lives. Some give up their jobs to do something completely different, others travel – to physical or euphorical places – to escape what seem meaningless routines of the everyday. For me, the experience of the emergency landing did not make me want to change profession or give up my research, although more than one psychologist tried to prepare me to potentially drop it and to spare myself a life of deep concentration, insecurity and intensive screen-time – which, at a point, were all challenging factors, admittedly. However, it made me redirect my inquiry with regard to my central research topic, *urban media art*. Curatorially involved with this artistic domain prior to initiating my doctoral research, I arrived at this topic curious of how contemporary artists explore aesthetic modalities of media art in urban exhibition contexts, expanding the formats, telos and aesthetic borders of contemporary art. When initiating my research, I was concerned with the *meaning* of this art form, its role, place, evaluation and positioning in the canon of (Western) art history from which my base of knowledge derived. However, after the crash I realized that rather than pursuing 'meaning' in the art, I had to pursue a closer encounter with the media aesthetic, sensible material in the art, with our perceptual encounter with it, and its relations with media aesthetics in our contemporaneity at large.

The origin of the term *inquiry* in the Latin *inquirere*, based on *quaerere*, concerns an effort to 'seek' in order to collect and examine information about something.[18] In a sense, the 'crash' halfway through my doctoral studies sent me on a journey of seeking: first for sensible balance by trying to regain my foothold in the world; and then, in a sense, for *truth*. I somehow initiated a pursuit of knowledge closer to truths of our actual, current and near-future reality than to the 'truths' of artistic discourses, societal imaginations or technological narratives. While reflecting on Marcel Proust's idea of *the Search* in *Proust and Signs* (2000), Gilles Deleuze describes[19] how, by nature, man does not have a desire for truth, or *will-to-*

[18] Unlike the term "enquire," which concerns a general sense of asking, "inquire" involves a formal investigation. See *Oxford English Dictionary,* accessed August 5, 2016, www.en.oxforddictionaries.com/usage/enquire-or-inquire

[19] Deleuze locates the concept of "the Search" in Marcel Proust's seven-volume novel *In Search of Lost Time* (1871–1922).

truth. Deleuze says that only when we encounter a "violent sign" is it in the human nature to seek the meaning of the sign and seek the truth.[20] In this perspective, truth is never the product of a prior disposition but the result of a violence of thought; it depends on an encounter with something that *forces* us to think and to seek the truth.[21] The Search involves a *will to truth*;[22] a will to discover what the urgent issues at stake really are. In translating this philosophical position into academic research, we can consider if our desire to obtain new knowledge concerns truth as a construct we conveniently or dutifully come closer to, or if it reflects a will to truth – to locating the actual urgent issues at stake.

My "violent" experience of the emergency landing might have initiated a will to truth in terms of a 'will' to locate *what is urgent* in relation to contemporary media aesthetic experience, in art and beyond – rather than what might fit into the confines of art history, academia, or our societal context – in relation to contemporary media aesthetic experience, in art and beyond. Following the 'crash,' I experienced how intensely and constantly sensible impressions – significantly media aesthetic impressions – affected my mind-body system. Light became painful, sounds inseparable and overwhelming, and registered movement instantly exhausted me or made me lose my balance. This made me realize how deeply intertwined our system of sensibilities is with the mediated conditions of our present environment; how our sense of presence is constantly influenced by various sources of natural and superficial mediation; and how fragile our perceptual system is in these conditions. I was physically confronted with the intensity of media aesthetic impressions that my sensible system under normal circumstances was adjusted to. From these realizations, the experience of the crash redirected my focus to inquire into what is *urgent* with regard to media aesthetics, but this was not to involve a newfound "critical perspective" as might otherwise have been some institutionalized or discursive obligation to problematize urban media art as an emerging aesthetic phenomenon. Rather, this concerned a form of urgency of a more persistent (and perhaps more honest) inquiry into our perceptual, ontological experience with media aesthetics, which I set forth to inquire *with* the art. This reflects a concern with how conditions of mediation affect our duration – our movement through life –, which I consider, in light of Henri Bergson's philosophy, eventually shape our human, cultural and societal

[20] Gilles Deleuze, *Proust and Signs*, *The Complete Text*, (Minneapolis: University of Minnesota Press, 2000), 16-17.
[21] Ibid., 16.
[22] Ibid.,148.

becoming.

In relation to *the curatorial*,[23] I consider how the perspective on urgency involves how the curatorial ethos seeks to position itself inside contemporary thinking, seeking to respond to profound challenges in our contemporary condition. The practice of curating has developed significantly since its basic definition as "caring for objects," which reflects its Latin root in *curare* (to care) and original meaning as the act of caring for a collection by a museum professional. The idea of 'contemporaneity' has gained prevalence as a fundamental dimension of inquiry in curatorial practice significantly since the 'discursive turn' emerging in the 1990s.[24] This denoted a movement in a range of practices to become engaged with notions of the relational, the discursive, and production of meaning rather than objects: an emphasis on framing and mediation of art and the circulation of ideas around art rather than its production and display. The curator is often the conceptualizing link where things are initiated *before* the world gets to respond to the art, and is involved with establishing the exhibition framework by retrieving funding, framing the theme, and doing so in awareness of the preceding canon of exhibitions, initiatives and publications. The timing of curatorial activities thus precedes audience responses, as well as art critical response and assessment of art-discursive significance. Sometimes it even precedes the direction of artistic thinking when a curator within a pre-determined exhibition framework commissions the artwork. Therefore, curatorial thinking unfolds at the level where practical and ethical decision-making is made and where discourse is negotiated and produced. This is why the questions it pursues matter.

The curatorial engaged with contemporaneity concerns a domain of practice that, beyond the pursuit of the art of providing a context and framework for exhibition and facilitating audience experience of the art, probes to be a response to changing conditions in the world.[25] A number of changes in curatorial practice over time, including the change in *focus* from

[23] The term *the curatorial* is known from the essay "The Curatorial" by curator Maria Lind, published in *Artforum* 203, October 2009. Terry Smith notes how in comparison to curating, "the curatorial" can be considered closer to artistic creativity and engaged public education than traditional curating as caretaking for objects per se. See Terry Smith, *Thinking Contemporary Curating* (New York: Independent Curators International, 2012), 55.

[24] The notion of curating as discourse, theorized by among others Paul O'Neill, involves curators as the key subjects and producers of discourse rather than acting like merely practice figures. Paul O'Neill, *The Culture of Curating and the Curating of Culture(s)* (Cambridge: MIT Press, 2012), 2f.

[25] João Ribas, "What To Do With The Contemporary?" in *Ten Fundamental Questions of Curating*, ed. Jens Hoffmann (Milan: Contrappunto S.R.L., 2011).

object to discourse,[26] a movement in curatorial self-concept denoting a new interdisciplinary hybridity of the figure of the curator from art historian to 'any-arts-practicing-figure,'[27] and recently a change from inner-directed practice to contemporary issues at large,[28] allows us to consider how the curatorial has developed in direction of pursuing inquiries concerned with our contemporaneity and its issues. The notion of 'care' has moved from the art collection to concern an attention and alertness to critical issues, oftentimes of contemporary relevance or perspective, and sometimes with ambitions of affecting change towards these issues through the idioms of art and critical discourse. As suggested by curator João Ribas, today we find that contemporary art and curatorial practice increasingly emerge *in response to changing conditions in the world*, which Ribas links to a shift in how we see the world and understand phenomena in relation (and as response) to it.[29] From this attention to the curatorial as a position inside contemporary thinking, rather than focusing on practical curatorial practice (which is beyond the scope of the dissertation), I formulate a curatorial inquiry as a methodological approach in response to our changing conditions with media aesthetic experience as related to deep-rooted urgencies in society.

In formulating my research methodology from this contemporary curatorial ethos, I am particularly concerned with how we can understand urban media art as a *contemporary* artistic orientation; as a modus with which we can inquire into our contemporaneity – its urgent issues and potential dysfunctions – especially into the broader media aesthetic and technological conditions of our contemporary urban reality. Instigated by my intensified sense-experience following the 'crash,' I examine this at the level of a sense-perceptual experience of media aesthetics, also beyond the art, in the urban context with which urban media art interferes. In this sense, I consider questions concerning 'aesthetics' in urban media art to be contingent with our ontological experiences with media aesthetics in our contemporaneity at large; that is, as both reflective of and potentially able to disrupt these experiences. As contingent with contemporary urban media aesthetics, I consider urban media art as an artistic form, as a sensible construct of *images of urgency* that, situated in the urban

[26] O'Neill, *The Culture of Curating and the Curating of Culture(s)*.
[27] Terry Smith, *Thinking Contemporary Curating*.
[28] Terry Smith critiques contemporary curatorial practice for enabling dialogue that is significantly 'inner-directed' (although it is driven by the desire to communicate with art's publics). Smith, *Thinking Contemporary Curating*, 17. Paul O'Neill also takes note of a 'self-regarding curatorial discourse,' see O'Neill, *The Culture of Curating and the Curating of Culture(s)*, 2.
[29] Ribas, "What To Do With The Contemporary?"

domain, inquire into urgencies relating to sensible experience in our contemporary communicative existence.

Media aesthetic images

The contemporary technologically developed city is developing at the threshold of two critical media aesthetic paradigms. One is *visible* concerning our visually mediated experience: imagery on our urban screens and surfaces; 'images' directly captured by lens-based technologies, such as video and photography, and characterized by a cultural tendency of 'making oneself visible' via instant capturing and posting of our presence in social networks. The visible paradigm has long been evoking our concerns with the visible 'image' as constituting a threat to our cultural wellbeing, significantly in its manifestations as spectacle or surveillance. The other media aesthetic paradigm may be considered *invisible*, which can be associated with data-driven, structural, organizational complexes that we cannot see but that affect our behavioral patterns via sense faculties other than the visual. These invisible images typically operate by gathering data generated by our behaviors and whereabouts, and by measurement of locational and environmental conditions and biometric data via sensors and our mobile devices. With the distinction between these two, mechanisms of power, ideology and control are not only enacted by our direct experience with visible media aesthetics but also using more complex, invisible and unconscious methods by which we engage with media aesthetic culture and everyday life. These invisible sensibilities and impulses affect our sensible experience at microtemporal scales, beyond – or below – visual experience, and sometimes avoiding our consciousness when operating in 'machinic temporalities.' This will be explored further in Chapter 4, "Immersion," leaning on the theories of Mark B. N. Hansen and N. Katherine Hayles. As such, media aesthetics affecting our experience today not merely exist in what we *see*, and their implications are not simply *that* or *how* we see them. While recognizing the prominent position the visual 'image' has possessed in past and contemporary culture, the attention here to the significance and intensification of media aesthetics today is considered as *multisensory*. This indicates a hesitation about a conception of sight as our primary sense, and a consideration of other

senses as equally integral to our perceptual experience.[30]

The conception of 'media aesthetics' here concerns a broad notion of technology-related expressions of processes, functionalities and appearances, reflecting 'media' in terms of processes of mediation, and 'aesthetics' in terms of multisensory expressions and their relationships to human sense perception and experience of intensity. In consideration of how we *experience* media aesthetics, I use the term *images*. My attention to the image as an expanded mode of sense-impression initially emerged from personal curatorial experience with urban media art. When I initiated my doctoral studies, I was based in New York City where I worked together with curator Nina Colosi on her exhibition initiative, the *Streaming Museum*. Emerging from a curatorial orientation towards using urban screens for the presentation of art (which I will attend to in more detail in my description of urban media art as *contingent* in Chapter 1, "The Art of Our Times") this museum's structure presents media-based art, mostly video, in public spaces through a network of collaborating urban screens, galleries, and public arts organizations all over the world. The museum's programs bring 'images' of media art, mostly in the format of video, to audiences and passersby in public spaces – replacing advertisement on existing screens or as temporary installations. During doctoral research, my curatorial engagements expanded from initially being concerned with video art in public spaces to be concerned with more technologically complex installations of interactive, responsive artworks presented on urban LED galleries, both in the format of urban screens and 'gallery façades' covering entire buildings, or taking up urban locations in more environmental, multidimensional and 'living' (interactive) ways.

During my involvement with the SESI SP Digital Art Gallery in São Paulo, Brazil, I realized how media aesthetic art in the urban domain is much more than its concept, artistic intent, or 'image' in terms of its visual display area. The gallery was founded in 2012 by Marília Pasculli and João Frugiuele with the purpose of establishing a new channel for digital public art and cultural dissemination as an integrated part of the city, merging architecture, art and media through various exhibitions and events.[31] During my first visit to São Paulo in

[30] Sight has been problematized as the "primary sense" by among others Martin Jay in *Downcast Eyes: The Denigration of Vision in Twentieth Century French Thought* (Berkeley and Los Angeles: University of California Press, 1993).

[31] I describe the SESI SP Digital Art Gallery in more detail in the article "Situations of presence: reclaiming public space in the urban digital gallery," in *Proceedings of the 2nd Media Architecture Biennale Conference: World Cities*, eds. Martin Brynskov, Peter Dalsgaard, Ava Fatah, S. B. Pold, Marcus Foth (ACM: New York, 2014).

spring 2013, on the occasion of the exhibition entitled *Germany-Brazil,* presented on the newly inaugurated three-sided LED façade, I observed how audiences on Paulista Avenue – some who were random passersby and others who had come intentionally for this show – took up the pavement and plaza across the street from the gallery, and lined up to engage with the interactive artworks which allowed for brief moments of human interference with the media aesthetics on the façade. The gallery façade, with its fairly low resolution, folded around the building of the Social Services for Industry and the Federation of Industries in the State of São Paulo (known as the SESI/FIESP building), and transmitted bright, colorful and intense images that changed the appearance and atmosphere of the entire area surrounding the building, visible from a distance in both directions of Paulista Avenue. The art installations which lasted between five and fifteen minutes on the gallery façade, were not just videos taken out of screens in galleries and placed on a larger, public display. They were developed for this mode of installation and with this eclectic, curious audience in mind, attracted through intuitive invitations for audience engagement and colorful, high-contrast aesthetics. These artworks did not have to answer to any art history or artistic discourse declaring what an artwork of this size, shape and nature is supposed to be or look like; it was all about experimentation, curiosity, and a high degree of playfulness. They were commissioned for a curatorial program emphasizing the integration of the art in the social, public and urban domain, without dictating any rules or guidelines for what this might mean or how this might be done.

During my following curatorial involvement with the SESI SP Digital Art Gallery as co-curator of two festivals and various minor exhibitions, I gradually arrived at an understanding of the artwork as 'happening' – an expression common to artistic discourse and coined by Alan Karprov in 1957 and indicating an event or situation occurring as art, which depends on the participation of an audience. The 'art' was not merely in the 'image' playing out on the display area of the building, but rather in its mode of affecting reactions and behavior in the context of its presence. In this sense, as much as in the work on the gallery façade, the art is in what happens in and among people in front of the building, stimulated by the media aesthetic sensibilities an installation introduces to this urban site. My conception of the art evolved from considering the exchange between an 'image' – for example a video art piece projected on a wall – and the surroundings of its installation, to being concerned as much with how forms of aesthetic impressions and sensibilities affect the environment, which is all part of the

'experience frames' of the art. I developed an understanding of the installation as a facilitator of situations, bringing people together in new ways; a modifier of behavior, meaning, experience, and consciousness in the urban context. From this perspective, rather than in the 'frame,' the art is in the *images of sensibilities* that engage the environment; it is engaged with a re-distribution of sensibilities in the environment, which it engages as a form of temporal, media aesthetic interference. This change in conception entails a form of resolution of the visual art 'image' into multisensory images distributed from the installation to interfere with the environment's materialities and temporalities, affecting social and cultural spheres, and eventually participating in grander urban and also global ecologies, (examined in more detail in Chapter 6, "On the Contemporaneity of Urban Media Art" with reference to Jacques Rancière's attention to the *distribution of sensibility*). Media aesthetics can therefore be considered more broadly in terms of images of sensible material that actively participate in our urban cultural sphere. My philosophical reflections behind this will be introduced with a basis in Henri Bergson's idea of image-perception in relation to memory in Chapter 4, "Immersion."

Bergson's process-philosophical perspective, which I engage based on his work *Matter and Memory* (1896), helps us to grasp the complex experience structures of sensible impressions in mediation today and offer understanding of how they affect the ways in which we and our environments change. *Matter and Memory* was written in reaction to a scientific tendency at the time of his writing of reducing spirit to matter.[32] Opposed to these ideas, Bergson considered *memory* not a material part of the nervous system but rather to be of a spiritual nature. Defending an anti-reductionist position, he considered memory to be of a deeply spiritual nature; the brain serving the need of orienting present action by 'inserting' – or selecting – relevant memories. Memory, in Bergson's philosophy, is the intersection of mind and matter.[33] Bergson also criticized how philosophers had overlooked 'impersonal perception' and taken perception as a whole for a kind of interior or subjective vision.[34] In my use of Bergson's philosophy on memory I am interested in his conception of the dynamic memory function as a faculty for change engaged in perceptual experience.

In the expanded conception of images as multi-perceptual sensibilities, we recognize an

[32] Bergson particularly reacted against Théodule Armand Ribot's *Diseases of Memory* (New York: D. Appleton and Company, 1882).
[33] Bergson, *Matter and Memory*, xii.
[34] Bergson, *Matter and Memory*, 25.

ontological change in the 'image' brought about by digitization; how the digital 'image' impacts our modes of experiencing the world through increasingly more sophisticated relations between visible and invisible – and multidimensional – sensibility impressions. From once depicting what the world was, today our contemporary 'images' are increasingly becoming involved with expanding, orienting and building it. No longer flat or framed like a photograph, the current evolution of the digital 'image' have become 'operative'; run by computational processes, and extending its sensible dimension beyond just three-dimensional space. As elaborated on in Chapter 1, "The Art of Our Times," the digital 'image' affects our human orientation and societal organization in operative, computational modes and increasingly aligns with how we understand and imagine the world, its processes of development, and our sense of self-reference within it. In *Imagery in the 21st Century* (2006), Oliver Grau notes how we are currently witnessing a *spatial* transformation of the 'image,' which, computer-generated and virtual, has come to represent lifelike, visually sensible spheres and seems capable of changing autonomously.[35] He writes: "Interactive media are changing our perception and concept of the image in the direction of a space for multisensory experience with a temporal dimension open to evolutionary change and gaming. Images appear whose condition is defined by the functions of display and interface; images serve as projection surfaces for interrelated information; images enable to move us telematically in immersive scenarios; and reversely images allow us to have an affect at a distance. Differences between outside and inside, far and near, physicality and virtuality, image and body, all shrink – this is how digital images more and more seem to act and function."[36] In this sense, we can consider how the 'image' has expanded with digital technology and media aesthetics, finding new modalities between the visual, the sensible and the ontological. From the perspective of urban media art's contemporary qualities as contingent with significant technological and communicative developments at large, the evolution of the 'image' with digital technology into new ontological phenomena is reflected in the art's format and how it interferes with the urban context *as* ontological phenomena.

The conception of the image as an expanded, sensible concept we find in the writings of, among others, Jacques Rancière in his account of distribution of sensibility, in Maurizio Lazzarato's notion of the image as machine sign, in Giuliana Bruno's account of image as

[35] Oliver Grau, "Media Art's Challenge to Our Societies," in *Imagery in the 21st Century* (Cambridge: MIT Press, 2011), 350.
[36] Ibid.

surface encounter, and in W. J. T Mitchell's approach to the image in visual media as taxonomy of senses and signs – all of whom are discussed in the dissertation. We also find an account of the image as a sensible concept in Henri Bergson's conception of perception-images as bound to dynamic memory, as something in between impression and perception. Leaning on his philosophical framework for 'experience,' I will consider how images affect us as sensible material, rather than considering how the 'image' exists as a delimited visual field (which I refer to as 'image'). The account of media aesthetic images here involves a consideration of these as multisensory, environmental, operative, processual and, as I will elaborate with Felix Guattari and Mauricio Lazzarato, as 'a-signifying' in the sense of connecting our human perceptual system to the functions of machines. This is elaborated on in Chapter 4: *Immersion*.

Presence and perceptual experience

This dissertation deals with what is considered to be an aesthetic symptom of our contemporaneity: the media aesthetification of experience today that significantly characterizes urban contexts and environments of technologically developed cities and human life worlds. We encounter this as our urban environments are developed with intelligent digital upgrades and implementations of sensors and other smart systems, and augmented with intelligent lighting schemes and moving 'images' on urban displays, screens and façades that respond to our presence with visuals, sounds and various algorithmic procedures. Media aesthetic interfaces of 'virtual spaces,' such as online platforms and mobile applications, accompany our activities in physical space and are designed to connect, inform or entertain us in continuously new ways, integrating with our physical environments while increasingly dissolving our distinction between real and virtual. With mobile devices in our pockets – with which our whereabouts are conveniently assisted with GPS navigation and augmented with virtual information, connecting us to any networked activity – we have few moments left in which our awareness, behavior and actions are not somehow tied in with or *immersed* in media aesthetic experience. Our sensible experience is almost always somehow intensified by mediation and by our awareness that we *can* connect, communicate, link up, search or share our life experience at any moment.

That our contemporary conditions of mediation with media aesthetics involve a particular orientation of human experience, has been a concern of many theorists whose perspectives are

taken into consideration in this dissertation. Among these are Mauricio Lazzarato's concern with how our subjectivity has become "machinic";[37] Jonathan Crary's attention to how the speed of our digitized, 24/7 condition of being deprives us of our consciousness;[38] N. Katherine Hayles' examination of the evolution of our technogenesis being affected especially by hyper and machinic reading and unconscious experience;[39] and Mark B. N. Hansen's concern with experience generated by an environmental sensibility with twenty-first century media.[40] Our contemporary technological forms continuously orient our experience. Consider, for example, the recent popularity of virtual and augmented reality in games and journalism (and soon, social media), and developments in photography that enable our personal moments to be captured as omnidirectional recordings. These provide new perceptual schemes and offer new modes of self-reference in experience. The urgency in this concerns how media aesthetic experience ties in with the evolution of our sense faculties. Pointing at this, Oliver Grau reminds us that: "…how people see and what they see are not simply psychological questions; they are complex cultural processes that are influenced by many and various social and media technological innovations."[41] Changes in media aesthetic imperatives and the perceptual experiences they solicit relate to changes in our human-perceptual system, both culturally and biologically, as we adapt to sensible temporalities and aesthetic intensities introduced with computational machines. This I consider in view of Gilbert Simondon's notion of *individuation* and Joseph Stiegler's conception of *technogenesis* in Chapter 4, "Immersion."[42] The dissertation significantly develops through an examination of how media aesthetic, perceptual experience presents us with new ontological modes of feeling *present*, which I examine with reference to Hans Ulrich Gumbrecht's theory on presence in Chapter 2, "Intensity."

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[37] Mauricio Lazzarato, *Signs and Machines, Capitalism and the production of subjectivity* (Los Angeles: Semiotext(e), 2014).

[38] Jonathan Crary, *24/7* (London and New York: Verso, 2014).

[39] N. Katherine Hayles, *How We Think*: *Digital Media and Contemporary Technogenesis* (Chicago and London: The University of Chicago Press, 2012).

[40] The term "twenty-first century media" has been used by Mark Hansen in *Feed-Forward* to describe media that are only *indirectly* correlated to human modes of experience, or media that involve technical operations to which humans lack any direct access, encompassing everything from social media and data-mining passive sensing to environmental micro-sensors. Mark B. N. Hansen, *Feed-Forward: On the future of twenty-first century media* (Chicago: The University of Chicago Press, 2015).

[41] Oliver Grau, *Media Art Histories* (Cambridge: Media Art Histories, 2010), 9.

[42] Gilbert Simondon, "The Position Of The Problem Of Ontogenesis," *Parrhesia* 7 (2009): 4-16. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Meridian: Crossing Aesthetics, no. 1, 1998).

Certainly, today we are 'present' in many more ways and in many more temporalities simultaneously than before digital media, which means that images of sensible, perceptual material affect us in increasingly more sophisticated – and complicated – ways. This is considered in relation to a contemporary cultural mode of *duration*, referring to a movement through time that leads to change. With help from Henri Bergson's critique of "spatialized time" from the late nineteenth/early twentieth century, this I consider in terms of a condition of 'spatialized temporalities.' Bergson problematizes the sense of implicit logic that emerged with the scientific breakthroughs of his time, such as Einstein's theory of relativity that became a founding principle of physics and science. This theory reflected contemporary symptoms of quantification, synchronization of time and homogenization that translated into philosophy, modernist urban planning schemes, and synchronous organization as perceptual confinement of everyday life.

Today, as computational systems have come to organize and quantify almost every dimension of our contemporary lives, we can advantageously grant Bergson's philosophy new relevance as a framework for grasping how human perceptual experience is limited in the given conditions of experience that are reflective of the contemporary dominant logics of society. His philosophy can help us to approach the urgencies of media aesthetic experience in a contemporary perspective, with emphasis on what conditions this experience rather than how we 'make sense of it.' With regards to today's context, I am particularly concerned with how our perceptual experience is dispersed across many temporalities through which we adjust to various 'mechanizations' of temporal experience frames with increasing intensities and intelligent operations. This condition has emerged with digital devices that synchronize our activities and cultural initiatives; that time our behavior with events and activities in the world; enable us to be in constant contact with multiple time-spaces simultaneously; and that help us with remembering beyond our human capacity via algorithms and endless archives supported by the Internet – reflective of a general rationalization of society and a neoliberal cultural condition that I characterize by the term *emergency culture* in Chapter 5: "Media Aesthetic Urgencies: Spectacularization of Behavior." This condition, I suggest, entails how, through media aesthetic, temporally dispersed 'experience frames' of our contemporary communicative condition, we adapt to still faster operational and increasingly intensified modes of experience voluntarily, in pursuit of gaining a sense of presence in our fragmented existence.

Presence may be considered an ontological mode concerning a subjective sensation of being present in a certain environment: the extent to which the individual *experiences* an environment as that in which one is consciously, emotionally and/or sensorially present. Our *sense of presence* is not necessarily reflective of what is *actually* present in that environment. In relation to technological mediation, it rather reflects how the human senses and complex perceptual processes mediate subjective experience of the physical world. A 'sense of presence,' as this term is defined in relation to technological mediation, occurs when a person perceives an experience as if only mediated by human senses and perceptual processes while part or all of the experience is also mediated by technology. 'Presence' in this respect concerns a perceptual condition in which part or all of an individual's perception fails to accurately acknowledge the role of technology in the experience, even though part or all of the experience is generated by and/or filtered through human-made technology.[43] It involves both technologies that directly and indirectly provide stimuli to the human neural processing system, as I will elaborate on in Chapter 4, "Immersion."

In noting a recent attention to the materiality of the presence of things that are not tangible as physical substance, Hans Ulrich Gumbrecht suggests in *Production of Presence: What Meaning Cannot Convey* that presence phenomena appear in modes of "presence effects" that appeal to the senses and spur certain impressions to seem present to us and tangible to our bodies.[44] Gumbrecht's theory on presence departs from theoretical considerations on the need for a new epistemology to deal with "materialities of communication" that 'touch' people through effects of intensity, informed by Friedrich Kittler's discovery of a new *sensibilité intellectuelle* for all kinds of materialities;[45] and by Heidegger's concept of "Being," indicating that knowledge revealed or unconcealed can be substance that appears and presents itself to us without requiring interpretation as its transformation into meaning.[46]

Gumbrecht particularly considers how the humanities up until the 1990s had been concerned with the dominance of meaning-related questions at the expense of an

[43] "Presence Defined," *International Society for Presence Research*, accessed November 20, 2016 www.ispr.info/about-presence-2/about-presence/
[44] Hans Ulrich Gumbrecht, *Production of Presence: What meaning cannot convey* (Stanford: Stanford University Press, 2004), 17.
[45] Ibid., xv.
[46] Ibid., 81.

abandonment of non-meaning-related types of phenomena and questions.[47] He notes how, since Aristotle, the dominant research paradigm in Western philosophy has been characterized by substance metaphysics, an attitude, both in academia and everyday life, that gives higher value to the *meaning* of phenomena than to their material *presence*.[48] The epistemological structure of the subject/object paradigm in Western philosophy, between the intellectual observer and the material surface of the world to be observed and interpreted as a container of meaning, and in which the Cartesian *cogito* made the ontology of human existence depend exclusively on 'the movements of the human mind,'[49] holds that we can come to know a world that exists, but which is immediately undetected by our sense perceptions and unexplained by our intellect.[50] We find, however, across contemporary visual culture, academia and the practical arts, a growing attention towards presence and corporeality of perception, which is now commonly referred to in terms of *affective* experience. Recent attention has been given to the 'affective' in (Western) theoretical history, as concerning a kind of interface between the domain of digital information and embodied human experience (Mark Hansen 2003), as the "operational present" of sensibility through which we encounter "worldly sensibility" (Mark Hansen 2015), or as produced through mimesis by various media theorists, for example, in the experience of television, film, and the Internet, in terms of how our world is saturated with affects (Massumi 2002), or in attention to emotional expression in mechanisms of computing (Rosalind Picard 2003). Gumbrecht suggests that the recent orientation towards sensual modes of *presence*, which we may characterize in orientations towards affection and embodiment, reflect a growing fascination with materialist thought and re-discovery of world appropriation through the human body and the senses. It is this attention, he argues, that has been neglected in Western theory building. His theory of presence entails an attempt to go beyond a metaphysical epistemology and the exclusively meaning-related relationship to the world.[51]

Like Gumbrecht, my change in focus from *meaning* of the art to *sensible experience* with the art as a locus for considering urban media art as *contemporary*, and my attention to presence as significant to media aesthetic conditions of experience, involves a break with the

[47] Ibid., 16.
[48] Ibid., xiv.
[49] Ibid., 17.
[50] Ibid., 25.
[51] Ibid., 77.

hermeneutic tradition and an opening up to different modes of knowledge, as I will address later in this introduction. However, like Gumbrecht, there is no attempt here to disregard 'meaning' for 'presence' or affiliate this inquiry to a strictly anti-hermeneutic perspective. Gumbrecht notes that we need to conceive of aesthetic experience as an oscillation and sometimes interference between both 'presence' and 'meaning.'[52] I will however grant special attention to the dimension of presence concerning sense-experience as conditional to how we arrive at meaning in presence with the art.

In absence of literature

As artistic orientation, *urban media art* implies installations of art of media aesthetic material situated in the urban, public domain where it interferes with current issues and sensible conditions of our contemporaneity and the everyday lives of audiences and passersby. The artistic domain closest to urban media art might be that of *media art*, also referred to as 'new media art' or 'digital art.' The topic of media art in a white cube exhibition context – its ontologies, historical foundations, canons and genealogies – has been fairly well examined.[53] The same cannot be said for urban media art, as only a few literary sources encompass the urban dimension of urban media art and its preceding initiatives of video and media art in urban installation contexts. Among these we find a number of books on "expanded cinema,"[54]

[52] Ibid., 2.

[53] See for example Oliver Grau, *Media Art Histories* (Cambridge: MIT Press, 2007); Christiane Paul, *Digital Art* (London and New York: Thames and Hudson, 2003); Rachel Greene, *Internet Art* (London and New York: Thames & Hudson, 2004); Judy Malloy, *Women, Art and Technology* (Cambridge: MIT Press, 2003); Rudolf Frieling and Dieter Daniels, *Media Art Net 1: Survey of Media Art* (Vienna and New York: Springer, 2004) and *Media Art Net 2: Key Topics* (Vienna and New York: Springer, 2005); Mark Hansen, *New Philosophy for New Media* (Cambridge: MIT Press, 2004); Bruce Wands, *Art of the Digital Age* (London and New York: Thames and Hudson, 2007); Mark Tribe, Reena Jana and Uta Grosenick, *New Media Art* (Cologne: Taaschen, 2006); Margot Lovejoy, *Digital Currents: Art in the Electronic Age* (London: Routledge, 2004); Roberto Simanowski, *Digital Art and Meaning: Reading Kinetic Poetry, Text Machines, Mapping Art, and Interactive Installations (Electronic Mediations)* (Minneapolis: University of Minnesota Press, 2008); Caroline A. Jones, *Sensorium: Embodied Experience, Technology, and Contemporary Art* (Cambridge: MIT Press, 2006); Edward A. Shanken, *Art and Electronic Media* (London: Phaidon, 2014); Katja Kwastek, *Aesthetics of Interaction in Digital Art* (Cambridge: MIT Press, 2013); Francis T. Marchese, *Media Art and the Urban Environment: Engendering Public Engagement with Urban Ecology (Future City)* (Vienna and New York: Springer, 2015); Martin Rieser, *The Mobile Audience: Media Art and Mobile Technologies (Architecture Technology Culture)* (Amsterdam: Rodopi, 2011).

[54] The term "expanded cinema" was popularized in Neil Youngblood, *Expanded Cinema* (New York: E. P. Dutton & Co., Inc., 1970); A. L. Rees, *Expanded Cinema: Art, Performance and Film* (London: Tate, 2011); Gloria Sutton, *The Experience Machine: Stan VanDerBeek's Movie-Drome and Expanded Cinema* (Cambridge: MIT Press, 2015);

describing multi-screen and mixed media installations built around one or more film projectors. Expanded cinema emerged as an artistic orientation at a seminal moment in the avant-garde when the moving image found new forms beyond cinema and the white cube, including new urban contexts for installations. Catrien Schreuder's *Pixels and Places: Video Art in Public Space* (2010) has contributed to the canon of expanded cinema in the urban domain, in which she explores the central thesis of what video art can offer to public space and, vice versa, what public space can offer to video art, speaking to a pragmatic discourse that has accompanied media art's expansion to public space.[55] However, Schreuder stays with a rather formal and discursive approach to the art and does not include artworks of interactive, audio or more mixed-media modalities in her examination.

While not all practitioners and theoretical contributors in this domain would name the aesthetic orientation I refer to here as 'urban media art' as such, we find useful perspectives in books on related topics, for example on urban media culture,[56] urban screens,[57] the media city,[58] media architecture,[59] or in publications on individual artists' practices with media art in the urban context. Perspectives from these related and overlapping domains have helped me with contextualizing urban media art in relation to related domains and gain an understanding of its broad interdisciplinary anchoring and diverse field of inclusion and presentation. My understanding of these interdisciplinary, or, as I will suggest in Chapter 1, "The Art of Our Times," *contingent* conditions of urban media art developed not only from literature but also

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Andrew V. Uroskie, *Between the Black Box and the White Cube: Expanded Cinema and Postwar Art* (Chicago: University of Chicago Press, 2014);

[55] Catrien Schreuder, *Pixels and Places: Video Art in Public Space* (Rotterdam: NAI Publishers, 2010).

[56] See Susa Pop, Gernot Tscherteu, Ursula Stadler and Mirjam Struppek's *Urban Media Cultures* (Stuttgard: avedition GmbH, 2011); Emma Barker, *Contemporary Cultures of Display* (New Haven: Yale University Press, 1999).

[57] Mirjam Struppek has published a number of articles on urban screens, available at www.urbanscreens.org/readings.html. In addition to the extensive writing on the topic of urban screens by Mirjam Struppek, see Lev Manovich, "The Poetics of Urban Media Surfaces," *Urban Screens: Discovering the potential of outdoor screens for urban society*, *First Monday* 4 (2006), www.firstmonday.org/article/view/1545/1460; Scott McQuire, Meredith Martin and Sabine Niederer, *The Urban Screens Reader* (Amsterdam: Institute of Network Cultures, 2010); Tanya Toft, "Screen Practice in Curating: The Medium Paradox," *Screen City Journal* 4 (2014).

[58] Scott McQuire, *The Media City* (London: SAGE Publications, 2008); Frank Eckardt, *Media and Urban Space: Understanding, Investigating and Approaching Mediacity* (Berlin: Frank & Timme, 2008); Andreas Broeckmann, "Public Spheres and Network Interfaces," in *The Cybercities Reader*, ed. Stephen Graham (New York: Routledge, 2004), 378-384.

[59] See M. Hank Haeusler, Martin Tomitsch, and Gernot Tscherteu, *New Media Facades: A Global Survey* (Stuttgard: avedition, 2013); M. Hank Hausler, *Media Facades – History, Technology, Content* (Stuttgart: av edition, 2009); as well as a number of articles in proceedings for the Media Architecture Biennale (Linz 2012, Aarhus 2014, Sydney 2016).

from actively attending conferences, symposia and panels, which have provided the domain of urban media art with space, audience and peers for development and sharing of knowledge, as well as a forum for sharing and discussing this research.[60] In 2016, I co-edited the publication *What Urban Media Art Can Do: Why When Where & How* together with Susa Pop, Nerea Calvillo and Mark Wright. The first book, to my knowledge, to define this artistic domain as such, it presents an account of 'urban media art' which seeks to lay out the conditions of the art in the format of a handbook with illustrated case studies contextualized with theoretical essays.[61] This publication acknowledges the interdisciplinary and contingent relations that urban media art engages and examines, which is continued by this dissertation – although here with emphasis on the art's contingency with sensible tendencies in urban media aesthetics – namely intensity, intelligence and immersion – rather than its interdisciplinary contextualization. Another position I formulate in the book's introduction and elaborate on as a premise in my approach to urban media art in this dissertation, is the attention to what the art *does* in the urban context, rather than what the art *is* or might be interpreted to mean. This conception derives from the art's emergence from (new) media art and as theoretically established by description of its behaviors, such as interactivity, connectivity, and computability;[62] as process-oriented, time-based, dynamic, real-time, participatory, collaborative, performative, modular, variable, generative, and customizable;[63] as distributed in nature, networked in existence, and combining physical and virtual elements.[64] From the perspective of urban media art, these characteristics are contributing factors to the physical manifestations the art takes and how it 'behaves' in urban space.

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[60] These forums, at which I have participated and presented my research, and which make discursive contexts in which I have developed my thinking and approach to urban media art as artistic domain, involve: Media Architecture Summit 2016 Toronto; International Symposium on Electronic Art 2016 in Hong Kong; Live The City Symposium 2016 in Bangkok; Human Vibrations 2016 in Hong Kong; Media Architecture Biennale 2014 in Aarhus and Media Architecture Biennale 2016 in Sydney; Connecting Cities Symposium 2016 in Brussels; City Link 2015: Reimagining The City 2015 in Copenhagen; Post Screen Festival 2014 in Lisbon; Transmediale Vorspiel Program at Public Art Lab 2014 in Berlin; Leaders in Software and Art Salon 2013 in New York City; Digitally Disturbed / Nordic Outbreak Symposium at Danish Architecture Center 2013 in Copenhagen; Screen City Festival 2013 in Stavanger; as well as a number of smaller presentations and exchanges at art galleries and museum, as well as presentations in public programs relating to my own exhibitions.

[61] The book is developed on the basis of the knowledge and capacity of the Connecting Cities Network, initiated by Susa Pop and produced by Public Art Lab in Berlin.

[62] Steve Dietz, "Why Have There Been No Great Net Artists?" Neme's official Web Site, accessed May 1, 2015, www.neme.org/82/why-have-there-been-no-great-net-artists

[63] Christiane Paul, "Introduction," New Media in the White Cube and Beyond: Curatorial Models for Digital Art (Berkeley: University of California Press, 2008), 4.

[64] Beryl Graham and Sarah Cook, *Rethinking Curating: Art After New Media* (Cambridge: MIT Press, 2008), 69.

We also find perspectives on urban media art in publications concerned more broadly with various aspects of urban media aesthetics. For example, in *The Media City* (2008) Scott McQuire examines the impact of electronic lighting on the experience of urban space, and emphasizes the potential in media art to act *relationally* and impact human social relationships.[65] In Andreas Broeckmann's essay "Public Spheres and Network Interfaces" (2004), he designates artistic urban interfaces the role of 'social interfacing,' as articulating physical spaces with networked communication spaces to connect different publics and urban "layers."[66] In *Feed-Forward* (2015), Mark Hansen briefly considers how contemporary media artworks can help us to gain consciousness about how media shape the sensibility from which our behavior emerges, as installations that mediate microtemporal sensible qualities.[67] These references to urban media art share the idea that in these recent art forms, which employ contemporary media aesthetics and which we encounter in the midst of our reality in urban public space, we find examples of alternative interfaces and modalities of *mediation* – emerging from the artists' attention to human agency, connectivity and well-being, rather than from corporate incitements. In these references to urban media art I have found inspiration to consider a *pharmakological* potential in the art, as I elaborate on in Chapter 6: "On the Contemporaneity of Urban Media Art," and also to consider the art's aesthetic inquiry to address real world urgencies of our communicative existence rather than answering to art history or artistic discourse. This is, beyond dogmas of, for example, critical resistance, social aesthetics, anti-technology thrusts, hypermediality or similar ideas for what art "should (or should not) do" – according to artistic discourse and positions of criticism and cultural critique in echoes of the avant-garde.[68]

While a few publications have paid attention to curatorial practice with media art,[69] this does not go for curatorial practice with urban media art. Besides documentation material

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[65] Scott McQuire, "Part 2: Public Space: Streets, Lights and Screens," *The Media City* (London: SAGE Publications, 2008), 113-158.

[66] Andreas Broeckmann, "Public Spheres and Network Interfaces," *The Cybercities Reader* (New York: Routledge, 2004), 378-381.

[67] Mark B. N. Hansen, *Feed-Forward: On The Future Of Twenty-First-Century Media* (Chicago: University of Chicago Press, 2015).

[68] For different positions to 'inhabiting the critical,,' see Irit Rogoff, "From Criticism to Critique to Criticality" (2003), accessed February 17, 2015.

[69] See Gloria Sutton, "Exhibiting New Media Art," *Rhizome Digest* 5 (2004); Christiane Paul, *New Media Art in the White Cube and Beyond, Curatorial Models for Digital Art* (Berkeley: University of California Press, 2008); Sarah Cook and Beryl Graham, "Curating New Media Art: Models and Challenges," in *New Media Art: Practice and Context in the UK 1994-2004* (London: Arts Council of England, 2004), 84-91; Sarah Cook, "Toward a

about arts events and exhibitions, documenting the intentions, theories, discourses, ethics, and reflections involved with developing a framework that facilitates the conditions for the art to freely explore and expand aesthetics in various relations to our world, as well as consideration on interdisciplinary dimensions and everything else that goes into curatorial practice with urban media art, curatorial practice has only been scarcely written about.[70] When the journey of my doctoral studies was initiated in the Fall of 2012, the few theoretical and textual sources available were not sufficient to help develop a theoretical and knowledge foundation from which this research could be initiated. I therefore conducted a number of in-person and video call interviews with curators, artists, theorists, architects, designers, cultural planners and artistic producers identified as 'curatorial thinkers' via initial research and via recommendations from my network.[71] They were selected based on how they have been influential in the recent shaping of the domain of urban media art[72] and, although not everyone refers to herself or himself as 'curator,' they share a common practice of working with media art in the urban context. These interviews have been used as base knowledge for this research, for mapping issues, positions, ideas and aesthetic concerns that have informed the emergence of the domain of urban media art. The interviews act as a form of knowledge foundation rather than as formal empirical research. Quotes form the interviews appear throughout the dissertation in a manner that reflects how they have guided this research, as ideas, discussions, experiences and positions, by which they have been used as a research tool – as an alternative to the books and articles not yet written – revealing curatorial thinking in the domain of urban media art.

Theory of the Practice of Curating New Media Art," *Beyond the Box: Diverging Curatorial Practices*, ed. Melanie Townsend (Banff: Banff Centre Press, 2003), 169-82; Sarah Cook and Beryl Graham, *Rethinking Curating: Art After New Media* by Beryl Graham and Sarah Cook (Cambridge: MIT Press, 2010). Sarah Cook, *A Brief History of Curating Media Art: Conversations With Curators* (Berlin: The Green Box, 2011).

[70] Only scarce attention has been paid to 'alternative exhibition venues' including, for example, Graham and Cook's attention to festivals, arts agencies and public art, labs, publishing and broadcast in a chapter in *Rethinking Curating: Art After New Media*. Graham and Cook, "Other Modes of Curating," *Rethinking Curating*, 215. See also Dave Colangelo, "Curating Massive Media," *Journal of Curatorial Studies*, Vol. 4, No. 2 (2015): 238-262; Mark Wright, "Collective Curatorial Statement," in *What Urban Media Art Can Do: Why When Where & How*, eds. Susa Pop, Tanya Toft, Nerea Calvillo, and Mark Wright (Stuttgart: av edition, 2016).

[71] The interviews are available on www.urbanmediaaesthetics.org

[72] The interviews also served as research material for my final curatorial project in completion of the Curatorlab program at Konstfack University in Stockholm, which I completed during the first year of my doctoral studies.

Practice-based methodology

By implicating curatorial engagements in this academic research, my approach to knowing and understanding my subject is practice-based. This has involved both thinking *and* doing, sometimes thinking based on doing, and thus a great deal of epistemological reflection. My methodology reflects the recent attention to artistic research and practice in academia, significantly in the humanities. This emerged with an expanded conception of 'practice' in academia in the early 1990s, when discursive practices ventured into the humanities, affected by the import of the social sciences and based on conceptualist and 'contextualist' strategies formed in the 1970s.[73] With this developed an account of 'practice' concerned with how knowledge and experience are constituted in and through practices, which thereby treats the field of practices as the place to study the nature and transformation of subject matter. In Europe, the focus on artistic research began as a concern with epistemological experimentation in the humanities[74] but was soon institutionalized with the European reform of education known as the Bologna Accord.[75] The merging of methodologies from the practical arts and academia fertilized an expanded conceptual terrain for new methodological inquiries. In artistic research, creative practice is central to the research process itself, and the creative process of research forms the pathway through which new insights, understandings, things and knowledge come into being. Henk Borgdorff, professor with specialization in research in the arts, defines artistic research: "Embedded in artistic and academic contexts, artistic research seeks to convey and communicate content that is enclosed in aesthetic experiences, enacted in creative practices and embodied in artistic products."[76] Artistic

[73] Mikkel Bøgh and Frederik Tygstrup, "Working the Interface: New Encounters between Art and Academia," in *Investigacao em Arte e Design: Fendas no Métode e na Criacao = Research in art and design: cracks in method and creation*, ed. José Quaresma (Lisboa: Edicao Cieba, 2011), 105.

[74] The debate on "artistic research" started in England with Christopher Frayling's paper "Research in Art and Design," in *Royal College of Art Research Papers* 1 (1) (1993), and in Holland with the *Artistic Research* volume in the Lier & Boog Series 18, co-edited by Henk Slager and Annette W. Balkema (Amsterdam and New York: Lier & Book, 2004).

[75] The Bologna Accord was launched by the Joint Declaration of European Ministers of Higher Education in Bologna and by university leaders of 29 countries in 1999. It was introduced in the first decade of the 2000s as an effort to improve transparency, comparability and quality between higher education systems in Europe, to be achieved by standardizing structure and evaluation criteria by encouraging "academization" of institutions of higher arts education. For various critiques of the consequences of the Bologna Process in arts and education, see "Editorial," *A Journal of Ideas, Contexts and Methods* 2 (2) (2009): www.artandresearch.org.uk/v2n2/v2n2editorial.html

[76] Henk Borgdorff, "The Production of Knowledge in Artistic Research," in *The Conflict of the Faculties: Perspectives on Artistic Research and Academia* (Leiden: Leiden University Press, 2012), 45.

research encourages the researcher to come into closer contact with the empirical world than what is common to academic research practices of analysis and interpretation. Rather than analyzing and interpreting the world at a distance and storing the research findings in academic standards, in artistic research the researcher is situated in the research matter in an active, operative manner. This methodological approach not only derives its significance from the new insights it contributes to the (academic) discourse on art, but also from the outcomes (things and experiences) that are meaningful in the world of art.[77] In the case of my curatorial research, the outcomes during these doctoral studies have included other communicative forms than academic writing per se. I have used my research to formulate open calls for exhibitions and festivals and curatorial essays; write descriptions of artworks; as foundation for articles about artworks; as foundation for conceptualization and thematizations of exhibitions; for organizing and theming symposia and artistic talks; as well as for structuring my own talks and presentations at conferences, festivals and artistic venues. I have applied my ongoing research in processes of conceptualizing the very premises or formats of various exhibition schemes and festivals, and as direction for commissioning new artworks. These 'outcomes' have made manifest ongoing reflection and consideration of concepts and issues with which the art engages, some of which appear in references throughout the dissertation.

More than expanding the toolbox or the methodological repertoire in the humanities, the opening up to the practical arts has made way for different types of knowledge and different aims for what one can come to know. This involves epistemological questions of what knowledge might be in relation to research, the objective of producing it/having it, how knowledge should be evaluated and, more methodologically, how knowledge should be obtained. Most often, we accumulate and generate a form of *propositional knowledge*, which refers to knowing that something is the case or a fact about the world by way of sampling and/or interpreting it. However, when methodologies from the arts migrate into academia, a characteristic in art migrates with it, which is that rather than being 'hypothesis-led,' art is most often *discovery-led*. Rather than starting out with a preconceived assumption of what the 'problem' might be – setting out a hypothesis, a fixed research question or a pre-formulated practice guideline from the beginning – this inquiry has involved a seeking *with* the art (rather

[77] Ibid., 46.

than an inquiry *in* the art, *on* the art, or *for* the art)[78] in the sense of using my curatorial engagements to inform and guide my inquiry in direction of 'urgent issues.' Along the way, my understanding has been nuanced and my research focus refined – both in writing this dissertation and in my parallel curatorial practice.

My positioning in relation to the art, as simultaneously curatorially engaged with artistic production and exhibition making, has led to taking up a research position Irit Rogoff would describe as "embedded." Something or someone is embedded when situated in interactions with the relevant surroundings, discourses, issues and other actors of the subject matter.[79] This embedded position has allowed an understanding of the artistic and aesthetic material of my research from the inside, where the art is thought and negotiated before it is realized, while 'producing' in the domain within which empirical observations are made. This position has allowed me to experience artworks firsthand and observe audiences during exhibitions. It has involved practical considerations on exhibition making, enabled my participation in public discussions as a peer rather than a distanced academic, and permitted the development of familiarity with various sub movements and orientations in this domain at a very early state of their genesis. I have circulated among artists, activists, curators, academics, cultural producers, architects, technological specialists, and researchers, whose ideas, casual conversations, comments, advices, presentations, and methodologies, have helped me with developing an understanding of urban media art and its complexities. I have conducted my research directly, through literature, archival research, interviews with artists and curatorial thinkers in the field, but also indirectly, by engaging in conversations with artists and other actors, or via reflection on requirements or delimitations published by institutions, exhibition frameworks, or funding bodies.

By way of my curatorial engagements, together with my academic research overall, I have become *acquainted* with my topic, and accumulated a form of knowledge that can only be gained on site and in direct experience. Bertrand Russell promoted the idea of

[78] Borgdorff considers these three ways in which artistic research may be employed within academic methodology: through research *on* the arts, research *in* the arts, and research *for* the arts. See Borgdorff, "The Production of Knowledge in Artistic Research," 46.

[79] This mode of embedded position differs from an anthropological approach of situating oneself in the physical middle of the empirical situation. See Irit Rogoff, "'Smuggling' – An Embodied Criticality," N.p., 8 (2006), accessed on February 11, 2015, www.xenopraxis.net/readings/rogoff_smuggling.pdf.

"acquaintance knowledge" in 1905,[80] considering how one's justification in believing that something is true or is related with the world in a certain way depends on one's acquaintance with the relations that hold it to be true. In criticizing the equivocal nature of the word 'knowing,' he rather acknowledged a form of acquaintance that was immediate and unquestionable, allowing for acquaintance with abstract properties and momentary items of sensibilities. The form of knowledge we gain from acquaintance is a way of knowing that advances in contact with the field and material of its concern. It involves familiarity with the materials, colors, moves, orientations, genres, gestures, attitudes, decision-makings, conditions, architectures, and events of the creative practice, which all form part of a discursive ecology, deriving from feedback of impressions, reflections, conversations, observations, research, abstractions, comments, and so on.

This dissertation has significantly derived from two aspects of acquaintance knowledge: 1) knowledge deriving from engagement with urban media art – its thinking practitioners, discourses, technologies, practical considerations, and restrictions, and 2) knowledge deriving from *sense data* experienced in the intimate engagement with the art. Regarding this second aspect, Russell considers sense data, from an object, person or impression, as the only thing that people can ever be acquainted with – whereas the physical object itself cannot be truly known.[81] Acquaintance knowledge involves knowledge gained through close encounter with the research material, as close as being able to "sense the data." This sensible aspect of acquaintance knowledge differs from propositional or descriptive knowledge and involves approaching the art from its material conditions (of experience), rather than its 'content.' This form of knowledge generated by acquaintance – spanning from discourse and epistemological concerns and down to the sensibilities of the aesthetic material – has informed the theorization of urban media art by way of its contingency with what I have identified as three persistent media aesthetic tendencies that significantly condition our communicative existence today: intensity, intelligence and immersion. I consider these as three tendencies relating to deeper philosophical concerns with our media aesthetic reality, concerning presence, duration and changing perception in the faculty of memory.

[80] The distinction between "knowledge by acquaintance" and "knowledge by description" was promoted by Bertrand Russell in his paper *On Denoting* from 1905, based on the philosopher John Grote's notion of "knowledge of acquaintance" from 1865.
[81] Bertrand Russell, "On Denoting," *Mind*, New Series, Vol. 14, No. 56 (1905): 479-493.

In the implementation of knowledge acquired from direct engagement with urban media art through curatorial practice, I have tried to avoid an instrumental mode of using these experiences as 'empirical findings.' In practice, I have pursued an intuitive mode of following and exploring critical concepts, questions relating to technological culture, or lines of thinking, bridging art and contextual or urban reflections. Rather than an artificial forcing of these observations and experiences into a formal framework, I have chosen a tactic of making some of them visible through *interludes*. Through these I emphasize *images of urgency* in the art; sensibilities that oscillate between presence and meaning that have brought new realization on the basis of experiencing the works, and sensing their data. These are realizations concerning urgent conditions in relation to media aesthetic experience in our contemporaneity. The interludes occur as occasional abruptions of short text pieces, for example directly describing a dimension of an art installation that has led me to a line of thinking in the particular chapter or argument. These impulses have become an aspect of ongoing reflection and thinking, and contributed to shaping my inquiry. Of course, the interludes presented in the dissertation only make a few examples of the many acquaintances from my practical engagements that participate in this dissertation in direct or indirect ways.

Dissertation Structure

The dissertation unfolds through an inquiry into media aesthetic conditions of our contemporary communicative experience. Overall, I examine how urban media art may be considered contemporary – emerging from, responding to, and co-existing with time. From my curatorial concern with the relations between an art form rapidly evolving from the technologies of our time, and its raison d'être as response to changing conditions in our contemporaneity, namely in our technological reality, I push my inquiry beyond the art's material. I inquire into the urgencies embodied in the art's contingent, contemporary existence, which I locate in the media aesthetic tendencies of intensity, intelligence and immersion.

In Chapter 1, "The Art of Our Times," I describe urban media art as finding its conditions of existence and expression in *contingent* relations with our contemporaneity; namely, with our contemporary communicative existence. While urban media art is contingent with contemporary technological culture, our contemporary 'aesthetic regime' and related aesthetic fields outside of artistic discourse, it is particularly with regard to the art's contingency with (temporal) media aesthetic tendencies and perceptual experience as characterizing our contemporary communicative existence, that I focus my attention. This concern with perceptual experience I present in a brief historic perspective, visiting examples of urban media art from orientations in expanded cinema in the mid-1960s.[82] I describe how in this brief historic perspective urban media art has emerged from questions and concerns pertaining to perceptual and ontological conditions with contemporary technological realities, significantly by use of and reflection on apparatuses and forms of mediation that have been characteristic to specific contemporaneities. I introduce my approach to aesthetics as sensible *images*, in light of philosopher Henri Bergson's conception of matter as images in the notion of sense-material, which involves a particular ontological consideration of perceptual experience in a contemporary context with twenty-first century media. Overall, in this chapter I ground my methodology for inquiring into urban media art's contingent relations with

[82] Of course we can anchor urban media art in a historic perspective going much further back than expanded cinema emerging in the 1960s, with historical lines going back to inventions in optical devices in the early nineteenth century, to Leonardo Da Vinci's studies on shadow projection around 1570, and probably as far back as the Renaissance frescos, Medieval mosaics and even early cave paintings.

contemporary media aesthetic culture and conditions of perceptual experience, specifically as this develops in urban environments – the location of the art's 'real-time' interference.

From here I identify three media aesthetic tendencies in this contingent relationship between art and media aesthetic culture, respectively, in intensity, intelligence and immersion. With the point of departure being problematizing these in the following chapters, I direct the inquiry into the media aesthetic conditions of experience and the perceptual implications they entail, in an approach combining curatorial experience, urban observations, and philosophical-theoretical examination.

In Chapter 2, "Intensity," I consider how a tendency of media aesthetic *intensification* has become a symptom of media aesthetic change in our contemporary urban environments and everyday experience which, in the domain of urban media art, we recognize in the brightness and scale of urban digital galleries, media façades used to exhibit art, and independent urban art installations. We recognize this tendency beyond the domain of art, in the urban, technologically developed context, in superficial light upgrades such as replacement of neon with LED lights; in the proliferation and upscaling of urban advertisement screens; in increasingly ambitious architectural lighting schemes; and in the expansion of light and sound shows augmenting entire skylines. In these examples of media aesthetic intensification, media aesthetics become brighter, faster, omnipresent, more accurate, and with potential for evolving in synchronicity with our contemporary computational systems. These intensifications in artificial lighting schemes directly link to what Hans Ulrich Gumbrecht describes as a *desire for presence* today, for experiencing moments of intensity and regaining a sense of 'being here' in our temporally dispersed reality, which can be achieved with mediated effects. As will be examined in more detail in the following chapters, this desire for presence is, however, problematic – not with regards to an assumption of human exposure to 'shock, as was the concern of the previous century (as we find in the writings of Sigmund Freud and Georg Simmel), but rather with regard to our *immersion* in more or less constant modes of mediation. This is significantly in consideration of intensity as a fundamentally quantitative concept of how media aesthetic intensification of urban environments through artificial light relates to changing *conditions of presence* towards the increasingly calculative and machinic organization of space.

In Chapter 3, "Intelligence," I begin with a reflection on how urban media art employs and modifies the intelligent technologies of our time. In this I ascertain a contingency

whereby our urban environments and infrastructures become increasingly *intelligent* with upgrades of computational systems, algorithmic procedures and technological inventions. These intelligent upgrades are forged by current urban developments in cities worldwide, directed by smart city visions of governments and corporate technology providers racing our cities to the future by making them more efficient, intelligent and predictable from analysis of aggregated data; as well as by continuous advancements in mobile devices enabling new apps, life navigation services and social and cultural experiences to structure our everyday lives in these environments. From the perspective of the changes in science, philosophy, industrialization, and urban planning around the turn of the nineteenth/early twentieth century – which equally derived from imperatives of quantification, measurement of time and space and logics of continuous optimization – I introduce Henri Bergson's philosophical foundation in his skepticism against "spatialized time." By presenting Bergson's concern with duration as aligned with spatialized time in a contemporary context of our 24/7 multi-temporal experience, a condition rather characterized by logics of *spatialized temporalities*, we can consider how intensity – as a quantitative concept – is implemented together with a certain 'cuing' of our duration. This concerns how behaviors and actions coincide with a homogeneous logic of space, which conditions how media aesthetics are designed to immerse us in our everyday experiences.

From this philosophical perspective on how our current dominant media aesthetic imperatives emerge from logics of quantification, optimization and 'more of the same,' in Chapter 4, "Immersion," I focus on a tendency of *immersion* that we locate in urban media art in experimentation with affective, embodied and emotional aesthetic scenarios for audience experience. This tendency in urban media art is contingent with how media aesthetic environments and interfaces in urban environments are designed to become increasingly immersive and corporeal. I consider immersion in this regard to involve a sinking into an artificial, technological augmentation of our environment, which we accept to be authentic, and by which our natural sensory impulses are replaced with artificial, mediated ones. I draw on research in virtual reality in examining various relations between immersion and memory as a foundation for arguing that the influence of artificial mediation on our sense of presence involves that we are more open to the emotions, discourses or knowledge we are presented with. I draw on Bergson's conception of *dynamic memory*, in which images (as sensory impressions) are layered in our body-system and inform our perceptual experience of the

world in considering how contemporary images-sensibilities – by means of feedback and feedforward mechanisms – may guide our attention. Furthermore, by interfering with what Bergson calls our "selective memory framework," I suggest that artificial images-sensibilities in immersion may inform certain modes of thinking, behavior and action, and affect the gradual technogenetic process of human development in co-existence with technologies. The main problem I emphasize is how our duration is tied with experience of certain *image-temporalities*, some which are machinic, are faster than our human perceptual experience, and which bypass our consciousness while still affecting our sensible system.

In Chapter 5, "Spectacularization of Behavior," I consider how the media aesthetic tendencies I've inquired into – intensity, intelligence, and immersion – add up to a contemporary condition of *spectacularization* with media aesthetics. I start from a conception of Spectacle from the perspective of critical theory and 1960s avant-garde, as the ideological function of mass media enacted through the spectacular 'image.' Rather than seduction, passivity and disillusionment of the spectator by 'images' we *look at*, I consider a mode of spectacularization of our *duration* in images that we *live through* in our contemporary spectacularized condition of immersion. This I characterize, based on Bergson's notion of spatialized time and Irit Rogoff's conception of 'emergency,' by a dominant cultural mode of *emergency* deriving from neoliberal mechanisms, which allows things and cultures to develop based on quantitative measures. The urgencies I locate with regard to media aesthetic experience concern how spectacularization fosters certain behavioral consequences. These involve a mode of *indifference* whereby our perspectives or positions do not necessarily distinguish between modes of intent behind aesthetic expressions; and an inability to access a range of options of modes of behavior or responses to things, resulting in *impulsive* reaction, sometimes detached from self-reflection of what the reaction means or may cause. In two examples of recent media aesthetic augmentation of urban environments, I exemplify how these behavioral consequences of spectacularization become forms of cultural feedforward mechanisms: in the unprecedented popularity of the augmented reality game Pokémon Go, which demonstrates the accelerated pace of adoption of media aesthetic novelty and reveals a tendency of indifference to the exchange of data for play; and in the illuminations of Le Tricolore on buildings and monuments following the Paris attacks in November 2015, which reveal a relation between a media aesthetic behavioral impulse and imbalance in the global distribution of sympathy. Furthermore, I argue that, because media aesthetic augmentation of

our urban environments is increasingly designed to synchronize with cultural and emotional dimensions of our presence, and with our data, it becomes difficult for us to *question* these aesthetic imperatives. They increasingly mirror us, express the sum of our data, imitate our behavior, depict how we feel, respond to our emotions, and express our sympathies. Overall, this chapter exemplifies how the temporalities of experience frames in emergency culture relate to behavioral-cultural tendencies with media aesthetic expression.

In Chapter 6, "On the Contemporaneity of Urban Media Art," I take a step back from my inquiry into media aesthetic urgencies of our contemporaneity and return to urban media art and its contingent (temporal) qualities as contemporary art form. I reflect on the *images of urgency* in urban media art, founded in Bergson's alternative heterogeneous mode of duration that aligned with homogeneous spatialized time, and in Irit Rogoff's conception of 'urgency' as an alternative to that of 'emergency,' as concerning a kind of nature in images-sensibilities that does not confine the logics of the emergency-cultural treadmill. Images of urgency come into effect through the art's *temporal experience frames* that urban media art offer to our perceptual experience in a combination of meaning and presence effects – that we find in, for example temporal overlay, temporal rupture, interactivity, networkedness and telepresence. These experience frames affect how we pay attention to the world and surrounding environment *with* the art, with our perception affected by the media aesthetic images-sensibilities the art distributes and that blend with all other images we register. With these experience frames, I suggest, the art interferes with our sensible, media-aesthetic 'materiality,' with the temporal experience frames of media aesthetics characterizing our communicative existence today. These I identify from the media aesthetic tendencies examined throughout. It is by means of this *radical temporality* that I consider urban media art to carry fundamentally different potentials as contemporary art from other analogue art forms – as the art of our times. With reference to Jacques Rancière and Mauricio Lazzarato, I emphasize a quality in *images of urgency* in urban media art in terms of their (re-)distribution of conscious and unconscious, human and machinic sensibilities. I suggest that by 'producing time' by way of providing temporal frames that allow for bodily and intellectual reflection, urban media art can help us with developing an awareness of *how* we are present in our technological reality, allow us to experience the 'presence' of other temporalities, and perhaps help us with realizing (even if unconsciously) what our modes of experiencing presence entail. Rather than playing the role of fixing our errors in a sense of post critique, I consider

that the images in urban media art may contribute to developing our ‘consciousness’ – understood here not just cognitively but also sensible, bodily, and intuitively; and not just human-subjective but also entailing a sense of consciousness distributed through global, environmental and future-virtual sensibility. In conclusion, it is eventually in the art’s temporal interference with the experience frames granted in our contemporary communicative existence, in between meaning and presence, that I present its qualities as *contemporary*: as radical temporal art.

1. The Art of Our Times

How can we consider urban media art as 'contemporary'? Contemporaneity has been one of the master tropes of aesthetic disciplines and practices in the arts. The notion of *contemporary art* emerged in the 1980s and 1990s, prefigured in the major movements in late modern art of the 1950s and 1960s.[83] Contemporary art has often been considered in terms of topicality, for example concerning the contemporary aesthetic relevance of new works of art, or sometimes in admiration of artists who manage to stay challenging to their contemporaneity – working at the fringe of it and pointing towards the future. From the position of curatorial inquiry introduced as a form of methodology in the introduction, I am particularly concerned with how we can understand urban media art as a contemporary artistic orientation. More than as a conceptualized contemporary artistic 'form,' it is as a modus with which we can *inquire* into our contemporaneity – especially into the broader media aesthetic and technological conditions of our contemporary urban reality. To inquire into our contemporaneity *with* urban media art thus simultaneously becomes an examination into what characterizes our contemporary communicative existence – and its urgencies as relating to media aesthetic experience.

How we characterize an art form has implications for how we trace its genealogies, how we understand its discursive departures and relations, formulate its trajectories and develop our expectations to what the art might pursue. The term *urban media art* is used to describe the art forms of this inquiry because this is currently the most common expression to denote media-based art situated in the urban domain. It is also because 'media' embraces all medial forms, modalities and expressions, as opposed to an alternative conception I have left behind with the term "digital," which implies the need for a digital signal. However, my focus here is not in defining urban media art in terms of delimiting it as an artistic genre or category. As noted by curator and theorist on urban media art, Christiane Paul: "It is always dangerous to categorize an artistic practice, since to do so sets boundaries, smoothes out rough areas, and includes a certain amount of generalization."[84] Familiar preceding media art genres otherwise

[83] Smith, *Thinking Contemporary Curating*, 33.
[84] Christiane Paul, *New Media in the White Cube and Beyond: Curatorial Models for Digital Art* (Berkeley: University of California Press, 2008), 3.

include ‘video art’ or ‘moving image,’ ‘video art in public space,’ ‘software art,’ ‘mobile art,’ ‘mixed media,’ and ‘digital art.’ However, these reflect an approach to urban media art that will be avoided here, that of characterizing it by the type of media employed. As these categories indicate, this is art with or without network components, art that is created for and distributed on the Internet, art that is wireless, art that has been coded, or locative media art that makes use of mobile devices and the global positioning system (GPS). Of course, it can be argued that the term *urban media art* falls inconveniently into this canon. However, in the use of this term here, the medial form employed in the art is considered as aesthetic material, tool or support structure and not the essence of the art, just like paint is not the art of a painting, and iron, wood or plastic, not the art of a sculpture made of such material. Urban media art should therefore not be characterized by its material as medium, and certainly not in the culturally assigned ideologies of the medium(s) it employs, but rather in its mode of behavior and its media aesthetic contingent relations with our contemporaneity.

As technologies and various modes of mediation have found their way into contemporary art, this has expanded the notion of how we art as ‘contemporary’ – not only dealing with contemporary issues but also employing the mediums, techniques, cultures and dominant (media) aesthetics of our contemporaneity. Today, we witness how artists are taking advantage of the advancement in powerful projection and LED technology and use of media infrastructures already in place in the urban context, such as urban screens; as well as applications of apps and software and visualization programs and technological devices. However, an approach to urban media art as considered in continuation of the evolution of ‘visual media’ is avoided here, as this points all the way back to the peep show, the panorama, myriorama, stereoscope, cyclorama, magic lantern, eidophusikon, diorama, phantasmagoria, silent films, color films, films with scents, IMAX, cinéorama, anamorphosis, television, telematics, and to contemporary virtual image spaces generated by computers.[85] Although urban media art employs visual idioms developed from these preceding inventions and continues to explore perceptual constructions pioneered with them, and although it has often been realized with visual media components, the art should not be delimited to the domain of the visual, nor should we delimit the understanding of our sensible experience with the art to just our visual sense.

[85] Oliver Grau, ”Remember the Phantasmagoria,” in *Media Art Histories* (Cambridge: MIT Press, 2010), 155.

Rather than categorizing urban media art in relation to (media) art history or any other disciplinary point of departure, it is characterized here as a contemporary art form by means of its *contingent* relations with our contemporaneity and, specifically with our communicative existence. At least since its manifestation with expanded cinema in the 1960s, urban media art has reflected a *contingency* with our contemporary communicative existence, which at a historic glance we recognize in how the art has made use of the given contemporary technologies and reflected on communicative discourses. This we also recognize in the arts' critical engagement with dominant perceptual structures that implicate given contemporary communicative conditions of experience. By its contingent qualities the art provides a modus through which we can inquire into our contemporaneity, significantly as relating to media aesthetic conditions of experience that characterize our communicative existence. However, while the art is overall contingent with disciplines and related aesthetic fields and with the materials and technologies of its time – which is mentioned in relation to Martha Buskirk's perspective on contingency – following an initial introduction to the arts' immediate contingency with these aspects, I will inquire into its contingencies with our ontological, media aesthetic experience at a sensible level of our perceptual experience.

Contingency with our contemporaneity's aesthetic regime

Our present contemporaneity involves a situation for contemporary art in which, as Hal Foster has noted, art seems to float free of historical determination, conceptual definition, and critical judgment.[86] This current artistic destiny is noted by curator Ken Farmer when he says, "…I think now art exists in a more apocalyptic place than it probably ever has before."[87] In what Jacques Rancière characterizes as our dominant aesthetic system today, "the aesthetic regime of the arts," he describes how art is freed from specific rules, from the hierarchies of the arts, and from subject matter and genres. In this condition, aesthetics strictly refer to the specific mode of *being* 'objects' of art.[88] Departing from philosopher Friedrich Schiller's idea of the "aesthetic state," which Rancière evokes as the current regime's first manifesto, the aesthetic regime of the arts 'establishes the autonomy of art and the identity of its forms with the forms

[86] Hal Foster, "A Questionnaire on the Contemporary," *October* 130 (2009): 3.
[87] Ken Farmer, interview with Tanya Toft, Brooklyn, November 2013. Accessible at www.urbanmediaaesthetics.org
[88] Jacques Rancière, *The Politics of Aesthetics*, ed. and trans. Gabriel Rockhill (London and New York: Bloomsbury Academic, 2015), 18.

that life uses to shape itself.'[89] This situation presents a reinterpretation of what makes art, and also of what art makes.[90] It also presents a broader aesthetic framework of approaching urban media art as contemporary art form, not as dictated by a given cultural-critical discourse but rather considered contemporary in terms of its contingency with the 'forms' of life that characterize our contemporaneity.

The condition of contingency in art has been theorized by, among others Martha Buskirk in *The Contingent Object of Contemporary Art* (2003).[91] Buskirk evokes how contemporary artists have been using mass-produced elements and impermanent materials, appropriated imagery, and incorporated performance and video, and how works have been created through instructions carried out by others. In this sense, contingency denotes a condition in which almost anything can and has been called 'art.' These tendencies we recognize in the use of industrial materials and methods under minimalism, appropriation found in pop art and the early twentieth-century ready-made, as well as in the intersection of contemporary artistic methods and the system of commodity production. The notion of the contingent art object is based on the assumption that meaning is discursively generated and given by the way elements are structured in a certain spatial context – rather than found in the originality of a singular piece of art. Buskirk points at how, in the contingent art object, the mechanisms through which the art is presented become fundamental to what the work becomes (not only how it is read).[92] In light of this contingent conception of contemporary art we can consider how urban media art is potentially comprised of all things, materialities, discourses, methodologies, philosophies and genre grips that are available in our contemporaneity.

The curatorial figures interviewed at a preliminary state of my doctoral research derive from various disciplinary backgrounds and areas of the arts. In addition to fine arts and art history, they come from the spheres of literature, music composing and other musical environments, theater studies, architecture, design, urban and environmental planning, science, and from the media arts scene. With the expansion of the concept of the curator figure in the domain of urban media art, we find differences in the origin of motivations, objectives, modes of practice, and so on. We recognize this interdisciplinary condition in the collaborations that go into urban media art production, where the artist and/or curator are

[89] Ibid., 23.
[90] Ibid., 20.
[91] Martha Buskirk, "The Contingent Object of Contemporary Art," Cambridge: MIT Press, 2005.
[92] Martha Buskirk, "The Contingent Object of Contemporary Art"

often dependent on other professionals in order to realize an exhibition. This is exemplified in the working process described by Daniela Arriado: "The artists are one important part of the research, but I've been talking to sociologists, urban planners, and historians of the city, journalists, of course other curators and other producers – not only in Stavanger but also outside of this context."[93] Nato Thompson notes how: "Urban planners ask very different questions about the use of space. They really look at how space is used; they look at places where people rest. They have a different series of metrics, productive evaluative mechanisms, which would be a very different way to look at what an artwork is."[94] Mirjam Struppek, coming to curating art and cultural programs on urban screens and media façades form a background as an urban planner, describes in relation to arriving at curatorial practice with urban screens, how "…urbanity was a guiding principle, referring to a balance of a functional, structural, social and cultural diversity and mixture in modern cities, creating social livability and a vital livelihood."[95] While the curatorial figure is dependent on and finds her role in relation to other professions, this also means that different philosophies deriving from different disciplines are brought into the negotiation process concerning space allowances, budgets, aesthetic expressions, and so on. Trevor Davies mentions how "Various agendas collide in this territory, and this is where you can find both the interest in working in new ways, and also in accepting the untraditional approach." He continues: "…there is a tendency to work interdisciplinary where the performative, the visual, architecture and media collide and can create very dynamic situations."[96] Dooeun Choi explains how "Most of the time, you have all these different creators in different fields. Let's say we have an urban project. You have the city planner, the architect, the artist, and of course, the audience. All these people have different philosophies, and different ideas are good."[97]

The various agendas and different philosophies deriving from the collaborative effort between disciplines may eventually impact how the installation is conceptualized. Marcus

[93] Daniela Arriado, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org
[94] Nato Thompson, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org
[95] Mirjam Struppek, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org
[96] Trevor Davies, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org
[97] Dooeun Choi, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org

Neustetter, speaking from the artistic context of Johannesburg, suggests how "Sometimes we consider whether the term 'art' is the relevant one, or whether social engineering or entrepreneuring is more relevant in certain areas, where the artist's role and responsibility becomes something very different."[98] Neustetter's remark evokes the apocalyptic situation for art in Rancière's aesthetic regime. This might mean to the artwork and the aesthetics that it can be unbound from established modes of categories, genres, and hierarchies, and can explore 'new' aesthetic goals liberated from these categories, and thus find its artistic pursuit anew. However, it might also mean that the art loses its freedom in truth-seeking, having to assimilate to aims, terms and agendas formulated without consideration or necessary valuation of the art's own conditions. But this discussion is beyond the scope of my inquiry.

We also recognize a contingent condition in urban media art in terms of how experimentation in related fields fuses into artistic practices and expressions, for example fields as diverse as conceptual art, system aesthetics, expanded cinema, public art, performance and installation art, new media art, graffiti, activism, VJ culture, architecture, maker culture, science, and academia, among many others. The contingency with related aesthetic fields pushes the aesthetic borderlines of the art in a way of 'aesthetic spillover.' Consequently, the art derives and develops from many different curiosities, skillsets and objectives, and the aesthetics and experiences it solicits then feedback into these domains. For example, when artists also work as scientists at research institutes, engaged with development of new interfaces, models for interaction, and innovative codes, the 'image worlds' they bring into the art may reflect aesthetic potentials that are explored in science contexts, such as design, architecture, biology or computational engineering.[99] These engagements with science set and push the technical limits of the art in negotiation with aesthetic goals, criteria and functionalities of the related aesthetic domains.

It might also be that artists are also practicing as VJs, mixing and 'mapping' images and music in large scale performances in club settings or at sport, cultural or brand promotion events, wherein the rhythm and aesthetic expressions characteristic of these visuals (often fast-paced, colorful, and psychedelic) developed for a certain desire for amazement, come to inform an aesthetic development in the art. At the SESI Digital Art Gallery in São Paulo, many of the local Brazilian artists who possess the necessary technical skills to develop work

[98] Marcus Neustetter, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org

[99] Grau, *Media Art Histories*, 5.

for the gallery have come from VJ backgrounds, including United VJs and Leandro Mendez. As witnessed in Brazil, this could well present an aesthetic access point from which audiences can relate to the art from aesthetics in clubbing and concert environments. As an example, our festivals in São Paulo have opened with a vignette of VJ-mixed visuals introducing the exhibition to catch the attention of audiences and announce that something is coming; a visual tactic probably not found in many other exhibition or festival genres.[100]

Then, of course, we also witness how other media aesthetic domains are contingent with the art. We have recently witnessed a number of guerilla marketing initiatives using laser light, wall projection or projection mapping in a manner similar to artistic initiatives for the purposes of promoting brands and products. These imitations evoke how advertisement has been imitating graffiti, design and any other aesthetic domain conceived to be 'cool' in the never-ending pursuit of attention from potential customers. But the contingency goes both ways. As Nato Thompson mentions, when considering the relationship between urban media art and audiences: "In some ways, not to be Machiavellian, I think you could also borrow some of the skills that are developed by the advertising industry because it's just so heavily developed. As much as I blatantly disagree with the manipulative methodologies in terms of their overarching goal, they definitely don't talk about audiences in blanket terms. They're much more nuanced in terms of demographics, which in the art world we'd call points of entry, I guess, colloquially. But I think they're much more nuanced in terms of conditions of reception, ways in which things get to people."[101]

In these approaches we can consider urban media art as *contingent* with our contemporaneity in terms of the materials, technologies, disciplines and aesthetic orientations that are employed in the art's conceptual and philosophical point of departure, production and realization, and overall how it 'exists' as a contemporary art form. While these aspects of urban media art's contemporary contingency will be evident throughout this inquiry, my attention is however directed at a more ontological level of the art's contingency with our

[100] It was interesting to follow that in 2016 the MoMA PS1 in New York City included the Blendy Dome VJ system developed by United VJs in the temporary VW Dome 2, a teodesic dome constructed as part of EXPO 1: New York in Rockaway. Thus, we see how the "image world" of VJs migrate to the art institution, perhaps by way of more experimental art exhibitions – like our festivals in Brazil – having opened up for more interdisciplinary aesthetic forms to enter the gated world of art.

[101] Nato Thompson, interview with Tanya Toft, New York City, November 2013. Accessible at www.urbanmediaaesthetics.org

contemporary world in *real-time*, in the art's direct media-aesthetic-material and temporal interference with contemporary reality.

Real-time contingency with the urban context

In continuous negotiation with technological development, the aesthetics and volume of urban media art is constantly finding new shapes and 'materialities' to an extent where it needs to be exhibited on its own terms. This development is preceded by media-based art forms that for decades have found their way to audiences via the Internet, direct interactivity, alternative spaces, and temporary settings that are constantly changing and experimental.[102] Scholar and new media curator, Christiane Paul has noted that "Because new media art is deeply interwoven with our information society – the network structures and collaborative models that are creating new forms of cultural production and autonomy, and profoundly shape today's cultural climate – it will always transcend the boundaries of the museum and gallery, and create new spaces for art."[103] Urban media art increasingly emerges in contexts in which artists are not delimited by established exhibition structures but develop their own terms, formats and conditions of exhibition. Consequently, we see an increasing number of media art and nuit blanche festivals, permanent digital galleries, and many more urban media art installations initiated by small experimental organizations or independently by artists or curators. These initiatives exemplify how 'exhibiting' increasingly involves the staging of an event, the creation of a sequence of sites, or the orchestration of a discursive interaction, such as a public dialogue. We see how the temporary, experimental and performative natures of urban media art influence the 'spaces for art.' These spaces not only frame the artwork but participate in shaping the work's ontology and 'meaning' of existence. Unlike museums, which used to be temples for the preservation of memory, the new exhibitionary complexes that frame and present contemporary art today are significantly media-based art and make contexts for the exploration and questioning of the present and contemporary being.

As a media aesthetic, artistic impulse located outside of the conventional exhibition space – oftentimes in urban spaces, but sometimes in private or semi-public spaces like courtyards, foyers, airports, or even shopping malls – urban media art has a position to engage with our contemporaneity in the context of our contemporary (urban) existence. It is an art

[102] Terry Smith, *Thinking Contemporary Curating* (New York: Independent Curators International, 2012), 73.
[103] Christiane Paul, *New Media Art in the White Cube and Beyond, Curatorial Models for Digital Art* (Berkeley: University of California Press, 2008), 2.

form with an extraordinary possibility for the 'art' to seek out, challenge and interrogate 'truth paradigms' in our contemporaneity while involving people – audiences and passersby – to participate in such negotiations. Out in the real life context, art not only affects the architecture or environment of its site-specific location but an entire ecosystem of aesthetics, culture, economy, politics, technologies, and urban discourse. In a curatorial essay written for the second SP Urban Digital Festival in 2014 in São Paulo, entitled "Digital Citizen," I suggest that this characterizes a particular inquiry at work in urban media art. Urban media art may help us expand our understanding of what it means to be and live in an age of ubiquitous computing – in all dimensions of our life experience.[104] It is significantly *because* of its contingency with an ecosystem beyond the art, specifically with our technological communications culture, that we can understand urban media art as inquiring into contemporaneity as 'the art of our times."[105]

The unconventional sites for exhibitions outside of the museum or gallery space, and also beyond (or below) online space, entails that the art exists in direct, material contact with the real world, gaining its meaning and significance from a contingent relationship with a particular site. The notion of 'site' denotes the location of the interference of the art. From my interviews with curatorial thinkers, it is clear how reflection on the art's contingent relationship with the site of its installation is an essential part of aesthetic and curatorial concern. Dooeun Choi describes how working on an urban project requires research into the conditions of the site: "You often go there and sit for several hours at different times a day so that you get the physical and social personality of the space. It's like you wait for the moment in which you encounter the space."[106] Choi further mentions how she reads newspapers and spends time on the local relevant social networks in order to familiarize herself with a local site and its discourses. Mirjam Struppek describes a similar anthropological method: "…working site specifically simply means always to first carefully observe, analyze the existing context, collaborate and engage with concerned players with local knowledge, and find a few strong existing characteristics – features, issues, and concerns in which you can

[104] Tanya Toft, "Digital Citizen," curatorial essay for the SP Urban Digital Festival 2014, São Paulo, accessible at /www.tanyatoft.com/publications-2/sp_urban-digital-festival-2013
[105] Oliver Grau has used this term "the art of our times" for naming media art. See Grau, *Media Art Histories*, 3.
[106] Dooeun Choi, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org

root your project."[107] Struppek also mentions that projects can be site-specific on different levels, "…for example, in terms of the material shape or the immaterial content; on an aesthetic or social level, on a practical, symbolic, time-based or spatial level."[108]

Site-specific art and the conceptualization of the term emerged in the late 1960s and early 1970s in the wake of Minimalism's returning a physical corporeal body to the viewing subject and in initiatives of challenging the autonomous art object by deflecting its meaning to the space of its presentation. The attention to site specificity came about especially through aesthetic experimentation with process art, installation art, land art, conceptual art, performance and body art, as well as institutional critique. This was as a critique of the physical parameters of the 'coded space' of the gallery or museum in the 1960s and 1970s, which was considered to frame and force how artists functioned. In the late 1980s site specificity came to concern more the physical inseparability between a work and its site of installation, as a model for challenging the innocence of space. Curator and art historian Miwon Kwon's perspective on site specificity has largely informed the domain of public art, and hence also urban media art. The attention to site specificity today, she notes, reflects a neo avant-garde aspiration of exceeding the limitations of traditional media and their institutional setting, of addressing the epistemological challenge to relocate meaning from art to context, a focus on 'lived bodily experience' – reflecting a sensorial turn from 'perceiving' to 'experiencing' art, by means of bodily engagement – and a self-conscious desire to resist the forces of capitalist market economy.[109] It regards a dominant drive of site-oriented practices as in pursuit of more intense engagements with the outside world and everyday life, for example by critiquing culture, integrating art in the realm of the social, redressing urgent social problems or relativizing art as a form of cultural work.[110] We can more specifically recognize these site-specific concerns in urban media art in terms of the intention to change the meaning of an urban context with art, for example by augmenting spaces for the purpose of embodied experience in order to affect a changed sensorial experience of a 'sense of place.'

[107] Mirjam Struppek, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org
[108] Ibid.
[109] Miwon Kwon, "One Place After Another: Notes on Site Specificity," *October* 80 (1997), 85-87.
[110] Kwon, "One Place After Another," 91.

Photo: Tanya Toft

Interlude No. 1

***Occupy Wall Screens (2011*) by Maurice Benayoun**

Section from transcribed video interview with artist Maurice Benayoun [30:00] entitled "Maurice Benayoun Occupies the Financial District, NYC." The interview was conducted during the artist's solo exhibition in New York City showing the work Occupy Wall Screens (2011) at Big Screen Plaza between January 31 and March 31, 2012, presented by Streaming Museum and curated by Nina Colosi and Tanya Toft. This was my first curatorial experience.[111]

Occupy Wall Screens (2011) is part of the artist's *Mechanics of Emotions* series of over 20 works. It reflects on the notion of the Internet as the 'nervous system' of the world. The left side of the piece projects data collected from search engines that maps and assesses the emotional trends of cities active in the Occupy Wall Street movement, and the right side shows the market trend of financial stocks, e.g. 99% down, 1% up.[112]

[111] The full interview is published on www.streamingmuseum.org/transcript-benayoun-interview

[112] "Maurice Benayoun's Real-Time Data Art," website of Streaming Museum, www.streamingmuseum.org/maurice-benayoun-1

MB: Maurice Benayoun
TT: Tanya Toft

TT: In your manifesto, Art After Technology, you express an understanding of new-media art as constantly in progress. How is the symbolic value of Emotion Forecast and Occupy Wall Screens being altered from their exhibition in New York – in addition to being exhibited in Europe and in cyberspace?

MB: *Emotion Forecast* could exist everywhere. It is created for the Net for the information to be widely distributed, and for screens on walls. *Occupy Wall Screens* is different. It is very important for a media work to be context specific and to take into account where it is placed. So, I thought about this work while thinking about New York. For me, it is a beginning of something, of a kind of action that can be an extension of the actual Occupy Wall Street movement. I would like people to think more about how to occupy, through new media, globally. This is the place to be when you want something to be heard by everybody.

TT: So, Occupy Wall Screens has a home in New York in the way that this was where the idea had its origin?

MB: Yes, exactly. I was really thinking about what kinds of emotions make sense to me now. And I have been really impressed by the Occupy Wall Street movement, by the fact that this movement is not coming from a party or from an existing political group. It is just coming from the fact that people can no longer stand the absurdity of the economic situation. And the fact that this is starting from New York, from Wall Street, from a district where people have been defending a certain vision of the world, dominated mostly by money, is very strong. I hope the movement will take other shapes now. I don't think that the impact in Europe is as big as it should be. So, if it is possible for my work, and other works with similar intentions, to occupy screens all over the world, then maybe more and more people will participate in creating actions and events – maybe new kinds of symbols – that will make this movement stronger in the minds of people.

TT: Are you saying that Occupy Wall Screens is an attempt to help the movement progress and grow in people's minds?

MB: It is definitely a way to give another key to understand the movement and what is going on. I wanted to quantify emotions the same way as the stock exchange and the stock market, and put emotions and economy together in one work where we have them face-to-face. This is the key of *Mechanics of Emotions*. This is my way to support the movement and maybe to open new tracks and new possibilities of development.

TT: We are in the middle of Zuccotti Park, which was occupied by the Occupy Wall Street protesters. What should the message of Occupy Wall Street protesters be, and to whom should it be addressed?

MB: I think, for me, that this movement is such a strong thing in the way that, for the first time, so many people decided to act without any political guidance. We have reached a point in history where the dominant people are just trying to fool everybody, and I think the way this movement spread around the world is the evidence that this is something totally legitimate that should be followed in different ways. And so, of course, the question is how this movement can have more than a symbolic impact; how can it really change the world? It is time to use the tools that people have to make a big impact. And media are really important. This is why I thought it would be interesting to go from the street to the screen.

And then, not only occupy the walls in the city but also occupy the medias, globally, and make people think that there is a strong group of people that really want to change the world, in a way. The question is: What to occupy? Where to occupy? How to occupy? And what for? What kind of impact do we want to make on the world? what kind of change is really needed now? I guess now is the time to build on the next step.

Methods of site-specific research and reflection, as expressed by the curatorial thinkers I've interviewed, lead to aesthetic tactics that emphasize a dimension of urban media art whereby inquiring into contemporaneity becomes a matter of responding to, negotiating and activating present or current site-contextual elements. This we see in the case of *Occupy Wall Screens*, at a discursive level however, in which the contrast between emotions and stock graphics speaks directly to the emotional backend of the Occupy Movement – installed in New York City only two and a half months after the protesters had been forced to dissolve

their occupation of Zuccotti Park.

The notion of real-time has gained a new ontological foothold with media art. It involves the art's temporal aesthetic material 'acting' on our reality in the present moment, perhaps by presenting real-time data, telepresent meetings or interactive experiences with the art, or by facilitating that we interfere or interact with matter directly in alternative mediated experience frames than those offered in regular (non-art) conditions of mediation. I consider this real-time dimension to constitute a main difference between media art and analog art forms. Here real-time is considered not strictly in terms of instant computational response or as reflective of a real-time networked dimension of the art, but in the sense of the art's direct interference with our urban reality, its processes and development, and as affecting the sensible distribution in this. Rather than site-specificity, I am interested in this real-time dimension in the art, which is contingent with (and hence may potentially interfere with) real-time phenomena that affects our duration in media aesthetic immersion.

Contingency with our communicative existence

Our technological development has always been of concern to art. This we find in for example Marcel Duchamp's "ready-mades" in response to industrialization, and in the subversion tactics of détournements and dérives of the Situationist International, with which they resisted against an age of mass media. When we look at the various orientations from which urban media art has emanated, particularly since the 1960s, we find that the art has not merely used technology as a tool in replacement of paint and brushes. Rather, it has emerged from questions and concerns pertaining to perceptual and ontological conditions with the contemporary technological reality, and from the devices and forms of mediation that have been characteristic to specific contemporaneities. Urban media art has developed into an artistic domain at a time when technological inventions, mediums and communicative infrastructures have become fundamental to how we understand our being, phenomena and relations in our technologically developed world. Installed in our urban reality, urban media art examines the expectations and perceptual structures we develop with technology.[113] Perhaps we find the most prudent aspect of how urban media art inquires into contemporaneity in its contingency with our communicative existence.

[113] I elaborate on these thoughts in the curatorial essay "Digital Citizen."

In my interviews, the curatorial thinkers express how they pay attention to the use and impact of (new) technologies and communications infrastructures in space, as a locus for the artistic or curatorial initiative. This concerns the artistic use of and response to technology, as well as to modes and conditions of communication (and mediation) in technological times. While the aesthetic telos and its associated intentions and purposes have been deeply engaged with contemporary technology, urban media art and its affiliated curatorial thinking have found its errands in critical reflections on our technological condition, namely in the perceptual, controlling, relational, globalized and networked conditions of our communicative existence.

We find an emphasis on *mediated perception* in the early initiatives of expanded cinema. This artistic movement followed the advent of video in 1965 and was furthered by the availability of video equipment in the mid-1970s – significantly, after Sony began selling videocassette recorder (VCR) decks and tapes into the consumer market in 1971. The gradual affordability, sophistication and portability of video technology stimulated new forms of artistic expression with video. The artistic movement of expanded cinema contributed to an interdisciplinary tendency for the flexible, immaterial art form of video. It expanded media-based installation art from video on a TV-screen into large-scale, multi-screen, immersive, mixed media and integrative complexes, often built around one or more film projectors. These set-ups confronted the politics and viewing structures of both the movie theater and the art museum. Artists created psychedelic environments with cinema technology with aims of making the cinematic experience more 'tangible.'[114] Early experimentation took place indoor with Andy Warhol's *Exploding Plastic Inevitable* series of multimedia events, which between 1966-1967 featured musical performances by The Velvet Underground and Nico, combined with screenings of Warhol's films and performances by regulars of Warhol's Factory. Stan Vanderbeek's *Movie-Drome* (1963) makes another early indoor example, which draws on Buckminster Fuller's work on domes as stable, lightweight and portable structures with 'spheres,' as a metaphysical metaphor for energy and the connectedness of the world. The movie-drome made a spherical theater where people would lie down and experience floating multi-image movies all around them. These 'spherical' installations we recognize in more contemporary examples, such as Olafur Eliasson's *The Weather Project* (2003) exhibited at

[114] Steven McIntyre, "Theoretical Perspectives on Expanded Cinema and the "Cruel" Performance Practice of Dirk de Bruyn," in *Senses of Cinema* 46 (2008).

the Tate Modern, which invited people to lay down and experience the 'sun'; and Chris Salter's *N-Polytype* (2014) installed in the Stattbad Wedding, Berlin, which also inviting audiences to sit down and experience a spectacular audio visual performance combining lighting, lasers, sound, sensing and machine learning software in the large-scale architectural environment. The spherical mode of expanding cinema initially experimented with liberating perception from fixed viewing structures, informed by a broader orientation towards embodied, immersive and environmental perception beyond the subjective encounter with the mediated image or message.

One direction in expanded cinema advanced into the public realm. Jeffrey Shaw's *Corpocinema* (1967) presented an expanded cinema environment from an air-inflated PVC dome 7m wide and 4m high, onto which were projected videos from outside in a series of open-air performances. The materialization of the projected imagery would change according to various 'material actions,' for example inflated white polythene tubing filling the interior of the dome, a white meteorological balloon inflated also inside, or various substances, such as smoke, steam, water spray, fire extinguisher foam, and confetti filling the interior space of the dome and creating a three-dimensional sense of volume to the projected images. Performers were also allowed to spray different colored powders over the dome's surface and throw liquid paints and crepe paper on to the dome. Thus, it made an embodied cinema (hence the title, *Corpocinema*) that properly broke with the perceptual conventions of cinema. It challenged the representative screen that dominated mass media in the 1960s by subjecting it to the performative, materializing acts of participating audiences.

Through the 1970s, expanded cinema moved from an interest in psychedelia to a focus on expansion of perception through cinema technology.[115] The expansion of cinematic projection developed in directions that in various ways sought to integrate with the urban context while challenging perceptual experience of space. *Projection X* (1972) by Imi Knoebel consisted of a projector attached to the roof of a car, projecting a luminous X on the city façades passed by the car when driving through Darmstadt. The moving projection was simultaneously recorded with a camera, also mounted to the top of the car. *Projection X* took advantage of the recent availability of video recording equipment at the time of its production with the mobile opportunities for documenting the world as a perceptually complex structure, with the moving X turning the fixed environment into a filmic, changeable experience. The

[115] McIntyre, "Theoretical Perspectievs on Expanded Cinema."

performative work was based on a series of artworks exploring the principle of a basic form of light projection in an exhibition space that, when projected onto uneven surfaces, would become deformed. Projected from the moving vehicle, the abstract geometric sign of the X would behave according to the screening surfaces and objects, and thereby oppose a perfect geometric design to the complexity of the real world. In this way, Knoebel demonstrated that what changes is the perception of space, rather than the image.

We also find the inquiry of expanding perception through cinema technology in recent art examples that explore our perceptual experience of the world with new technologies, while indicating how this leads to new ontological modes of relating to our environment. For example, the project *Light Echoes* (2013) by Aaron Koplin in collaboration with Ben Trickleman, broadcast traces of light via a laser onto landscapes, aboard a moving train. The slow exposure documentation makes images and video in which light – in colors, patterns, and words – has seemingly been painted on the natural environment in a magical-surreal aesthetic. Filmmaker Daniel Riley, in November 2015, also attached a 1000W LED panel of 90,000 lumens of light to a drone, the Freefly Alta octocopter, and flew it through the nightscape. The strong, focused light from the drone created theatrically-lit compositions influenced by a confluence of nineteenth century romantic painting and science fiction in a sense of intensified realism.[116]

Significantly, artists have been concerned with how an extra-layer of mediation can change the perception of a space or context. Jenny Holzer has experimented vastly with projecting poems and sentences on urban buildings and monuments in expressions of projected urban poetry. One-liners from her work *Truisms* (1978-87) have been displayed on storefronts, on outdoor walls and billboards, and other public places, in addition to digital displays in museums and galleries. In these poetic projections, Holzer challenges the fixity of meaning in public space by overlaying reality with a thought-provoking message. She mediates perception of space by twisting the meaning of a site with the overlaying poem. Also, since the early 1980s, artist Krzysztof Wodiczko has made various urban projections as forms of 'active mediations,' juxtaposing the physical space of architecture with the psychosocial space of the public realm, typically revealed through iconic representations of, for example, global capitalism, militarism, and consumerism, or images of body fragments

[116] "Guy Attaches His DIY 1000W LED Strip to a Drone, Captures Amazing Shots," PetaPixel, published October 17, 2016, www.petapixel.com/2016/10/17/guy-attaches-diy-1000w-led-strip-drone-captures-amazing-shots

that symbolize these forces. In one example, four days before the presidential election in 1984, Wodiczko projected the hand of Ronald Reagan onto the north face of the AT&T Long Lines Building in New York City's financial district, signifying corporate business. Wodiczko's work characteristically disrupts the complacency of perception instigated by architecture and dominant social and political ideologies of the present.

In the 1990s, the low price of video production technologies and advancement in projection equipment made artists independent from technicians and enabled video installations to change in scale. Installations became flexible and mobile, enabling numerous experimentations with video art in public space by artists like Bernard Tschumi, Bill Viola, Jenny Holzer, Hester Scheyerwater, Jeffrey Shaw, Krzysztof Wodiczko, Theo Botschuijver, Rafael Lozano-Hemmer, Olafur Eliasson, and many others. This augmentation of urban environments with visual imagery is continuously exploring new variations, for example in augmented and virtual reality that take advantage of contemporary technology. In the recent work *Augmented Airspace* (2013) by Dia Hamed and Lot Amoros, drone technology is combined with augmented reality and an urban screen that shows real-time footage of Cairo from the perspective of the drone. The real-time footage on the screen is overlaid with augmented graphics that illustrate tanks and soldiers (as well as more innocent icons, such as a teddy bear) in a manner of reenacting a recent violent episode. This work evokes how perception today is mediated not by a single medium but in cross-medial experiences, which give us access to new perspective angles and are made of both 'real' and fabricated content.

Although this dissertation will not delve into sound art (which also falls under urban media art but with which I have little experience) we should not forget how urban media art also developed from advances in sound recording and reproduction. This movement emerged with the small, cartridge-based tape systems of the mid-1960s, which then enabled the personal music player such as the Walkman in the 1970s and 1980s, and later the advent of digital sound recording and the compact disc (CD) in 1982, followed by various digital audio file formats. These developments have assisted mobile, urban explorations in sound art. In this area of urban media art we find artists acting like "aural architects,"[117] mediating perception of space and environments in and through sound.[118] Some artists have experimented with narratives, such as Janet Cardiff with her well-known site specific piece

[117] Barry Blesser and Linda-Ruth Salter, *Spaces Speak: Are You Listening?* (Cambridge: MIT Press, 2006).
[118] Among artists working with sound in the urban context are Andreas Oldörp, Christina Kubisch, Stefan Rummel, Max Eastley, Circumstance, and Edwin can der Heide.

Her Long Black Hair (2004) situated in and around Central Park in New York City. Cardiff's quasi-narrative style mixes site-specific signs with historic facts and fiction, as well as sounds of other atmospheric or cultural elements, thus basically mixing information as is characteristic to our fragmented experience of space that we experience today through our various media devices. Other sound artists have explored more abstract musical or acoustic re-compositions of the natural sounds of the environment, such as Sam Auinger, for example in his work *Listening Sites in Bonn* (2011). This urban sound work provides a map of Bonn through which people can experience the auditory qualities of different sites to consciously expand their perception, recognition and interpretation of urban settings and places in the city. Artists have also worked at the intersection of media, sound, land and environmental art, like Teri Rueb whose work *Drift* (2004) as an example, covers a 2km by 2km region in Cuxhaven, Germany, filled with areas of interactive sound, allowing spoken words in different languages, and footsteps on different surfaces which "drift with the tides" to play automatically as you 'drift' with a mobile GPS device.

What we see across examples of expanded cinema through history is that the artworks pursue situations of perceptual experience that are characteristic to the communicative conditions *of their times*: from concerns with expanding perception and with liberating the subject from fixed viewing structures in the 1960s; to being more radically enabled by mobility of the perceptual lens of the video camera in the 1970s; to efforts of destabilizing fixity of meaning and remediating power structures of physical places in the 1980s and 1990s, with some experimentation in establishing experiences of spaces for social encounters in the 1990s (omitted from this description as it reflects a different inquiry to mediated perception); to a significant attention to expanding perception with media aesthetic ambiance and augmentation of real world environments in the 2000s and 2010s. In these both visual and aural examples of urban media art oriented towards mediated perception of space, we encounter a sense of *overlaying the time frames of real environments* with the time frames of video, light or sound.

An orientation towards mediated power structures and control, namely visual control, emerged significantly when video art found a venue on the urban screen. To my knowledge, the earliest use of a commercial public screen for art was a program of the Public Art Fund entitled *Messages to the Public*, running from 1982-1990 in Times Square in New York City. This featured a series of artists' projects created specifically for the sixty watt bulbs in white,

blue and green of the Spectacolor board at One Times Square installed in 1977.[119] Every month, a new artist would present a thirty-second animation, repeated more than fifty times a day for two weeks sandwiched into a twenty-minute loop of commercials. The program presented artists like Rirkrit Tiravanija, Jenny Holzer, Manuel DeLanda, Barbara Kruger, Keith Haring and many others. From 2000-2005 followed the initiative *The 59th Minute* on the NBC Astrovision screen in Times Square, presenting moving image artworks programmed by Creative Time during the last minute of every hour. Today, and since 2012, the Times Square Arts presents the *Midnight Moment*, a 'permanent' urban digital gallery that coordinates more than twenty screens for presentation of art for three minutes before midnight every night. Also, Dara Birnbaum's *Rio Videowall* (1989) is an early example of an interactive installation of twenty-five interlinked monitors for the Rio Shopping Mall in Atlanta, Georgia, on which Birnbaum showed images of the original natural surroundings at the site of the shopping mall.[120]

Following these and other experimentations with displaying artistic messages and video art on screens in public spaces, the proliferation of urban LED screens in the late 1990s provided a number of new venues for urban media art. The LED panel raster of light emitting diodes made it possible for images – of both art and advertisement – to be shown during the daytime, while the flexibility of the diodes enabled the screen (and the art) to adapt to the shapes of buildings. In the 2000s, in a media condition in which screens had become common – and dominant – phenomena in the technologically developed urban landscape, a movement took off that systematically used urban screens for art. The Urban Screens initiative was devised by Mirjam Struppek in Berlin in 2004/2005. It investigated how the commercial use of outdoor screens and the related infrastructure for digital moving images in urban space could be broadened with cultural content; in a sense, replacing advertisement. Moving image artworks have streamed on urban screens with intentions of breaking up the general logics of rules and routines in urban space, "re-appropriating the urban space as a communicative, social and discursive space,"[121] with aims of connecting the screens put up for advertisement

[119] The Spectacolor Board was initially running half-and-half public-service announcements and paid spots (the screen was also used for the first public art screening program). Fred C. Shapiro, "Spectacolor," The New Yorker, February 14, 1977, accessed December 5, 2016, www.newyorker.com/magazine/1977/02/14/spectacolor
[120] Catrien Schreuder, *Pixels and Places: Video Art in Public Space* (Rotterdam: NAI Publishers, 2010), 17.
[121] Andreas Broeckmann and Fabian Saavedra-Lara, "The Transformation of Urban Space," in Urban Media Cultures, eds. Susa Pop, Gernot Tscherteu, Ursula Stadler, and Mirjam Struppek (Stuttgard: avedition GmbH, 2012), 95.

more to a communal context, and of creating situations in which a sense of ownership and responsibility for the locality might occur in the audience, or citizens.[122]

The Urban Screens movement has been influential in guiding some crucial perspectives for the role of media art on screens in public: a curatorial culture that has inspired many art on-screen initiatives in various urban environments all over the world.[123] As I suggest in the article "Screen Practice in Curating: The Medium Paradox," we can characterize a mode of 'screen practice' in curating in which curatorial figures and cultural producers all over the world have programmed existing urban screens with art and cultural content, but also set up new screens specifically for the purpose of showing art and cultural content. The screen provided a new platform for media-based art, both physically and conceptually, as a point of critical departure. Physically, it enabled a form of permanent, sometimes free-of-charge gallery space. Conceptually, it invited for artistic confrontation with the screen's own format, politics and underlying ideology, as a medium of mass communication.[124]

An early predecessor for curatorial and artistic practice with urban screens was *Video Projection Outside Home* (1978), in which Dan Graham placed a large video projection screen on the lawn in front of a house in Santa Barbara, California, facing pedestrians on the sidewalk. The projected image showed the given television program that a family was watching inside the house, thus confronting the televised connection between family life and the rest of the world as mediated through the TV screen.[125] When presented outdoors in this manner, the television as medium is not much unlike a billboard. By exposing the intimate image content of the television screen in an outdoor projection facing the street, the installation confuses the perception of private and public space and the discursive structures related to media consumption, and we recognize a sense of critical medium reflection as the center of the artistic commentary.

While artistic expressions have employed contemporary technology and the modes of mediation enabled by these, in many examples we see an orientation towards *hypermediality*. This refers to critical engagement with the specific characteristics of the medium form by which the employment of that specific medium is made visible by the artist and articulated in

[122] In my article "Screen Practice in Curating: The Medium Paradox," I elaborate on how the urban screen was appropriated as exhibition platform in tandem with a culture of "screen practice in curating," *Screen City Journal* 4 (2014).
[123] Ibid.
[124] Ibid.
[125] Schreuder, *Pixels and Places*, 15.

a self-reflective manner. This is unlike, for example cinema, which seeks to take viewers to another world behind the screen, as well as virtual and augmented forms of mediation, by which the audience is immersed in the aesthetic experience – rather than exposed to a medium critique. An example is Pipilotti Rist's *Open My Glade* (2000), commissioned by the Public Art Fund as sixteen one-minute video sequences interspersed with advertisements and NBC and Panasonic programming, first presented on the NBC Astrovision by Panasonic board in Times Square. The video work shows a close-up of the artist herself pressing her face and make-up against the camera lens, almost as if trying to escape the screen. In the performative video the artist plays with ideas relating to seduction as characteristic to content shown on advertisement billboards. The work parodies and exaggerates how femininity has often been pictured by the media, film and advertising industry. The remediation is acted out through this 'narrative' as well as through the low-tech, home movie-like aesthetics, saturated in psychedelic colors, remediating the generic content and visual idioms of digital advertisement on public screens.

In more recent works there has been a turn towards an interactive employment of the screen where, in addition to reclaiming the screen from visual control, it is used as a semi-controlling mechanism in space by the artists – as a platform for social engagement. We find this in a recent installation by Laurent Mignonneau and Christa Sommerer, called *People on the Fly* (2016), commissioned for the large screen at the K11 shopping mall in Hong Kong. In this participatory public artwork, passersby could see themselves in a black and white surveillance video of the space. Based on software detecting the data of all moving persons, passersby would get covered by a swarm of flies as they crossed the space with the screen installed – the faster they moved, the more flies. However, when people stood still the insects would fly away. Artworks oriented towards visual control in mediated power structures of for example the screen have particularly operated through a mode of *time disruption*, of both the 'screen time' and the rhythms of the site.

A third mode of inquiry into our communicative existence is found in the orientation towards *new modes of relational space*, specifically in exploring the dynamic agora enabled by the open system of the Internet. The notion of relational space is informed by Nicolas Bourriaud's influential book of 1998 on relational aesthetics, which considers the sphere of human relations as 'site' for the artwork – considered to produce a specific sociability. From this aesthetic imperative the art depends on the social processes and practices that it programs

or motivates. Urban media art has operated with the sphere of interhuman relations seeking to form new modes of the contemporary socius by establishing what Bourriaud has called "relational micro-territories." An early example of urban media art inquiring into this relational aspect of our communicative existence is the installation *Hole in Space* (1980) by Kit Galloway and Sherrie Rabinowitz. This installation showed real-size, live televised images with sound – unannounced – that suddenly interconnected passersby at the Lincoln Center for the Performing Arts in New York City and at The Broadway department store in the open air shopping center in Century City in Los Angeles. Unprepared for the telepresence experience, people gradually realized that they were talking with people in the other city – live. The installation was operational for three evenings and created a new context for a pedestrian intersection. *Hole in Space* followed a series of projects by the artists developed under the heading "Artistic Research in Telecommunications" between 1975-1977, which tested "telecollaborative arts" and "virtual space performance," exploring new ways of being in the world with satellite transmissions.[126]

A mode of relational space is also found in Krzysztof Wodiczko's renowned installation *The Tijuana Projection* (2001), which projected live testimonies of women working in the 'maquiladora' industry (manufacturing) in Tijuana onto a sixty-foot diameter façade of the Omnimax Theater at the Centro Cultural de Tijuana in Mexico. The live-shared testimonies focused on issues such as work-related abuse, sexual abuse, family disintegration, alcoholism, and domestic violence. The women's faces and voices were recorded with a headset that integrated a camera and a microphone, with loudspeakers transmitting their testimonies live, and creating a temporary space of assembly, sharing and connectivity. We recognize in both *The Tijuana Projection* and *Hole in Space* how the works, by means of telepresence and live testimonies, function through a *real-time* component that temporarily organizes the site.

The orientation towards telepresence is found in a wealth of recent urban media artworks, among these *Peoples Screen* (2014) by Paul Sermon and Charlotte Gould, which connected Guangzhou in China and Perth in Australia in a telematic installation, as a commission of the Connecting Cities project initiated by the Public Art Lab in Berlin, directed by Susa Pop. The two locations were connected for twelve evenings, sharing the same time zone and offering audiences the opportunity to create chance encounters and self-

[126] "Telecollaborative Art Projects Of Electronic Cafe International Founders Kit Galloway & Sherrie Rabinowitz," www.ecafe.com/museum/history/ksoverview2.html

direct spontaneous performances in transitory events, in a manner of 'telepresent fluxus happenings.' The encounters between people in both locations took place on the screens in 'scenes' inspired by computer games aesthetics, with graphic elements that were characteristic to each local environment. Paul Sermon explained to me once how the "silly" computer game elements established a neutral environment that staged the encounter in such a way that people felt incited to engage on screen.

With reference to his own work, Rafael Lozano-Hemmer describes how the public dimension of 'site' becomes 'relationship-specific.' He explains, "It's really the relationships that you establish in public spaces – temporary, ephemeral interventions that allow people to have a dialogue with their space or with each other in a way that is not normal – that is exceptional or eccentric."[127] His work *Body Movies* (2001) for example used a larger-than-life display to explore intimacy in our urban behavior. Interactive projections displayed thousands of photographic portraits previously taken on the streets in the city of Rotterdam, which would only appear when passersby covered them with their projected shadows. Sharing the same premise as *Hole in Space* and *The Tijuana Projection*, if no-one participated there would 'be no work' – no visuals to see and no sound to hear. In these cases the real-time component depends on participation, and thus the works come to exist *as* relational encounters or dynamic agoras.

The most profound change to our contemporary communicative existence might well be the global networking of people by means of the World Wide Web. Anticipated by Félix Guattari in 1989[128] and articulated in terms of the rise of the network society,[129] the Internet, networked technologies and network logic, "network culture" has gained magnificent impact on how we organize and understand developments in our world today. Network culture is characterized by Kazys Varnelis in terms of: the simultaneous superimposition of real and virtual space; the new participatory media; concerns about the virtues of mobilization versus deliberation in the networked public sphere; and emerging debates over the nature of access – all characteristics that extend deeply into the domain of culture.[130] It has not escaped artistic

[127] Rafael Lozano-Hemmer, interview with Tanya Toft, Toronto, November 2013, accessible at www.urbanmediaaesthetics.org
[128] Felix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (London and New Brunswich: The Athlone Press, 1989).
[129] Manuel Castells, *The Rise of the Network Society: The Information Age: Economy, Society, and Culture Volume I* (Hoboken: Wiley-Blackwell, 2000).
[130] See Kazys Varnelis, *Networked Publics* (Cambridge: MIT Press, 2012).

or curatorial thinking that the Internet today establishes the most significant infrastructure of communication of all time and makes new structures for human connection and sociability; that is, new structures of relational space. Contemporary urban media art oftentimes transgresses the limited focus on human relations by means of physical presence as the 'site' for the artwork, as per Bourriaud's relational aesthetics. The flexibility of urban media art's 'material' allows it to be sited wherever it wants, allows for trangressing the limited focus on human relations, because it has the ability to connect people at a distance over a network. Tony Oursler's *The Influence Machine* (2000), presented in Madison Square Park in New York City, for example allowed remote participants to record their messages on an Internet platform, which were then converted to 'talking lights' appearing on trees, buildings and on clouds of smoke. These blended with 'ghost projections,' voices and images of inventors of technological breakthroughs, which appeared as characters in the projected videos. Rafael Lozano-Hemmer's relational architecture piece *Vectorial Elevation* from 1999 explored the notion of a hybrid commons by taking advantage of the Internet and advanced telecommunications technologies in the coordination of eighteen searchlights positioned around Mexico City's Zócalo Square, in celebration of the arrival of the year 2000. The searchlights could be controlled through an online 3D simulation program on the Internet via which users could choreograph six second-sequences of light design. Thousands of people from eighty-nine countries participated via the virtual reality program.

Nato Thompson describes this tendency in terms of a "…social networking backend to a lot of the projects that are done with public art. It is also a way that participation happens that fuels a different engagement with what happens in lived space together."[131] We see this in artworks that experiment with establishing audience connectivity and social situations, and opportunities for collaboration that bring people together, not only physically but also in online shared encounters. Ideas relating to the networked condition of our contemporaneity implemented as the foundation for a museum structure are found in Nina Colosi's initiative, the Streaming Museum, inaugurated in 2008, which she describes as "…launched at the cusp of the global expansion of the Internet and screen culture, including mobile, computer and urban screens."[132] A curatorial initiative of distributing art in a global network of screens, the

[131] Nato Thompson, interview with Tanya Toft, New York City, November 2013. Accessible at www.urbanmediaaesthetics.org

[132] Nina Colosi, interview with Tanya Toft, New York City, November 2013. Accessible at www.urbanmediaaesthetics.org

Streaming Museum was inspired by Nam June Paik's ideas of 'the electronic superhighway' and also reflective of the urban screens movement. Colosi describes how "The goal and challenge is to reach the widest demographic with the selected artworks so that it becomes a globally shared experience."[133] Susa Pop notes specifically how her recent networked project, Connecting Cities, emerged from ideas of using global networks to create connectivity, especially via mobile phones, which establish a precondition for her curatorial initiatives. She indicates how curatorial thinking is contingent with our technological condition, specifically how the "connection of places" in the Connecting Cities project coincides with mechanisms of globalization and the worldwide dissemination of information about localities everywhere.[134] The project does not take a critical position to these forces of globalism but rather provides an open structural frame for artworks to develop as nodes of problematization. Our behaviors and expressions are intimately related to our cultures and behavior in networked media, and these inform curatorial and artistic thought and inquiry today.

In these examples of urban media art we find that the art has evolved from inquiry into our communicative existence with regard to the given dominant or enabled conditions of mediated experience at the time. The orientations identified here, concerned with mediated perception, mediated power structures and (visual) control, and towards the relational, networked agora, reflect co-existing conditions of our communicative reality which has characterized specifically the last part of the twentieth century and early twenty-first century. They reflect different aspects of how human perceptual experience has been simultaneously amazed and challenged by the introduction of technological mediums, media aesthetic imperatives and new communicative infrastructures. In our attention to how urban media art engages with our mediated perceptual experience, it is necessary to first reflect on how we understand perceptual experience in relation to media 'aesthetics' today, in comparison to previous forms.

Sensible images and contemporary perceptual experience

As introduced in the foreword to the dissertation, I approach media aesthetics in terms of sensible material that affects our perceptual experience on multi-sensible levels, a perspective

[133] Ibid.

[134] Susa Pop, interview with Tanya Toft, online, November 2013. Accessible at www.urbanmediaaesthetics.org

I arrive at following my flight emergency landing that for a time caused disturbances in my perceptual system.

This approach to aesthetics as sensible material deviates from an ocularcentric account of matter as mainly made up by representations and 'images' that we *see* in our world. The ocularcentric account of matter, which entails a primacy of visual perception, relies on a classic worldview with a visual order comprised of Cartesian discourses of rationality and embodied in the metaphor of the camera obscura. The camera obscura is a model for the apparatical function of a device for illusion, in which the camera image mimics the material object being depicted as an optically produced illusion of appearance, represented by light projection. The apparatical operation transforms the three-dimensional space of vision to a two-dimensional virtual plane of representation. What is perceived is thus a representation of the world. More than device or set of technical premises, from the 1500s to the 1700s the structural and optical principles of the camera obscura coalesced into a dominant paradigm denoting the status and possibilities of the observer and subjectivity as constituted through vision.[135] The metaphor of the camera obscura has informed an idea of space-time that found its way to the 'modern image' in the defined field-source of the frame, as investigated by the Renaissance perspectivists, significantly in Leon Battista Alberti's use in 1435 of the architectural figure of the window as a frame for perspectival view. Since then, embedded in a larger organization of knowledge, the camera obscura has traveled through the history of visual culture and the modern age, informing a spatialized account of aesthetics that still informs how we tend to approach aesthetics today.

In breaking away from the camera obscura conception of a world of representations, we are distanced from the 'image' as delimited visual field, and by approaching aesthetics as multi sense-material, we can consider a notion of the image to not only concern what can be either visually seen or cognitively imagined, but something that might also not be visible at all: that we *sense* beyond vision, and sometimes also beyond consciousness. In his essay "There Are No Visual Media," W. J. T. Mitchell challenges the ocularcentric conception of the visual in relation to media as having acquired a status as the "sovereign" sense, as also famously investigated by Martin Jay.[136] We find a constitutive role of visual in its ocularcentric conception in theories such as "society of the spectacle" (Debord), "scopic

[135] Jonathan Crary, *Techniques of the Observer*, 27.
[136] Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth Century French Thought* (Berkeley and Los Angeles: University of California Press, 1993).

regime" (Foucault), "surveillance" (Virilio), and "simulacra" (Baudrillard)[137] – concepts that still inform our aesthetic conceptions and methodologies for generating knowledge on aesthetics. While challenging the conceptions of the visual as a foundational notion that can be taken for granted, Mitchell argues that "there are no visual media," with which he emphasizes that media are never *just* visual but a combination of many other things, too.[138] As an example, he mentions cinema, which is not just a ration of sight and sound but also of words, speech, music and noise.[139] Media, Mitchell explains, are however not only to be understood by sensory labels such as visual, aural, and tactility, but by specific sensory ratios embedded in practice, experience and tradition, as well as technical inventions. They are not only extensions of the senses, "calibrations of sensory rations," but also symbolic or semiotic operators, or complexes of sign-functions.[140] However, we can however make a different twist to Mitchell's perspective and argue that there are no visual media because there is no such thing as pure visual perception in the first place. This is, I suggest, because in our perceptual experience we capture sensible fragments of every sensibility we consciously and unconsciously encounter. This includes impressions from anything that impacts our moment of experiencing, which is mixed with our thoughts and memories. In this sense, images tie in with our perceptual experience and represent more impressions (which might be just a fragment of our experience) than objects. Images reflect all the environmental, relational, and sensible (consciously and unconsciously perceptible) forces that affect our experience – including machinic sensibilities.

A helpful philosophical framework to grasp aesthetics in this manner is Henri Bergson's conception of matter as images, in the notion of sense-material. The conception of images as sensible-perceptual impressions (as presented in the foreword), mirrors Bergson's conception of the image as something halfway between an impression (conscious or unconscious) and what is present to us (not necessarily a material 'thing').[141] Bergson's philosophy on matter as images is particularly interesting to my inquiry as he considers the images of present-impressions that we encounter in experience to enter our "dynamic memory" – an open pool in which we gather all images ever experienced. From here we have access to these images in

[137] W. J. T. Mitchell, "There Are No Visual Media," in *Media Art Histories*, ed. Oliver Grau, 395-406 (Cambridge: MIT Press, 2010), 403. This has been thoroughly examined by Martin Jay in *Downcast Eye*.
[138] Ibid., 403.
[139] Ibid., 400.
[140] Ibid., 400.
[141] Ibid., vii.

perceptual experience, as a form of reference of familiarity that we engage when we try to make sense of our experience and go about life intuitively. Bergson's consideration of memory as operative and constituted contemporaneously with our present perception that he considers to be inseparable from memory, challenges the worldview embodied in the camera obscura of conception of knowledge and matter as fixed and prefigured in the external world. Leaning on Bergson's philosophy, the approach here is to challenge an ocularcentric account of matter – including art – by way of considering matter as sense material rather than visual representations of an external world. Bergson's philosophy on memory is elaborated on in Chapter 4, "Immersion."

Although formulated almost a century before the emergence of twenty-first century media, in a sense Bergson's account of images considers the environmental condition of subjectivity described earlier. This is by considering a mode of perception as self-existent from us. He criticizes how philosophers have overlooked *im*personal perception and defined perception as a whole as a kind of interior or subjective vision.[142] In several places in *Matter and Memory*, he speaks of the conditions that influence perception and affection, and which perception and affection influence in return, to belong to an external world. For example, Bergson considers in the first chapter of *Matter and Memory* how "the eye is in the things themselves, things that are luminous by themselves with no consciousness illuminating them."[143] He considers how any image influences other images in a manner independent of our individual perception and determined by the laws of nature, therefore not only determined by how we perceive them.[144] It is in this consideration of impersonal experience and of images as self-existent from us in an external order that a possibility in Bergson can be found for the interpretation of contemporary machinic image conditions. Of course, Bergson could not anticipate our current media condition, but he grants existence (almost intelligence) to images outside of that of the perceiving body, as we find in, for example, algorithmic processing today.

My approach here to aesthetics as sensible impressions, which are theorized in terms of *images* of sensible material, proposes that how we pay attention to things and our environment cannot align with any one imperative of experiencing, for example of a 'spectating subject' that relies on the model of the camera obscura. Therefore, my

[142] Bergson, *Matter and Memory*, 25.
[143] Ibid., 1-85.
[144] Ibid., 66.

philosophical conception of matter as image-sense-material involves an ontological positioning of the individual. This concerns how we understand perceptual experience in relation to our current communicative context.

In *The Media City*, Scott McQuire describes how we have witnessed a shift in technological culture in a relatively short period of time with new information and communications technologies supplanting a broad set of older cultural forms. This involves changes from industrial production to post-industrial processes and services, from analog to digital media, and from print-based culture to connection of a global society.[145] In his account of the relations between media technologies and the transformation of the city, McQuire uses the term *media city* to indicate the relation between media technologies and the transformation of the city in a media architectural complex, reflecting a perception of media as an environment in a McLuhan's sense, and of the city as "medium" in a Kittler's sense.[146] Significantly, in his account McQuire considers how the convergence of media historically and today – which he describes has become increasingly mobile, instantaneous and pervasive with urban space – establishes certain modes of *spatial experience*. This is in terms of embedded media practices, in culture and systems as well as in the materiality of our physical environments, and as infrastructures for our communicative existence. Our mode of spatial experience is established through 'complex processes of co-constitution between architectural structures, urban territories, social practices and media feedback.'[147] My inquiry will unfold with attention to exactly this dimension: our spatial, perceptual experience. It will examine urban media art's contingent conditions with contemporary perceptual experience, as conceptualized in urban, technologically developed environments. This involves looking further into how we can consider our perceptual experience to be structured today, in a relationship between the nature of what we experience and our perceptual ability to make sense of this. Our understanding of perceptual experience today, as related to human subjectivity, needs to reflect contemporary experience in our current technological culture and in the current conditions of spatial experience in the media city.

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[145] Jonathan Crary, *24/7* (London and New York: Verso, 2014), 35.
[146] Scott McQuire, *The Media City: Media, Architecture and Urban Space* (2008); Marshall McLuhan, *Understanding Media: The Extension of Man* (Cambridge: MIT Press, 1994); Friedrich Kittler, "The City Is A Medium," in *New Literary History*, Vol. 27, No. 4, Literature, Media, and the Law (1966): 717-729.
[147] McQuire, *The Media City*, vii.

The ocular paradigm entailed a specific subject-object relation that *delineated* the relation of the perceiving subject to the external world and reasoned that the subjective observation (and interpretation) of the external world led to objective 'truth.' This worldview embodied an observer mode significant of the seventeenth and eighteenth century, characterized by a monocular, immobile and disembodied subject relying on the self-presence of the world in a perceptual logic of the camera obscura, with the observer bound by the visual imperative of an object or 'image.'

Today's perceptual experience differs from the pre-modern observer mode, and also from that of the "modern observer" that Jonathan Crary describes in *Techniques of the Observer* as relating to a mode of human subjectivity that emerged with modernity in the nineteenth century. Crary's modern observer was considered to possess a form of bodily subjectivity which involved ontological considerations on how the human being in the mode of observation is in *movement*.[148] The modern observer is a phenomenological subject, for whom observation is binocular, embodied and mobile, and perception is instantaneous and a-temporal in nature;[149] for whom observation is increasingly tied to subjective experience, with temporality and vision considered as inseparable. The act of seeing for the modern observer was thus synonymous with the *shifting processes of one's own subjectivity experienced in time*.[150] In Crary's distinction between the observer of the seventeenth and eighteenth centuries and the modern observer of the nineteenth century, and in describing how the conception of subjective experience and vision changed with modernity, he explains how this was affected by a number of specific changes that coincided with developments in science and optical technology. These involved changes in theories of the nature of light, where light began to be seen as an electromagnetic phenomenon which had less to do with the realm of the visible and more with the description of human vision, with studies of the eye and its sensory capacities in 'physiological optics' coming to dominate the study of vision.[151] These changes also involved the emergence of a number of optical devices in mass visual culture at the time, such as the stereoscope, the kaleidoscope, and the phenakistoscope, which relied on the appearance of movement to be constructed in the process of viewing by the spectator.

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[148] Jonathan Crary, "Techniques of the Observer," *October*, Vol. 5 (1988): 3-35.
[149] Ibid., 20.
[150] Crary, "Techniques of the Observer," 9.
[151] Crary, "Techniques of the Observer," 8-9. This specifically concerned changes from emission and corpuscular theories to wave motion explanations.

Although the 'image' was still reliant on the apparatus, these devices forged the idea that it was in the subjective process of perception of the spectator that the visual impressions came to make sense as movements.

Today, we need to reconsider our conception of perceptual experience and re-negotiate subjectivity from its conception with the modern observer, not least in perspective of how today's optical and technological developments are changing our perceptual-ontological experience. How can we understand our ontological condition of human experience today, in which our sensible reality has recently undergone profound changes, specifically with the emergence of the Internet and digital technology? If mirroring Crary's attention to the significance of new optical devices to the emergence of the modern observer, it can be considered how our current inventions in 'optical' technical devices equally affect a contemporary perceptual condition. In addition to becoming increasingly mobile, intelligent, networked and multi-temporal, our current optical-technological devices allow for new perspectives and positioning in the world. We have immediate access to content from anywhere and to instant photographic and video documentation and distribution, while video calls allow us to share 'current' moments across distance to connect people in various locations simultaneously. EarthCams allow us to log onto webcams installed in public spaces in different cities all over the world and watch the activities there live.[152] Drones allow us to video document our world from above in real time. Our cameras are changing with omnidirectional functionality to capture not only a delimited square field but also our entire surrounding sphere, in both photography and video. This means that we not only perceive from our individual subjective perspective but also from dispersed perspectives of multiple positions, angles, and framings. As such, if the 'modern observer' was a subjective, phenomenological subject in movement, the *contemporary* 'observer' is one for whom ontological experience is networked and environmental-relational; whose attention is dispersed across multiple communicative activities and perspectives simultaneously, and who is sensibly affected by multiple temporalities of mediation. This is the observer, or, rather participant, of a networked, global and technologically advanced reality in which we are assisted by media aesthetic functionality, efficiency and interfaces, and connected directly to people and environments anywhere.

[152] "EarthCam," accessed October 18, 2016, www.earthcam.com

A certain displacement of self-reference comes with these changing technical conditions of mediation in which experience is anchored. Mark B. N. Hansen characterized this in terms of an "environmental sensibility."[153] This expresses a complex, hybrid condition of experience as a dimension of a larger 'production of environmental processes' in which human experience is generated within a wider environmental network of sensibility. As opposed to purely subjective experience, this hybrid condition of experience encompasses a plethora of agencies, both human and nonhuman. Therefore, if *experience* for the modern observer was perceived as located in the individual rather than in the external world, the situation is now that the external world has become part of individual experience, while experience has become externalized and environmentalized in contemporary forms of mediation. While we physically exist in the phenomenal world, our thinking, behavior, and the effects of our actions are also of a worldly context. Today, our shifting processes of subjectivity are conditioned by mediating factors of different temporalities affected by environmental and global connectivity, and experienced across time-spaces.

Furthermore, if, in the establishment of the modern observer, philosophical attention was brought to the temporality of observation as a notion of subjective vision, today we have to take into account a line of theorizing on how temporalities of new forms of mediation in our external world participate in constituting a mode of 'subjective' vision. Theories by Felix Guattari, N. Katherine Hayles, Mark B. N. Hansen, and Mauricio Lazzarato, which I reference in the dissertation, consider variations of a new condition of human subjectivity in which a mode of 'environmental sensibility' assists or, in some aspects, even takes prominence over agent-centered, subjective sensibility. The central idea of human subjectivity, autonomy of human being and the possibility for actual human agency are brought into question by: the perspective on environmental sensibility by which human agency exists alongside any other type of agency in Hansen's theory inspired by Alfred North Whitehead;[154] the account of a machinic aspect of our subjectivity and consideration of a-signifying signs in our perceptual system, as suggested by Guattari and further theorized by Lazzarato; and the role of mediation between machines and human systems in informing our

[153] Hansen, *Feed Forward: On The Future Of Twenty-First-Century Media* (Chicago: University of Chicago Press, 2015), 8.

[154] Ibid., 2. Hansen describes "environmental sensibility" in terms of human agency being 'internally differentiated, dispersed across various scales and operational divisions, and implicated in 'a total multi-scalar cosmological situation.'

unconscious, as found in Hayles' theory. The question is how much awareness, consciousness and emancipation from our machinic processes we can grant the human being. This is central to how we can understand a condition of human perceptual experience and subjectivity today – which is fundamental to understanding how media aesthetics may affect us as participating audiences in both artistic experience and our contemporary world. It also concerns how we can understand urban media art as contemporary, and as engaging with perceptual experience in the current conditions of our communicative existence.

With this approach to aesthetics as multi-sensible material that we encounter in experience, we move the conception away from the frame of the object (e.g. the 'image' of the artwork) to a *frame of experience*. Frames of experience, of which many may be encountered simultaneously, may be established by way of many different frequencies as both signs and sensibilities. What we experience concerns not a 'frame' in the sense of a frame of film or a narrative imposed on reality by the art, but rather a more micro level of multisensory experience of image-impressions. The 'frame' is in our perceptual experience that the art's media aesthetic images affect. In this inquiry into how urban media art may be considered as contemporary, by way of how it 'behaves contemporary,' under examination will be the thesis that a main contemporary quality in urban media art is found in its contingent relations with perceptual 'experience frames' of our communicative existence at a given point in time and context. Urban media art – like any art form experienced anywhere – is not an isolated experience but co-existing with a local and global media aesthetic ecology. In real-time, direct contact with our real-world reality, employing the same technologies and software as that by which our world is developing, urban media art holds a potential as 'site' where we can encounter, challenge and modify the images (as sense-impressions) of our world in the midst of their 'operation.' This entails that our perception is not isolated with the art when we experience it.

As another contingency aspect, media aesthetics in art engage our sensible system just like any other media aesthetic experience, combining with image impressions of everything else in our experience with it. What makes media art distinct from other kinds of media aesthetics is the mode by which it intervenes in image impressions of everything else and interferes with our perceptual experience. From this perspective, we can consider questions concerning aesthetics in media-based art to coincide with our ontological experience with media aesthetics in our contemporaneity at large, which guides my examination throughout

the dissertation. With an understanding of how the experience frames we are attentive to by means of media aesthetic images affect our perceptual system, and how they make cause us to pay attention to certain things and adapt to certain aesthetic modes and discourses, the cultural-perceptual mechanisms that urgently need our attention can clearly be defined.

After examining the art's contingent relations with our contemporaneity in the following chapters, my proposition is that what the art holds as a quality of 'behaving contemporary' is a potential, – by way of its temporal material – to challenge our dominant mode of cultural participation that more or less uncritically aligns with the experience frames, interfaces and templates made available to us. Urban media art potentially acts contemporary by recomposing conditions of mediated experience, providing alternative 'experience frames,' for example in modes of temporal overlay, temporal disruption, interactivity, forms of networkedness and forms of telepresence, which I will return to and elaborate in Chapter 6, "On the Contemporaneity of Urban Media Art."[155] It is by means of these contemporary qualities, I suggest, that urban media art may be considered the art of our *times*.

[155] These categories for new forms of networkedness in urban media art are inspired by categories proposed by Susa Pop in the article "Connecting Cities Network," in *What Urban Media Art Can Do, Why When Where & How?* eds. Susa Pop, Tanya Toft, Nerea Calvillo and Mark Wright (Stuttgart: av edition, 2016), 35-36.

2. Intensity

– inquiry into media aesthetic intensification of urban environments

We only need to glimpse at current movements in urban media art to find tendencies of *intensifying* media aesthetics in the art; from artworks that augment entire building façades and urban environments, to artworks that employ behavioral lighting schemes and that guide us through cityscapes navigating in response to mobile, media aesthetic amplification of sound and virtual urban overlays. A tendency to increase the intensity in technological culture informs and contingently effects developments in the arts, towards larger scales, brighter mediation, and more environmental modes of exhibiting media art in urban public space. This concerns some of the exhibition projects I have worked with and includes, for example the material nature of the SESI SP Digital Art Gallery in São Paulo, which takes up three sides of the entire twenty-one-storey façade, resulting in the art installation being visible far along Paulista Avenue in both directions. Also the video art program Nordic Outbreak co-curated with Nina Colosi for New York City and which toured across the Nordic region in 2013 and 2014, adorned grand spaces on building façades and temporary screens. This program also collaborated with the Midnight Moment in Times Square – a 'permanent' urban digital gallery coordinating more than twenty screens for presentation of art for three minutes before midnight every night. In Spring 2016, I was on the jury reviewing and nominating artworks for the Open Sky Gallery, on the occasion of the International Symposium on Electronic Art (ISEA) in Hong Kong. This gallery covers three sides of the 490-meter high LED façade of the ICC Tower on the Kowloon side of Victoria Harbour, the highest tower in Hong Kong. The use of these façades and grand displays for art reflects urban media art's contingency with developments in the media aesthetic intensity of our urban environments and in digital culture – evidenced clearly from the proliferation of LEDs on any built structure in screens, media façades or completely adaptable lighting schemes – some even utilizing the sky.

We also recognize the tendency of 'tuning up' media aesthetics in art installations not independent of pre-existing media façades, screens or LED structures, which grow in size, color brightness, computational advancement and 'immersive' qualities, in pace with advancement and affordability in the technologies that produce them. The public art installations of Rafael Lozano-Hemmer, for example, are notorious for working with scale.

Vectorial Elevation from 1999, initiated in celebration of the year 2000 in Mexico City's Zócalo Square, employed eighteen searchlights positioned around the square. These could be controlled through an online 3D simulation program on the Internet via which users could choreograph six second light sequences of their own design. The participation of thousands of people from eighty-nine countries via the virtual reality program created a form of a global hybrid commons. In my interview with Rafael Lozano-Hemmer, he describes this motive of amplifying people to an architectural scale, taking real buildings and people – their movements, shadows, or intimate biometrics, like heartbeats – to the size of the buildings themselves, a city block or a public park: "This idea of amplification comes in part because of a political desire of working with publics, which are not just marginalized but somehow powerless in an urban condition of homogeneity (…) How do we, as people, take entitlement of the city and use these technologies to amplify our gestures, our voices, our heartbeats, whatever it is, and make them tangible in a very spoken form? So, that's where the big scale comes from – it's about a desire to amplify presence to an urban scale."

The tendency of media aesthetic intensification in urban media art reflects how our everyday life worlds are increasingly being tuned up with media aesthetic intensity. Hans Ulrich Gumbrecht describes "moments of intensity" as when feeling a high level of functioning of some of our general cognitive, emotional and perhaps also physical faculties, which he considers have become our desired outcome of aesthetic experience today.[156] The intensification of experience with media aesthetics in our technologically developed cities today happens in all areas of mediation of our urban environments. We recognize this when media aesthetics develop towards brighter light implementations in architecture, in advertisement screens growing in size and computational advancement, mobile screens developing with increasingly higher resolution and more complex functionality, and in environments designed with light and mediated features to become increasingly ambient. In this chapter, I will consider some complexities that relate to this tendency of growing *intensity* in technologically developed urban contexts, which will briefly be defined in a historic perspective, and bearing in mind how Gumbrecht considers "intensity" to be a quantitative concept. These changing conditions of media aesthetic intensity will be related to a human desire for achieving a sense of *presence*, which I will argue, in light of our dominant

[156] Hans Ulrich Gumbrecht, *Production of Presence: What meaning cannot convey* (Stanford: Stanford University Press, 2004), 98.

imperatives of designing and augmenting our environments for a special mode of sensation, has consequences to the sensible language from which our media aesthetic culture develops.

Increasing intensity with light upgrades of urban environments

Superficial light can be considered the foundational material in the *media aesthetics* that organize, augment and characterize our contemporaneity and sensibilities, by affecting our experience through various modes of mediation (conscious and unconscious). Our contemporary communications infrastructures consist of ultra-short light data pulses propagating in tiny optical fibers. Fiber optics transmit light signals via extremely thin, flexible, transparent fiber made of silica or plastic. It permits transmission over long distances at high bandwidths and creates the root structure to the ways in which the Internet connects people via social media, telecommunication, video conferencing, etc. Optical fibers also have many uses in remote sensing for measuring strain, temperature, pressure, and other qualities by modifying a fiber so that the property being measured modulates the intensity, phase, polarization, wavelength, or transit time of light in the fiber. With this perspective on superficial light as a mode of intensity permeating our communicative infrastructures in mind, in the following, I will focus on the superficial light we can see, which is increasingly implemented in lighting schemes of architecture and urban environments, and bears witness to a deeper condition of our communicative existence: the tendency of tuning up media aesthetic intensity.

Neon signs became increasingly visible and characteristic to the feel of urban environments in Hong Kong, Tokyo, China and New York City in the 1920s, and proliferated throughout the world in the 1930s with, for example Broadway and Times Square transforming into spectacular neon assemblages. The neon industry experienced a boom in the 1950s, and by 1965 entire neon streetscapes occurred, making up urban neon-augmented environments characteristically depicted in Hong Kong. However, the emergence of LEDs announced a brighter and more visible, energy-efficient,[157] long-lasting, maintenance free, increasingly affordable lighting technology, as well as being easily controlled by computer programs and potentially coordinated on a massive urban scale to produce singular, powerful

[157] LEDs consume between five and ten times less power in comparison to neon.

displays.[158] While gradually replacing previous media aesthetic forms like gaslights, arc lights, incandescent lamps, electric light bulbs, and neon, LED lighting technology has added a new augmented, aesthetic layer to buildings and entire skylines – for good or for worse. During a visit to Hong Kong this year I noticed the significant transformation to the aesthetic feel of the urban environments by the replacement of neon signs with LED lights. The Hong Kong streetscape featured in Christopher Doyle's Chungking Express, which depicted especially the flashing and throbbing ambient neon glow on Nathan Road, the main thoroughfare in Kowloon, only barely exists today – replaced by a much sharper light from LED signs in brighter and more defined RGB colors. LEDs are more powerful, more energy efficient, but also casts a colder light. As LEDs are replacing neon signs in Hong Kong and elsewhere, they also add light by implementing more architecturally implemented lighting schemes, thus tuning up artificial brightness while changing the ambiance of urban environments.

Continuing what had been started by the stereopticon, the billboard, and floodlights, and in synchronization with illuminated commercial signs of neon and LEDs, during the 1980s LED screens began to appear widely in public spaces. Urban advertisement screens found their way to intensify some of the most iconic, capitalist world city centers and enabled advertisement messages to instantiate a capitalist logic as part of the experience of public space. Through the 1990s, cities all over the world employed large-scale screens for advertisement and as a strategy for 'reinvigorating public space.'[159] Today, LED screens sometimes cover entire buildings, with the Taman Anggrek Mall in Jakarta currently being the largest LED illuminated façade in the world, being literally wrapping with 8,361 square meters of display area and showing a mix of commercial content and decorative generative patterns.[160] Today, digital advertisement screens seem to escalate and outsize each other in unregulated urban spaces. The evolution in urban screens is directly linked to developments in technology, and continuously progresses with higher resolution, more energy efficiency and increasingly more intelligent functionality.

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[158] "Neon Timeline," website of Neonsigns.hk, accessed September 5, 2016, www.neonsigns.hk/neon-timeline/?lang=en

[159] Scott McQuire, *The Media City* (London: SAGE Publications, 2008), 130.

[160] "Taman Anggrek Jakarta, Indonesia," website of Standard Vision, accessed October 5, 2016, www.standardvision.com/projects/taman-anggrek/

Photo: Tanya Toft

Interlude No. 2[161]

SESI SP Digital Art Gallery in São Paulo

The SESI SP Digital Art Gallery was founded as the first media façade in Latin America in November 2012 on the façade of the SESI/FIESP-building on Paulista Avenue in São Paulo. The gallery covers a twenty-two-story Brutalist style high-rise, concrete building, taking up three sides of the building's four façades. It was built in 1979 and designed by the then late Brazilian architect Rino Levi, who was an exponent of modern architecture in Brazil, in particular Brutalism, a style he adopted in the 1960s and contributed to the modernist transformation of the architecture of São Paulo around that time.

What appears to be the gallery's immediate 'screen' is a structure of 26,241 LED clusters (pixels), installed on a façade area of 37,000m2 with a resolution of 214 (vertical) x 167

[161] The description of the SESI SP Digital Art Gallery in this interlude is based on my description of the gallery in the article "Situations of presence: reclaiming public space in the urban digital gallery," in *Proceedings of the 2nd Media Architecture Biennale Conference: World Cities*, eds. by Martin Brynskov, Peter Dalsgaard, Ava Fatah, S. B. Pold, and Marcus Foth (New York: ACM, 2014): 79-84.

(horizontal) pixels and a luminous intensity of 4,5 cd per cluster. This rough-pixelated area is made of colored dots of a high switching rate, which onlookers make sense of as an image. The LED clusters are installed in the building's original architectural skin made of a metallic honeycomb structure that covers the three-sided media façade. If these technical specifications are translated into artistic challenges, they reveal a very large-scaled media façade structure, which is highly luminous and flexible in terms of types of content, but at the same time of very low resolution – significantly in comparison to the current advancement in LED displays.

The gallery has no permanent interface except from the LED structure of the facade. Interface devices are installed temporarily and customized to the particular artwork and exhibition, with Internet connection and sound. This leaves artists with flexibility and freedom to envision how to work with the gallery and expand on its architectural fixture. The façade has been used to play videos, receive live feeds, respond to software and code, and respond to audience engagement through scanned movement or direct engagement from an 'interaction platform' across the street. Installations have been either new commissions or new versions of existing artworks completely adapted to the architecture and context. Artists have been invited to experiment with new ways in which the audience can engage with the façade, for example through 'controllers,' such as buttons triggering certain consequences (some predictable, some not), as well as through mobile devices, props, bodily motion, facial projection mapping, and motion sensors.

When switched on, the LED skin completely modifies the architecture, and the ontological nature of the building changes. The building that usually appears solid and permanent, and which would usually organize the surrounding material world in a solid and permanent manner, is dissolved by references of a more symbolic nature. When lit, the gallery dematerializes the appearance of the architecture, transforming its sense of shape, volume, stability, function and symbolism, and thereby changing its relationship to the surrounding buildings and environment.

Because the LED clusters are dictated by the honeycomb structure, the image is not organized in a raster display – the mathematical, Cartesian coordinate space that has organized TV and computer screens through history.[162] Identified with both modernity and

[162] Sean Cubitt, "Current Screens," in *Imagery in the 21st Century*, eds. Oliver Grau and Thomas Veigl, 21-36 (Cambridge: MIT Press, 2011), 25.

> the broad cultural project of modernism, the raster grid became the technical protocol for the format of mass media representation.[163] However, the gallery screen deviates from the screen protocol of most emerging new screen technologies, which are built on existing raster grid standards. This means, to the audience experience, that a different mode of visual decoding and sense making is activated. Since the audience is not presented with a glossy, high-res HD-simulating screen image but one of very low resolution, and since people can never see the entire three-sided screen space that folds around the building, one has to complete the image oneself. In a sense, audiences have to fill in the space missing in between the pixels.[164]

The transformation of the façade of the SESI/FIESP-building into a digital gallery with the application of LED lights into the honeycomb surface structure, reflects how LEDs in the past two to three decades have been implemented in architecture and urban environments all over the world. A sub-domain of architecture has emerged, using computer-controlled illumination in conjunction with new types of electronic screens and active glass surfaces, with computer-based design and production processes enabling electronically animated, computer-controlled ornament.[165] With this, towers and buildings of architectural signature around the world are increasingly augmented with lighting, and media aesthetic visual expressions with artificial light are now common in urban environments worldwide. This is found in modes of, for example functional exterior illumination; urban nighttime environment illumination; static light architecture concerned with permanent artistic illumination of buildings and structures; media architecture that, in addition to exterior illumination, employs dynamic graphics, text, image, and spatial movement displayed on elements of the architectural structure; light art using artificial light as main artistic expression in urban environments and on architecture; and in dynamic and temporary use of lighting for events, such as world fairs, sound and light shows, urban light festivals, open air music concerts, and mega events.[166]

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[163] Ibid.

[164] Toft, "Situations of presence: reclaiming public space in the urban digital gallery," 80f.

[165] Uta Caspary, "Digital media as ornament in contemporary architecture facades: Its historical dimension," in *Urban Screens Reader*, ed. Scott McQuire, Meredith Martin and Sabine Niederer (Amsterdam: Institute of Network Cultures, 2009), 65-74.

[166] These categories of use of artificial light in urban environments are suggested by architect Karolina M. Zielinska-Dabrowska in "Critical Perspectives On Media Architecture: Is It Still Possible To Design Projects

Recent upgrades and new constructions with advanced LED lighting systems happen in symphony with a wealth of skyscrapers built and having transformed cities dramatically since the 1980s and 1990s. Especially since the early 2000s, when prices in LED technology dropped and power efficiency went up, many buildings have been upgraded to extend their brand or urban signature with lighting design. In Toronto, the CN Tower upgraded its original incandescent lights from 1976 with color-changing LED lights in 2007. In 2012, the Empire State Building in New York City unveiled its new LED lighting system driven by high-speed computers, capable of 16,000,000 different colors. This replaced the floodlights added in 1964 to illuminate the top of the building at night, which had red, white and blue colors implemented in 1976 for the bicentennial of the United States, on the initiative of Douglas Leigh, an advertisement and lighting designer also responsible for many of the electric billboards in Times Square.[167] These are just a few among many buildings around the world being 'upgraded' with LED lights. LED lighting systems seem like an essential architectural component in recently constructed towers, for example the Tokyo Skytree opened in 2010, Dubai's Burj Khalifa opened in 2010, and One World Trade Center in New York City that opened in 2014 with a colorful lighting scheme for its spire. In fact, the reason the Fernsehturm in Berlin seems so special, is that it appears as one of few towers in the world that has not been upgraded with colorful, computational LED lights, but maintains its original, subtle white lighting.[168]

Increasingly, new building design implements not only floodlights or LED lights but also a combination of powerful light expressions. On August 29, 2016, a permanent light and sound show was inaugurated on the Mahanakhon Building in Bangkok, Thailand's tallest building, combining multiple light modalities of both sparkling LEDs, laser light and rotating searchlights. Also the Shard, Europe's tallest building raised in London, demonstrated a light show involving twelve lasers and thirty searchlights in celebration of its completion in 2012. The Burj Khalifa in Dubai carries the largest LED-illuminated façade in the world with

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Without Negatively Affecting Urban Nighttime Environments And Will The Future Remain Dynamic, Bright and Multi-Colored?" *Conference Proceedings for MAB 14* (2014): 101-108.

[167] "Historical Timeline," website of the Empire State Building, accessed December 13, 2015, www.esbnyc.com/explore/historical-timeline; "Tower Lights," website of the Empire State Building, accessed December 13, 2015, www.esbnyc.com/explore/tower-lights

[168] Only for Berlin Light Festival in October is the Fernsehturm augmented – in 2016 with green lights and a projection animation on the one side, and for Saint Patrick's Day the white lights are replaced with green (probably the same green lights being reused for Berlin Light Festival), which might indicate that the Fernsehturm is catching up with the trend of most other towers and landmarks in the world.

70,000 LED panels wrapped around the building combined with laser light flashing over downtown Dubai, especially on special occasions. Meanwhile, the Elbphilharmonie in Hamburg, which opened on January 11, 2017, presents a light display combining search lights, glass screens and LED lights in real-time visualizations of concerts performed inside the concern hall.

These intensifying light upgrades increasingly reflect on neighboring buildings and, in effect, come to augment entire city skylines, resembling light and sound shows such as we find in mega cities like Hong Kong, Singapore, Nanchang, Shanghai and Doha. The first permanent light and sound show to augment an entire skyline was "A Symphony of Lights" in Hong Kong, inaugurated in 2004 and unfolding on both sides of the Victoria Harbour. It consists of LED lights and displays, laser beams and searchlights performing a spectacle synchronized to music. The show involves forty-seven buildings (originally seventeen buildings on only the Hong Kong Island side), lasting for thirteen minutes every night at 8pm. The show grows year by year to include more buildings and more advanced and spectacular lighting systems. So is the number of permanent city light and sound shows across Asia and the Middle East, in particular. In Dubai, there are various daily light and laser shows, for example on the Burj Khalifa, the Wafi City Mall and the Dubai Fountains – which outcompete each other in spectacularity and, of course, get an upgrade for special celebrations such as New Year's Eve. In October 2015, the city Nanchang in Jiangxi, China, presented a permanent light and sound show using 293 buildings.[169]

Intensity as parameter of growth

The evident motivation behind the spectacular light implementations is clear: "Brighter means more prosperous," as the Astronomer Dr. Jason Pun of the Hong Kong University department of physics stated in an interview in The Guardian.[170] Since urban streetlights proliferated in the 1880s, a combination of security and prosperity has characterized the logics that guide the media aesthetic developments of urban environments. Already following its early installation, electric lighting was used as a novel form of 'advertising' by way of enhancing a sense of presence, as light created ambiance and attracted nightlife. Urban street lights served to

[169] "Most buildings in a permanent light and sound show," Guinness World of Records, accessed October 20, 2016, www.guinnessworldrecords.com/world-records/largest-permanent-light-and-sound-show

[170] Ellie Violet Bramley, "Urban light pollution: why we're all living with permanent 'mini jetlag,'" *The Guardian*, October 23, 2014.

reduce anxieties about dangers associated with darkness, but they also expanded the time frame and profitability of factories, shops and other economic activities.[171] Early electric public space illumination was particularly installed around city center businesses, such as theaters and department stores, while 'block street lighting' was arranged among businesses.[172] The tendency of using light for attracting crowds, advertising, and demonstrating the progressive orientation of a city was manifested with the World's Fairs, which were key sites for lighting innovation and experimentation with systematic use of electric light to alter the ambiance of space, significantly between the 1880s and World War One.[173] Scott McQuire notes how cities hosting the World Fairs in the 1880s and 1890s sought to outdo previous shows in the number of lights installed and the power of their illumination. They simultaneously demonstrated the possibilities with light density (using many lights), and tested dramatic new ways in which lights could be used, for example by outlining buildings and pathways or illuminating fountains and water jets. The World Fairs thus showcased the potential for the transformation of cities into performative spaces.[174] Corporations expanded brand promotion by floodlighting skyscrapers, and from the early twentieth century hidden floodlighting enabled buildings to be displayed in integrated illuminated environments.[175] In these urban, media aesthetic imperatives, commodification of space not only concerned direct advertisement with illuminated signs but also a mode of intensification of ambiance and brand extension via illumination of buildings and streets.

As illustrated earlier, contemporary visual urban media aesthetics grow fast in intensity via size, resolution, brightness, multi-mediality, and computational complexity. The path and pace of development has been driven by competition for visibility and mastering of space via scale, while signaling technological advancement and incorporation of intelligent computability underlying the illumination systems. The tendency of tuning up media aesthetic intensity reveals an aesthetic culture driven by entertainment and infused with imperatives of growth and capitalist objectives. It reveals the global competition between cities and a tendency to modify our world map by means of spectacles and events that highlight certain places or buildings – while others vanish from our attention. Cities compete for space on the

[171] Wolfgang Schivelbusch, *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*, trans. Angela Davies (Berkeley: University of California Press, 1988).
[172] McQuire, *The Media City*, 117.
[173] Ibid., 117.
[174] Ibid., 119.
[175] Ibid., 120.

map of spectacular attractions to get attention on city pages and tourist blogs. In this condition of global competition, media aesthetic initiatives in other places must be exceled in size, intensity and spectacularity to evoke the attention of the media, potential investors, building tenants, local powers and tourists.

As Nato Thompson has noted, "We live in a world in which culture is used within the mechanisms of power. Power gets art, too." Urban media art has not remained free of the neoliberal paradigm and growth imperatives. As temporal, immaterial, performative, and oftentimes highly visible and 'sensational' aesthetic material, urban media art has fitted perfectly into an economic narrative of growth through urban cultural planning. In recent decades, this has turned into strategies of making places and cities attractive with art and culture.[176] In her account on site specificity, Miwon Kwon refers to this in terms of a tendency towards "cultural valorization of places," by which a certain commodity status is brought to the immaterial, process-oriented, ephemeral and performative qualities in art and aesthetic expression. Kwon explains how, when socioeconomic order thrives on the (artificial) production and (mass) consumption of difference, public art is at risk of becoming a tool for achieving "distinction in a world beyond difference."[177] Public art comes to supply distinction of place and uniqueness of locational identity, which within our competitive restructuring of the global economic hierarchy are highly seductive qualities in the promotion of towns and cities.[178] As technology becomes continuously cheaper and more efficient, with neoliberal city marketing departments' attention to the monetary outcomes of tourists flocking to places with events promising sensational experiences, year on year we witness how, for example light festivals are becoming more and more voluminous: bigger, brighter, and more of the same – in contingency with the development in technologies that light installations employ.

The city light festival typically requires various allowances and budget support from city governance and increasingly tends to be grounded in numbers and growth estimates rather than cultural value. As a recent example, Sydney's annual light festival Vivid Sydney – the world's largest light festival – in 2016 presented more than ninety light installations and projections in addition to comprehensive music and 'ideas' programs. When I visited the Vivid Sydney in June, on the occasion of the Media Architecture Biennale (MAB) coinciding

[176] Tanya Toft, "Screen Practice in Curating: The Medium Paradox," *Screen City Journal* 4 (2014), 8.
[177] Miwon Kwon, "One Place After Another: Notes on Site Specificity," *October* 80 (1997): 106.
[178] Ibid., 105-106.

the same days, I experienced an overwhelming abundance of light installations that augmented the entire Sydney Harbor. These transformed the skyline of the Port Jackson with a dominance of purple-ish colors lighting up buildings, and a wealth of individual light installations spread in the area surrounding the harbor, including – of course – a projection mapping on the white sails of the Sydney Opera House. The Sydney Vivid was seemingly growing from notions that bigger is better, or, as the Creative Director, Ignatius Jones stated without filter in the opening of his keynote presentation at MAB: "Art Is Marketing."[179] Since the first Vivid Sydney in 2009, the festival has increased its visitor numbers from 225,000 to 2,31 million people in 2016. Vivid Sydney has been estimated to give an economy boost to Sydney of sixty-three million Australian dollars – a fifty percent increase from 2015.[180] Consequentially, festivals like Vivid Sydney are conditioned by quantitative, calculable estimates, and their character becomes more or less homogeneous – oftentimes presenting more spectacle-driven light and projection mapping installations and less installations deriving from autonomous artistic inquiries, in the sense of deriving from the artist's emancipated curiosity, ethics and criticality rather than strategic directions of a festival. In a manner of cultural valorization, Vivid Sydney demonstrates the art's contingency with local policy and city marketing incitements – while inspiring many politicians elsewhere to imitate the economic success and position their city on the world's 'cultural map' by initiating a new light festival, of which more and more are popping up around the world every year. We witness how city light festivals become bigger and brighter in accordance with city branding incitements, not in accordance with considerations on how these festivals may contribute to our human curiosity and cultural well-being.

Intensity and changing conditions of presence

A visit to Bangkok in June 2016 revealed, in addition to the proliferation of urban screens with advertisement content, how areas of the city are illuminated in ambient ways at night. I especially noticed how the contours of the boats transporting tourists and inhabitants on the Chao Phraya River are marked with colorful light, which was not installed on an earlier visit in 2005. Light from the boats reflects in the water and extends to affect the entire canal

[179] Ignatius Jones, opening keynote at Media Architecture Biennale Sydney, June 2, 2016.

[180] Simon Thomsen, "Here are the incredible crowd numbers for Vivid Sydney this year," Business Insider Australia, published June 28, 2016, accessed October 9, 2016,: www.businessinsider.com.au/here-are-the-incredible-crowd-numbers-for-vivid-sydney-this-year-2016-6

environment. The lights, permanently installed until probably upgraded with newer and brighter light ornamentation with time, leave an intense signature on the ambiance of the environment. The recent tendency of intensifying urban environments with ambient lights evokes Walter Benjamin's comment in his essay "One Way Street" from 1926, in which he writes: "What, in the end, makes advertisements so superior to criticism? Not what the moving red neon sign says—but the fiery pool reflecting it in the asphalt."[181] The intensity is, significantly, in the reflection of light in the Bangkok canal and the surrounding environment, which is also found in the spectacular light schemes of recent architecture reflecting on neighboring buildings and augmenting entire city skylines. While the lights in Bangkok do not represent advertisement – except by bringing attention to the boats and their businesses – they contribute to constituting an urban ambiance that implements a different logic of space, and thereby affect the way in which one feels present. It is therefore important to consider how current tendencies of upgrading our urban environments with visual media aesthetics affect how we feel *present* – with increasingly machinic sensibilities affecting our ontological experiences.

So, how are these changing conditions of media aesthetic augmentation of presence to affect our experience to be considered? With the conception of "presence" Hans Ulrich Gumbrecht refers to something that has an immediate impact on our human bodies. From an epistemological perspective, Gumbrecht considers how Western culture has gone through a process of progressive abandonment and forgetting of presence in favor of orientation towards meaning. He considers how in our Cartesian, quantitative and temporally dispersed contemporary reality we are longing for presence and tangibility because our everyday environments are so conscious-centered. Rather than having to think, we *desire* to connect with a layer of our existence that wants the things of the world close to our skin.[182] This, Gumbrecht argues, we can achieve through the "special effects" produced today by the most advanced communication technologies.[183] Mediated special effects are thus instrumental in reawakening a *desire* for presence. The "desire for presence effects" that Gumbrecht points at may indicate that we do not – under normal, non-traumatized circumstances – feel discomfort

[181] Walter Benjamin, "One Way Street," *Walter Benjamin, One-Way Street and Other Writings*, ed. E. Jephcott and K. Shorter (Frankfurt: Suhrkamp Verlag, 1979), 89f.
[182] Hans Ulrich Gumbrecht, *Production of Presence: What meaning cannot convey* (Stanford: Stanford University Press, 2004), 106.
[183] Gumbrecht, *Production of Presence*, xv.

with these effects; rather, perhaps we enjoy them because they make us *feel more present*, at least there where we direct our attention.

This conception challenges an otherwise theoretically established concern with subjective experience as *distracted* by intense stimuli. As noted by Jonathan Crary in *Suspensions of Perception* (2001), much critical and historical analysis of modern subjectivity since the new observer of the nineteenth century has been based on the idea of 'reception in a state of distraction'– a concern developed around this with how to *disengage* oneself from a broader field of attraction, specifically visual and auditory stimuli. This regarded the ability of the human being to focus on a reduced number of stimuli, to disengage oneself in order to protect oneself, which has been considered conditional and constitutive to creative and free subjectivity.[184] We find such characterizations of perception in terms of human experiences of fragmentation, shock and dispersal in the writings of, among others, Sigmund Freud, Georg Simmel, Walter Benjamin, Paul Virilio, and in Jonathan Crary's *24/7*.

In *Beyond the Pleasure Principle* (1920), Sigmund Freud considers that our faculty of consciousness as a form of shield has the function of protecting us from stimuli and the effects of shocks described as 'excessive amounts of stimulation' and 'unsuitable kinds of stimuli.'[185] This reflects a concern with human subjectivity and wellbeing when conditioned by shock in the modern metropolis, in which subjects must struggle to maintain a coherent sense of the world. We can recall how Simmel in *The Metropolis and Mental Life* describes mental life by means of the individual's adaptation to the economic-psychological conditions of the newly emerging modern metropolis. Simmel describes how the "metropolitan type" needs to adapt to the psychological conditions of the city, characterized by a "telescoping of changing images" and differences between "what is grasped at a single glance and the unexpectedness of violent stimuli."[186] The psychological conditions worrying Simmel are due to the tempo and multiplicity of economic, occupational and social life. He writes about a condition of urban living in the modern city of Berlin in 1903, of shopping arcades, motorcars, electric trams, and streetlights. Although he does not mention illumination in his essay, we should note that unlike other metropolises at the time, the streets of Berlin were

[184] Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge: MIT Press, 2001), 4.
[185] Sigmund Freud, *Beyond the Pleasure Principle*, ed. And trans. James Strachey (New York and London: W. W. Norton & Company, 1961), 22.
[186] Georg Simmel, "The Metropolis and Mental Life," in *The Blackwell City Reader*, eds. Gary Bridge and Sophie Watson (Oxford and Malden: Wiley-Blackwell, 2002), 11.

fully illuminated with gaslights, arc lights and incandescent lamps.[187] The illuminated city space was a fairly new condition, which extended the 'productive' hours of the city and stimulated a new ontological situation of nightlife – which likely characterizes what Simmel considered to be a challenging new condition of stimuli for the modern subject. He pays particular attention to the *incapacity* of the human being to cope with the stimulations of the modern metropolis. However, while he might have experienced shocks in the modern metropolis, today, even though media aesthetic impressions are arguably more intense and tuned up than ever, they hardly shock us as such. Their impact on our human system must be considered differently than the impressions affecting the modern stroller at Simmel's time. In comparison to the illuminated condition of Berlin in 1903 (and the efficiency and economic forces it brought forth), contemporary conditions of illumination in world cities reveal new perceptual implications that, with help from Gumbrecht, can be rooted in our growing *desire* for presence that is met by increasingly intensifying media effects in aesthetic decoration schemes.

In the foreword, I explained how an experience of a mental and bodily shock made me aware of the *intensity* of mediation – both natural and artificial – that we are immersed in, and which constantly affects our senses. The breaking down of my perceptual system made me aware of the intensity of the mediated experience frames of everyday life, which suddenly and severely challenged my perceptual system. When exposed to intense light impressions or loud sound, or sound coming from multiple sources simultaneously, when my eyes had to focus and catch up with 'fast images,' when looking for items on shelves in the supermarket or scrolling through online news or a text document, or, when just thinking in random streams of thought, my forehead would start to burn. I would get dizzy and my body would feel a sudden intense exhaustion. The world, and significantly all its mediated impressions, simply went too fast and were too intense for my perceptual system to cope with. From the perspective of psychoanalytic theory, it was my lack of a strong enough 'protective shield' against stimuli, that caused the experience of the near-flight crash to manifest in my 'long experience' – to an extent where my system of sensibilities has been left 'damaged' or changed. With his concept of the protective shield, Freud explains how the more readily consciousness registers shocks,

[187] Sandy Isenstadt, Margaret Malle Petty and Dietrich Neumann, *Cities of Light: Two centuries of Urban Illumination* (New York and London: Routledge, 2015), 69.

the less likely the shocks are to have a traumatic effect.[188] The protective shield is one that can be trained and developed in order to cope with stimuli. The more efficiently our protective shield screens the stimuli, the less the shock impressions enter into our long experience.

However, Freud's theory is problematic in the context of our contemporary condition of intensifying presence effects. In Freud's logic, the better we train our perceptual system to adapt to the intensity of stimuli, the more used to them we will become and the less we will experience their effect in our perceptual system. However, in a contemporary condition in which, according to Gumbrecht, we *desire* rather than avoid intensified stimuli, this protective mechanism then also entails that presence effects must increasingly intensify in order to effectively help us with achieving an enhanced sense of presence. This is because we continuously adapt to new levels of intensity. What becomes problematic is not the shock but the mechanism of protection, a mechanism of technogenetic adaption, as I will explain in more detail in Chapter 4, "Immersion." In light of Gumbrecht's consideration of our desire for presence, Freud's protective shield may be considered a mechanism by which we *adapt* to stimuli and develop an ability to cope with our mediated reality; a mechanism that contributes to *pushing* our desire for more and stronger presence effects. Consider then how the economic growth logic on which the city light festivals and current upgrades of architecture with spectacular lighting schemes relies exactly on this *desire* for presence: on people's desire for spectacularizing experiences that make us feel present in the here and now. At this more sensible level, the pace of implementation of intensifying media aesthetic developments in urban environments reveals our *desire* for the ambient reality they create.

As illustrated in this chapter, our current media aesthetic upgrades involve a sense of mechanization of our ontological experience. Recently, LED drone light shows have demonstrated a new media aesthetic opportunity for lighting the sky in performative manners, resembling – and potentially one day replacing – fireworks. Indeed, with the emergence of fireworks, which date back to the seventh century Tang Dynasty in China, we can see a tendency of using mediated effects to achieve an enhanced sense of experience and amazement in the here and now. Fireworks were long used for accompanying festivities, especially in celebration of the Chinese New Year and the Mid-Autumn Moon Festival, before gaining popularity in Europe during the mid-seventeenth century, mostly for

[188] Benjamin, "On Some Motifs in Baudelaire," 176.

ceremonial use.[189] While fireworks are still widely used to celebrate New Year and other events, very recently LED drone light shows have been introduced to potentially replace them. In November 2015, the technology company Intel demonstrated the coordination of one hundred drones in an 'airborne music and light experience' syncopated with a live orchestra in Hamburg. The drones, also referred to as 'space pixels' or 'spaxels,' followed flight paths through custom software, turned on and off lights and moved succinctly with one another to form 3D messages and shapes. When the documented drone light show was presented by Intel CEO Brian Krzanich in his keynote lecture at the CES2016 (Consumer Electronic Show) in Las Vegas, he predicted how drones would "redefine the fireworks experience without the inherent risk of traditional pyrotechnics."[190] In comparison to fireworks, drone performances do not pose a danger to the people installing them, they do not release carbon dioxide and can be reused and updated as new LED technologies emerge, and they can be choreographed into completely accurate formations. In February 2017, Intel upgraded their drone performances to include five hundred drones, "…something we could have never done last year," a developer noted.[191] With the drone light show, we might surmise the beginning of an era of technological upgrade of an ancient media aesthetic practice or perhaps the beginning of entirely new forms of aesthetic expressions with airborne LED light.

This media aesthetic optimization, at least in a technological sense, not only concerns the replacement of one technology with another. The 'upgrade' of fireworks with the drone light performance entails a different mode of experience in terms of how our *sense of presence* is choreographed with media aesthetics. It entails a different mode of *sensible language*. While drones might *resemble* fireworks, situated in the sky and potentially imitating patterns and modes of light effects, they replace the soft and color-tuned light ambiance of fireworks with one that is sharp, cooler and in the RGB color schemes of LED light (which might become more sophisticated as LED technology progresses, of course). The drones introduce a calculated organization of space with the lights moving in accurate mechanic formations and reacting to algorithmic instructions, as opposed to falling softly towards the ground by natural gravity. So, a media aesthetic phenomenon following the rules of natural forces is replaced

[189] Simon Werrett, *Fireworks: Pyrotechnic arts and sciences in European history* (Chicago: The University of Chicago Press, 2010), 181.
[190] "2016 CES: Highlights of Intel CEO Brian Krzanich's Keynote," published on Youtube January 6, 2016, accessed October 20, 2016, www.youtube.com/watch?v=BslGBBYsi8c
[191] "Intel's 500 Drones – Super Bowl LI – LED Light Show Amazing Technology," Youtube video, published February 6, 2017, accessed February 14, 2017, www.youtube.com/watch?v=mk7TsDNuhs0

with computational mastering and control; replaced with a different language of sensibilities. The tendency of upgrading media aesthetic modes of expression applies extensively beyond fireworks and drone performances as a contemporary characteristic of media aesthetic change of our environments and everyday experience. Like drone light shows – as compared to fireworks – change the feel and ambiance of the sky, new inventions and technological implementations change the feel and functionality of the urban landscape while they also contribute to reshaping our media aesthetic experiences, conditions and ambiences. The replacement of previous lighting schemes with LEDs in architecture, the proliferation and growth in urban screens, light and sound shows, and festivals, and the "urban cosmetics"[192] that we find in light-intensified ambience, contribute to what Jordan Crandall has named a "defining horizon." Crandall describes the defining horizon as "a calculative ambience that imposes its distinction, categories and ways of being onto all facets of urban life – as it acts as a cognitive, ontological, and experiential supplement for the simplest forms of ordinary routine."[193] Crandall's defining horizon applies to what Hansen describes as data-driven operations that bleed into the texture of experience to form a background of a peripheral "calculative ambiance" that indirectly flavors events and phenomena.[194] Our intensification of urban media aesthetics thus contributes to quantifying the quality and feel of atmosphere in the technologically advanced, competitive city, with current intensification of media aesthetic presence effects reflecting how machinic processes and algorithmic functions are applied to still more dimensions of our everyday lives. The following chapter will continue examining a tendency of *intelligence* as underlying our current media aesthetic visual upgrades: a tendency of computerization of functionalities, systems, and interfaces of our urban environments.

Conclusion

Intensity is a dominant factor of our perceptual experience today. In urban media art's contingency with this tendency, the art simultaneously evolves from a human desire to enhance a sense of presence with media effects, while seeking to critically deal with what conditions this desire. It matters whether this desire is motivated by sensation on the premises

[192] Maurice Benayoun, "Urban Media Art Paradox," in *What Urban Media Art Can Do: Why When Where & How*, eds. Susa Pop, Tanya Toft, Nerea Calvillo, and Mark Wright (Stuttgart: av edition, 2016).
[193] Jordan Crandall, "Geospatialization of Calculative Operations: Tracking, Sensing, and Megacities," in *Theory, Culture and Society* 27 (2010): 68-90, 87f.
[194] Mark B. N. Hansen, *Feed-Forward: On the future of twenty-first century media* (Chicago: The University of Chicago Press, 2015), 186.

of neoliberal growth imperatives, or if it is motivated by experience frames of closer relation to our human core.

What can be recognized in the spectacular building illuminations and light and sound shows is a tendency of increasing media aesthetic intensity – bigger and brighter installations combining various sources of light into choreographed shows, so changing a media aesthetic language in our urban environments towards sensibilities of bright-cold frequencies in LED light. The media aesthetic images in intensification become part of our basic sensible language as a structure of our communicative experience that conditions our existence today. When upgraded technology replaces previous forms, this causes changes in the dominant language of sensibility – changes towards an increasingly quantitative status of the city and our urban environments. Driven by our *desire* to achieve a sense of presence with these intensifying, mediated presence effects, the question is what lasting human (perceptual) consequences the intensification of presence effects will have on our sensible system, especially as we seem to be adapting to them. We must especially consider the consequences when mediated presence effects increasingly engage processes of temporalities that are different – faster – than our human temporalities. This will be investigated further in the following chapter.

3. Intelligence

– inquiry into computational upgrades of our life worlds

The tuning up of media aesthetic intensity with, for example proliferation of LED lights in new flexible, mechanical, energy-efficient and dynamic lighting schemes, involves increasingly complex computational functionality. Media (and mediating) architectural structures characterize our environments with increasingly intelligent, responsive, efficient and convenient technological and media aesthetic 'upgrades,' with modes of expression becoming brighter, safer, faster, more accurate, and with potential for evolving in synchronicity with our computational systems and technological inventions. These intelligent upgrades are forged by the current urban developments of cities worldwide, directed by the smart city visions of governments and corporate technology providers, as well as by continuous advancements with mobile devices that enable new apps and life navigation services, as well as social and cultural experiences in order to structure our everyday lives in these environments. Through the computerization of various functionalities we are surrounded by and experience an intensification of presence effects assisted by machinic processing speeds.

We recognize the contingency with this tendency of our urban environments and infrastructures becoming increasingly intelligent in urban media art as it employs the 'intelligent' technologies of our times. Artists make use of existing interactive screens, urban infrastructures and digitally controlled lighting systems, most often however, breaking with the visual idioms that usually characterize these venues. Besides engaging the smartphones and mobile devices people have in their pockets, artists employ contemporary technologies of cameras, microphones, speakers, webcams and controllers from video games – technologies at the center or periphery of mass culture, which are sometimes hacked or modified for the artistic use. Artists make use of emerging ocular technologies like virtual reality headsets to provide immersive virtual reality for the wearer, such as the Oculus Rift headset, affordable viewing frames or cardboard viewers allowing you to turn your smartphone into virtual reality goggles. Artists employ surveillance technologies: motion detectors such as the Kinect camera; sensors that may detect the movement of people or traffic; or sensors that detect the behavior of plants, water or pollution at a more granular level. They also employ radio-

frequency identification (RFID) in their artworks, tags attached to objects (such as mobile phones) that contain identifiable, electronically stored information that can be tracked in a method for data capturing; reflecting surveillance mechanisms in the population of urban environments with tiny embedded microprocessors in mobile phones, laptops and cameras for aggregating data to customize products, services or politics. Artworks equally facilitate real-time data collection and visualization, for example for visualizing public opinion or otherwise invisible operations in society. Artists employ social media platforms like YouTube, Facebook and Instagram (Selfie), and connections via Skype – though they sometimes write their own software and formulate their own instructions to change our familiar mediated interfaces. When artists make use of open source software, write their own software, establish their own data streaming networks, and develop smartphone applications as the interface for artworks, it is oftentimes in response to existing networks, applications or interfaces and their instructive mechanisms in digital culture.

In this chapter I will inquire into the tendency that the employment of intelligent technology in urban media artworks reveals: the tendency of our urban environments becoming increasingly intelligent, as a support structure for the media aesthetic intensification of our life worlds. A main question is what consequences these intelligent technological upgrades might have on our experience, not only bringing more efficiency into our lives and affecting our ontological experience to increasingly being measured, quantified and potentially micro-managed, but also affecting our intuitive habits and modes of behavior with the implementation of algorithmic functionality and logic.

Intelligence in contemporary media aesthetic urban experience

Since interests emerged in exploring the possibilities that data and computers could bring to public policy in the late 1960s,[195] cities all over the world have followed urban development visions to integrate information and communication technology and Internet of Things solutions to urban systems and environments. Urban environments are made intelligent with

[195] Early attention to "smart city" visions, the use of information technology and data to help govern cities more effectively, connect residents to city government and resources, and encourage high-tech employment, can be traced back to the late 1960s. For example, the Community Analysis Bureau (a department of City Government) established in 1967 in Los Angeles, pursued computer-assisted data and policy analysis with the ambition to create an "Urban Information System." See Mark Vallianatos, "Uncovering the Early History of "Big Data" and the "Smart City" in Los Angeles," on BOOM A Journal of California, published June 16, 2015, accessed October 21, 2016,
www.boomcalifornia.com/2015/06/uncovering-the-early-history-of-big-data-and-the-smart-city-in-la

sensors integrated with real-time monitoring systems and 'smart city' intentions of enhancing quality, performance and interactivity of urban services.[196] Today, smart city visions inform one of the strongest imperatives for city development. Smart city initiatives reflect the belief that better use of information technology and data can: help more efficient city governance; improve the efficiency of services to meet residents' needs; encourage high-tech employment; reduce costs and resource consumption; improve contact between citizens and government; improve quality of life; and support urban growth and innovation economy. Through the use of real-time control systems and sensors, data is collected from citizens and various movements of people, traffic and anything else trackable in the city and then processed in real time. Processed and analyzed, this data is used to make more efficient use of physical infrastructure through artificial intelligence and data analytics, which can be used to tackle inefficiency and to optimize systems.[197] In Singapore, for example, one of the smartest cities to date, sensors and cameras are implemented across the island city-state and allow the government to monitor everything from cleanliness of public space to density of crowds, while measuring the precise movement of every locally registered vehicle.[198] From 2017, the collected data then feeds a dynamic 3D city model and collaborative data platform with 3D maps of Singapore, called Virtual Singapore. Government, research sectors and private interests[199] will be able to access this platform for data heavy insights of the city – in real time. Virtual Singapore can be used to visualize network coverage areas or simulate crowd dispersion, to establish evacuation procedures during an emergency, to predict how diseases might spread, or for tracking people.[200] Significant funding is directed towards optimizing and making cities worldwide more efficient. In 2025, the market for smart city technology is estimated to reach US$1 trillion.[201] Smart city visions embody a dominant imperative in contemporary global thinking about city development, one of improving the intelligence of cities in connecting human, collective, and artificial intelligence.

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[196] "Smart Cities Mission," Ministry of Urban Development, Government of India, accessed August 5, 2016, www.smartcities.gov.in/

[197] Sam Musa, "Smart City Roadmap," 2016. www.academia.edu/21181336/Smart_City_Roadmap

[198] Jake Maxwell Watts and Newley Purnell, "Singapore Is Taking the 'Smart City' to a While New Level," The Wall Street Journal, April 24, 2014, accessed September 18, 2016, www.wsj.com/articles/singapore-is-taking-the-smart-city-to-a-whole-new-level-1461550026

[199] According to The Wall Street Journal, the government plans to share some data with the private sector. Ibid.

[200] "Unveiled – Virtual Singapore," on the website of National Research Foundation – Prime Minister's Office Singapore, published December 1, 2014, accessed September 18, 2016, www.nrf.gov.sg/media-resources/media/special-coverage/unveiled---virtual-singapore

[201] Watts and Purnell, "Singapore Is Taking the 'Smart City' to a Whole New Level."

In a sense, our cities have always been intelligent, being structured around systems of communications, trade and supply networks. During industrialization, cities were developed with water supply and liquid waste removal networks, energy supply networks, transportation networks, heating and air conditioning networks in buildings, as well as sewers, and food processing and supply networks. In the latter half of the nineteenth century and first half of the twentieth century, telegraphs, telephones, and radio communication systems connected cities and optimized infrastructures for communication, trade and information.[202] The current, high-speed intelligent condition of the twenty-first century media city significantly began to take shape following developments in digital telecommunication. Introduced in the late 1960s, these developments laid the foundation for the Internet and mobile wireless networks with the invention in packet switching – data transmission by breaking down messages into parts that are sent independently and reassembled at the destination/s – enabling the Arpanet, Ethernet, the World Wide Web and eventually the Internet as we know it today. With the 'semiconductor revolution' in the 1970s and 1980s, computers became smaller and less expensive. In the 1990s, digital innovation progressed with digital sensors and tags, as well as minuscule digital cameras and microphones, GPS and other location technologies, and RFID tags embedded in products and packaging. These devices and inventions were soon linked into the growing digital network.[203] By the end of the twentieth century, tiny embedded microprocessors allowed mobile phones, Blackberries, laptop computers, digital cameras, mp3 players, iPods and iPads to populate urban environments, whereby digital intelligence became ubiquitously present.

Today, in smart city upgrades, but also in the seeming course of evolution of the media city, devices such as cameras, motion detectors, RFIDS and other sensors are embedded in our urban infrastructures and linked to computers and databases for analysis and feedback via algorithmic procedures. Our urban environments are increasingly populated with responsive façades, multi-touch surfaces, 'intelligent' lighting, networked and programmable screens and machines, smartphones and other devices with geospatial positioning system (GPS) devices and social media interfaces, intelligent personal assistants (IPAs) and software agents, as well as ubiquitous technologies, such as radio frequency identification (RFID) tags, often coupled autonomously with sensors and actuators. Urban computing technologies are more or less

[202] William J. Mitchell, "Intelligent Cities," *UOC Papers – e-Journal on the Knowledge Society* 5 (2007), accessed September 16, 2016, www.uoc.edu/uocpapers/5/dt/eng/mitchell.pdf.
[203] Mitchell, "Intelligent Cities."

uncritically applied to making our environments more intelligent, responsive and sensational, directly in the urban surface or via our mobile media that accompany our behavior within these environments. Technologies increasingly mediate the physical and digital layers of human networks and urban infrastructures – fast-paced towards a complete, media aesthetic 'virtualization' of our reality. The variety, pervasiveness, and intensity of information streams entailed in these intelligent media architectural constructs have brought about significant changes to our contemporary experience.

Photo: Tanya Toft

Interlude No. 3[204]

***Lagoglyphs: Animation* (2009) by Eduardo Kac**

The real-time parametric animation *Lagoglyphs: Animation* (2009) by Eduardo Kac shows an animation of a sign system of constantly changing constellations composed of green and

[204] The description of the installation here is based on my description in the curatorial essay "Digital Afterimage," curatorial essay for the SP Urban Digital Festival in Sao Paulo in 2015, accessible at www.tanyatoft.com/3458-2

black bunny symbols on the façade of the SESI SP Digital Art Gallery in São Paulo, Brazil. The work is part of the artist's Lagoglyphs series of works in which he has developed a 'leporimorph' or 'rabbitographic' form of writing. The series has been in development since 2006 and includes prints, murals, sculptures, paintings, an algorithmic animation, and a satellite work created specifically for visualization in Google Earth. The work references Kac's famous bio art work entitled *GFP Bunny* (2000), the 'Alba' bunny that glowed green under a certain type of blue light. Also known as 'the green bunny,' *GFP Bunny* manifested the art genre bio art, concerned with exposing the role of science in society and its incorporation in our everyday worlds. It brought attention to the notion of mutability, which in *Lagoglyphs: Animation* is illustrated in the generative mutability of writing.

The work presents a visual language that alludes to meaning but resists interpretation. It is composed of green and black calligraphic units, which involve the birth of writing (as in cuneiform script, hieroglyphic orthography, or ideography). The Lagoglyphs function through a repertoire of gestures, textures, forms, juxtapositions, superpositions, opacities, transparencies, and ligatures. These coalesce into a form of script constituted by bunny symbols and structured through visual compositional units.[205] While converging and dispersing, the bunny symbols in *Lagoglyphs: Animation* translate biology into a digital visual language.

The symbols of green and black bunnies are put together in a way that makes them appear alienated, touching on how certain lifeforms (such as a green rabbit) are alien to us when appearing as unknown or strange – in a language that is more poetic than decodable. We can consider the piece to speak to how society constructs the idea of difference, which is not only critical to most multicultural and complex urban societies today – like the demographic context of São Paulo – but also to our social participation online. We are still debating whether social media are truly social and bringing people together in genuine networks or if these platforms are in fact making us feel more alienated among each other.[206] Alienation might also apply to the 'language' that the visuals depict, which is coded.

On the opening night, the artist and I were standing on the street in front of the installation on the gallery façade, gazing at the work. He turned to me and said: "You know, I think it is so great that the work is shown on this building – because it is an *algorithm*, it is

[205] www.aspectmag.org/works/lagolyphs
[206] Toft, "Digital Afterimage."

developed to be adaptable to all kinds of screens and environments." By means of algorithm (which is alien to us because it is non-human), the installation acts like a structure of aesthetic architecture that enables its behavior and determines its interference with the surrounding environment. When presented on the SESI SP Digital Art Gallery, the dynamic bunny language wrapping the three building façades could easily be imagined to disperse the bunny symbols into the streetscape – yet the logic of the language holds them together in a collective behavior of one organism. Nonetheless, with the urban backdrop of the installation, *Lagoglyphs: Animation* comes to assimilate the alien back into the environment – the green bunny, the algorithm – by transforming it into something that feels familiar, a graphic pattern that once in a while signifies a recognizable bunny figure.

The language of the digital aesthetics in *Lagoglyphs: Animation* develops from logic similar to what today generates most of our speculative shapes, functions and imagination, which is that of the *algorithm*. An algorithm is an intelligent method that can be expressed within a finite amount of space and time and in a well-defined formal language for calculating a function.[207] It contains sets of operations to perform calculation, data processing, and automated reasoning tasks by which an instruction describes a computation that proceeds through a finite number of successive states, until it produces outputs. Algorithms play an increasingly integral role in the process by which data becomes information, by which the production of knowledge becomes a process *shared* by humans and machine systems, and in informing processes of change in our world. The algorithm is the software formula that makes contemporary images operative. The consideration of images as active, as somehow performative or possessing a kind of agency, is nothing new. The talking image brought the silent image to life, as did the moving image with the still image. Since their origin, advertisement images have been considered to have a capacity to generate desires or behaviors. Images of pornography have been considered to enact a form of violence (or pleasure). Images of the first man on the moon in 1969 contributed to asserting a collective imagery of America's global dominance. The idea that images have social, psychological or societal power has been a trope of the society of the spectacle and of the society of

[207] Hartley Rogers, *Theory of Recursive Functions and Effective Computability* (Cambridge: The MIT Press, 1987).

surveillance – from discipline to control, as per the writings of Deleuze.[208] However, digitization, enabling the conversion of analog source material into a numerical format whereby the representation of an 'object' is generated from a series of data (binary numbers of 0s and 1s), which facilitate computer processing, has enabled images to become active in a different way. This we find in, for example computer games, surveillance cameras, military drones, scientific and medical-guided operations, treatment and therapy in virtual reality, and the 'images' of practices involving location-based applications (such as Google Street View), but also in images in the conception as sense-impressions to become active, or operative – emerging from operations of the algorithm. We can consider how our media aesthetic, operative image condition, characterized by algorithmic procedures, increasingly makes "architecture" in our technological, media aesthetic life world.

Our online, digital environments are structured in a web of algorithms. Consider how Google presents search results based on previous searches and online behavior. Amazon suggests what to buy next and ranks top-selling products. Facebook presents selected news feeds based on previous likes and activity. Netflix suggests films and TV shows based on what has previously been watched. Search engines in all these corporations run on algorithms. By means of algorithms, machines come to suggest, enable, solicit, prompt, encourage, or prohibit certain actions or promote others. Algorithms take the place of consciousness, mediating between our machinic-sensible environments and us, while our behavior is subject to surveillance, analysis, and exploitation by the information systems in which we (increasingly) participate. This is found, for example when smart city applications enable governance to better visualize, model, and predict urban processes, simulate probable outcomes, and lead to more efficient (and sometimes sustainable) cities, as in the example of Virtual Singapore. This relies on 'data mining algorithms' that look for patterns in large datasets. These become the basis for concrete urban change initiatives that remodel how the city functions and appears.

We are reminded of the unlimited expanding, continuous and generative aspect of algorithms where, in the speculative architectures and landscapes of networked computer games, algorithms of 'procedural generation' allow a game's landscape to continue endlessly. Imaginary landscapes are generated in unique formations for each player, with environmental

[208] Gilles Deleuze, "Postscript on the Societies of Control," *October* 59 (1992): 3-7.

elements randomly arranged from a palette of options every time someone begins a new game. For example, this is the case in the game No Man's Sky that turns the computer game into a full-scale digital cosmos, enabling virtual travelers to explore eighteen quintillion different 'planets.'[209] Algorithms generate dynamic, extensible and possibly endless media aesthetic services and expressions that characterize a basic DNA of how our systems today function and develop. However, this generative mechanism evolves from a foundational coded formula and is a mechanism of homogeneity, creating more of the same.

In architecture, algorithms are no longer just tools intended to accomplish various tasks, but the constructive material or abstract 'stuff' that enables the automated design of buildings, infrastructures, and objects.[210] Drawing on biological notions of morphogenesis and relying on the capacity of forms to change over time, algorithms have become generative components for form- and pattern-making used for some of the most progressive (and, one could argue, alienating) examples of architecture today, including the Guggenheim Museum in Bilbao, the Kunsthaus Graz, the Selfridges building in Birmingham, the SOM Mumbai Airport Canopy, the Rotating Tower in Motion in Dubai, and many 'blobitecture' designs characteristic of architects such as Zaha Hadid, Jean Nouvel and Frank Gehry. Many of today's speculative architectural structures would not have been possible without algorithms. These examples of algorithmic functions not only demonstrate how computational procedures change the look, feel, functionality and procedures for development of urban environments. As algorithms are employed to program architectural forms and urban infrastructures, they also come to 'program' our modes of living by cuing our patterns, rhythms, behaviors, and perceptions of things.

Already in 1903, Georg Simmel addressed his concern with 'algorithmic logic' when explaining how economic, personal and intellectual relations in the city of modernity grew in a 'geometrical progression.' He writes: "Every dynamic extension becomes a preparation not only for a similar extension but rather for a larger one, and from every thread which is spun out of it there continue, growing as out of themselves, an endless number of others."[211] What

[209] Raffi Khatchadourian, "World Without End," *The New Yorker*, May 18, 2015, www.newyorker.com/magazine/2015/05/18/world-without-end-raffi-khatchadourian

[210] Fernando N. Van der Vlist, "Topological Calcilation in Architecture: A Historical and Conceptual Investigation of a Cultural Technique and Its Vectors of Variation," online research article, accessed January 4, 2017, www.fernandovandervlist.nl/papers/topological-calculation-in-architecture.html

[211] Georg Simmel, "The Metropolis and Mental Life," in *The Blackwell City Reader*, eds. Gary Bridge and Sophie Watson (Oxford and Malden: Wiley-Blackwell, 2002), 17.

Simmel describes is a kind of algorithmic function in society. As such, although most familiar implementations of algorithms are in computer programs (and everything where computer programs are implemented), *algorithmic logic* is not just a matter of computation. This notion of algorithmic logic is brought in to a more contemporary context with reference to art history when Peter Weibel suggests how algorithms may both entail an *exact* application, as found in computer art, but also an *intuitive* application of instructions to bring about events or accompany an item of daily use. He traces this mechanism in op and kinetic art, in happenings and the Fluxus movement's 'instructions to act.'[212] Weibel thus defines the algorithm as also applying to non-computational functions, such as "a decision procedure – a set of instructions to act – made up by a finite number of rules, a finite sequence of explicitly defined elementary instructions that exactly and completely describe the stepwise solution to a specific problem."[213] With the notion of algorithms as intuitive applications and as mechanisms of instructive application, we are reminded that the implementation of algorithmic services, functions and logics in almost everything involves a behavioral adjustment. In this sense, all areas of social and cultural life are permeated by algorithmic logic in terms of behavior of both humans and machines, which partly derives from behavioral and imaginational stimulation with intelligent computational algorithms.

We can, for example, point to an intuitive application of algorithms as an effect of how they allow us to increasingly speculate on change. By way of enabling investigations into scenarios of what the future may hold, algorithms stimulate our amazement with new worlds and vistas of experience with the technological as well as a pressing curiosity of the future. The feeling that we can potentially affect our current and near-future narrative is intriguing, and one which we nurture in our engagement with mapping, imagining, prospecting, and modeling of the future, for example in 3D printing and visualization tools, and in easy-to-use architectural programs. Enabled by the Internet and our networked culture, we experience that we can co-create the world, build messages, platforms and tools that can potentially reach global masses and change the world, especially by virtue of their digital and easy proliferative material. Our personal inventions may join the canon of change-making initiatives and media-aesthetic creations that direct us towards new 'possible futures.' We recognize this intuitive tendency (with an echo of technological optimism) in art and urban cultural programs in

[212] Peter Weibel, "It Is Forbidden Not to Touch," in *Media Art Histories*, ed. Oliver Grau, 21-42, (Cambridge: Media Art Histories, 2010), 25.
[213] Ibid., 22.

speculation and imaginings about future conditions of urban spaces, better situations for inhabitants, and potentials for urban life and cityscapes. Speculation becomes an aesthetic, perhaps even ontological, trope.

Algorithms – as both intelligent functionality and the logic it spurs – are implemented to an extent where intelligent computation is participating in the construction of almost every dimension of our present. Algorithms are no longer just instructions to be performed but have become performing entities that select, evaluate, transform and produce data, which further optimizes the algorithm. Mathematical equations, computer programs and diagrams directly participate in the process of generating the images of our perceptual experience as an operational mechanism that cues our life world. This I addressed in the previous chapter with help from Jordan Crandall's notion of our 'defining horizon' as characterized by a calculative ambiance. Crandall argues that all movement is subordinate to a condition of "calculative mobilization," whereby he reads the urban realm through the *spatialization* of intelligent algorithmic operations. He exemplifies this with techniques of tracking that have been incorporated into distributing systems, augmented by new sensing and positioning technologies, and embedded into mobile devices, urban structures and environments.[214] In this sense, the employment of algorithmic computation can be considered an intelligent, operational force that eventually comes to affect our behavior in space, as I will move on to discuss shortly with perspective to Henri Bergson's philosophy on spatialized time.

Intelligence – in light of Henri Bergson's concern with spatialized time

Henri Bergson's critical consideration of "spatialization of time," which expresses his concern with a tendency of quantifying the quality or feel of life, provides a philosophical perspective on how our perceptual experience today may be affected by intensifying and intelligent technological 'upgrades' of our urban life worlds, as constituting a 'calculative ambiance' and intuitive logic. This pertains to the quality of our sense of presence; the quality that we can consider to stimulate our desire for media aesthetic experience of intensifying presence effects.

The zeitgeist of current imperatives of urban change with intelligent upgrades, and the related sense of technological optimism, we can compare to the zeitgeist of another epoch of

[214] Jordan Crandall, "The Geospatialization of Calculative Operations: Tracking, Sensing and Megacities," *Theory, Culture and Society* 27 (2010), 69.

scientific, industrial and urban change: that which characterized significantly Western societies in the late nineteenth and early twentieth centuries – the time of Henri Bergson's writing. This period equally brought about radical changes in technical, scientific and urban development practice forged by unprecedented technological progress and a fast-growing enthusiasm for measuring and quantifying the world and life within it. Technological progress in the nineteenth century accelerated inventions such as the locomotive, the telegraph, the telephone, the steam engine and the internal combustion engine (the gasoline and diesel engine), ironclad ships replacing wooden warships, electricity and the light bulb, photography, and the growth of cinema. This contributed to a *mechanistic conception of change*, which we recognize in the transformations of urban environments in Paris between 1853 and 1870, for example. Georges-Eugene Haussmann renovated the city of Paris to the extent of the complete transformation of certain areas – also encouraging boulevards, squares and parks in other French cities as well as in Brussels, Rome, Vienna, Stockholm, Madrid, Barcelona and beyond, inspiring the City Beautiful Movement in the United States, for example, and diagonal street plans for Chicago. The developments in Paris involved the building of wide avenues, parks and squares, construction of sewers, fountains and aqueducts. In other words: the regulation of urban space into controllable forms. This was at the expense of crowded and unhealthy medieval neighborhoods, which were demolished without much nostalgic consideration. Around this time, electric lighting was being implemented in cityscapes, although in France (where Henry Bergson was writing) it was implemented on a more restrictive scale in comparison to vibrant cities like Berlin, New York and Chicago.[215] The rational reorganization and optimization of modern systems in Paris, which prepared for cars, health systems, and better security, as well as advances in technology and science, laid the foundation for the growth and technological progress which characterized the twentieth century. This was foundational for the efficient city, and eventually for contemporary smart city imperatives and the upgrading of urban intelligence.

Significantly, in the late nineteenth and early twentieth century, time measurement was changing due to the modern ambition of connecting the world with cables relaying intenrational time information. This followed the industrial development and became

[215] Scott McQuire, *The Media City* (London: SAGE Publications, 2008), 122. Here, McQuire refers to the time around the 1910s.

essential for choreographing trains, shipping and completing maps,[216] while local times, travel timetables, etc. came to be measured more accurately. The principle of "simultaneity" pioneered with Einstein's theory of relativity. In his article "On the Electrodynamics of Moving Bodies" from 1905 on special relativity, Einstein presented his founding principle of physics: relativity. Preceded by accomplishments in nineteenth-century physical science in the mastery of electricity and magnetism, dynamos bringing electric lighting to cities, electric trams in cityscapes, and telegraphs transforming markets, news and warfare, and the newly accepted electron,[217] the physical theory of relativity subjugated time in a comprehensive and essentially static space-time; a 'volume' that could be quantified, measured, and extracted by the physicist.[218] Einstein's theory soon came to dominate scientific thinking.

The new view on the physical world worried the contemporary philosopher Henri Bergson, who presented his philosophy in France at the turn of the early twentieth century. He rejected the mechanistic conception of change and reacted against the dominant movements in science and philosophy inspired by Einstein, which he considered sought to quantify the quality or 'feel' of life, and to be concerned with separating the living world from matter.[219] His concern was specifically directed at a tendency he characterized as "spatialized time," which he observed as a consequence of the scientific conception of space as something that could be fixed, measured and analyzed; that could be co-opted into a homogeneous grid combining space and time into a composite in which space was considered a ready-made and, in consequence, time became a fourth dimension of space.[220] Bergson was particularly concerned with how this condition of space affected human *duration*, referring to our ontological situation throughout life, whereby we experience the world according to the logics that we live and navigate within.[221] The dominant mode of duration, he problematizes, is one that is aligned with a dominant condition of homogeneous space-time.

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[216] Peter Galison, *Einstein's Clocks and Poincaré's Maps* (New York and London: W. W. Norton & Company, 2003), 14.
[217] Ibid., 23.
[218] Herbert Dingle, "Introduction," in Henri Bergson, *Duration and Simultaneity*, trans. Leon Jacobsen (Indianapolis, New York, Kansas City: The Bobbs-Merrill Company, Inc, 1965), 15.
[219] Bergson is not exactly opposing a philosophical vision of duration to a scientific conception of space but considers the problem in terms of the two kinds of multiplicity: differences in degree and differences in kind.
[220] Gilles Deleuze, *Bergsonism*, Trans. Hugh Tomlinson and Barbara Habberjam (New York: ZONE BOOKS, 1991), 86.
[221] In *Time and Free Will* and in *Creative Revolution*, duration appears as a psychological experience as a case of transition, change and becoming – a becoming that endures and a change that is substance itself (Deleuze, *Bergsonism*, 37).

Photo: Tanya Toft

Interlude No. 4[222]

***Fivefold dodecahedron lamp* (2006) by Olafur Eliasson**

Between January and April 2015, the exhibition Voyage to the Virtual was presented at Scandinavia House in New York City. The following text is based on a paragraph from the curatorial essay, describing the artwork Fivefold Dodecahedron Lamp (2006) by Olafur Eliasson, which was part of the exhibition.

On our journeys to the virtual, we explore the fabric of reality today. But what is this fabric? Up until the late 20th century, we believed, and to some extent we still do, in a form of "scientific materialism." We understand that we live inside Euclid's three-dimensional space organized by Einstein's theory of relativity—the universal principle of physics that

[222] This interlude is based on the text "Voyage to the Virtual," my curatorial essay for the exhibition *Voyage to the Virtual*, Scandinavia House, January 24-March 5, 2015, accessed November 1, 2016, www.virtualvoyage.org/curatorial-essay

considers space as a boundless, three-dimensional extent in which objects and events have relative positions and directions. In this, we live in a single universal metric for space and time, and things cannot exist if they are not "physical."

Fivefold dodecahedron lamp (2006) by Olafur Eliasson investigates a space principle, that of the dodecahedron, which has played an important role in the visual arts and philosophy. As a spatial concept of investigation the dodecahedron evokes a reconsideration of the idea of modern space as something relative and something that can be explained by its physical qualities. Reality is a fabric of space, and if our observations of the 'materiality' of space are reductionist, that may affect how we understand our reality and ourselves within it.

In geometry, a dodecahedron is a three-dimensional shape with twelve plane faces. The regular dodecahedron is one of the five Platonic solids. Plato associated each of the four classical elements with a regular solid. Earth was associated with the cube, Air with the octahedron, Water with the icosahedron, and Fire with the tetrahedron. The *fifth* Platonic solid, the dodecahedron, Plato called by the name of *aether* – alongside Air, Water, Fire and Earth. This he considered to be the finest of substances that filled up space. Aether was used in ancient and medieval science to explain natural phenomena such as the traveling of light and gravity – before Einstein's theory of relativity according to which space-time is considered relative to an observer's speed and nothing can exceed the speed of light. As opposed to Einstein's theory, the aetheric medium offered a single universal metric for space and for time (time-space, rather than space-time).[223]

Aether may be considered a kind of hyperspace, which denotes movement beyond light speed – movement of electromagnetic waves.[224] In contrast to quantum physics, aether theory studies the nature of the particles (with mass) that constitute matter, considering that there are no particles, only waves. In this sense aether can be understood as a non-material fluid-like medium or a form of subtle energy substance that permeates the physical vacuum of our universe. In the theory of aether, all matter in the universe is interconnected with matter created moment by moment, as a standing wave; a vortex in the physical vacuum.[225] The theory of aether was abandoned after a physics experiment in 1887 by Albert Michelson and

[223] Brendan D. Murphie, "Where did the aether go?," Unexplained Mysteries, published October 29, 2011, www.unexplained-mysteries.com/column.php?id=216792

[224] "Aether Vibrations: A Wave-Based Uinverse," published July 6, 2012, accessed December 2, 2014, www.bibliotecapleyades.net/ciencia/ciencia_fisica36.htm

[225] "Ether (physics)," Citizenzendium – The Citizen's Compendium, accessed December 2, 2014, www.en.citizendium.org/wiki/Ether_%28physics%29

Edward Morley, which however since has been believed by scientists to be misinterpreted.[226] The argument for the existence of aether is that electromagnetic waves cannot travel through empty space. Waves require a medium, just like sound waves require air and water waves require water.

An alternative perception of the material of space is intriguing in our contemporary reality of reciprocal flows of energy and information. It speaks to our eagerness to grasp the sense of physicality we experience in hyperspace and virtual realities - the nonmaterial fabric of reality. The aether is not physical, but produces physical effects. It has been argued that if aether is the medium of electromagnetic waves, the flow of energy and information between "parallel" dimensions or virtual realities may be considered reciprocal.[227] In this perspective, reality can influence hyperspace, and vice versa.

We recognize Bergson's conception of spatialized time in Simmel's description of modern life in 1903. In *The Metropolis and Mental Life*, Simmel writes about how a general "diffusion of pocket watches" holds up the city system of Berlin.[228] Synchronized by clocks and pocket watches, the city had come to depend on its activities and reciprocal relationships, organized through punctuality, calculability and exactness. Consequentially, this was turning the metropolis into a firmly fixed framework of time that Simmel considered to transcend all subjective elements. In this condition, he writes, "The calculating exactness of practical life which has resulted from a money economy corresponds to the ideal of natural science, namely that of transforming the world into an arithmetical problem and of fixing every one of its parts in a mathematical formula."[229] The idea of 'clock synchronization' concerned more than time planning and city efficiency; it became a "beacon of modern thought."[230] Simmel describes the development of modern culture as characterized by the predominance of an objective spirit over the subjective, which he sees manifest in all aspects of life – including language,

[226] Dorothy Michelson Livingston, "Michelson-Morley: The Great Failure," The Scientist, published July 13, 1987, accessed December 2, 2014, www.the-scientist.com/?articles.view/articleNo/8805/title/Michelson-Morley--The-Great-Failure

[227] Brendan D. Murphy, "Empty Space is Upgraded with Virtual Aether," Global Freedom Movement, published January 9, 2016, accessed September 9, 2016, httwww.globalfreedommovement.org/empty-space-is-upgraded-with-virtual-aether

[228] Simmel, "The Metropolis and Mental Life," 13.

[229] Ibid.

[230] Galison, *Einstein's Clocks and Poincaré's Maps*, 24.

law, technique of production, art, and science.[231] It is exactly this notion of an objective spirit of logic coming to 'code' subjective being in a quantified quality or 'feel' of life, which is of concern to Bergson. For a visual reference to such a condition, think of Charlie Chaplin's movie *Modern Times* from 1936 in which Chaplin's Little Tramp character is trapped as a worker in a factory – symbolizing the modern, efficient and fully industrialized world – struggling with becoming a machinic human being himself. To Bergson, the problem occurs when spatialized time becomes the basis for historical, economic, and cultural representations, and thus comes to shape our world; when, in Simmel's words, "…the modern mind becomes more and more a calculating one."[232]

Bergson describes the 'coding' condition of spatialized time in more detail with the philosophical metaphor of a hand moving from point A to point B.[233] The hand passes in one stroke through the interval between point A and point B. This movement consists both of an image, which he sees, and an act, of which his muscular sense makes him consciously aware. The passage of the hand is given to his consciousness as an undivided whole. When it presents itself via movement, it describes a trajectory in space, a kind of geometrical line that is made up of indivisible points.[234] In this sense, the line can be split into 'intermediate positions,' or 'halts,' which make an infinite number of points in space along this line.[235] The total line represents the total duration, and the points of the line represent the underlying quantitative diagram that, in our perception of the movement, become 'data of our senses.'[236] The movement *appears* to be one with the line along which it passes (and similarly, divisible). Bergson emphasizes that it is our imagination that makes the division 'seem,' and it is therefore in the faculty of our imagination that we can adjust how we experience

[231] Simmel, "The Metropolis and Mental Life," 13.
[232] Ibid., 18.
[233] Bergson's account of duration in two modes of experiencing the world – in the distinction between a condition of "continuity" and a condition of "heterogeneity" – is based on the physicist and mathematician G.B.R. Riemann's description of "multiplicity" as a mathematical concept. In Riemann's notion, multiplicity may occur both in the notion of the quantitative (the many) and the qualitative (the difference). Riemann distinguished between *discrete multiplicities* (containing the principle of their own metrics, the measure of one of their parts being given by the number of elements they contain) and *continuous multiplicities* (founded on a metrical principle in something else, which may also be phenomena unfolding or acting in them). (Deleuze, *Bergsonism*, 39). Riemann also inspired Einstein's theory of relativity.
[234] Henri Bergson, *Matter and Memory* (1911), trans. N.M.P. and W.S.P (Mansfield Centre: Martino Publishing, 2011), 249.
[235] Ibid., 247.
[236] Ibid., 24.

duration.[237] When mobility and time (duration) are mistaken for the spatial line that underlies them, they are mistakenly treated as a thing's spatial trajectory that can be divided *ad infinitum*.[238] It is based on this, according to Bergson, that we can speak of time's measurement, rather than its experience. That which is measured is not really time, but the underlying space logics that condition it.

The moving hand is a metaphor for our duration, our bodily experience of going through life. The line makes the underlying or structuring conditions of our experience, as a line of logic, which our movements, thoughts and acts coincide with. What Bergson describes with the analogy of the moving hand as the focal point of his concern is how, in the composite of our reality, the seemingly instantaneous or just natural state of things (in space), tends to become a form of support structure or diagram for duration – meaning it comes to inform and direct our movement through life. In this sense, the purpose we may carve out of homogeneous space (spatialized time) is one in which our actions (movements) can only appear as reflections of the logic of the space. Our perceptions *coincide* with the perceived object, or "puts us at once into matter."[239] When this happens, perception avoids reflection and critical thinking outside of the logics and forces that characterize the condition of space: the condition of spatialized time. When we feel inseparable from our condition, we will only see and invent what the world has already laid out for us to see and invent – and we stay blind to discourses or systems that might actually be dysfunctional or unsustainable. We are deprived of the ability to question our world. Bergson significantly reminds us to be hesitant towards technocratic approaches that align conceptions of time and change with the affordances and conditions of the dominant narratives of science and contemporary technology.

Spatialized time concerns a situation of seemingly fixed or a just natural state of things that facilitate an immobilized view of reality and human life. Bergson problematizes space in which human activities in time are converted into something that can be measured and quantified into identical, divisible and reproducible units.[240] However, today we can measure and model space at a level of granularity that Bergson would never have imagined. Through

[237] Ibid., 248.
[238] Ibid., 191-192.
[239] Deleuze, *Bergsonism*, 25.
[240] N. Katherine Hayles, *How We Think*: *Digital Media and Contemporary Technogenesis* (Chicago and London: The University of Chicago Press, 2012), 107.

initiatives that upgrade our environments with ever-smarter, pervasive, ubiquitous technologies, our environments are turning into intelligent, predictable spaces in which our moments, activities and data are increasingly being measured, and in increasingly more granular ways. This measurement happens through the aggregation of data via urban sensors, service machines (parking tickets, in-car payment systems), GPS implementation in cars and other portable devices, and other smart implementations, especially via our mobile phones that log our physical movements, online behavior and the amount of time spent at different locations. Smartphone navigation 'watches' our movements from A to B. Unless you have actively turned it off, the iPhone (iOS 4 and later) saves your latitude and longitude along with time and date, providing an accurate time and location line that documents your whereabouts. This information is logged into the databank of Apple. Even if we turn off this function, our moments are logged every time we activate 'location services' (which almost every app today requests that we do – even if it does not need this information to function). For example, this is when we 'check in' to places with the Swarm app,[241] or sign up for catching virtual Pokémons. Not only do we measure space in terms of location coordinates through advanced mapping procedures, we also map and measure real-time activities in space – the data and signals we generate via our activities: when we make a search, record and post digital imagery, communicate in any way or make an emotional expression in online environments. As such, measurement of spatialized time has reached a whole new meaning, significantly because what is measured is simultaneously being stored in live archives of big data. The implications seem to be accelerating faster than we can keep up with critical questioning or rely on laws to be made to protect our privacy.

[241] The check-in feature was moved to Swarm in 2014 from having been a signature feature of the app Foursquare, which is now a search and discovery mobile app more in keeping with Yelp. The term 'checking in' was coined with the Foursquare app, which also preceded popular virtual reality games today, like Pokémon Go.

Photo: Verve Cultural

Interlude No. 5[242]

Coisa Lida* (2014) by *Lucas Bambozzi

The work *Coisa Lida* (2014) by Brazilian artist Lucas Bambozzi lives on the gallery façade of the SESI Digital Art Gallery after opening hours on Paulista Avenue. It explores an idiom somewhere in between poetry projection and data visualization. Video sequences show glimpses of words, which reflect on speed and perception. These fade in and out with varying pace and like a filmic montage blend into sequences. They blend with glimpses of narrative flashing in just a few frames, for example, showing an ant running with a leaf, a plane appearing in the sky, a bunch of flowers falling from a window, a moon blinking through the clouds, or a bird crossing the building. The images of the video sequences are mental rather than polished and 'finished.' They reflect the low resolution, pixel and color limitations of the gallery façade and adopt an aesthetic that does not pursue high-res graphics.

[242] This interlude is based on my description of the artwork *Coisa Lida* in the curatorial essay for the SP Urban Digital Festival titled "Digital Citizen" in Sao Paulo in 2014, accessible at www.tanyatoft.com/publications-2/sp_urban-digital-festival-2013

The work evokes an urban condition dictated by speed. It makes visible the speed of the city of São Paulo and explores tensions of acceleration and flow by *reacting* real-time to the city's rhythm and pace. The video sequences of text and images are disrupted in real-time by the changing pace and noise from Paulista Avenue, by movement of traffic and people in front of the gallery façade. In a negotiation between acceleration and deceleration, the rhythm of the video sequences responds to signals from a motion detection system installed in front of the gallery façade, from a webcam that 'sees' and 'listens' to the flows of cars and people. Audio is recorded on the sidewalk in front of the gallery and is amplified and diverted to screens located across the street from the SESI Digital Art Gallery.

Coisa Lida speaks to urban conditions of speed by combining philosophical ideas in quotes and phrases by Alberto Caeiro (F. Pessoa), Paul Virilio, Pierre Clastres, Oscar Wilde, Clarice Lispector and others, which in this context come to address global and local conditions that impact the environment of Paulista Avenue. The oscillation between the phrases reveals the processing of images on our retinas and memories as a clash between what escapes the eye and what is retained in our consciousness. The video sequences reveal gaps in human perception, fluctuating between consciousness and escapism into the illusionary reality of a city on speed. It invites audiences to slow down in order to fill in the gaps between words and images, and seek to make sense of the video sequences. *Coisa Lida* thus indicates that it is by slowing down that we reach a state of consciousness, become aware of this programming, and are able to act differently on our surroundings. It recalls how our context both physically and culturally programs our mode of seeing things. As such, how we constitute the meaning of our surroundings by way of how our context pre-programs our way of seeing things.

The intelligent upgrades of our urban lives also involve that our *time* with twenty-first century media has become much more complex than during Bergson's working lifetime. Time today is not simply a matter of the synchronization of near and distant clocks, as per Einstein's theory of relativity, which was the root of Bergson's concern with spatialized time in the late nineteenth and early twentieth century. As a result of Internet-connected and responsive devices and screens, we find ourselves in a 'global now,'[243] which has expanded

[243] I came across the term 'global now' in a call for "Time's Urgency, call for the 16th Triennial Conference of the ISST at the University of Edinburgh," organized by the International Society for the Study of Time, and

the horizon of the 'electronic present.' This denotes a significant condition of digitization: the inscription of our human lives into a digitally structured reality, the global networking of people, and the increased speed of communication that shapes our contemporaneity by modifying our relationships with time, space and sense of place. The contemporary condition of time has manifested in a networked world of constant, instant contact, exchange, and a state of living in multiple temporalities. In the condition of the global now, we are (sometimes simultaneously) dealing with multiple lines of time in multiple spaces. The 'desire for presence' is a desire for feeling a sense of 'being here now,' as a reaction to the condition of our contemporary experience as dispersed across multiple, simultaneous temporal frames, and resulting in us being rarely present in the same or closely-related experience frames with our body, attention, and actions.

With the invention of computational, smart and intelligent technologies, we are experiencing an era of not just 'spatialized time' as an account of a state of things, but a condition of spatialization of multiple temporalities. Of course, we have always been living in multiple temporalities if we consider thinking, dreaming and communicating across distance, in addition to the temporality of our physical presence. However, spatialization of temporalities in our contemporaneity involves temporalities of multiple simultaneous 'experience frames,' enabled by various computational mechanisms. We make a video call, check for updates on our social media profiles, post an instant image of our current moment, or follow the GPS on our phone to reach a destination – all while 'on the go.' Navigation apps and web mapping services, like Google Maps, enable us to plan, act and navigate while having access to recommendations of restaurants, travel options, books, and other commodities, which 'save' us time. The Internet has synchronized the world, and experience no longer occurs in a simple present but is dispersed temporally across many presents. Not only do we know in New York what time it is in Berlin, but we can access simultaneous news, events and human expressions, see instant images and videos being posted from there, and we can follow the world's responses to these impulses, expressed via Twitter, Facebook, on blogs, etc. We have access to temporalities of information and narratives from every corner of the Internet and can, in principle (restricted by our cognitive capacity), keep up with all recorded instants in the world. This is a condition of 24/7, as named by Jonathan Crary; a

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taking place June 25th – July 2, 2016, accessed December 15, 2015, www.studyoftime.tumblr.com

diachronic condition in which individual time management made possible by 24/7 networks and markets is overlaying previous modes of duration.[244]

According to Crary, every aspect of social and personal life today is bound to a *logic* of 24/7. This is not meant to indicate that we are always shopping, gaming, working, blogging, downloading, texting, or finding our way, but that we possess a meta awareness that we are always able to do this (if connected).[245] This condition, Crary argues, is reorganizing our personal and social identity in a manner whereby we have had to invent a self-understanding that optimizes or facilitates our participation in digital milieus.[246]As creative and imaginary beings, this also regards expansions of our sense of a field of possibilities. Our sense of agency expands with the awareness that we are, for example, able to organize a demonstration on Facebook, able to draw our dream house in architectural software programs, or learn about the world through online surfing – as a preliminary step to traveling to that location. This expanded sense of agency, together with our increasing social and professional connectedness in the networking structures of environments, inevitably contributes to keeping us 'in the loop.' The technological optimization of our life world is thus intertwined with a mode of cultural formation that affects our aesthetic inventions, social constructions, human behaviors and interactions, and also artistic expressions.

As digital media, including those embedded in the urban environment, become more pervasive, they push us in directions of faster communication, more intense and varied information streams, greater integration of humans and intelligent machines, and more interactions of language with code.[247] When computer processes speed up the operation of apparatuses they are also involved in speeding up our rhythms, behavior, imaginations and expectations. Thus the condition of intelligence concerns a contingent relationship between the speeds of machines and human experience, which I will examine in greater detail in the following chapter, focusing on what conditions of media aesthetic *immersion* entails.

Conclusion

[244] Jonathan Crary, *24/7* (London and New York: Verso, 2014), 57.
[245] Ibid., 30.
[246] Ibid., 100.
[247] Hayles, Hayles, *How We Think*, 11.

In our contemporary, technologically developed world, it is no longer viable to approach phenomena of our time from the perspective of a polarized relation with computational technologies. Intelligence, in the computational sense of the term, is a conditional support structure for our contemporary urban reality. Urban media art's contingency with our increasingly intelligent tools, cultural infrastructures and urban materialities, involve not only an engagement with power structures, behavioral mechanisms and the cultural adaptation of intelligent technologies and their environments, but also an engagement with the experience frames we are granted by these and the computationally enabled *temporalities* that affect our cultural behavior; for example, when machines or systems expose us to images that operate faster than our human consciousness.

In an attempt to approach our experience with media aesthetics in the urban context, it should be considered how current technological advancements of making our cities more intelligent are tied in with a speeding up of processes and urban activities, as the systems that operate our life worlds are continuously being computationally optimized. This 'optimization' of our environments and surfaces with increasingly more intelligent implementations and continuous updates happens on the condition of measurement of ever more granular levels of our experience. In bringing Bergson's concern with duration as aligned with spatialized time to a contemporary context of our 24/7 multi-temporal experience, a context of *spatialized temporalities*, it is possible to consider how intensity – as a quantitative concept – is brought about by a certain 'cuing' of our duration. This applies to how we are inhabiting multiple lines of time in multiple spaces, dispersed across multiple, simultaneous temporal frames, so that we are rarely present in the same or closely related experience frames with both our body, attention, and actions. The reason for concern about the intelligent nature of images emerging from the computational 'backbone' to digital matter is that they affect our duration in ways that are different from previous (non-digital) matter. Different, because intelligent images inhabit different temporalities, some of which avoid our direct experience and consciousness. This I will examine in more detail in the following chapter with specific attention to our sensible experience with media aesthetics in immersive experience.

4. Immersion

– inquiry into media aesthetic experience at a sensible micro scale

Following my 'crash,' what I realized from the recovery phase of seeking to regain a foothold in the world – while experiencing an involuntary enhanced sense of presence from media effects – was how my perceptual experience was challenged by immersion in more or less constant and multiple modes of mediation. I experienced how contemporary media aesthetic conditions of intensity and intelligence involved a matter of *immersion* in the present moment; how we are increasingly and media aesthetically immersed in the virtual flesh of the world. Immersion pertains to the feeling of being part of a simulated 'universe' and the feeling of presence in something other than matter; in a condition in which sensations of the mediation are introduced directly to the nervous system. Here, immersion is considered in terms of a quality of technology that permits embodied forms of the human-machine interface; a mode of intensified, mediated experience. Technologies that particularly hold this quality are, for example stereoscopic spectacles and screens, three-dimensional sound or illumination, position sensors, tactile and powerful feedback systems, omnidirectional photography and video, as well as virtual reality. Through these and similar technologies, conditions of experience may be established that make you feel an impression of reality, that affect you through multiple (bodily) senses, beyond vision and hearing.

The attention to how we are immersed in media aesthetics is a familiar trope in urban media art, in significantly temporary art installations in which the locus of the art may be considered in what it makes us feel (and by that, affects) rather than in what it is (as an "object"). The art pursues ways of enhancing our sense of presence employing trajectories of immersion in sound or visuals, environments merging virtuality into our physical world, and media aesthetic augmentation that may accompany our journey in a mobile experience. As a result, the art comes to affect our memory – not unlike how media aesthetics are employed to achieve this in our urban environments in commercial imperatives. From the curator interviews, the desire to affect people's memory is explicit. This is found in an expression by Usman Haque who, in relation to his atmosphere-architectural urban light installations, notes: "I'm particularly interested in the construction of a shared memory. So people having experienced something in a space, in a shared public space, that will continue to percolate

long after they're there." Also Dooeun Choi adds: "I often work on memory. The goal would be to create a meaningful memory for people. (…) Eventually, all these meaningful memories will change the culture of the space and they will change the society, which is what I'm pursuing." Current tendencies in urban media art reflective of embodiment and multisensory experience reflect a condition in our technological reality at large in which our media aesthetic environments are becoming increasingly immersive. Our mediated experience in changing engagements with digital mediation – for example, through haptic experience with touch screens, motion sensors, virtual reality, and networked communication – is becoming increasingly corporeal. Through bodily contact with mediated infrastructures and interfaces we are physically, perceptually and haptically embodied in our life world.

In the inquiry into a media aesthetic tendency of immersion in this chapter, I consider how immersion involves the sinking into an artificial augmentation of one's environment. This, in perspective of what might be the most intense condition of media aesthetic immersion – experience in virtual reality – involves an experience that manipulates our nervous system to accept mediation as authentic as part of our present environment.

Positioned attention in immersive experience

Photo: Tanya Toft

Interlude No. 6[248]

***Here All Alone* (2015) by Anders Weberg**

Here All Alone was a total installation of sound and video art by Swedish artist, Anders Weberg. The installation took up a 2000m2 area of the Novozymes factory at Nørrebro in Copenhagen. The factory spaces were built in 1935 in an industrial interpretation of functionalism and expanded in 1967-69 following the stylistic, modern and stringent thesis of Arne Jacobsen's architecture and design of the original building. They were in use until 2007 for producing enzymes but closed down in 2007, and have lain abandoned since. The project unfolded through large-scale audio and sound installations, as well as other visible and invisible installations involving surveillance cameras and older media devices, which immersed audiences in an augmentation of the factory. Visuals and sound were initially captured by the artist's iPhone 4S from inside the decaying factory and from the surrounding neighborhood of Nørrebro, and then modified for the site specific installation. This method reflects the artist's characteristic site-specific mobile video explorations of urban textures and layers of meaning – captured with the mediating optics through which we increasingly experience the world. Responsive elements were conceptualized and produced by the artist duo NULEINN. An audio walk, written and spoken by writer, Benedicte Gui de Thurah Huang, offered a narrated tour through the labyrinthine spaces of the old factory and through the installation's uncanny atmosphere.

Inside the factory, a fragment of the city of Copenhagen was transitioned from the world of the concrete, productive and real into the realm of the fictional. Walking through the factory, audiences experienced various intuitive, embodied encounters with the installations that mirrored how we engage with the world in a mediated reality increasingly conditioned by surveillance, feedback from invisible computing, and overlays of virtual realities. Audiences were invited behind the material surface of the factory and underneath an emotional skin of our cultural condition; confronted with anxiety, fear and alienation. While freely exploring the space, they were confronted with an uncanny state of anxiety, fear, insecurity and growing alienation, and with a feeling of being in an emotionally desolate world – all alone. They were

[248] This interlude is based on text written for the exhibition project *Here All Alone* with Anders Weberg. Accessed December 4, 2016. www.hereallalone.dk

offered various aesthetic entry points that confront the dystopian consequences of a fear-focused reality, for example video of a gunshot hole in a wall, of flowers after a shooting (all captured after the attempted terror attack on Copenhagen in February 2015), a photograph of a police car with silent sirens, and close-ups of chemicals left at the abandoned factory. The timing of the installation came just four months after the shootings in Copenhagen against a freedom of expression event at Krudttønden with the Swedish cartoonist, Lars Vilks among the speakers, and against the Jewish Synagogue in Krystalgade. During this time, an emotional state of fear and anxiety had gained presence in Copenhagen – the inhabitants having experienced their first terrorist attack and then with a populist rightward shift in politics expected to influence the upcoming Danish general election (which took place in June 2015 with a fallout of 21,1% support for the Danish Folk Party). *Here All Alone* was initiated in direct critical, thematic response to this emotional-political condition in Copenhagen, a condition in which Danish society was being confronted with growing internal diversity.

The total installation strived towards immersing the audience in a fictive atmosphere but with the semblance of the real world, and was curated to enhance a sense of being 'here' in space and time – in the factory. It coincided with an artistic research project I directed in a graduate course at Copenhagen University in close collaboration with the artist, Anders Weberg in open dialogue and with constant shifts between theory, practicality, and critical inquiry. Together with the artist, we explored tactics by which the installation would effectively position the audience in immersion, by augmenting the factory though the various visual, auditory and interactive elements. We considered how the installation would make certain experiences possible while foreclosing others; how it would propose and embody a certain order, a certain model for perception; and how it might reconfigure the senses. This we explored through formulating a set of obstructions, four produced by the students for the artist, and one produced by him and given to the curators.[249]

While immersive experience is propelling communication modes in journalism, gaming, cultural events, festivals, memorials, lighting imperatives in media architecture, and curating of exhibitions and installations, we should keep in mind that the enhanced emotional

[249] The obstructions and full research projects, as well as documentation of the installation, can be retrieved at www.hereallalone.dk.

evocation, derived from the enhanced sense of presence established by means of media aesthetic conditions of immersion, is never neutral. In the installation of *Here All Alone* (2015), the aesthetic strategy that Anders Weberg and I developed together sought to articulate this non-neutrality by enhancing sound and image elements in order to position the viewer in an emotional state of feeling alone, like the 'other,' in the uncanny factory environment. This mode of positioning people's attention is further seen in current trends in the use of the omnidirectional camera, which provides a wide angle 360-degree field of view – a visual field that covers approximately the entire sphere. This camera invention is centered on a single viewpoint. We are familiar with the omnidirectional camera from the Google Street View feature (launched in 2007) of Google Maps and Google Earth, which provides panoramic views of 'stitched' together images that make up photorealistic street views and three-dimensional reconstructions of cities. The omnidirectional camera is also employed in robotics and computer vision used for advanced video surveillance; roundtable live video conferencing; in meteorology for sky observation; by the automobile industry to improve safety by providing the driver an omnidirectional view of the surrounding environment; and for visual odometry (the process of determining the position and orientation of a robot by analyzing the associated camera images). Significantly, the omnidirectional camera enables professional and amateur panoramic photography and video, which similarly present a position from which one experiences the narrative.[250] While these applications contribute to changing our understanding of the perceptual scope of photography and the camera apparatus, they also announce an ontological role of media aesthetics in our lives as an immersive interface that enables us to experience an enhanced sense of presence in the now – however, from the 'positioning' of the ambiance; the perspective or framework designed for us. As we are becoming increasingly familiar with immersive, mediated experiences, we might also grow accustomed to accepting the conditions of the experience frames it grants us.

Omnidirectional photography and video records an environment as it is seen at that moment from the one-point perspective of the filmmaker. Viewers are, to some extent, able to navigate the 360-degree image by way of moving right or left, up or down, during the playtime of the video (or still photography). That Facebook in 2015 launched a feature that allows users to post their personal omnidirectional videos in their newsfeed confirms that

[250] See Davide Scaramuzza, "Omnidirectional Camera," in *Computer Vision: A Reference Guide*, ed. Katsushi Ikeuchi (Vienna and New York: Springer, 2014).

omnidirectional video and photography has reached the masses. The launch also indicates how we are becoming used to experiencing by a sense of living through, rather than looking at media aesthetics, and how we increasingly experience ourselves embodied and immersed in mediated modifications of our reality.

The opportunity with omnidirectional photography and video of enabling a person's embodiment of someone else's experience or environment (the photographer) is recognized as a powerful storytelling quality in the recently emerging form of 'immersive journalism.' Following experimentation with immersive storytelling that combines audio, video and photographs on the Internet, and a long time journalistic aim to connect readers or audiences to the news story, immersive journalism refers to the use of omnidirectional video and virtual, 3D environments to convey insights, sounds and 'feelings' of the news. It combines 3D gaming and immersive technologies to enhance the viewers' sense of presence in the depicted narrative or situation. A form of journalism production, it allows a first-person experience of the events or situations described in news reports and documentary films. The viewer is offered access to the sights and sounds of the event, and is intimately confronted with the feelings and emotions that accompany the story or news item.

Since 2015, immersive journalism has come to be explored broadly by established news outlets. The NYT VR launched by New York Times in 2015 offers a mobile app that simulates storytelling in richly immersive scenes, allowing users to 'put themselves at the center of stories' in an immersive virtual reality experience.[251] One narrative included personal stories of three displaced children from South Sudan, eastern Ukraine, and Syria in a manner that aims to stir the audience's sense of connection with the children. Another narrative allowed users to experience firsthand the battles which Iraqi forces endured to retake the city of Fallujah from ISIS. PBS' FRONTLINE took viewers to the heart of the Ebola crisis,[252] and The Associated Press launched their virtual reality app debuting with a 360-degree view of the Calais migrant camp in northern France, cleared in 2016, featuring migrants and refugees preparing for a dangerous journey aboard freight trains heading across the English Channel into the United Kingdom.[253] In the themes of these immersive

[251] "NYTVR," The New York Times, accessed November 20, 2016, www.nytimes.com/marketing/nytvr
[252] "Ebola Outbreak: A Virtual Journey," PBS Frontline, published November 12, 2015, accessed November 20, 2015, www.pbs.org/wgbh/frontline/article/ebola-outbreak-a-virtual-journey
[253] "Seeking Home," Associated Press, accessed November 20, 2016, www.interactives.ap.org/2015/calais-migrant-camp

documentaries it is apparent that immersive experience in omnidirectional video is developing in the direction of seeking to make us feel more present and emotionally invested in serious world events, using the idioms of immersion to evoke higher empathy with the narratives and featured people in the stories. While immersive experience in omnidirectional video is considered to facilitate a physical, intuitive reaction in viewers and enhance a sense of presence, it does involve heightening emotions that relate to *that* sense of presence.

This mode of presence is positioned and aligned with the author's perspective, and so are, to some extent, the emotions it evokes. As an example, the immersive journalism project *Use of Force* developed by a team directed by journalist and videographer, Nonny de la Peña, offers a sympathetic but positioned perspective on border patrol violence. It brings viewers to the scene where thirty-five year old Anastasio Hernandez Rojas was beaten to death in May 2010 by the American border patrol – one of many immigrants who have been killed by the border patrol under questionable circumstances in recent years under the 'Use of Force protocols.'[254] As a viewer, you experience this actual narrative first hand, as expressed by journalist Chelsea Stark, when describing her experience with *Use of Force*: "I experience deep chills when I pull off the headset. I've played in a couple dozen or so virtual reality worlds, but this experience, titled *Use of Force* continues to haunt me. It could have been the pain in the audio, the immersive headset that allowed me to walk through the action and face horrified bystanders, or the fact that I watched a violent act – like a witness."[255] Her reaction to *Use of Force* indicated how the immersive experience encouraged her to sympathize with the victim from the perspective of a bystander.

Immersive experience tends to offer a perspective – of, for example empathy – provided from the 'angle' of the journalist or the point of positioning you are granted. This perspective might not clearly appear to us as such because we 'naturally' inhabit it as a premise for participating in the immersive experience. This means that the images we encounter in immersive experience are spurred, loaded with perspective, bias, politics and ideology. The tendency of designing mediation in order to target and affect people's memory and through that affect behavior is a familiar and constant line of thinking in advertisement. However, while we might notice that a perspective, emotion or position is offered in the advertisement

[254] "Project Use of Force," website of Use of Force, published March 6, 2014, accessed November 21, 2016, www.useofforce.immersivejournalism.com/category/main-info

[255] Chelsea Stark, "Misled Memories: Virtual Reality is Ready to Manipulate Your Emotions," Mashable, accessed November 29, 2016, www.mashable.com/2014/06/26/virtual-reality-memory/#a52D.FmzakqL

in front of us, we might not notice it as easily when they are embedded in our experience, such as in the intensification of ambiance and brand extension via the illumination of buildings and urban spaces. Nonetheless, through our immersion in these augmented environments we are similarly urged to 'inhabit' the situation in a certain fashion, for example under conditions of a calculative ambiance of machinic aesthetics and LED color schemes, as in the case of the drone light shows. Just as the experience we are granted in omnidirectional video is 'positioned,' so are our immersive environments and everyday situations intensified by media aesthetics. While these experiences may not be directly reflective of ideologies of corporations, governance or other potential controlling body, in these environments we are nonetheless exposed to the same sensory mechanisms of mediation, which is always 'authored' and which in our current technological reality is oftentimes characterized by spatialized temporalities.

How we are affected in immersion – in virtual reality

The journalist's description of her experience with the omnidirectional video narrative *Use of Force* illustrates what has been argued based on virtual reality research: that immersive experience can increase emotional investment and interest in certain matter. Establishing a different approach than Gumbrecht's epistemological conception of 'presence' as a condition of experience that characterizes our ontological experience today, research and technological development in virtual reality has been particularly concerned with how a convincing sense of presence may be established in the situation of immersion in a virtual reality environment, and how the designed sense of presence may affect our behavior both during but also after the experience.

Virtual reality (VR) is a rapidly developing domain of mediation of human experience. It presents a completely artificial 3D environment that fully surrounds and immerses the user. Preceded by lightweight, high-resolution cellphones and motion sensors, high-speed wireless data, the growth of the Internet of Things, and 3D capable devices, virtual reality was introduced in gaming in 1987 with headgear and hand controls that allowed users to interact with video footage. Through the 1990s various VR headsets were introduced for arcade games with releases by both Sega and Apple in 1994. The first virtual reality artwork was realized the following year in 1995: *Tunnel under the Atlantic* by French artist Maurice Benayoun, which connected in real time the Pompidou Centre in Paris and the Museum of

Contemporary Art in Montreal. Also in 1995, Char Davies' immersive interactive virtual reality environment installation *Osmose* was realized as a space for exploring perceptual interplay between self and world, navigated via one's breath and balance. A number of artists, such as John Cleater and John Craig Freeman, similarly experimented with virtual reality through the 1990s and 2000s. Especially since Oculus started to distribute developer kits to filmmakers and artists in 2013 (rough prototypes of the final VR product), there has been a great number of artists experimenting with virtual reality. Today virtual reality experience is accessible to the masses via free-to-download GoPro software for your smartphone. VR allows users to enter a digitally-mediated omnidirectional environment in which one has full mobility, typically by wearing a virtual reality headset. This environment manipulates the spatial and temporal properties of sensory information by replacing physical world sensory information with that from the virtual reality immersion. While gaming is still progressing mediation through virtual reality, it is also increasingly finding application in fields from initiatives in education, surgical training, and military training, to apps that allow you to design your own IKEA kitchen in virtual reality. Meanwhile, city planning and architecture have embraced the opportunities to envision what a new building would look like in a particular location before construction.

Virtual reality research has especially explored the ontological and psychological possibilities and consequences of media aesthetic immersion, provided insight into how we are affected by intense media-aesthetic environments, and into how our brain and perceptual system respond to and integrate multisensory information in our memory-body system. This involves the effects or consequences our enhanced sense of presence in a particular mediated environment may have on our perceptual system.[256] The empirical findings from virtual reality can help us in particular with examining presence in terms of how the human senses and complex perceptual processes mediate subjective experience of the physical world. This description of presence reflects the definition developed by the International Society for Presence Research, which examines the concept of presence in relation to technological mediation. Their conception derives from *telepresence* – the sense of 'being there' in a technologically mediated environment: "…an illusion of non-mediation in which users of any

[256] Important research on virtual reality and memory has been conducted at the Virtual Human Interaction Lab at Stanford University and the Multisensory Brain and Cognition Lab at University of Waterloo, see www.vhil.stanford.edu

technology overlook or misconstrue the technology's role in their experience."[257] From this perspective, a *sense of presence* occurs when a person perceives an experience as if only mediated by human senses and perceptual processes (a first order mediated experience) while part or all of the experience is also mediated by technology (second order mediated experience). Presence in this perspective thus concerns a condition of perception in which part or all of an individual's perception fails to accurately acknowledge the role of technology in the experience – even though part or all of the experience is generated by and/or filtered through human-made technology.[258] This involves both technologies that directly and indirectly provide stimuli to the human neural processing system.

Computer scientists, Mel Slater and Sylvia Wilbur have theorized 'presence' in relation to technological mediation as a two-dimensional construct, first comprised of a sense of self-location, and secondly of an individual's perceived possibilities to act. From this perspective, spatial presence is achieved when the user is first 'drawn in' by spatial cues (such as visual field, occlusion, texture effects, motion parallax, and stereoscopy) to perceive the mediated environment as a plausible space. After this perceived self-location has been established, the user perceives the possibilities for acting in the mediated spatial environment. In this way, a sense of presence is considered achieved as a result of presence effects of high sensory quality and when the immersion more or less isolates the individual in the virtual experience by having their mental capacities 'bound' by the mediated environment.[259] Based on this, Mel Slater and Sylvia Wilbur suggested in 1997 that the more immersive the system – the more efficiently physical reality is shut out via convincing quality in sound and visual experience – the more likely an individual is to *feel present* within the mediated environment, and consequentially, the more the virtual setting dominates over physical reality in generating memory and determining the individual's response to a situation.[260] Their research has

[257] "International Society for Presence Research," accessed November 20, 2016, www.ispr.info. The term *presence* derives from the term 'telepresence' coined by professor at Massachusetts Institute of Technology Mavin Minsky in 1980.
[258] "Presence Defined," *International Society for Presence Research*, accessed November 20, 2016 www.ispr.info/about-presence-2/about-presence
[259] Ibid.
[260] Mel Slater and Sylvia Wilbur, "A framework for immersive virtual environments (FIVE): Speculations on the role of presence in virtual environments," *Presence: Teleoperators and Virtual Environments* 6 (1997): 603–616.

informed a common assumption in virtual reality research that higher immersive quality elicits greater psychological presence.[261]

An interesting find in research on virtual reality in relation to the sense of presence is that aesthetically intensified environments may potentially have long-term impact on our psychologies, by enhancing emotions and empathy, and eventually affecting human behavior. A study on virtual reality from 2013 suggests that the behavior and attitudes evoked in immersive, mediated experience can be transferred into the physical world. It examined the potential of embodied experience through immersive virtual environment technology to foster greater merging with persons with disabilities. It found that virtual reality experience evoked sympathy, and increased certain attitudes. In observing how the research participants also increased their real life helping behavior after the virtual reality experience, the study suggests that immersive experience in virtual reality can increase not only human empathy but also behavior to help others in our actual life world.[262] As such, the study points out that embodied experience in a media aesthetic environment (virtual reality) can contribute to developing instincts, habits, and impulses in effect also beyond or outside of the immersive experience. Another study from 2012 examined how presence in mediated environments influences subsequent tasks in the physical world. It exposed thirty-three male and female college students to a pro-environmental message in an immersive virtual environment, after which they completed a memory task in the physical world regarding pro-environmental principles. The study suggests that media technology that induces presence can influence an individual's ability to remember information in the physical world – remembering more clearly the details of the mediated experience than the details of real life as experienced immediately before the mediated experience.[263]

We can consider this compensation of one kind of sensory impressions with another kind as a pharmakological recompense. The *pharmakon* in this sense, is a central figure for

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[261] Doug A. Bowman and Ryan P. McMahan, "Virtual reality: How much immersion is enough?" *IEEE Computer* 40 (7) (2007): 36–43; Mel Slater, Vasilis Linakis, Martin Usoh, and Rob Kooper, "Immersion, presence, and performance in virtual environments: An experiment with tri-dimensional chess," *ACM Virtual Reality Software and Technology*, ed. M. Green, 163–172 (New York: ACM Press, 1996).

[262] Sun Joo (Grace) Ahn, Amanda Minh Tran Le and Jeremy Bailenson, "The Effect of Embodied Experiences on Self-Other Merging, Attitude, and Helping Behavior," *Media Psychology* 16:7 (2013): 7-38.

[263] This research was undertaken at Stanford University, Department of Communication and Precourt Energy Efficiency Center. See Jakki Bailey, Jeremy N. Bailenson, Andrea Stevenson Won, June Flora, and K. Carrie Armel, "Presence and Memory: Immersive Virtual Reality Effects on Cued Recall," *Proceedings of the International Society for Presence Research Annual Conference.* October 24-26, Philadelphia, Pennsylvania, USA, 2012,

describing the mechanism of 'compensation' in the correlation between technical media and human being. Bernard Stiegler developed this concept based on Jacques Derrida's reading of technics in "Plato's Pharmacy" and the Greek term naming both a poison and its remedy. With the concept of the pharmakon, Stiegler describes how technical media operate through an essential duplicity, whereby they give back to the human a remedy for what they take. For example, in the case of writing, while the technique removes the need for memory practice, it also extends the scope of memory by exteriorizing it into a technical support. Thus writing involves the replacement of one form of memory (interior memory, or *Erinnerung*) with another (artificial memory, or *Gedächtnis*), and in this way, writing has functioned as a form or recompense for the weakness of natural memory. The pharmakological recompense involves a sense of replacing what we might experience as natural, unmediated and conscious presence with an artificial, mediated sense of presence; of natural, sensible images that affect our nervous system with artificial, sensible images. Immersion is thus a mode of experiencing in which we are more likely to take in and accept image sensibilities that follow the logics or narrative of the mediated dimension of immersion. This is because the sensory qualities of the immersion block or replace those of the natural environment. Biologically, we interact with reality and receive sensory impulses through our nervous system. As these inputs are artificially stimulated in immersion they may, to a higher or lesser degree, block or replace natural impulses.

With the concept of the pharmakon, the studies mentioned indicate how intense mediated immersion, by establishing an artificial condition of presence that is experienced as mediated by one's human senses and perceptual processes, compensates the user's memory from immediately before the mediated experience. With regard to immersive experience, images of artificial sensory impressions of mediated immersion may be considered to overwrite or 'compensate' images of sensory impressions from our natural environment.

With light and other artificial stimuli increasingly augmenting our urban environments, we can consider the technological quality of immersion beyond the single direct medium experience to concern mediated experience more environmentally. As media aesthetics augment our contemporary lives, we can consider how media aesthetic immersive experience may also apply to our actual reality beyond the experience of virtual reality – and affect our behavior in our everyday life worlds. Another virtual reality study from 2005 challenges the two-dimensional construct of presence suggested by Slater and Wilbur. The new study shows

that rather than depending on high visual and auditory quality, the effective means for establishing a sense of spatial presence depends on the levels of user control in the mediated environment, as well as on the sense of possibilities to act and navigate freely within the environment (in virtual reality, for example, through user tracking, stereoscopic visuals and wider fields of view in the visual display).[264] The study indicates that the closer the mediated experience is to our real-world navigation field, the more of a sense of spatial presence we experience. From this perspective, experience of immersion in which the physical, real-world environment is augmented or supplemented with media-aesthetic, computer-generated sensory input may have an even stronger influence on our sense of presence than in the virtual reality experience in which the real world is replaced with a simulated one. The enhanced sense of presence via immersion may thus be considered to be strongest when the mediated presence effects are integrated in our real-life environment. In this sense, it is when we 'feel' emotional intimacy and we have space for action and navigation that we are most open to accept artificial images from the mediated space. If we look at some recent figures, *augmented reality* – by which immersion is transferred from a closed mediated space and into our real-life navigation field – is expected to reach US$90 billion in revenue by 2020, whereas virtual reality is projected to reach just US$30 billion.[265] This is partly due to the expected incorporation of augmented reality with our social media networks by 2018. Facebook has plans to create an augmented reality device that looks like simple reading glasses but which will allow for digital overlay in real time.[266] This will, for example, allow information about a person to appear before your eyes as opposed to on the screen. These predictions and already initiated near-future initiatives support the thought that achieving an enhanced sense of presence which may affect impulse, behavior and actions, is considered particularly efficient in augmented mediated experience. Compared to virtual mediated experience, augmented experience comes closer to our immersive experience of a reality with presence effects of increasing intensity and intelligence.

What could be of concern here is how the experience of artificial images encountered in

[264] Werner Wirth, Tilo Hartmann, Saskia Böcking, Peter Vorderer, Christoph Klimmt, Holger Schramm, Timo Saari, Jari Laarni, Niklas Ravaja, Feliz Ribeiro Gouveia, Frank Biocca, Ana Sacau, Lutz Jancke, Thomas Baumgartner, and Petra and Jancke, "A Process Model of the Formation of Spatial Presence Experiences," *Media Psychology* 9:3 (2007): 497.

[265] Drew Lewis, "Infographic – Why You'll Be Wearing Your Next Computer," Touchstone Research Innovation & Excellence, accessed November 22, 2016, www.touchstoneresearch.com/augmented-reality-industry

[266] Ibid.

media aesthetic immersion (at the expense of images from the natural world), may have a stronger potential impact on our behavior, thinking and action when these are not part of a research experiment but are conditions of our media aesthetic reality. Also, in our contemporary conditions of immersion with mediated presence effects, as reflecting both the tendency of intensity and intelligence examined in the previous chapters, the pharmakological structure differs by not directly giving back what it takes – a matter that will be investigated shortly.

Artificial sensibilities at a micro scale

A group of neuroscientists at UCLA have found that neurons in the brain react differently to virtual reality than they do to real-world environments. They placed rats in a virtual reality environment similar to those used by humans, while studying the hippocampus – the region of the brain affected by, for example, Alzheimer's, stroke, depression, schizophrenia, epilepsy and post-traumatic stress disorder – and found that although the rats' hippocampal neurons were highly active in the real-world environment, more than half of those neurons shut down in the virtual space. They concluded that the neural pattern in virtual reality is substantially different from the activity pattern in the real world, meaning the virtual environment affects the brain differently. The scientists explain how, when we try to remember something, rhythmic patterns appear in the hippocampus, which facilitate the formation of memories. Memory depends on two different 'languages' – one based on brain rhythms, the other based on intensity – which every neuron in the brain 'speaks' simultaneously. They found that in the virtual world, the language based on rhythm had a similar structure to that in the real world, however the language based on intensity was entirely disrupted.[267] So, what might it mean to form our memory in a similar manner in virtual reality as in the real world, but with an entirely different intensity?

We know from research that artificial lighting and sound interferes with the functioning of living organisms, such as birds, fish, insects and bats. A study comparing city birds with countryside birds – six blackbirds tagged in Munich and six in woodland twenty-five miles away, which were monitored for a week – has found that blackbirds nesting in the city behave differently than birds in the countryside. The research revealed that city birds wake up around

[267] Zahra M Aghajan, Lavanya Acharya, Jason J Moore, Jesse D Cushman, Cliff Vuong and Mayank R Mehta, "Impaired spatial selectivity and intact phase precession in two-dimensional virtual reality," *Nature Neuroscience* 18 (2015): 121–128.

thirty minutes before dawn, while forest birds start their day when the sun rises; city birds stay up longer, with their day lengthened by forty minutes; and, the *internal clocks* of the city birds were ticking faster and were disrupted, especially for birds resting in the brightly-lit business district of Munich.[268] Another study in the developing field of 'acoustic ecology' published in *Bay Nature* shows that sparrows in San Francisco adapt their song to urban noise. Interestingly, the birds not only changed their tune to become louder, but also to a higher minimum frequency, which the researchers estimate is an effort to rise above the low-frequency rumble of cars. This might eventually impact the bird's life expectancy, breeding behavior and mating success.[269] These studies reveal the consequences of urban noise, sense impressions and visual intensities on birds, but they also indicate how intense stimuli might affect biological systems in other species, such as humans.

Intensities in mediated experience of immersion affect our sensory system at a quite molecular level. First, consider the sensory impacts of light, which perhaps most clearly embodies the tuning up of mediated presence effects. Although we do not feel it, we know from research that artificial light impressions impact the human system.[270] When using our computers or smartphones at night, we might notice how an eerie blue glow lights up the face or how, after we've adjusted to darkness, we are 'blinded' by our screens if we turn them on. Blue light disturbs the body's circadian rhythm (biological clock), and this may result in us staying up longer than our natural rhythm would have us do. Visible light comprises wavelengths from about 380-780nm, and the wavelengths between 380-440nm are critical to our human system. Blue-violet light, with wavelengths between 380 and 500nm, is the highest energy wavelength of visible light and can penetrate through the eye's natural filters. Too much light in the ultraviolet and blue-violet bands can damage the human eye, cause inflammation of the conjunctiva and cornea, and damage the eye's crystalline lens and the retina.[271] It can cause headaches, dry eyes, and difficulty with sleeping. Furthermore, by reaching photosensitive cells in the eye's retina, blue light may prevent the production of

[268] Stefanie Reinberger, "Birds That Go Wild for the City," *MaxPlanckResearch* 1 (13) (2015): 72-79, accessed September 25, 2016, www.mpg.de/7023282/W004_Environment-Climate_072-079.pdf

[269] Kim Todd, "The Language of Sparrows: How Bird Songs Are Evolving To Compete With Urban Noise," B*ay Bature*, published January 20, 2016, accessed September 25, 2016, www.baynature.org/article/the-language-of-sparrows

[270] "Blue light has a dark side," Harvard Health Publications, accessed November 4, 2016, www..health.harvard.edu/staying-healthy/blue-light-has-a-dark-side

[271] "Blue Light: The Good and the Bad," Zeiss, accessed November 4, 2016, www.zeiss.com/vision-care/en_de/better-vision/understanding-vision/eye-and-vision/blue-light-the-good-and-the-bad.html

melatonin which is produced in the brain and in the retina. It not only plays a role in regulating our sleep/wake cycle, but a decrease in melatonin production has been linked to higher rates of certain forms of cancer (significantly breast cancer), as well as immune system disorders, macular degeneration, cardiovascular diseases, diabetes and osteoporosis.[272] Today, due to our many new light sources containing a higher proportion of blue light than old traditional light bulbs, we are exposed to significantly more blue light than previously. This is particularly from our digital devices, but also via illumination of our urban environments, celebrations and light shows, public screens, and so on, which employ LED lights. As absurd as it might seem, the apparent environmental solution of replacing previous light sources with energy-efficient lighting in LEDs happens at the expense of our increasing exposure to blue wavelengths and thus comes to pose a risk to our health. However, my focus here is on the behavioral affects of media aesthetics.

While light waves can be measured and their effects proven through experimentation, there are those waves and sensibilities that cannot be measured, but which equally affect our system. The sensory impressions of contemporary conditions of mediation not only derive from light impressions, noise and movement that we perceive, but also from different temporalities of mediation affecting our experience that we do not perceive; some that avoid our consciousness, and some of which derive from environmental sources of sensibility. Some of the images of our media aesthetic contemporary experience reflect temporalities that we experience without conscious awareness because of the temporal mechanisms of underlying computation, but they still access our perceptual system and stir certain behaviors and impulses.

[272] "Health Effects of Artificial Light," European Commission (Brussels: European Union, 2012), accessed November 23, 2016, www.ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_035.pdf

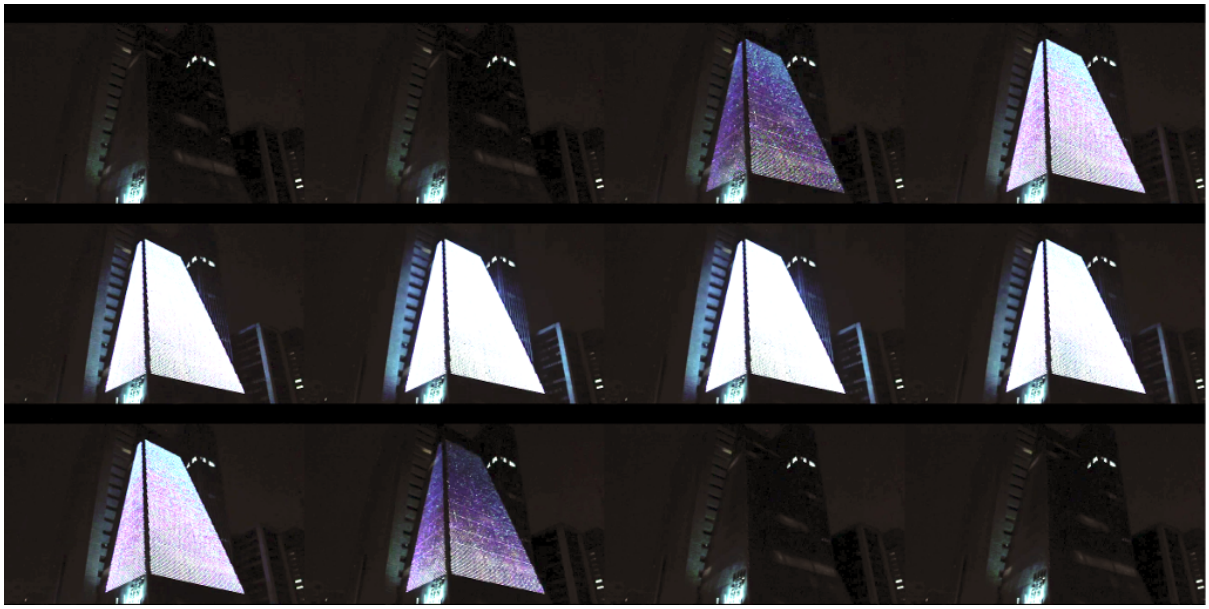

Photo: Radamés Ajna and Thiago Hersan

Interlude No. 7[273]

***0.25 FPS* (2014) by Radamés Ajna and Thiago Hersan**

0.25 FPS (2014) reflects on the incessant, unilateral broadcasting behavior we perform when 'sending.' 'trending,' 'liking,' or 'posting' in social networks and digital culture. A mirror is placed in front of the building hosting the SESI SP Digital Art Gallery in *São* Paulo, and a camera is placed in front of it at a short distance. *0.25 FPS* allows you to experience a direct relationship with the apparatus of the camera, which is connected to the gallery façade on the building. Audiences are free to step in front of the mirror and have their picture taken, which they know will be projected on the façade. First, a white flash appears on the façade a number of times, one for each 'photograph' taken by the camera with the audience intuitively posing in front. The number of flashes on the building indicates a mediation process before the image appears in a slightly processed version on the façade, one that is similar to a GIF image (Graphics Interchange Format). After this has been repeated a number of times, it finally fades before the next series of photographs is taken. The façade then pauses by going back to black until the next participant engages with the camera. The delay between the photos is

[273] This interlude is based on my description of the artwork in the curatorial essay "Digital Citizen" written for the SP Urban Digital Festival 2014, São Paulo, accessible at httwww.tanyatoft.com/publications-2/sp_urban-digital-festival-2013

captured and the GIF video summarizes the 'image' series, allowing participants to reflect on the moment they just had in front of the camera. After the few seconds of GIF image display are over, that moment is gone.

0.25 FPS has, as its point of departure, the question posed by the artists: "As we keep racing to make our communication devices better, faster and smaller, how can we make sure our interactions still impart a sense of uniqueness and specialness for the people involved, and that our personalities don't get optimized out of our own communication processes?"[274] They speak to how our new communications devices and apparatuses on the one hand, offer a seemingly personal or social experience – allowing us to capture images and post them to social media networks, instantly connecting us to people, places and information all over the world, and augmenting our whereabouts – and on the other hand, operate in modes that service processes and corporations that also *indirectly* participate in that experience. The short pause in *0.25 FPS*, between the series of pictures taken and the GIF video being shown on the gallery façade, seems to imply a time frame; one that we cannot see. This might indicate how, rather than direct address, mediation increasingly concerns invisible relations between technical circuits and human experience.

The artificial, mediated impressions-images that intensify, surprise or amaze our senses in immersive experience involve many different temporalities. Originating from machinic processes, largely by algorithmic procedures, these temporalities tend to be different from the temporalities of our direct perceptual grasp of what we experience. In *How We Think: Digital Media and Contemporary Technogenesis*, N. Katherine Hayles expresses how mediation with twenty-first century media involves a discrepancy between two co-existing modes of temporalities: that of human cognition and that of machinic operations. On the human side, we have short time scales of 'synaptic' connections which are structures that permit a neuron (or nerve cell) to pass an electrical signal (converted to a chemical signal) to another neuron, and which relate to the relative long time scales required for human narrative comprehension. On the machine side, we have very fast processing at the level of logic gates and electronic circuits – the basic building blocks of any digital system that relate input and output and read

[274] "0.25 FPS," website of Thiago Hersan, accessed April 4, 2016, www.thiagohersan.com/project/0-25-fps/?ref=404

"bits" – and combinations of binary digits in 0s and 1s that contain information. The interactions between these two temporalities, Hayles writes, are "…dynamic and continuous, with feedback and feedforward loops connecting different levels with each other and cross-connecting machine processes with human responses."[275] As a consequence, she notes, "Walking around with Pleistocene brains but increasingly immersed in intelligent environments in which most of the traffic goes between machines rather than between machines and humans, contemporary subjects are caught between their biological inheritance and their technological hybridity."[276] In this situation, reflected in the complex dynamics between deeply layered, technologically-built environments and human agency, we experience what Hayles describes as a discrepancy between human temporalities and machinic temporalities. This is manifested in both the human conscious and, significantly, in the unconscious.[277] The unconscious does not primarily exist as suppressed material but rather as a perceptive capacity that catches the abundant overflow that attention might not grasp.[278]

This has consequences to the nature of the artificial sensibilities we experience in immersion. Felix Guattari has suggested that in our 'machinic' world reality – in which what is possible for us is enabled and extended by technology – the signs of our current capitalist machines are *a-signifying*. By this, he means that they 'bypass the representation of a subject while connecting an organ, a system of perception, and intellectual activity directly to a machine, procedures, and signs.'[279] A-signifying signs, in the elaboration of the concept by Mauricio Lazzarato, refer to how, in our 'machine-centric world' "…one speaks, communicates, and acts 'assisted' by all kinds of mechanical, thermodynamic, cybernetic, and computer machines."[280] In conditioning our every experience that involves an apparatus or machinic operation, a-signifying signs denote those relations between technical circuits and human experience that occur in mediation – those that we experience unconsciously.

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[275] N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis* (Chicago and London: The University of Chicago Press, 2012), 13.
[276] Ibid., 219.
[277] Ibid., 17. Hayles refers to recent work across a range of fields, including neuroscience, psychology, cognitive science and a wealth of experimental and empirical evidence that indicate the significant role that the unconscious plays in our habitual actions.
[278] Ibid., 12-14. Hayles examines 'attention' as a focus for inquiry in an academic context into the relation of human to machine cognition and the cycles of epigenetic changes catalyzed by our increasing exposure to and engagement with digital media.
[279] Guattari quoted in Mauricio Lazzarato, *Signs and Machines, Capitalism and the production of subjectivity* (Los Angeles: Semiotext(e), 2014), 40.
[280] Ibid., 29.

Lazzarato notes how our contemporary "sign machines" – of, for example, algorithms – work 'prior' and 'next' to signification, where rather than signifying signs they produce an 'operational sense' via diagrammatic operations.[281] This is, for example, as utterances, representations, and meaning function, as a kind of 'grid' that affects our ways of perceiving, feeling, and understanding.[282] This operational sense been named by Hansen as *datasense*, defined as an unconscious form of 'sensing' that is synonymous with a data milieu.[283] Through datasense, a-signifying impressions avoid our consciousness and enter our dynamic memory, without us necessarily paying attention to it, from where they come to affect our bodily routines.

In this sense, with the pharmakological temporal operations of twenty-first century media, we lose our direct perceptual grasp of our environment, while we regain an expanded and microtemporal sensory contact with the world that affects us also beyond our consciousness. We regain a sense of environmental sensibility, referring to human experience in relation to a larger, networked and environmental domain of experience that transfers machinic circuits. In other words, our datasense experience with machines is disjunctive with our phenomenological modes of experience. This involves us being affected by sensory impressions that avoid human consciousness through bypassing our ontological, perceptual grasp. Based on this, with our desire for enhancing our sense of presence by means of mediated presence effects, as Gumbrecht characterizes, we simultaneously accept the loss of direct perceptual grasp, and subdue our consciousness. When we experience an enhanced sense of presence, this is then without awareness of its substance, of what makes it come about, or how it may affect our system. Therefore, we are to some extent unable to understand – both cognitively and in the experience of our body-system – the relations between images of sensory impressions, their sources, and their consequences on our perceptual system.

[281] Ibid., 41.
[282] Lazzarato conceptualizes this grid with reference to Guattari's diagrammatic power signs. Ibid.,144.
[283] Mark B. N. Hansen, *Feed-Forward: On the future of twenty-first century media* (Chicago: The University of Chicago Press, 2015), 148.

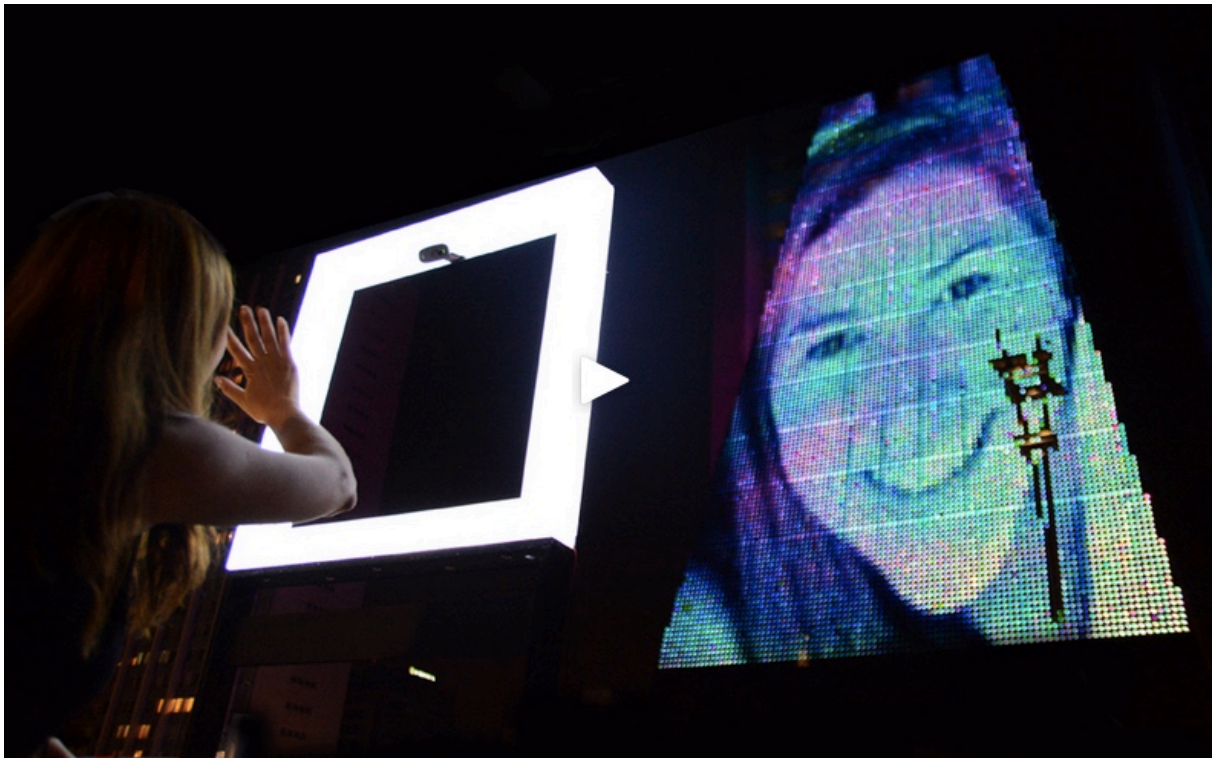

Photo: Verve Cultural

Interlude No. 8

***Onirical Reflections* (2013) by Anaísa Franco and Jordi Puig**

My realization of the significance of the relation between images and memory in experience arrived with an artwork by Brazilian artist Anaísa Franco and Japanese artist Jordi Puig, entitled *Onirical Reflections* (2013). This was exhibited for the second SP Urban Digital Festival in São Paulo, from November 4-28, 2013, which I co-curated with the festival's director Marília Pasculli. The piece was developed for this particular public space based on an interactive gallery sculpture of the same title. You encounter the work at night when Paulista Avenue is dark (darker than most city streets because of the abandonment on advertising). Across the street of the building holding the SESI Digital Art Gallery you walk up on the top of a container installed on the occasion of the exhibition, which isolates the 'interaction field' from the street. However, you are still close to the street activities and can watch how passersby pay attention to the façade.

On top of the container you look through a seemingly empty white frame placed across the street from the gallery façade. Your close encounter with the frame activates a face tracker and maps your face real-time. A situation of immersion is established as you approach the write frame. As your face 'touches' the missing screen in the frame, it appears in color on the gallery façade, not sharp due to the resolution, but recognizable. The visual image on the façade appears unlike familiar representations of faces on screens as the rough resolution enhances a sense of tactility in the visuals. You simultaneously see the pixels and make sense of the image as a whole. As you move your face, hand drawn animations are mapped onto your projected face on the building, following your movements and changing as you change the position of your face. In this manner the work interconnects the physical with the digital in the shape of animations, in search of chemestry between materials – the face and the animations. The intimate, personal engagement, I noticed from watching various people engage with the installation, seems to invite different facial-emotional expressions. You are in real-time sensible resonance with the visuals, not only at a cognitive level but also at an intuitive, embodied frequency. As the artist, Anaísa Franco told me while looking at the piece together during one of the testing nights, the work reflects on concepts of psychology and dreams, and brings out the architecture of these dreams through the animations. Her idea is that the images that are contained in our memory participate in the processing of the outside world.

Onirical Reflections brings the participant in close contact with the transparency and emotional simultaneity of our mode of being in a digital reality. Although displayed on the LED façade, the art image can be considered in terms of an expanded notion of *projection*: a projection of an extreme moment of your existence, as if connecting the psyche with an artificial existence in the digital realm. It is a state of pseudo-certainty, of simultaneous intensification of presence – 'you are here for sure!' – and uncertainty about the state of presence. This mode of presence is somewhat familiar, as we see our 'reflection' in mediated space all the time, but certainly also unfamiliar due to the size, intensity, materiality and manipulation of this image reflection. The visual impression seems to open up a virtual depth in the environment. The art image distorts the urban context as a re-projection of reality with the human being in it, and opens up the senses to comprehend a new mode of feeling present. The audience is confronted with a visualization of dreams, memories and the mental rewritings we make when processing different levels of daily experience. In the re-projection

of reality these become part of the physical contact with the world, indicated by their physical appearance on top of people's faces, participating in our experience.

The conception that there is a relation between immersive media aesthetic experience and change of memory structures is acknowledged in the use of virtual reality in medical treatment in, for example, treatment of trauma. Here, patients typically confront their traumatic memories through a retelling of the experience in virtual reality. This is now endorsed as an evidence-based treatment for posttraumatic stress disorder.[284] Research in virtual reality has become an established domain of neuroscientists and computer scientists, providing scientific argumentation for how immersive experience with media aesthetic presence effects may affect our memory system. If memory is the faculty that is affected in media aesthetic immersion, and from which we may change our attention, empathy or behavior – as the cited research in virtual reality point to – then how can we understand what *happens* in our memory?

In the following I will suggest that, particularly in consideration of the ontological conditions of our current communicative context, we can advantageously use Bergson's philosophical conception of memory to grasp the relations between perceptual experience and duration; our movement through time. In *Matter and Memory* (1896), he describes the structure of memory as conditional to the structure of experience. Bergson's philosophy of memory entails a conception of memory as a dynamic entity that is conditional to our mode of duration, our movement through life, as an in-situ, processual function, that facilitates a kind of mediating operation of real-time events. Bergson's thinking on memory is considered a major philosophical contribution to the understanding and analysis of 'implicit memory'; the unconscious, procedural and intuitive type of memory that people rely on when coping with their everyday lives.[285] Implicit memory operates through a different mental process than its counterpart of 'explicit memory,' which refers to the conscious, intentional recollection of factual information, previous experiences and concepts. Implicit memory concerns how we

[284] "Bravemind: Virtual Reality Exposure Therapy," Creative Technologies, accessed December 1, 2016, www.ict.usc.edu/prototypes/pts Virtual reality is also being used in, for example, treating pain by means of distraction or in physical therapy to produce situations of relaxation or increased engagement.
[285] Daniel Schacter, "Implicit memory: History and current status," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 13:3 (1987): 501–518.

encounter, perceive and sort impressions and develop an intuitive, durational mode of being and acting in the world. This facilitates the operation by which we – without necessarily being consciously aware of it – adapt our behavior in duration to the logics of our dominant narratives, and participate in emergency culture.

Bergson's conception of memory avoids its consideration as a faculty of repetition or reproduction, as archived traces, and also as something 'stored' on psychic shelves in our brain.[286] He thus avoids a conception of memory in terms of containment, which has otherwise made a common imperative in thinking on memory, whether it is the brain or the computer that provides the container.[287] We find the conception of memory that Bergson rejects in, for example, the theory of Sigmund Freud. In "A Note Upon the "Mystic Writing Pad"" (1925), Freud pictures the functioning of the perceptual apparatus of our mind and memory with the metaphor of the "mystic writing pad"; a children's toy and writing tablet. The writing on celluloid paper, which leaves a trace on dark brown wax paper underneath, can be removed or washed out by one's hand. However, what Freud finds significant is that a vague, permanent trace is left, which can be legible in suitable light. The writing pad can simultaneously provide an ever-ready receptive surface and leave permanent traces of the notes that have been made on it.[288] Freud uses this as a metaphorical, hypothetical structure for our perceptual apparatus in a theory of memory as a faculty of the brain that consists of simultaneous reception and 'traces' of memories, 'stored' on psychic shelves in our memory as a form of container.

Freud's conception of memory, as a system of storage, is fitting to how nineteenth and twentieth century media operate primarily (not exclusively) in the service of individual and cultural memory by means of the 'cultural archiving' of, for example still photographs, cinematic moving images, video, and raster scanning. In these mediums, what is recorded gets stored in the memory system. However, in *Feed-Forward*, Mark B. N. Hansen describes how, with the emergence of twenty-first century media, it shifted from forms of past-directed recording platforms to become data-driven anticipations of the future,[289] encompassing

[286] Rather, Bergson considers the office of the brain as limited to the transmission and division of movement. Henri Bergson, *Matter and Memory* (1911), trans. N.M.P. and W.S.P. (Mansfield Centre: Martino Publishing, 2011), 20.
[287] Edward S. Casey, *Remembering* (Bloomington: Indiana University Press, 2000), 310.
[288] Sigmund Freud, "A Note Upon the "Mystic Writing Pad" (1925)," in *General Psychological Theory, Chapter XIII*, 207-212 (New York: Touchstone, 1997), 209.
[289] Hansen, *Feed-Forward*, 4.

everything from social media and data mining to passive sensing and environmental micro-sensors.[290] Hansen argues that twenty-first century media differ from twentieth-century media particularly by means of different processes of recording, storage and transmission. While we are still very much engaged with "recording" today and that medium forms of the twentieth century are still used in contemporary culture, recording today is significantly practiced with our mobile phones that allow for instant distribution of captured moments in photographs, messages, personal online galleries, and social networks. When 'posted,' the recorded image is stored in the archive of the Internet – and the platform we use – and made available to the world. The frequency and volume of stored recordings on the 'recording platform' of the Internet is excessive, and based on this a form of cultural memory continuously takes shape. However, when we record an image, video, our journey, 'pin down' a location or event on an online map, or bookmark a Google search result, we not only record content but also its related data trace. This is stored in addition to the stored image, video or information, in databanks of the service, platform or app that we use. As such, what is recorded and stored in our global media archive operated by twenty-first century media are not only human experience and cultural memory but also data registrations of our behavior.

This change in recording and storage with twenty-first century media concerns a live connection to our reality and the sensibilities distributed in our networks, the environmental sensibility of our reality, which is profoundly different from our 'live' experience of being before we were connected. Hansen emphasizes how the operationality of media and mediation today is different from direct perceptual mediations of twentieth century media's technical inscriptions of human experience in situations of unique address.[291] These are situations of, for example watching television, listening to radio, or speaking on the phone. With the operationality of twenty-first century media, it becomes a kind of general platform for immediate, action-facilitating interconnection with and feedback from the environment and environmental sensible processes.[292] An example of this is how our modes of recording, transmission and storage today are almost as live as the experience we record. We are on the path to a near-future condition, as Alexander R. Galloway and Eugene Thacker describe it, in which "…there will be a coincidence between happening and storage. After universal standards of identification are agreed on, real-time tracking technologies will increase

[290] Ibid., 3.
[291] Ibid., 6.
[292] Ibid., 160.

exponentially, such that almost any space will be iteratively archived over time. Space will become rewindable, fully simulated at all available time codes."[293] This is a condition of total recording and trackability; a condition of measurement and quantified space, but it is also one in which data sensibilities of real-time experience will become directly archived. This near-future scenario is almost reality in the example of Virtual Singapore, in which data of sensible experience is logged in an operational archive to be analyzed, to suggest and guide governmental action – real-time. Recording and storage with twenty-first century media concerns a simultaneous, real-time recording (of data) and transmission (by optimizing functions), while data is stored as a form of memory of a new kind of sensible-cultural archive. More than our cultural human narratives, this is an archive of our data, of behavioral patterns and mediated sensibilities.

While Freud's conception of memory as a function of psychic shelves storing traces of experience might fit with the cultural mode of recording, transmission and storage of twentieth-century media of direct experience, the dynamic functionality of Bergson's memory framework, which I will now move on to introduce, seems more fitting to the condition of twenty-first century media where live-recording, live-transmission and live engagement of data is 'stored' in a live-archive.

Bergson's conception of *dynamic memory* is tied in with an ontological conception of how our world of matter is made up of sense material, as an aggregate of many *images*, as introduced in Chapter 1, "The Art of Our Times," which are not just in our material world but also in our body, mind, thoughts and consciousness.[294] Memory-images are interlinked with both our consciousness and our bodily sensible system, and therefore dynamic memory equally engages our body and our mind. Memory itself functions like an 'open pool' in which all images (between impression and thing) ever experienced surface, and which we then have access to and select from in perception when trying to make sense of things and formulate our intuitive reaction in duration. In considering memory to function as the *intersection of mind and matter*, Bergson challenges the classical philosophical problem founded in Cartesian dualism between body and spirit – between the human body as physical entity and the mind as non-physical. He avoids the dualism by combining mind and matter in memory, in relation

[293] Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks (Electronic Mediations)* (Minneapolis: University of Minnesota Press, 2007), 132. This is similar to what Hansen has termed the "manipulability of mediated or recorded space," see Hansen, *Feed-Forward*, 11.
[294] Gilles Deleuze, *Bergsonism* (New York: ZONE BOOKS , 1991), 41.

between perception and memory, and between movement and time.[295] Bergson considers that it is through our memory function as dynamic that we may understand the world, reflect on its meanings, and determine our reactions to it.[296]

What Bergson seeks to explain is not how perception arises, but rather how it is limited by means of our automatic, intuitive memory operation. This limitation of duration is what he problematized with the notion of spatialized time, wherein our movements and imaginations are aligned with perceptually structuring conditions of our experience. In his philosophy on memory, Bergson explains this alignment with a pre-formulated reality in terms of how our perception is limited by a memory function of a 'selectionist framework,' which determines what we select from our pool of memory-images when we make sense of experience and react to the world intuitively. In this framework, our unconscious selection of images from our memory tends to be based on what interests us or seems useful to us.[297] This, Bergson explains, depends on our *sense of proximity* to them. He describes how, when our horizon widens, images become more indifferent, whereas when our horizon is narrowed, images appear less distinct and bodies can more directly touch or move them.[298] From this perspective, consideration must be given to what the mechanisms may be that make us feel more proximate to some images and make us choose or select certain images over others in our perceptual engagement with and making sense of the world. This is what navigates our duration. As a matter of image selection, we can consider immersion as a mode of experiencing in which we are more likely to take in and select images that follow the logics or 'narrative' of the mediated dimension of immersion. We can thus consider the pharmakological recompense of natural images with artificial (media aesthetic) images in immersion to be a mechanism that makes us choose certain images over others. This involves the exclusion of images from the natural world and selection of images from the mediated

[295] Bergson, *Matter and Memory*, 54.
[296] Bergson, *Matter and Memory*, xii. Bergson's philosophy can be situated amongst a number of theories in the first decade of the nineteenth century concerned with the relationship between perception and memory – which attack notions of 'pure' isolated sensations. Among these are those of the physicist Andre-Marie Ampere with his epistemological writings on "concretion" to describe how any perception always blends with a preceding or remembered perception. Also, Johann Friedrich Herbart, who presented an early attempt to quantify the movement of cognitive experience, suggested that the mind does not reflect truth but rather extracts it from an ongoing process involving the collision and merging of ideas. See Benjamin B. Wolman, "The Historical Role of Johann Friedrich Herbart," in *Historical Roots of Contemporary Psychology*, ed. Benjamin B. Wolman (New York, Harper and Row, 1968), 33. Referenced in Crary, "Techniques of the Observer," 11.
[297] Ibid., 114.
[298] Ibid., 6.

dimension of our experienced environment. As images in our memory continuously mix with images of our external material world, these now include mediated, artificial images and their sensory properties. Bergson's dynamic memory framework is fitting to a condition in which cultural memory is active, changeable, exchangeable, and operating in the now, rather than documented, stored and remembered for what it was, and in which cultural memory not merely concerns images of recorded experience but also images of sensibilities deriving from machinic operations based on aggregated data.

In consideration of *memory* as a dynamic faculty in our contemporary condition with twenty-first century media, we can consider two general mechanisms of operation: feedback and feedforward. *Feedback* concerns impressions, forces and conditions in an environment that affect us. I derive this term from Scott McQuire's *The Media City*, in which he theorizes feedback in terms of how in the contemporary media city experience and social agency come to be routinely defined by feedback from other sites and other temporalities.[299] This is a condition in which an expanded matrix of media feedback loops increasingly shape the ambiance and intensities of urban space by providing instantaneous feedback in real-time.[300] This we can consider in terms of the sensible images we encounter in immersive experience, which enter our dynamic memory. However, their impact does not end with affecting our system, but translates into a feedforward mechanism.

The term *feedforward* I derive from Mark B. N. Hansen's *Feed-Forward: On The Future Of Twenty-First Century Media*. Hansen describes *feed-forward*[301] (which I adapt to *feedforward*) as a structure that concerns how the "operational present of sensibility" (what Hansen, with reference to Whitehead, describes as "causal efficacy") is projected forward into future activity and into the future of perceptual consciousness.[302] With this he considers how experience with twenty-first century media reconceptualizes the linking of perception and sensibility. He describes how feedforward loops mediate the data measured, calculated, and analyzed by twenty-first-century media for future consciousness to "factor into its activity to

[299] Scott McQuire, *The Media City* (London: SAGE Publications, 2008), 26.
[300] Ibid., 57.
[301] Hansen distinguishes his account of *feed-forward* from the cybernetic concept of feedback and from the concept of feed-forward used in neuroscience (as counterpart to feedback) describing the pathway of sensations downward from the brain to the sensory nerve endings. Both of these cases refer to an operation that occurs internally to a system and for the purpose of maintaining the system's function, whereas Hansen's conception of feed-forward refers to an external process. Hansen, *Feed Forward*, 140.
[302] Ibid., 145.

come."[303] Feedforward thus concerns how impressions, forces and conditions of our environment and technological reality impact us to think, act, invent, and take initiative that feed forward into our world through our behavior and actions. In light of Bergson's framework of dynamic memory, images we have encountered – consciously and unconsciously – through feedback mechanisms of our environment, surface in our memory as an open pool of both body and mind, from where we may activate them to help us make sense of our perceptual experience, modulate matter and act back at the world. Our perception recalls to us former images, which support our navigation in the current moment. In this way, our image-perceptions *feedforward* into the world; we come to 'act out' images in space via our present action. Bergson describes how our perception in this way becomes a means of "exteriorization of internal states."[304]

We recognize the feedforward mechanism in the operation of algorithms, by which calculating processes come in advance of us and affect memory by delimiting our selection of images to either what algorithms prescribe or what seems intuitive in response. As feedforward mechanisms, algorithms substitute our selective framework by 'choosing' options, products and calculations for us. They store and apply memory much faster than we can and, to some extent, substitute our human memory when recalling complex mathematical formula or individual consumer patterns of, for example all the other 334 million active user accounts on Amazon whose consumer patterns impact what is recommended to us.[305] Every single act, click, 'like' or location recording we make automatically feeds into what Amazon suggests and thus feeds forward into the present. Here, it contributes to developing behavior, discourses, expectations, technologies, and codes of conduct.

Feedback and feedforward make two mechanisms of our dynamic memory. Of significant concern is the feedforward mechanism, which we can understand in terms of how our dynamic memory operates as a faculty of change by modifying our impulse, behavior and actions. When we modulate our present behavior in the material world, this is from accessing and evoking memories that inflect our present actions. Our activated memory-images thus inform our response to a situation and, by way of informing our perception, prepare the

[303] Ibid., 58.
[304] Ibid., 52.
[305] "Annual number of worldwide active Amazon customer accounts from 1997 to 2015 (in millions)," accessed September 9, 2016, www.statista.com/statistics/237810/number-of-active-amazon-customer-accounts-worldwide

reaction of our body to the action of external objects.[306] Thus the operation of our memory, as Bergson notes, concerns and depends on our *attention to life*[307] – our attention to certain cultural logics, certain issues or problems, to what to care about, and certain ways of positioning ourselves in relation to the media aesthetic imperatives we are exposed to and the agendas, values and intents they more or less clearly express.

While it is hardly so that our immersive experience overwrites images from our natural world in such a way that we get instantly manipulated, the potential consequences of this process can be considered in perspective of another mode of *virtuality*, as the concept is theorized by Bergson. This I will elaborate on after sharing a personal virtual reality experience one afternoon in September. I encountered the site-specific virtual reality artwork *L'Avalée des avalés* (The Swallower Swallowed) (2016) by artist Jon Rafman during the Berlin Biennale 2016. Employing the virtual reality headset Oculus Rift the artwork could be experienced on the terrace of the Art Academy in Berlin. In what begins as a documentation of the real environment of the terrace facing Brandenburger Tor, you see the terrace you are standing on and ordinary people passing the square, close to a realistic documentation of the square. The environment then gradually changes with an uncanny ambiance established by sound and by changes in the weather becoming more stormy, and you notice how sculptures of animals on the terrace start to literally swallow one another. As the weather gets worse, people at street level are sucked up into the storm. Suddenly, the terrace beneath you disappears, and you drop down into the depths of a sea. You land in the middle of what appears to be a parade or performance of choreographed movements of black silhouettes, in an aesthetic idiom combining what appears to be moving sculptures and performance. The immersive experience is organized in a way of expanding one's experience in the site of the terrace and, as I can report now four months after encountering the work, it effectively affects one's memory of the site as if having experienced a virtual and supernatural but still actual situation. *L'Avalée des avalés* reveals how our memory operation is affected and manipulatd into new modes of narrative construction in intense immersive experience, as we experience in virtual reality; a process we may consider to some extent to happen in all modes of immersion and consumption of digital media.

[306] Bergson, *Matter and Memory*, 10.
[307] Ibid., xiv.

In Bergson's philosophy, the 'real' divides into two realms, the actual and the virtual.[308] The *actual* real relates to what has been historically actualized. It describes all the forces that have come together in the confluence of historical time to form what we know as history. The occurrences of these forces have actually happened, and we now know them as the 'past.' The *virtual* is what acts on the present and leads to actualization. It is in the realm of the virtual that we invent what becomes actualized.[309] The virtual realm is not an abstract, imaginary 'third dimension,' but is made up of all those forces surrounding the present, which await actualization in the confluence of historical time. It is contingent on actual history so far but it has not yet coalesced in time. However, it *can* do that, in endless possible combinations. Still, the virtual is not just potential or possibility – because something is already actual when it can be envisioned or imagined. Just consider how an idea exists from the moment it is born. From here it just needs to be realized. As such, the virtual in Bergson's philosophy is that which could coalesce historically in the present moment but which has not yet been actualized (or, conceived as possible). We shift between virtual and actual states all of the time, never completely virtual or completely actual.

Bergson's thinking on the virtual can be used to consider that if the virtual experience – for example, in augmented or virtual reality – generates an emotional experience, an idea, or other, then this is brought into existence, even if only at the state of sensing or in thought. The experience of *L'Avalée des avalés* on the site of Brandenburger Tor introduced a potential or possible narrative in that place which will never directly coalesce with the site but nonetheless manifests in the memory of the user, by way of expanding one's perceptual experience of the site that 'exists' as a memory on equal terms as – or perhaps even stronger than – memories of the actual environment of Brandenburger Tor itself. Our virtual contemporary experience today – also in augmented conditions of immersion, beyond just virtual reality – entails that the impressions, experiences, lines of thinking, etc. that we experience in conditions of mediation may lead to actualization; how image-impressions from the mediated experience enter our selective memory framework and, by that, may potentially inform our thinking, behavior or action in the present. Enhanced with mediated presence effects, our present experience is 'surrounded' by virtual forces that, even if only at a tiny molecular level, contribute to informing and guiding our perceptual duration in the present. In this way, the

[308] Other theorists who have dealt with the distinction between actual and virtual are, among others Marcel Proust, Alfred North Whitehead, Gilles Deleuze, and Brian Massumi.
[309] Bergson, *Matter and Memory,* 48.

augmented/virtual experience feeds forward by slightly modifying the conditions for our imagination, for how we relate to our emotions, how we choose to react next, or to what we envision to be possible.

This perspective on virtuality can be thoerized in more detail with Gilbert Simondon's conception from 1958 of the individual as the complete *result of a process* rather than a substance coming out of nowhere; a process in which potentialities of our environment affect our state of becoming. Simondon considers how, rather than distinct, substantial subjects, existing independently from the "sensory complex" of our surroundings, individuals are heterogeneous compositions in ongoing and highly complex processes of *individuation* with and within our reality. He explains how the individual is conditioned by two modes of being: as 'individual' (our sense of 'being' in reality) and at a level of "pre-individuality" ('being' as a field of potentialities). Our level of pre-individuality responds to our environmental presence in the world, our associated milieu, which is conditioned by our technological reality. At the level of pre-individuality, forces from different ontological levels impact us simultaneously and our system absorbs potential energy from the sensory complex of our environment, from where "incompatible potentialities" develop and cause a phase of difference. This is what Simondon calls an "individuation." The resolution of this difference or tension between potentials creates a process of emergence. The theory of the two-split individuation process enables us to be affected by impressions and tensions at the unconscious level of pre-individuality that eventually affect our conscious level of individuality – such as a-signifying signs of machinic temporalities inherited in artificial images we are exposed to in conditions of immersion. With this, Simondon suggests an alternative individual construction to that of metaphysical doctrines of individuality. Being is not 'what is,' but 'what becomes,' in and through our relations with the world.[310] Significant to our contemporary environmental reality is that the sensory complex of our environment not only contains elements of an external world but also elements of ourselves – of our own data, which also feed into our process of individuation.

[310] Gilbert Simondon, "The position of the problem of ontogenesis," transl. Gregory Flanders, *Parrhesia* 7 (2009): 4-16.

Photo: Verve Cultural

Interlude No. 9

***SelfieSãoPaulo* (2014) by Moritz Stefaner, Jay Chow and Lev Manovich**

In June 2014, citizens of *São* Paulo might for a brief moment see their Instagram selfie on a twenty-one-storey high gallery façade. This would have been part of the work *SelfieSãoPaulo* developed for the SESI Digital Art Gallery façade, which presented an exploration into 'patterns' in Instagram selfies shared in the center of *São* Paulo during the week prior to the exhibition.

SelfieSãoPaulo developed further the ideas from the project *Selfiecity* published earlier in 2014, which investigated the style of self-portraits in selfies in five cities around the world. The work consisted of three animations showing São Paulo Instagram selfies. Around one thousand selfies constituted the animations, selected from a large pool of images collected prior to the exhibition. These were sorted by three characteristics – age, gender, and level of smile – automatically estimated by software. As the animations played, they were superimposed with text on the faces, for example "smile 98%, age 20.3, female 100%." The selfie images were then automatically analyzed by software making algorithmic estimations

of eye, nose and mouth positions, the degrees of different emotional expressions, and face size, as well as other parameters. The selfies were then scaled to the same size, organized in sequences using custom code developed for the project, and automatically aligned by eye composition. The work contrasted expressive and unique faces of the selfie subjects and the numbers that software reduces them to.

The selfie animations revealed the diversity of São Paulo citizens as well as the variety of ways in which they present their self portraits, including face expressions, poses, colors, filters used, body styles, and some of the common conventions people use when capturing their selfies. The images were translated into data, which in turn was used to structure their presentation. But underneath this, *SelfieSãoPaulo* revealed one of the key issues of our time: the use of computational methods to analyze users' content and digital traces, make predictions based on this analysis, and act on these predictions.[311] It spoke to how, as data of our behaviors are being mined and mapped, the social has become the new object of science. The work thus reminds us that our spontaneous online actions become source of behavioral and cognitive data used for commercial and surveillance purposes – improving results of search engines and customizing recommendations.[312] The 'estimation' of gender and sex that was translated into a display resembling quantifiable data (age 20.3, female 100%) shows how analysis is probabilistic, since algorithms only produce guesses as opposed to certain results. Hence, the decisions made by systems that use these results, which we often trust, can be wrong.

The quantifiable presentation of Instagram images in *SelfieSãoPaulo* speaks to how, in our current condition with twenty-first century media, the subject is reduced to his or her impersonal data, a statistical fact, an abstract quantity of human capital, or 'a generic skill set of an entrepreneurial self' – not unlike Friedrich Kittler's account of the primary effect of modern media as replacing people with numbers.[313] This we can consider a tendency of *desubjectification*. The notion of desubjectification evokes Guattari's notion of the "dividual"

[311] See description of the work at "SelfieSaoPaulo, a Site-Specific Visualization of Selfies on Sao Paulo's Largest Media Façade," accessed October 4, 2016, www.lab.culturalanalytics.info/2014/08/selfiesaopaulo-new-project-by-moritz.html

[312] Ibid.

[313] Friedrich Kittler, "The City Is A Medium", *New Literary History* 27:4, *Literature, Media, and the Law* (1966): 723.

whose profile is composed of the convergence of data and which, rather than referring to a subject, consists of relays of inputs and outputs in production-consumption machines.[314] Lazzarato describes how by desubjectification "…the component parts of subjectivity (intelligence, affects, sensations, cognition, memory, physical force) are no longer unified in an 'I,' they no longer have an individuated subject as referent."[315] The condition of desubjectification denotes the basic ingredient of what fuels processes of change and eventually our process of individuation today: data; our personal data, which is probably the most significant form of feedback and 'objective value' that we generate in our everyday cultural participation.

Guattari noted already in 1989 that the increasing development of the machines of production of signs, images, syntax, and artificial intelligence, requires us to reexamine the relation between the individual and subjectivity. He conceived of our lives as "machinic" in the sense that, what is possible for us is enabled and extended by technology. Consequentially, he notes, our subjectivities become machinic, too.[316]

Lazzarato describes how the production of *subjectivity* today therefore works through the coupling of two mechanisms: apparatuses of social subjection *and* machinic enslavement.[317] On the one hand, in social subjection, signs and semiotics produce meaning, signification, interpretations, discourse and representations through language. This is the domain of linguistics and critical theorists, and a mode of subjection in, for example the encounter with an advertisement video on an LED screen. On the other hand, in machinic enslavement, a-signifying signs produce operations, induce action, and constitute components of a social or technological machine.[318] Machinic enslavement takes in a multiplicity of modes of subjectivation, of states of consciousness, unconsciousness, realities and modes of existence, and of languages and semiotic systems.[319] By means of 'enslavement,' human agents (like non-human agents) function as points of connection. These, Lazzarato notes, make up the

[314] Lazzarato, *Signs and Machines*, 37.
[315] Ibid., 27.
[316] Felix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (London and New Brunswich: The Athlone Press, 1989).
[317] Lazzarato, *Signs and Machines,* 13f.
[318] Ibid., 39. The term *enslavement* Lazzarato borrows from Deleuze and Guattari, who take it from cybernetics and science of automation. It refers to the 'management' or 'government' of the components of a system. Enslavement is the mode of control and regulation of a technical or social machine, such as factory, business, or communications system. Ibid., 25.
[319] Ibid., 90.

corporate, collective assemblage, and the communications systems.[320] Machinic enslavement dismantles the individual, consciousness and representations through the mode of desubjectivation. Desubjectification differs from social subjection which addresses the consciousness, representations and behaviors of individuated subjects; and also from subjection via direct address-media (radio, television, film).[321] This has fundamental consequences to our cultural development, specifically as desubjectification instigates new modes of surveillance and (voluntary) control that feedforward into our phase of difference and adjustment to our cultural environment. Desubjectification is one dimension of how our 'subjectivity' is constructed beyond individual perception.

Simondon's conception of difference and emergence in individuation suggests how we *adapt* to our environment and technological-cultural context, changing just a little, all the time. We can identify the two-split process of individuation in the mechanisms of feedback and feedforward: feedback relating to the forces that impact us from the sensible complex of our environment and technological reality, informing our field of potentialities; and feedforward relating to the resolution of difference or tension between potentials in individuation, that lead to emergence and a slightly changed condition of being. We can consider how dynamic memory is the site of processes of individuation since this is where we deal with 'incompatible potentialities' that cause differences. It is in our dealing with these differences that we adapt to life.

Hayles describes a mediated relationship in which the mechanisms of attention mutate in response to environmental conditions and begin to operate in new ways when changes in the environment occur.[322] In the discrepancy between human temporality and machinic temporality as elaborated earlier in this chapter, our mode of attention changes, as it operates more in the immersive surface layer of our temporal environments. Hayles points out how our attention has changed from a mode of deep attention to a mode of hyper attention.[323] Hyper attention correlates with hyper reading, for example on the web in response to an information-intensive environment, such as skimming, scanning, fragmenting, and juxtaposing texts – accessible to us by virtue of machinic processing. It involves an attempt to conserve attention

[320] Ibid., 27.
[321] Ibid., 12.
[322] Hayles, *How We Think*, 98.
[323] Ibid., 99.

by quickly identifying relevant information and adjustment to a high level of stimulation.[324] Hyper reading combined with machine reading presupposes that while we scan through vast amounts of images and information, we do not register the sensory impressions from machinic temporalities that avoid our consciousness. We are in exactly this situation when immersed in virtual reality or another augmented, immersive-virtual condition: we scan through the intensified images that mediate our experience in trying to keep up with the narrative or order of aesthetic experience, while sensible image-impressions from machinic temporalities affect us that we do not manage to decode or even sense with our consciousness. Hyper attention is thus a consequence of human adaptation to machine times. This pushes us toward faster response times and, as a side effect and feedforward mechanism, we develop an increased impatience with longer wait times.[325] We recognize this by how we are increasingly likely to switch to other computer processes, such as surfing, checking e-mail, or playing a game, as a result of quickly feeling bored;[326] or by how we might feel indifference or only show a short-term interest in world events because of how new information quickly steals our attention, at least for a moment, until the next thing. Hyper attention affects our selective memory framework in terms of what we pay attention to and how deep attention we pay. We take in images of many different temporalities and impressions, cognitive and sensory, while unconsciously – and not unlike the city birds – we adapt to our experience.

In this lies a problematic issue and the main argument of Hansen, which is intimately tied in with our temporal experience and human consequences of experience assisted by machinic temporal frames, or what he refers to as "temporal disjunction"[327]: by 'exploiting' the temporal gap of experience between the operationality of media and the subsequent advent of consciousness, machines are able to capture sensibility, including the sensibility most intimately bound to our behavior, long before we can.[328] Technical operations leave human experience to be increasingly conditioned and impacted by processes that operate at microtemporal levels without any necessary direct connection to human sense perception and conscious awareness.[329] As a result, we are deprived of the ability to shape and constrain how our sensibility becomes our experience. Our attention is captured without our awareness, and

[324] Ibid., 11-12.
[325] Ibid., 12.
[326] Ibid., 105.
[327] Hansen, *Feed-Forward*, 181.
[328] Ibid., 190 and 195.
[329] Ibid., 38.

conscious deliberation and response are left out of our experience.[330] From this we can consider how impulse develops as a human intuitive response, which will be problematized in relation to contemporary tendencies of media aesthetic expression in urban environments in the following chapter.

Ultimately, contemporary changes in mediation have significant neurological, cognitive and behavioral consequences that impact our *technogenesis* – the concept developed by Bernard Stiegler to describe how humans and technics coevolve together. With this concept, Stiegler considers "technics" as constitutive of human temporality and essentially a form of memory.[331] However, this is not a new condition with twenty-first century media, as Stiegler considers the human to have always been 'technological,' evolving through a coupling with the exterior evolution of technological objects.[332] That being said, the advent of intelligent technologies has changed the ways in which co-evolution between humans and technologies is proceeding. As such, if we are to consider that we – as our art and everything else – change in contingent relations with our world, at stake is a gradual technogenetic process of modifications to our perceptive, cognitive and neural systems.

Naturally, we have to consider that we are not at all times equally immersed in technology and its processes. We tune in and out of our technological environments and pay more or less attention to the sensibilities of these. Although the contemporary subject might be part of an environmental confound and unable to grasp every sensible impression that affects her present existence, we have to maintain some level of trust in human consciousness and critical (self) awareness. Humans are (still) thinkers and creators, demonstrating time and again the ability to pursue interests and goals, perhaps enabled by technical systems but not initiated because of them and not limited to their functional and imaginary constraints. Therefore, it must be stressed that humans, not machines, are responsible for the images that affect our duration today, and that humans, not machines, are the ones who can eventually change them.

Conclusion

[330] Ibid., 195.
[331] Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Meridian: Crossing Aesthetics, no. 1, 1998).
[332] Ibid.,

In this chapter I have sought to elaborate on how we achieve a sense of presence in immersive media aesthetic environments. Immersion involves a sinking into an artificial augmentation of one's environment by which our natural sensory impulses are replaced with artificial, mediated ones. While we immerse ourselves in media aesthetic augmentation, we expose our sensory memory system to mediated, artificial sensory impulses that overwrite natural sensory impulses while enhancing our sense of presence. The artificial or mediated images then come to focus our sensible attention in a certain manner. The virtual reality studies point to how, by this mechanism, our sense of presence achieved by means of media aesthetic 'presence effects' (or special effects) influences how we relate to our life world. These studies demonstrate how media aesthetic intensified environments (in virtual reality) can, for example, intensify emotions of sympathy, affect memories and enhance a sense of matter, and even impact our behavior in real life following the mediated experience. This does not exclusively concern immersive experience in the closed spaces of virtual reality but, significantly, the mode of immersion we encounter when media aesthetic presence effects are integrated in our real life environment, which we for example encounter in various modes of augmentation in which our physical environment is not replaced by but supplemented with media aesthetics.

We should be wary of how, in conditions of immersion, our perspective, emotional state and impulse to act may be 'positioned.' Immersion involves a mentally active process that focuses our attention on our environment. Our sensory experience directs our choice or intuitive act of paying attention to one thing rather than something else. Bergson's account on memory opens up for questioning how the images we encounter in conditions of immersion in our contemporary urban environments inhabit the spatio-temporal coordinates of the dominant logics of culture, which depends on our selection of perception-images from our dynamic memory. At the heart of his concern is how we choose perception-images that interest us or seem familiar because of how our selective memory framework is delimited, rather than images that may nuance our perceptual experience. In this sense, our duration depends on how our selection process is stimulated in our choosing of certain images over others when trying to make sense of things; and, in our contemporary technological reality, we have to consider our selectionist framework to work in current conditions of mediation that involve operative images and a-signifying signs – sense-impressions derived from machinic processes and algorithmic function.

We must particularly consider how a-signifying images of machinic processes we encounter in mediated experience tend to suspend our natural sensibilities. As a technological quality of twenty-first century media in conditions of media aesthetic immersion, we encounter faster experience frames of machinic processes that affect our mode of presence in a way in which we are deprived of temporal experience frames that allow for reflection, or for developing our consciousness. In memory operations between feedback and feedforward, these images come to guide and instruct our intuitive mode of behavior, to inform and change our perception-images with which we meet certain representations in the world and trigger behavioral impulse and reaction. When examining our contemporary condition of spectacularization in the following chapter, the consequence of the suspension of our consciousness may manifest in modes of unreflected impulse and behavioral automation, attesting to how we are positioned in our dominant *culture of emergency*.

5. Spectacularization of Behavior

Contingent with intensifying, intelligent and immersive media aesthetic conditions of experience today, we can consider that urban media art engages with aesthetic mechanisms in the 'fast lane' of our contemporaneity. This is where technological innovation moves fast, where smart city investments and cultural budgets are allocated and are speeding up innovation and creative initiatives, and where people's excitement and curiosity for new experiences brought about by the next app or immersive environment is endless. Urban media art may be situated in what art historian, Terry Smith has named a "spectacularist current" in the arts, emerging since the 2000s. This has resulted from the changes in new informational and communicative technologies, which have led to a viral spread of small-scale, interactive, DIY art and art-like output. Smith notes how this current cannot be named a style, period or tendency, and how artists are concerned less with high art style or confrontational politics and more with tentative explorations of temporality, place, affiliation, and affect.[333] This notion of a spectacularist current reflects the heterogeneous condition of our current aesthetic regime of the arts (as depicted by Rancière), and the application of 'forms' from life in the forms of art, significantly forms and expressions from our visually-oriented media culture, reflecting the art's contingent relation with our technological and communicative reality.

The spectacularist current undeniably reflects how broader cultural tendencies of technological avowal and neoliberal-logic have infused expectations of scale and technological demonstration in arts and culture. "At the moment, the most evident tendency spreading everywhere is the development of light festivals," notes Mirjam Struppek, "and in connection to these, things like mega projection mappings. This is an example of the peak of the society of the spectacle; the fruits of the focus on creative industries and global urban marketing – a society in which bigger, louder, more spectacular and fun counts, with the aim to reach the largest audience and impress the world. These kinds of artistic interventions cannot exist without merging with the field of market-oriented entertainment. The borders between the genres dissolve more and more. So this keeps worrying me, this melting between

[333] Terry Smith, *Thinking Contemporary Curating* (New York: Independent Curators International, 2012), 34.

art, entertainment, and advertisement."[334] Struppek evokes this aspect of spectacularization as found in initiatives of architectural projection mapping, sometimes closely related with spectacular aesthetics deriving from the VJ-culture of mixing light, music and video projection, as well as in the adoption of increasingly more intensified media aesthetic idioms for amazing the audience anew. Spectacularist experience has been both a conditional and critical complex of urban media art, which we recognize when the art explores the qualities of visibility and public space collectivity (or connectivity) of the grand scale spectacle, for example when it animates buildings and city squares with projected 'images,' light and sound, or when entire buildings are turned into outdoor gallery spaces with LEDs covering the architecture.[335]

In this chapter, I will propose that the aesthetic imperative we recognize in the accounts of the spectacular indicated by Struppek is, however, not at the heart of what we should be concerned about in terms of spectacularization. Based on my examination here into media aesthetic tendencies of intensity, intelligence and immersion, I will suggest that the problematic essence of spectacularization today concerns not 'images' of scale, volume or ideological imperatives but rather an ontological infrastructure of media aesthetic *immersion*. This concerns the nature of our condition of immersion in media aesthetic augmentation of our everyday life world, in experiences offered by the digital services, social interaction templates and game designs provided by computational programs, mobile apps and online platforms. The concern regards *how* we may more specifically consider our current condition of spectacularization to affect our behavior and duration.

Reconsidering spectacularization as emergency culture

In a western context, and significantly since Guy Debord's cultural-critical breakthrough with *Society of the Spectacle* (1968), the notion of Spectacle is often evoked by the astonishing public performance or the sensational display of scale, oftentimes visual. Within art history and criticism, the Spectacle has been equated with the large-scale bright and colorful image, blamed for presenting illusionistic representations at best and ideology at worst. This critique

[334] Mirjam Struppek, interview with Tanya Toft, online, November 2013, accessible at www.urbanmediaaesthetics.org

[335] A number of permanent urban digital galleries have emerged since approximately 2012, including the Times Square Art's Midnight Moment in New York City (since 2012), the SESI Digital Art Gallery in São Paulo (since 2012), and the Open Sky Gallery in Hong Kong (since 2014, closed in 2016).

is deeply grounded in critical-theoretical discourse that, in powerful alliance with the avant-garde of the 1950s and 1960s, succeeded in establishing a critical imperative in the arts and humanities against products and aesthetics of mass culture, significantly the 'images' of this as forms of social domination. These ideas were formulated in the aftermath of the Frankfurt School, describing the Spectacle as a subject of blame for the alienation, disillusionment, and subjectification of people in capitalist societies. The notion of the Spectacle has been haunting conditions of mediation – as eventually related to mediums of mass culture – as a discursive ghost ever since. It has been criticized for a range of attributions, among these: overwhelming scale (James Meyer); the absence of historical positioning and a capitalization of pure presentness (Rosalind Krauss); as denoting the triumph of corporate branding (Hal Foster); as reference to the uncritical use of new technology (Benjamin Buchloh); it has raised concerns with how technological progress affects social change (Jean Baudrillard): and, in a post-modern fashion, for how it has deconstructed meta-narratives of society (Jean Francois Lyotard).[336] Significantly, the Spectacle figured in Guy Debord's questioning of the penetration of the commodity form into mass communication and a concern for social relations under capitalism.

The critique of the Spectacle builds on a notion of the 'image' as an empty referent in a homogenized, instrumentalized world, and a vehicle for domination over human emancipation and freedom. The Debordian rhetoric relies on the enlightenment rationality's split between subject and object – between the perceiving subject and the spectacular content or representation. With this, the spectacular 'image' is rooted in a space-time conception and metaphor of the camera obscura, as described in Chapter 1, "The Art of Our Times," which, as dominantly visual, ideological construct has fed one of the strongest, critical imperatives through perspectivalism, visual commodity culture, modernist art and also in urban media art. This notion of Spectacle reflects a discourse that has formed, particularly since the 1960s, within which also artistic and curatorial practice with media art in public space has discursively contributed to an imperative of resistance against the spectacular 'image' of the mass media culture industry and its imperatives of entertainment and seduction, and to an assumption of a direct address to the viewer as subordinated spectator of an inescapable

[336] See elaboration in Claire Bishop, "Participation and Spectacle: Where Are We Now?" published for Creative Time's *Living As Form* (2011), 1. Accessed March 3, 2016, www.dieklaumichshow.org/pdfs/Bishop.pdf

ideological medium.[337] This notion of Spectacle is a frequent point of reference in artistic and curatorial reflection on urban media art as an art form relying on mediation and negotiating with oftentimes visual discourses in public space. In this medium-oriented discourse, a critical assumption of the ideology and politics of the medium has to some extent dominated the artistic content and guided curatorial tactics.[338] In the urban domain, the Spectacle is commonly perceived in terms of forces of neoliberalism operating through urban marketing, cultural planning, entertainment and market-driven culture, aiming to reduce the individual to spectator and event consumer and to establish commodified expectations of urban experience with desire (and impatience) for entertainment in replacement of human intellect and critical awareness. We recognize this concern when Ken Farmer notes, "In relation to the spectacle, it seems like, especially within the field of art and new media, there is always this negotiation between art and entertainment, and the spectacle seems to be a kind of weighing towards entertainment, of surprising people and immersing them."[339]

However, in our contemporary condition of globalization and network culture the threat of spectacularization does not concern 'screen time' of manipulative modes of visual illusion in sensational aesthetics or in the potentially alienating or manipulative effects of entertainment imperatives in grandiose 'images.' At least since the general emergence and urban popularity of the smartphone in the mid-2000s (in Japan, since 1999), the ideological function of mass media enacted through the 'spectacular' screen or 'image' challenging our emancipated agency and cultural wellbeing no longer denotes the proper concern with our current condition of spectacularization– if it ever did. In the urban condition of technologically developed cities today, as Mauricio Lazzarato says, "…in order to 'see,' one must remove oneself from the incessant bombardment of visual clichés."[340] By this, Lazzarato refers not to a bombardment of visual images but rather to visual clichés depicted as the enemy by critical theory that, as he suggests, has neglected to account for the essentially "machinic nature" of capitalism.[341] The following will suggest that our current condition of

[337] I develop this xx further in the article "Screen Practice in Curating: The Medium Paradox," *Screen City Journal* 4 (2014).
[338] Mirjam Struppek, interview with Tanya Toft, online, November 2013, accessible at www.urbanmediaaesthetics.org
[339] Ken Farmer, interview with Tanya Toft, Brooklyn, November 2013. Accessible at www.urbanmediaaesthetics.org
[340] Mauricio Lazzarato, *Signs and Machines, Capitalism and the production of subjectivity* (Los Angeles: Semiotext(e), 2014). 142.
[341] Ibid., 60.

spectacularization derives from the changing nature of our 'culture industry' which, rather than producing ideological 'images' of capitalism, presents environments of intensified media aesthetic presence effects, intelligent computational operation and 'surfaces' of immersion, which contribute to a neoliberal-infused cultural condition of *emergency*.

The threat of the culture industry today is no longer that of manipulation and direct subjectification of the 'image,' as Theodor Adorno and Max Horkheimer – who coined the term "culture industry" – characterized in *Dialectic of Enlightenment* (1944) about their repulsion for American environments heavily populated by advertisement billboards. Capitalist corporations of the culture industry used to work by targeting individuals and masses directly through represented 'images' of advertisement, synchronous with experienced time, for example with displays on billboards and TV screens image. In referring to the culture industry today we can perhaps use the term 'data aggregators,' with corporations encompassed in massive data collection 'environments.' Facebook is a prime Western example of this.[342] Like many other contemporary social media platforms and platforms for cultural expression, Facebook operates as an environment and targets people through ever smarter service features for networked social and cultural engagement and connectivity. Products of today's data culture industry are not merely consumer products, brand messages or physical apparatuses and devices, but various services, functions, series and interconnections that become forms of ontological templates for our social reality.[343] Rather than seduction, the operation of the data culture industry is measurement, evoking Bergson's concern with spatialized time as a quantified condition of duration. Measurement of *spatialized temporalities* today concerns the recorded, microtemporal and massively researched details of our sensible material data. Through micro-computational censors, data aggregators capture our physical and digital movements and behaviors, access our bodily sensory output, emotional expression (clicks, likes), data of images we take and post and content of our social engagement, and details of our online consumption. They use this data to excavate intimate details of our preferences, behaviors and life patterns in predictive analysis and algorithmic performances, to sell advertisement or products, show us what we might like,

[342] While my referencing to social media networks reflects my own experience with mostly networks developed in the United States, such as Facebook, Twitter, and LinkedIn, I do not mean to generalize about behavior in relation to these networks. Among top networks from China that are used globally are Weibo, WeChat. QQ, Baidu, and Line.

[343] Jonathan Crary, *24/7* (London and New York: Verso, 2014), 43.

do next, or have an opinion about, to 'guide' our experience or improve and maintain systems of governance that keep us entertained, informed, connected or in other ways digitally engaged. The gap between 'those who sell' and 'those who buy,' which Simmel noticed had deepened already around the turn of the nineteenth century, is deepening further with the lack of transparency about the data we give in exchange for our contemporary cultural consumption.[344] While our data reveals increasingly more details about our behaviors and patterns, this can be used for developing increasingly more intelligent forms of services – which can be considered to some extent to control and micro manage our behavior. By processes of desubjectification, as described in Chapter 4, we contribute to generating our media aesthetic life world at the same time as we live through it.

Here we can recall how in "On Some Motifs in Baudelaire," Walter Benjamin refers to Marx' statement that "All machine work requires the same training of workers."[345] He describes how, when working with machines at factories, workers learn to coordinate "their own movements with the uniformly constant movements of an automation."[346] Benjamin compares the factory with an amusement park: "What the amusement park achieves with its dodgem cars and other similar amusements is nothing but a taste of the training that the unskilled laborer undergoes in the factory."[347] With this comparison, Benjamin indicates that what might seem like pleasurant activity is just as productive to the system of capitalism as factory work itself, because the engagement with machines for amusement has a similar behavioral instructive effect. By using the amusements, people receive 'training' as a mechanistic part of capitalist society; what Guattari and Lazzarato would call *machinic enslavement*. Activities in the amusement park are reduced to 'exchange value' in terms of people's contribution of time and attention to machines of the capitalist system. This comparison evokes how our cultural participation in various modes of entertainment also makes our 'productive capacity' of maintaining the various entertainment platforms, by improving the algorithms that run them with our data. Our activities with platforms, programs, apps and interfaces of data aggregators is in some sense reduced to exchange value in terms of our contribution of data in exchange for 'free' entertainment, news, services and

[344] Georg Simmel, "The Metropolis and Mental Life (1903)," in *The Blackwell City Reader*, eds. Gary Bridge and Sophie Watson (Oxford and Malden: Wiley-Blackwell, 2002), 13.
[345] Marx quoted in Walter Benjamin, "On Some Motifs in Baudelaire," in *Illuminations*, ed. Hannah Ahrendt, trans. Harry Zohn, 155-200 (New York: Shocken Books, 1936), 192.
[346] Marx quoted in ibid., 191.
[347] Ibid., 192.

social connection. It is easy to imagine the amusement park in today's immersive condition tuned up with presence effects and intensified media aesthetics, with tendencies in intelligent illumination, responsive screens, increasingly ambient entertainment, and not least in the media aesthetic interfaces of our social media, service and entertainment apps.

Operations of data aggregators target temporal conditions of our experience. What was once characterized as consumerism has today expanded to 24/7 activities of techniques of personalization, individuation, machinic interfaces, and impulsive communication.[348] The condition of 24/7, as theorized by Jonathan Crary, indicates how the operation of markets, information networks and other systems are constant and uninterrupted – not only taking place when we buy something on Amazon for example, but in our every movement of production/posting or consumption of content while online. Mechanisms of command blend in everywhere at all times, becoming part of an overall normalization and internalization of control in a more "micrological" way.[349] Marx might not have anticipated the mechanisms in today's 24/7 mode of temporal productivity in not accounting for the 'work' of the factory laborers when they *left* the factory, that is, if we consider posting, chatting, and instagramming as modes of "production" that contribute to upholding the neoliberal capitalist system. With reference to Gilles Deleuze,[350] Jonathan Crary describes in *24/7* how in the *disciplinary society*, descriptive of conditions of governance in the nineteenth and much of the twentieth century, forms of coercion and surveillance occurred within sites such as school, the workplace, and home. When occupying the spaces between these sites, one was relatively unmonitored. However, in the transition towards a control society, which is characterized by the disappearance of gaps, open spaces and times, we are more or less always engaging with surfaces.

Contemporary modes of surveillance can be considered in an upgraded condition of what Shoshana Zuboff in 1988 termed "Information Panopticons." These do not rely on physical arrangements, such as building structures and human monitoring, but on computation mechanisms keeping track of people's (workers') movements.[351] This is a form of centralized power that uses information and communication technology as observational tools and control

[348] Crary, *24/7*, 72.
[349] Ibid., 71.
[350] Gilles Deleuze, "Postscript on the *Societies of Control*," *October* 59 (1992): 3-7.
[351] Shoshana Zuboff, *In the age of the smart machine: the future of work and power* (New York: Basic Books, 1988).

mechanisms. Significantly, the Information Panopticon is not a matter of surveillance of unwilling subjects, as per the panoptic function envisioned by Bentham and as per Foucault's disciplinary society, but is facilitated by the *benefits* it offers to 'volunteer' participants. It involves a voluntary surrender of privacy similar to what is found in contemporary communications culture, in which people voluntarily give up personal information and location data in turn for being able to use service functions on their mobile device or play the newest virtual reality game. Information Panopticons concern a mode of omnipresent and self-sustaining control, rather than enforcement of discipline. A mechanism of voluntary control is exercised through our constant potential engagement with media aesthetic surfaces – which are found in our interfaces to social media networks, apps on mobile devices, screens and responsive displays, and also surfaces of light and media aesthetic augmentation. The controlling mechanism is directly linked to our contemporary ontological experience in temporalities of media aesthetic environments. Our *networked* activities today 'control' our patterns of behavior and actions, not by enforcing rules (only templates) but rather by stimulating voluntary media aesthetic engagements, such as sign-ups, software updates, downloads of apps, adoption of new modes of communication and entertainment (such as new sign systems or emoticons in our messages, or adaption of trends of aesthetic expressions).

Aggregation of data is equally used to optimize services via algorithmic self-development of the system to become increasingly more sophisticated. Perhaps an effect of our desire for presence effects, as elaborated on by Crary (with reference to Gumbrecht's theory on presence) in Chapter 2, "Intensity," He considers how we have become dependent on 24/7 routines; how the individual is "made into an application of new control systems and enterprises."[352]

The non-stop life world of twenty-first century capitalism characterizing Crary's condition of 24/7 developed from the constant revolutionizing of forms of production, circulation, communication, and image making in the last 150 years. These are characterized by changes from industrial production to post-industrial processes and services, from analog to digital media, and from print-based culture to a global society unified by the instantaneous circulation of data and information.[353] These changes have forged a redefinition of markets

[352] Crary, *24/7*, 43.
[353] Ibid., 36-37.

and precede the emergence of neoliberal economy and cultural logic. A late offspring of neoclassical economics concerned with growth and accumulation, *neoliberalism* has been shaping our world significantly since the 1980s and has become the main structure of development in global society.[354] Neoliberalism involves a continuously emergence of the new and a speeding up of processes, and entails the extension of free market principles and corporate structures into the wider social and cultural spheres, including art.

These neoliberal forces characterize what Irit Rogoff in her essay *Turning* has termed a current condition of "culture of emergency," in which we flow along with the temporal modes of neoliberal logic. Emergency culture entails that our world develops from mechanisms of repetition, continuation, imitation and incitements of growth, which affect our contemporary ontological experience. In this cultural condition, we produce needs and are reactive to an endless series of crises of our own making, 'go around in circles' and make up conceptual problems of 'emergency.' This is, for example, when light festivals or architectural lighting schemes need grow bigger and brighter in competition for tourism and world attention. In this we recognize Bergson's characterization of spatialized time which, in Chapter 3, "Intelligence," I reconceptualized in a contemporary networked perspective in terms of *spatialized temporalities*; a logic of duration which can only affect and reproduce what is already there, more of the same – what Bergson characterizes by a mechanism of a multiplicity of "differences in degree." In this mechanism, 'things' can only reduce or increase according to the underlying logic, and not change in nature or diverge from the dominant logic.[355] This mode of force functions by mass and velocity and can be measured by acceleration, that is, by how much things grow following the underlying imperatives of quantitative measures, and how quickly. This mode of force has morphed into our contemporary environment as reproduction, repetition, and imitation, as well as invention based on predefined procedures or algorithms; and we recognize it in the growth imperatives of the Sydney Vivid light festival.

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[354] Manfred Max-Neef, "Preface: The death and rebirth of economics," in *Sustainable Development: Capabilities, Needs and Well-being*, eds. Felix Rauschmayer, Ines Omann, and Johannes Frühmann (London: Routledge, 2011), 19. Max-Neef describes how the early studies of neoliberalism go back to around 1870, where the law or model of 'utility' emerged (developed by Stanley Jevons and Leon Walras) describing the behavior of human beings by the dictum 'every human being always behaves and acts in such a way as to maximize his/her utility.'

[355] Bergson describes force in terms of forces of repulsion and attraction. See Henri Bergson, *Matter and Memory* (1911), trans. N.M.P. and W.S.P (Mansfield Centre: Martino Publishing, 2011), 264.

These mechanisms of emergency culture are foundational for coming to understand contemporary communicative experience in technologically developed contexts. The forces of emergency culture shape a world that requires constant immediate action, which we are equipped with technological devices to constantly provide – via our clicks, attention or media aesthetic expressions. They involve how we participate in culture, how we establish and organize social relationships, how we shape an opinion about things, and eventually how we act and take action. The emergency cultural condition of 'going around in circles' can be considered in the sense that, through our participation in communicative culture today, we flow along with the temporal modes of neoliberal logic; we maintain it while we live it. This is conditional for our cultural situation which encourages certain cultural norms for how we develop and engage with media aesthetics.

Based on these considerations on a temporal and environmental condition of spectacularization, and in light of how contemporary data aggregators (replacing what we used to refer to as the culture industry) operate through services that engage, stimulate and maintain cultural behavior (rather than relying on strategies of seduction in a visual-sensible manner), the aesthetic conditionings of social relations under capitalism in our networked reality today depend on a different conception of spectacularization than what was depicted by the critical theorists and Debord's early work. Our condition of spectacularization today rather evokes Debord's later writings on the "global integrated spectacle" of the late 1980s (updated from the "diffuse" spectacle of capitalism proclaimed in the 1960s), about which Debord argues that there are no areas of social life that remain relatively autonomous and exempt from effects of the spectacle (of liberal Democracy, in Debord's writing).[356]

Spectacularization as behavioral tendencies with mediating surfaces

With the nature of our contemporary data culture environments – as a system of voluntary control through cultural participation, which constantly optimize services based on data aggregation and analysis – contemporary urban spectacularization does not so much concern seduction, passivity and disillusionment of the 'spectator' but rather spectacularization of our *duration*. Spectacularization in this conception concerns not merely domination of visual, spectacular 'images' that we *look at*, but rather images that surround us and that we *live*

[356] Guy Debord, *Comments on the Society of the Spectacle*, trans. Malcolm Imrie (London and New York: Verso, 1990).

through in our conditions of media aesthetic immersion; such as interfaces, functional mechanisms, and aesthetic modes of expressions that mediate the temporalities of sensible impressions in our contemporary experience. Living through these, we immerse ourselves not only in mediated narrative augmentations of reality, but also in mediated, artificial sensible impulses that overwrite natural sensible impulses, as elaborated on in Chapter 4.

Consideration can also be given to a certain "mirroring" character of our contemporary ontological condition, which I will approach by visiting Walter Benjamin's characterization of Paris in the mid-nineteenth century. When denoting a new mode of perceptual experience in the Parisian arcades, Walter Benjamin adopts Charles Baudelaire's metaphor of *flâneurie*, embodied in the figure of the flâneur strolling in Paris' arcades – before Haussmann's renovations of Paris with wide pavements.[357] Charles Baudelaire describes the figure of the flâneur in his essay "The Painter of Modern Life" as a "painter of the passing moment,"[358] a passionate spectator, "amid the ebb and flow of movement"[359] The flâneur figure embodies the modern observer, an ephemeral mode of experiencing *in movement* in the context of an urban metropolis, in which strolling becomes a mode of flitting through space, gazing and self-presenting in public space.[360] Benjamin also depicts Paris as "the city of mirrors," as detailed in the chapter "Mirrors" of *The Arcades Project*.[361] Benjamin describes how mirrors are employed in all kinds of façades, in doors and walls, framed in bars and restaurants as if they were paintings, used for illumination effects in shop windows, as reflective façades, and even appearing in the 'glassy smoothness of the asphalt on the roads.' The ambiance effect achieved with mirrors decorating the arcades made spaces brighter and added a "pleasing amplitude" to the Parisian taverns. However, Benjamin also describes how these 'mirror worlds' were also disorienting, ambiguous, double-edged, and deceptive, interweaving inside and outside, and making orientation more difficult.[362] "The way mirrors bring the open expanse, the streets, into the café – this, too, belongs to the interweaving of spaces, to the

[357] Walter Benjamin, *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism*, trans. Harry Zoln (London and New York: Verso, 1997), 36.
[358] Charles Baudelaire, "The Painter of Modern Life and Other Essays," trans. Jonathan Maybe (New York: Phaidon Press, 1964), 5. This was before Haussmann's renovations with wide pavements, which I will elaborate in chapter xx.
[359] Baudelaire, "The Painter of Modern Life and Other Essays," 9.
[360] Crary, "Techniques of the Observer," 9.
[361] Walter Benjamin, "Mirrors," in *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge and London: The Belknap Press of Harvard University Press, 2002), 537.
[362] Ibid., 542.

spectacle by which the flâneur is ineluctably drawn."[363] In this quote Benjamin refers to the Spectacle in relation to the modern subject in movement, as living through rather than looking at images of immersion. The condition of augmentation with mirrors enhances the "phantasmagoria of Parisian life,"[364] a condition in which every experience and observation floods into the next and the city behaves like one big performance. Benjamin writes, "Paris has a passion for mirror-like perspectives. The Arc de Triomphe, the Sacré Coeur, and even the Pantheon appear, from a distance, like images hovering above the ground and opening, architecturally, a fata morgana."[365] Benjamin beautifully describes how even the sky is spread out like the crystal mirror over the Seine.[366] While his distrust in the mirrors' 'deceiving the eye' is obvious, we should notice his description of how they are "growing larger by the day" – perhaps a poetic prediction of how media aesthetics would continue to grow in intensity, as we recognize as a symptom of our contemporary augmented, immersive condition. In our aestheticized urban environments of today, everything in a sense mirrors and floods together to blend into our reality; illumination as well as aesthetics of navigation, documentation (and self-documentation), personal, cultural and manufactured narratives, emotional experiences, augmented spaces, and virtual overlays. More than referring to the mirrors throughout Paris as forms of representation, Benjamin describes an augmented condition with mirrors that facilitates a kind of relationship between the self and the world.

In our contemporary mirror-condition, our experience is one of 'surfing along' with what is represented to us in a more or less constant immersive experience augmented with artificial image impressions. Giuliana Bruno's concept of "surface encounters" describes our contemporary engagement with mediating surfaces – skin, fabric, canvas, wall, and screen – as constructs of "architecture." Bruno's account of surfaces indicates a position to contemporary aesthetics as sharing a deep engagement with superficial matters, which she argues make a pervasive state of matter today. From the perspective of this inquiry, the notion of 'surface' entails the mediating layer of temporal overwriting with artificial sensible impulses, as characterized in Chapter 4. Consider then, along with Bruno how, in this sensible experience, in our condition of 24/7, we 'surf along' mediating surfaces – including screens on mobile devices, digital cameras, mobile phones, information screens, video billboards,

[363] Ibid., 537.
[364] Benjamin, *Charles Baudelaire*, 39.
[365] Benjamin, "Mirrors," 538.
[366] Ibid.

windows of any given computer desktop, larger screens of home theatres, the lens of Google glasses or augmented reality goggles; visual projections in advertisement, memorials, public events, art installations, data visualization, and cultural communication; illumination of surfaces of architecture, from single buildings to entire skylines; and in interfaces of our digital platforms, mobile apps, and virtual entertainments. In her modernist approach to aesthetics, Bruno uncritically explains how our surfaces of superficial matter positively shape our culture by generating contact, connectivity, and communication, and in a mode similar to cinematic motion, by 'transporting' us to imaginary planes of ideas and feelings, "haptically bonded in the re-collective itinerary of spectatorship."[367] However, it is exactly this mode of immersion in terms of a celebration of 'surfing' from one superficial impression to the next that breeds our mode of duration in emergency culture. The relationship between self and world that we find in this ontological mode in the layer of surfaces, no matter the degree of their hapticity,[368] is one of aligning our duration with the positions, perspectives and logics of mediation that condition our experience of immersion.

The constant exposure to mediated stimuli indicated in the characterization of a contemporary condition of media aesthetic spectacularization, evokes Simmel's description of a condition of intense stimuli in the modern metropolis of Berlin in 1903, which affected the "metropolitan type" by way of the psychic phenomenon of *blasé attitude*. With this attitude, a certain "calculability of modern life" came to "color the content of life" by means of intensifying the person's rational consciousness in order to protect inner life against the overstimulation from impressions of the metropolis. Simmel describes how blasé attitude in reaction to the constant bombardment of stimuli results in an attitude of *indifference* towards the distinction between things. The indifferent behavior Simmel points to is not reflective of mental dullness or pacification but rather of the impulsive consequences of rapidly shifting stimulations of the nerves.[369]

In today's context, the stimulations of our nerves, not by shock but by temporal overriding of natural impulses with mediated sensible impulses in conditions of immersion, might lead to a mode of indifference towards the distinction of what motivates the impulses,

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[367] Giuliana Bruno, "Surface Encounters," *e-flux journal 56th Venice Biennial* (2015).

[368] Bruno suggests that 'surfaces,' by means of a quality of hapticity, activate a combination of motion and emotion. In a mode similar to cinematic motion, they set our memory in motion and transport us to imaginary planes of ideas and feelings, "haptically bonded in the re-collective itinerary of spectatorship."

[369] Simmel, *Metropolis and Mental Life*, 14.

how they position us, or our perspective in a certain manner. For example, even though we might know that an appealing immersive experience is actually an act of advertisement, this fact might be indifferent to us. Or, even if we know that turning on location services in order to use a new app means we give our data in exchange (which has value to the data aggregator and which will eventually be used to customize new products, services and experiences to our profile), we might still do it. Indifference in this sense implies on the one hand that we may not distinguish between experiences of one kind or another – social, cultural, political, consumerist; and on the other hand that we do not care about what it is, or that we donate our data for unknown purposes. After all, it does not feel 'personal'; but it is, as an intimate record of our whereabouts and preferences.

Benjamin, in his depiction of the mirror condition in Paris, describes how mirrors surrounded people in *their own reflections*; in reflective surfaces depicted as forms of screens in which the flâneur sees his own reflection. Benjamin considers how we mirror not only our portraits but also our behaviors, attitudes, actions and perceptions in our mediating surroundings – in our environment, in those of others, and in our collective culture. In light of his description of the diachronic condition of 24/7 characterized by differentiated temporalities, Crary suggests that our state of indifference – considered in a similar manner to Simmel – is an effect of how our shared zones of experience are fragmented into fabricated micro worlds of affect and symbols in a particular mode of *homogenization*. This he describes as characterized by a mass synchronization of behavior. This mode of homogenization differs from the making similar of individuals in terms of reduction, as we otherwise find in Stiegler's conception of industrial homogenization of individuality, consciousness and its flows with contemporary media objects.[370] Rather, Crary's mode of homogenization involves delimitation or narrowing of the range of behaviors at our disposal, which results in a homogenous mode of behavior or reaction that he characterizes as a "generalized sameness."[371] With this, individuals are unable to access a range of options of behavior or responses to their media aesthetic life world. This entails that our recollections of memory are happening in similar ranges – similar to each other and to previous perceptions – and consequentially, we act in more similar patterns.

[370] Crary, *24/7*, 56.
[371] Ibid., 53.

This mode of generalized sameness, reflective of our networked culture in which we can mirror ourselves in each other and in the world, has become a tendency recognized in the ways in which our behavior materializes in new inventions, modes of expression, and ways of doing. Think of the many service apps departing from 'sharing culture' – whether baby clothes, apartments or taxi rides; think how every website has become 'fluid' to fit to our mobile screens and reflect a similar visual distribution on the screen and intuitive menu navigation; or think of trends in where people travel to (inspired by other people's travel photos shared in social media), what news they read or music they listen to, as recommended by 'friends' in the online echo chambers of one's news feed on social media. The mode of sameness is equally reflected in how lighting designs on buildings imitate each other, how cultural celebrations or memorials employ media aesthetics, and in idioms characterizing the intensification of presence effects.

One effect of generalized sameness is that we tend to act by impulse. Crary states: "The most important recent changes concern not new machine forms of visualization, but the ways in which there has been a disintegration of human abilities to see, especially of an ability to join visual discriminations with social and ethical values."[372] In this regard, we act by *impulse*, perhaps along with everybody else. We recognize this impulse in the imperative to respond, take deliberate action and make decisions that might, however, happen on the basis of our unconsciousness, as explained in Chapter 4. We can recall how human experience is increasingly conditioned and impacted by processes that operate in machinic temporal frameworks without any necessary direct connection to human sense perception and conscious awareness.[373] Therefore, our attention is captured without our awareness, and conscious deliberation and response are left out of our experience.[374] This is what Hansen refers to by the notion of "cognitive opacity," indicating how our consciousness struggles to catch up to what is happening.[375] Impulse in this sense refers to an act carried out almost as if per automation, because it seems like the natural, intuitive response or way of doing things – even though we are not certain exactly why it is so or what consequences it may have. Examples include why we click the 'like' buttons on posts and events on Facebook, or why

[372] Ibid., 33.
[373] Mark B. N. Hansen, *Feed-Forward: On the future of twenty-first century media* (Chicago: The University of Chicago Press, 2015), 38.
[374] Ibid., 195.
[375] Ibid., 59.

we post images of our personal holiday moments, which – outside of the Facebook context – we would not otherwise share with our neighbors. Impulse is thus a behavioral symptom of spectacularization as an immersive condition, reflecting a sense of homogeneity and 'sameness,' and a behavioral symptom characterized by suspension of conscious deliberation.

The impulsive reaction happens on the condition of *suspension* of reaction rooted in our individual social and ethical values. Simmel writes that, as a consequence of blasé attitude, the person comes to exclude irrational, instinctive and sovereign human traits and impulses, which originally seek to determine the form of life from within instead of receiving it form the outside.[376] This account of indifference concerns something deeper than merely distinction between the nature of goods or choices. Simmel points to a diminishing of individual freedom, not merely understood as freedom of movement or emancipation, but concerning a sense of heterogeneity, as found in the ability and motivation to express particularity and incomparability which enables people to follow the laws of their *inner nature*.[377] In this regard, the experience with intensified presence effects in virtual reality proved to affect test persons' memories, attitudes, positions and behaviors. This indicates a focus on values derived from the conditions of immersion at the expense of individual values, which brings Simmel's perspective into contemporary purview.

These behavioral mechanisms characterize our current condition of spectacularization: *indifference* in attitude whereby our perspective or position does not necessarily distinguish between expressions and their intent; and *sameness* in the sense of an inability to access a range of options of modes of behavior or responses to things. The result being *impulsive* reaction that mirrors other actions in our world detached from inner reflection about what the reaction means or its consequences. These behavioral mechanisms are contingent with our cultural engagements in the environments of data aggregators. Eventually, they come to impact and direct modes of media aesthetic expression in our urban environments by means of the behavioral consequences and the media aesthetic culture they breed. They come to guide our evolving communicative existence, which synchronizes ever more with our culture and behavioral natures in digital environments.

The following will offer exemples of these mechanisms of indifference, homogeneity, sameness and impulsive reaction in two recent tendencies of media aesthetic expressions in

[376] Simmel, "The Metropolis and Mental Life," 13.
[377] Ibid., 17.

the urban environment: the unprecedented global popularity of the augmented reality game Pokémon Go, and the illuminations of Le Tricolore on monuments and buildings following the terror attacks on Paris in November 2015. While these instances exemplify the behavioral tendencies in feedforward mechanisms of emergency culture described in this chapter, they also point out the level of environmental and cultural significance of these behavioral mechanisms, thereby emphasizing why we should care about them as affecting our contemporary mode of duration. They show how media aesthetic expressions in the urban environment derive from the logics that drive our behavior in online or virtual environments of contemporary emergency culture. Perhaps above all, the examples illustrate how alarming is our detachment from social and ethical values in aligning with cultural tendencies furthered by emergency cultural conditions of immersion.

Example One: Indifference in adoption of the new with Pokémon Go

In July 2016, a phenomenon hit the world and within days redirected the attention of millions of people globally. An augmented reality game was launched and was to turn people's behavior in urban spaces upside down and show the multi million-dollar business potential in media aesthetic augmented experience. Preceded by a number of augmented reality games,[378] *Pokémon Go* was the first to become a worldwide phenomenon, enabled by the availability of augmented reality applications for mobile devices since 2008. In a combination of nostalgia and novelty, it was inspired by the original Pokémon games first released in Japan in 1996 for the Nintendo Game Boy and then on various portable devices as a series of role-playing video games. The Pokémon games take place in a world populated by exotic creatures – Pokémons – which people, who are called 'trainers,' travel around the world to tame in order to use them to fight against each other. The augmented reality upgrade of the games, Pokémon Go, brought the original 151 creatures to life by setting them free to populate our *actual* reality, as perceived through the screen of a mobile device. For those few who missed the hype and did not play it exhaustively during the summer of 2016, here is a brief explanation of its functionality.

[378] The first outdoor, mobile augmented reality video game to let the user walk around without a joystick or controller was developed by Bruge Thomas from Wearable Computer Lab in 2000, entitled *ARQuake*. "Augmented Reality History," Augmented Reality Games, 2017, accessed November 5, 2016, www.augmented-reality-games.com/history.php

The game is installed on a mobile device as an app and uses the device's GPS and clock to detect where and when a player is in the game. This allows geo-tagged Pokémons to 'appear' around you, situated as a layer on top of the material surface of your environment, visible on your mobile screen. The game incorporates real physical places and landmarks into its gameplay, which are called 'PokéStops.' These are notable locations also marked in the in-game map, functioning as 'gyms' for training Pokémons, and sites where players can purchase various items including 'PokéBalls' for catching the Pokémons. It builds on crowd-sourced data from the game Ingress, Niantic's preceding science fiction-themed augmented reality game released in its first version in 2012 in collaboration with Google, to populate the locations for PokéStops and gyms. The game uses data from Google Maps to spawn specific Pokémons on certain terrain or environments, for example water-type Pokémons found near water. While you move within the real world surroundings, your avatar moves within the game's map. When you successfully catch a Pokémon, which depends on the 'force,' time and type of PokeBall used, you are rewarded with in-game currencies. The game is then to catch all 151 Pokémons while you move around in the real world searching for them.

Pokémon Go has lured millions of people on the streets in pursuit of catching Pokémons. People have been brought outside together in parks and visited museums, monuments, and other public sites while following the navigation of the game. But people have also gone to catch Pokémons in cemeteries and memorials, including the Auschwitz-Birkenau State Museum and the United States Holocaust Memorial Museum, through which a sense of indifference begins to surface. People have gone to catch Pokémons on railway tracks, caused traffic congestion, caused accidents from inattentive driving, with 79 Pokémon Go-related accidents reported in Japan alone[379] and 290 police incidents reported to have occurred due to the game in the United Kingdom by August 2016 – about a month after the game's release.[380] It has been necessary to install signs all over the world to remind people to be mindful of their safety when catching Pokémons, for example in the New York Subway and in temples, castles and monuments. The 'Pokémania' caused a stampede of thousands of people in the district of Beitou in Taiwan as they tried to catch a 'Snorlax,' and also in Odaiba in Tokyo,

[379] Rich McCormick, "Driver distracted by Pokémon Go kills woman in Japan," The Verge, August 25, 2016, accessed November 25, 2016, www.theverge.com/2016/8/25/12637878/pokemon-go-driver-kills-woman-japan
[380] Tom Mullen, "Hundreds of Pokemon Go incidents logged by police," BBC News, August 29, 2016, accessed November 25, 2016, www.bbc.com/news/uk-england-37183161

this time trying to catch a 'Lapras' – causing a massive traffic jam.[381] The excitement about catching the Pokémons seems to have been on the condition of suspension of normal attention to safety, urban privacy and traffic regulation, and with disregard for consideration of historic or spiritual sensitivity in certain public places. The overlay of the game aesthetics on the urban environment has seemingly followed an overlay of a different, indifferent urban public behavior. Pokémon Go demonstrates sameness brought to effect in, what is for many, a novel augmented reality experience. It demonstrates how we adapt our behavior to how our experience is being designed, upgraded and expanded, while indicating our desire for presence effects and our amazement of the augmented occurrence of supernatural appearances and gamified logics in our material world. However, the most alarming sense of indifference that might have the most impact on near-future inventions, might not be the behavior in the events mentioned above but the indifference that players demonstrate by not caring about the data they submit in exchange for the entertainment.

Pokémon Go demonstrates a global sense of indifference revealing how our critical reflection on data sharing does not seem to be keeping up with our eagerness to participate in new media aesthetic experiences designed to become only more playful, useful or 'necessary.' The game is available for free download on Android (the mobile operating system developed by Google), and iOS (the mobile operating system developed by Apple). It works in a similar manner to other location-based apps, such as Tinder, Foursquare, Swarm, Google Now, etc. The app is GPS-enabled, meaning users have to turn on location services if they want to play. This allows the app to capture data based on one's movement and behavior, also after playing the game; where you go, when you go there, how you get there, how long you stay, and what you make of searches, image postings, purchases, etc. The app can collect, use and share user data and does not need the user's consent. Niantic, a geospatial visualization company, which was also involved with developing Google Earth and Google Maps, keeps the data. While this announces a potential short leap to location-based promotions and campaigns, we can only wait and see how this data may be used for future quantitative expansions of our needs, routines and behaviors.

Pokémon Go is one of the most profitable mobile apps to date, the fastest game to top the App Store and Google Play charts, and downloaded more than 500 million times worldwide;

[381] Brian Ashcraft, "Police Dealing With Pokémon Go Chaos In Tokyo," Kotaku, August 23, 2016, accessed November 25, 2016, www.kotaku.com/pokemon-go-stampedes-in-taiwan-1785629608

100 million times after just thirty-three days on the market.[382] While the game is free to download, it supports in-app purchases of additional PokéBalls and other items. After only ninety days on the market, it reached US$600 million in revenue.[383] By July 14, Nintendo shares had risen by 50%, increasing their market value to US$9 billion within five days of the release.[384] When, by September 2016, the game had lost seventy-nine percent of its players, it designed a comeback in a Halloween Event, which gained the game the top spot on the charts of highest growing apps (earning US$23.3 million between October 25-29).[385] We recognize a symptom of emergency culture in the constant development of new 'needs' in how the game continues to offer new kinds of Pokémons, features, etc., designed to make people keep on playing, data continuing to come in, and revenue continuing to grow.

Pokémon Go was mentioned on Facebook and Instagram 1.1 billion times just in July 2016.[386] We can only wonder – with amazement – why that many people would pay *attention* to an augmented reality game and run around catching Pokémons, while during that same month – according to Wikipedia – 190 terrorist attacks took place in Congo, Iraq, Bangladesh, Syria, Libya, Mali, Afghanistan, Armenia, and many other countries, killing more than 1,528 and injuring more than 2,269, but did not receive nearly the same amount of global attention?[387] The absurdity was explicated when activists in Syria on July 21, 2016, tweeted images showing children in Syria holding signs in both Arabic and English with a Pokémon creature and the text "I am in Syria… Save me!!"[388]

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[382] Michael Crider, "Pokémon GO passes 100 million Play Store downloads in just a month," Android Police, August 8, 2016, accessed November 25, 2016, www.androidpolice.com/2016/08/08/pokmon-go-passes-100-million-play-store-downloads-just-month

[383] Eddie Makuch, "Pokemon Go Reaches $600 Million, Faster Than Any Mobile Game in History – Report," GameSpot, October 21, 2016, accessed November 25, 2016, www.gamespot.com/articles/pokemon-go-reaches-600-million-faster-than-any-mob/1100-6444687

[384] Darrell Etherington, "Pokémon Go adds $9B to Nintendo's value, global rollout continues this week," TechCrunch, July 15, 2016, accessed November 25, 2016, www.techcrunch.com/2016/07/11/pokemon-go-adds-9b-to-nintendos-value-global-rollout-continues-this-week

[385] Paul Tassi, "Expect 'Pokémon Go' To Make More Halloween-Like Events After Huge 133% Revenue Jump," Forbes, November 1, 2016, accessed November 25, 2016, www.forbes.com/sites/insertcoin/2016/11/01/expect-pokemon-go-to-make-more-halloween-like-events-after-huge-133-revenue-jump/#4991f70220e1

[386] Lauren Johnson, "231 Million People Talked About Pokemon Go on Facebook and Instagram in July," Adweek. August 11, 2016, accessed November 25, 2016, www.adweek.com/news/technology/231-million-people-talked-about-pokemon-go-facebook-and-instagram-july-172891

[387] "List of terrorist incidents in July 2016," Wikipedia, accessed November 27, 2016, www.en.wikipedia.org/wiki/List_of_terrorist_incidents_in_July_2016

[388] Tweeted by the Revolutionary Forces of Syria Media Group on July 21, 2016, www.twitter.com/RFS_mediaoffice/status/756226803300126720/photo/1?ref_src=twsrc^tfw

Pokémon Go exemplifies how our contemporary mode of duration when characterized by a condition of homogeneity is one in which we accept the accelerating pace of aesthetic developments and contribute to the fast adaptation of new mediated languages and modes of expression. Jonathan Crary argues that our perceptual and cognitive relationship to communication and information technology is and will continue to be estranged and disempowered because of the speed at which new products and inventions emerge.[389] This is by means of the sophisticated strategies of encouragement and continuous reinvention of apps and interfaces to make us continue our behaviors, which then generate the data that fuels the continuous optimization of the environment (and advances the personal targeting of advertisement services). Think of how Facebook continuously expands its features, emotional icons, and formats of connections to other platforms of news and entertainment, enabling continuously new forms of engagement and re-grouping (collective messages, events of different profiles, and causes). Or, how the 'need' of a smart phone has developed with the expansion of social media networks and apps designed to improve and 'cheer up' almost any aspect of our lives, from helping with navigation to providing mediation techniques for stress reduction. New technological inventions tend to present themselves as essential for the organization or enjoyment of our life, and hence we 'have to' download or sign up for them. Missing out on one might prevent us from participating in the next. Consequentially, if we want to participate in this life, our patterns and behavior need to some extent to coincide with the applications, devices and networks that are available and promoted at our contemporary moment.

Before we get a chance to reflect on what the Pokémon Go has brought to our experience or use of public space, new and most likely updated and more advanced entertaining replacements will be offered. Already in July 2016, Nintendo announced its plans to release four more smartphone app games by March 2017 – with franchises such as Super Mario, The Legend of Zelda, and Metroid expected to evoke the same sense of nostalgia that gave Pokémon Go an easy entry into the market.[390] This reflects a tendency of how we develop an intuitive familiarity with interfaces, functionalities and services, while we may not consciously recognize where this sense of familiarity comes from or how it affects our occupation of time, and eventually, our technogenesis. Before we become familiar with new

[389] Crary, *24/7*, 37.

[390] "Nintendo shares soar on Pokemon Go success," BBC News, July 11, 2016, accessed November 25, 2016, www.bbc.com/news/business-36762791

media aesthetic developments and inventions, newer ones tend to replace them; just as the features on Facebook or apps on our mobile devices are replaced by others. We adapt to new inventions and their temporalities before properly understanding how they affect us, how they overwrite other sensible impulses and 'position' us in a particular manner, which directs our attention in a particular way and makes us adopt new experiences, behaviors or modes of logic. The mechanism of presence effects in our condition of immersion that I characterized with Hayles, and with Hansen's concept of 'temporal disjunction' that refers to how machines operate at a different, faster frequency than our human awareness,[391] involves that we experience temporalities of processes that work faster than our conscious perception. Thereby these machinic processes affect us sensibly without our conscious awareness, the result being that we are to some extent unable to keep up with our inventions. Our consciousness is then in a sense alienated from the mechanisms that develop and sophisticate our media aesthetic environments, while our immediate, intuitive participation in these environments is based on an experience of them as increasingly familiar, social, personal, and intimate. The reason this should concern us is that new products and inventions may involve not only single 'objects' or experiences but sometimes reconfigurations of entire systems, cultures, and economies. This was the case when the first social network, video sharing service, or virtual reality game was introduced.

Example Two: Imbalance of global sympathy in the illuminations of Le Tricolore

In the days that followed the attacks on Paris by Islamic State on November 13, 2015 that killed 130 people, a remarkable media aesthetic reaction occurred in urban environments across the world. We witnessed a worldwide response appearing in illuminations on world landmarks, embassies, museum buildings, and various architectural façades, of *Le Tricolore*, the French flag, in the colors blue, white and red. The illuminations appeared one by one, in at least sixty cities worldwide, almost as if this gesture of sympathy had been coordinated.[392] The first flag illuminations in this expressive mode was in London in January 2015 after the massacre at the offices of satirical magazine *Charlie Hebdo* in Paris on Wednesday January 7, 2015. However, the Eiffel Tower went dark, as it also did following the attacks in both

[391] Hansen, *Feed-Forward*, 189f.

[392] I researched the global scope of this phenomena shortly after the attacks. See Tanya Toft, "Aesthetics of repair: The illuminations of Le Tricolore," *Proceedings for International Symposium on Electronic Art* (2016).

January and November, and so did the Empire State Building in New York City and the Eiffel Tower replica at Paris Las Vegas in November.

The flag illuminations evoke how we have developed a media-aesthetic urban culture of using urban surfaces for communication and expression – rooted in the early signboards, billboards, illuminated shop windows, magic lantern projections and early dynamic displays. Since the 1990s this has developed with modes of expression in a dialectic between the commercial and artistic culture of activating urban screens, architecture and other material facades. These illumination gestures around the world signaled an unprecedented global demonstration and made us feel emotionally connected in a mutual state of sympathy, solidarity and tribute to France. They were not pre-planned, coordinated aesthetic initiatives. Rather, they bore witness to a globalized, networked world in which news and cultural trends spread fast and in an imitative manner while evoking a hybrid commons. We recognize a performative aspect in the flag illuminations as rapid responses to crises by means of the privilege of *being able to* respond to stimulus in the world, in this case exercised visually, rapidly, and with great emotional impact and global resonance.

Perhaps the flag illuminations also indicate the mechanism of acting in the absence of sufficient awareness and time for conscious deliberation. They reveal a mode of *impulse*, the mode in which we find ourselves faced with an imperative to respond and take action via visual expression (without having to invest much else). In Bergson's perspective, the 'impulsive person' is he who suspends his consciousness and stays within the unreflective domain of automatism.[393]

We might consider the illuminations as gestures of showing sympathy via expressive identification with an issue or locality – one that we are familiar with in online social networks. Consider for example the similarities in the gestures of illuminating the flag on urban surfaces with personal appropriation and posting of the slogan and logo "Je suis Charlie" on Facebook. This slogan was created by French art director, Joachim Roncin after the massacre at the French satirical newspaper *Charlie Hebdo*. It proliferated over the Internet, especially in social networks, and also appeared in physical demonstrations. Following the new attacks on Paris in November that same year, the slogan and hashtag updated to "Je suis la Paris." One could argue that the flag illuminations in a similar manner

[393] Bergson, *Matter and Memory*, 5.

signaled sympathy via identification with France or the French population, which the flag represents.

In an even more explicit example perhaps, concurrently with the emergence of the flag illuminations in various urban environments worldwide, Facebook offered its users the ability to cover their profile pictures with a translucent layer of the French Flag, intended as a gesture of showing sympathy and solidarity with France after the tragic events. In this sense, the behavioral forces underlying the flag illuminations on urban surfaces directly reflect behavioral mechanisms in online environments. I would think that many who re-circulated the slogan or appropriated the flag online were motivated by experiencing connectivity with a larger domain of people, in a form of shared experience. With the best of intentions, showing one's sympathy in this manner might have seemed an appropriate intuitive response. However, for many, this collective gesture was probably joined without deep consideration of what Facebook might gain from generously offering the aesthetics of the half transparent flag and the infrastructure for sharing, or what such clearly expressed sympathy with one nation might exclude in terms of expressions of sympathy with other nations that had recently undergone similar horrors.

To show a gesture of sympathy in our current condition with twenty-first-century media is never a neutral act. The flag illuminations reflected a tendency in global media in which some events in certain countries are granted more global attention than events in countries less covered by Western media, either because these are taking place outside of the northern hemisphere, or, because they are of less concern to the Western world either geographically or politically. A poem went viral on November 14, written by the Indian blogger Karuna Ezara Parikh from New Delhi with the title "It is not Paris we should pray for," continuing, "… It is the world. It is a world in which Beirut, reeling from bombings [one day] before Paris, is not covered in the press. A world in which a bomb goes off at a funeral in Baghdad and not one person's status update says, 'Baghdad,' because not one white person died in that fire…"[394] The illuminations show an example of lack of attention being granted to or directed at matter that is truly urgent. Expressions of worldwide sympathy by illuminating a national flag on urban surfaces did not happen after the explosion in Beirut, killing at least forty-three people

[394] Ron Dicker, "Virtual Poem Urging Prayers For World, Not Just Paris, Strikes A Chord," *Huffington Post*, November 115, 2015, accessed December 14, 2015, www.huffingtonpost.com/entry/viral-poem-paris-attacks_56489fe5e4b045bf3def806a

and wounding 239 on November 12;[395] nor after the roadside bomb targeting Shias in Iraq, killing twenty-six people and injuring more than sixty on November 13;[396] not after the destruction of the Russian civilian airliner with 224 passengers flying from Sharm al-Sheikh to St Petersburg on October 31; not after 102 Turks and Kurds were killed by two suicide bombers at a peace rally in Ankara on October 10; not after 149 students were killed and seventy-nine wounded at Garissa University College, Kenya, on April 2nd; and not after every frequent attack in Baghdad, Syria and many other places in the world, to mention just some of those tragic events of terrorism taking place in 2015 that one could show sympathy for. Only in Giza did projections on the pyramids also include other flags than Le Tricolore, namely the Syrian flag in memorial of various attacks on Syria, and the Russian flag in memorial of the destruction of the Russian civilian airliner. An unfortunate observation to note is that by 2015 Facebook still had not offered any other flag overlays apart from the Le Tricolore to customize individual profile pictures.

Yet again, tragically, following the attacks on Brussels on March 22, 2016, this media aesthetic mode of expression of illuminating a country's flag in acts of sympathy and mourning had manifested, and this time we witnessed the colors of the Belgian flag illuminating the world's monuments. Once again, following the attacks on Turkey on June 28, 2016 the colors of the Turkish flag appeared, and the French flag was repeated following the subsequent attacks in France during June and July 2016. We have developed a media aesthetic visual language of aesthetic expression on urban surfaces that somehow makes sense to us, and which is appropriated globally, almost regardless of the level of technological advancement. With this we have cultivated a certain mode of media aesthetic, expressive behavior, but also unfortunately, a sense of hierarchy in terms of where our attention and sympathy is directed.

The illuminations reflect a tendency in which aestheticized urban surfaces are used to convey the virtual transformation of our material (physical) relations in our global, sensible condition. When considering the effects of the monumental gesture of the Tricolore illuminations, even if we agree to these as signs of sympathy, solidarity, respect, love and

[395] Kareem Shaheen, "Isis claims responsibility as suicide bombers kill dozens in Beirut," *The Guardian*, November 12, 2015, accessed December 14, 2015, www.theguardian.com/world/2015/nov/12/beirut-bombings-kill-at-least-20-lebanon

[396] "Dozens dead as ISIL claims attacks against Iraqi Shias," Aljazeera, November 13, 2015, accessed December 14, 2015, www.aljazeera.com/news/2015/11/dozens-dead-isil-claims-attacks-iraqi-shias-151113165046854.html

support (rather than attempts at publicity, which would be the judgment of a more cynical account of these initiatives), they must be considered as both reflecting and reflective of this global sensibility. Media aesthetic urban initiatives are part of an ecosystem and we need to be careful about how the sensibility of this ecosystem is managed because it feeds back into our human and global becoming. These initiatives impact and uphold media ecologies as much as they arise from them.

We should not forget that the flag illuminations 'existed' (and still exist) as much in their virtual presence as in their urban contexts; documented, distributed and re-distributed online while building up a hybrid commons, attracting attention to the venues by world media and enhancing a discourse on 'worldwide sympathy.' The ongoing emergence of new flag illuminations in the days that followed the attacks, as well as the echoes of documentation of the illuminations across the world's media, indicated how the illuminations not only represented but also generated collective reactions and expressions of sympathy. Worth considering is how the flag illuminations have instigated a generative protocol for expression of emotional gestures in light projection onto urban surfaces. The expression of projecting a country's flag after acts of terror might be a phenomenon occurring now but not in a few years, however it will inevitably affect how networked gestures of sympathy and mourning will be expressed in the future. The grander, brighter, more powerful and globally visible these 'events' become, the bigger their hybrid commons, the more they come to interrupt and intervene into our global (im)balance.

The flag illuminations might reveal a new face of networked spectacularization. This is one not governed by culture industries' capitalist incitements in a conventional sense, although cultural and official institutions initiated most of the illuminations, and the motivations for doing so *could* relate to the opportunity of conveniently having their sympathizing gesture distributed in news and social media worldwide. What we might be glimpsing is characterized by much more complex cultural forces; forces that avoid our awareness and cognitive reflection on the cultural, social and political consequences of these media aesthetic expressions. The flag illuminations bear witness to how our duration in a media aesthetic contemporary condition in emergency culture, aligned with spatialized temporalities, are not only found in our direct responses to machines but also in how our behavioral patterns, norms, and cultures take form beyond direct machinic interaction. This can be considered in terms of the mode of cognitive opacity combined with temporal stress,

as well as generalized sameness. Initiatives like these, emerging as a sudden cultural norm or mode of intuitive reaction, eventually model our contemporaneity and feedforward into our future cultural reality.[397]

Synching with our human existence

Media aesthetic augmentation of our urban environments is increasingly designed to synchronize with an emotional dimension of our presence. This is the transverse situation of how mediation in omnidirectional video and virtual reality is designed to make us 'sync' with our situations of media aesthetic experience. However, when the environment syncs with us, we have no opportunity for taking off the VR glasses and escaping. An example of this we find in the lighting imperative of The Empire State Building which seeks to communicate a collective, cultural 'state of mind' (to use a popular phrase associated with New York City) by means of colored light. A current banner on Google advertising for 'The Empire State Building Experience' shows the tower lit with blue and text saying: "Feel the heart of NYC." This invites us to imagine that we *feel* the city through the building's communicative skin of illumination. It positions the Empire State Building as an emotional lighthouse, changing its color scheme in reflection of events in the city. Red, white and blue mark Independence Day and other American national dates of note. Purple and white mark New York University's graduation day. Nuances of green have marked Ramadan, St. Patrick's Day and Earth Day, and Red was used in honor of World AIDS day.

However, the color symbolism has also recently taken on more corporate 'celebrations.' For example, on December 11, 2015, the colors burgundy and white appeared on the spire in celebration of the arrival of Qatar Airways in the building's office spaces; and on December 8, 2016, the light presented pink and white stripes in celebration of the twentieth annual Victoria's Secret Fashion Show.[398] I am not certain when these events came to qualify as events of note and significance to the people of New York City, to what extent were millions of people watching the color augmentation expected to *feel* them. In these misuses of the city's 'emotional tower,' they come to *inject* rather than *reflect* a 'state of mind.' This tendency brings to mind how architectural augmentation with light has sometimes pursued

[397] I have elaborated on this analysis of the Tricolore illuminations in the article "Aesthetics of repair: The illuminations of Le Tricolore."

[398] "Tower Lights," website for the Empire State Building, accessed December 13, 2015, www.esbnyc.com/explore/tower-lights

questionable paths, as in 1956 when three 150-foot-high white crosses formed by lit windows appeared on three buildings in Manhattan's financial district on the occasion of Easter. The media aesthetic intervention was linked to a message in the newspaper advocating for people to come to church.[399] Apparently, Oklahoma City still uses building windows to depict crosses during the holidays in this manner.[400] Similarly, the ancient Great Pyramid of Giza is presented to tourists as a 'son et lumière' with laser show and projections, assumingly to meet tourist expectation to a dramatic experience, or compete with other 'exciting' tourist attractions. It seems like the Pyramids, constructed between 2560 and 2580 BC, are no longer exciting enough in themselves, and we need to enhance our emotional experience of them with mediated presence effects – and, with that, mediate our relationship to history.

In tandem with developments in technology, emerging modes of media aesthetic visual expression in urban environments are becoming larger, more powerful, and more seeking of global attention. The use of light, LED façades and projection (mapping) has spread so that they no longer belong only to the domains of advertisement, news, community media, art and cultural events.[401] Modes of media aesthetic visual expression are now fusing into other modes of use, developing new languages of visual forms of expression with an 'extra communicative' augmented layer that reflects our cultural and emotional condition. What we witness are increasingly flexible and creative employments of media aesthetics, predominantly visual, which sync with us in new forms of aesthetic and emotional languages. In temporary installations, this is often on the occasions of celebrations, dates of national or cultural importance, or situations of collective mourning. An example of this was in a mode of data visualization, showing the changing status of the result of the election for the Danish parliament on the façade of Christiansborg, the parliament building in Copenhagen, on June 14, 2015. This provided a TV transmission-friendly poll figure for the election result and was very possibly the first informative, non-artistic use of visual projection on a building in Denmark. In a similar fashion, reflecting how the Rockefeller Center in New York City since the year 2000 has been illuminated with floodlights in the colors of the American flag for the national election, on November 8, 2016, south façade of the Empire State Building in New

[399] "Come to Church Sunday," the Oxnard Press-Courier, March, 31, 1956, accessed August 25, 2016,
[400] "A Downtown View of Oklahoma City, Lit for the Holidays," Jim on Light, November 30, 2010, accessed August 25, 2016, www.jimonlight.com/2010/11/30/a-downtown-view-of-oklahoma-city-lit-for-the-holidays
[401] These are genres identified within the domain of 'media facades' in particular, as proposed by Martin Brynskov, Peter Dalsgaard, Tobias Ebsen, Jonas Fritsch, Kim Halskov & Rune Nielsen, "Staging Urban Interactions with Media Façades," *Human-Computer Interaction* (2009): 154-167.

York City lit up with a combination of photography, real-time election results, maps, voter mosaics and animations to commemorate the presidential election. The visuals tracked the electoral votes adding up for Republican presidential candidate, Donald Trump and Democratic candidate, Hillary Clinton as the election night progressed, and voters could submit their election night photos to be displayed on the building by tagging their Instagram photos with #MyVote.[402] This was the Empire State Building's first-ever use of its custom-built, state-of-the-art dynamic lighting system that allows changing light scenes in real-time for visualizing ongoing election results, culminating in a 'Big Brother-reminiscent portrait of the winning candidate, Donald Trump on the building's façade. The spectacular statistics were conveniently used as background images by news channels covering the election night.

What the above examples illustrate is how, while we increasingly immerse ourselves and synchronize with our mediated environments, our mediated environments also increasingly sync with us. These environments increasingly mirror and reflect us and immerse us in our own cultural fabrications. Design tendencies in urban intelligent illumination and augmentation point towards increasingly sophisticated aesthetics that in various ways strive to *mirror* our human moods, emotions and senses by employing our desubjectified data in media aesthetic expressions. A near-future example is the Jacques-Quartier Bridge opening in 2017 for the 150th anniversary of Canada and the 375th anniversary of Montreal. This structure will express the condition of the citizens of Montreal with light color and intensity derived from big data generated in the city.[403] In this instance, the aesthetics not only sync with people's collective cultural experience but literally with people's movements and data generated in the city of Montreal in real-time.

With the current tendency of media aesthetics to sync with our cultural rhythm and human emotions – more recently through data visualization of letting media aesthetics be generated from our collective data, but also in responsive features in media aesthetic design that react to or mirror our behavior – it is becoming increasingly difficult for us to withdraw from immersion. Consequentially, it becomes harder for us to inhabit a mode of duration that

[402] The electoral display on the Empire State Building was created by Obscura Digital in collaboration with CNN, Instagram, and CA technologies. See Zoe Szathmary, "Trump takes over the Manhattan skyline: Empire State Building displays a YUUUGE picture of 45th President's face after his stunning election victory," Daily Mail, November 9, 2016, accessed November 10, 2016, www.dailymail.co.uk/news/article-3918754/Lighting-election-Empire-State-Building-turns-live-results-tracker-dazzling-display-Hillary-Trump-face-race-White-House.html

[403] "Jacques-Cartier Bridge Illumination," website of Moment Factory, accessed November 15, 2016, www.momentfactory.com/work/all/all/jacques-cartier-bridge-illumination

questions these aesthetic design imperatives that mirror us, reflect our patterns, imitate our behavior, depict how we feel, and respond to our emotions and sympathies. In effect, these aesthetics induce 'more of the same' in a mode of generalized sameness in accelerating progression of duration of homogeneity. At stake is indeed a quantification of a quality or a 'feel' of life, as Bergson warned. This tendency evokes anew Le Corbusier's vision for the control society of 'the radiant city' in which electric light was used to convert mute architecture into a living, communicative and controlling thing, which stimulated signals of rationality and rational design and became a controlling factor in the urban landscape.[404] McQuire states it thus: "Underneath the fantasies of individual transcendence supported by electricity's technological sublime lurks the potential for 'a control society' in which illumination merges with information, producing not so much the visibility of a rational civil society, but the overexposure of the searchable database."[405] The problematic aspect highlighted here is that the searchable database builds with increasingly granular data-details of our lives. When urban images in media aesthetic immersive experience mirror us and we experience a strong sense of immersion, we are more likely to accept the angling/framing/emotions/knowledge imperatives presented to us in the immersion, which however oftentimes align with emergency culture and the underpinning neoliberal logic. In this regard, we tend to withdraw from our inner nature in replacement of a mediated 'nature' or logic aligned with cultural behavior. The tendency points towards design schemes, which evoke emotional sensation that enhances our sense of presence – our sense of investment in the site, situation and its codification of certain perspectives, positions or perhaps even ideologies – which reflect quantifiable parts of narratives that can be converted into sparkles and lights. They do not reflect our poetry, ethics, complex narratives, or inner nature.

Conclusion

In this chapter, I have brought the media aesthetic tendencies identified until now – of intensity, intelligence and immersion – together in the argument that our contemporary communicative existence is characterized by a culture of *spectacularization.* However, rather than a figure of seductive 'images,' manipulative messages or ideological signs of the

[404] Tanya Toft, "Situations of presence: reclaiming public space in the urban digital gallery," in *Proceedings of the 2nd Media Architecture Biennale Conference: World Cities*, eds. by Martin Brynskov, Peter Dalsgaard, Ava Fatah, S. B. Pold, and Marcus Foth (New York: ACM, 2014), 79f.
[405] Scott McQuire, *The Media City* (London: SAGE Publications, 2008), 127.

Spectacle as a vehicle of the culture industry, the problematic nature of this condition of spectacularization today is in terms of an ontological infrastructure of media aesthetic immersion. Contemporary urban spectacularization characterizing our communicative existence does not so much concern seduction, passivity and disillusionment of the spectator, but rather spectacularization of our *duration* in emergency culture – in a networked, neoliberal and technologically advanced reality, in which we are assisted by media aesthetic functionality and efficiency, and immersed in attention-directing interfaces as surroundings that we *live through* (as supposed to *look at*). In our non-stop life world, we 'surf' immersive experiences via augmenting surfaces. In this ontological condition we more or less blindly, and certainly intuitively, follow the positions, perspectives and logics of immersion that breed our mode of duration in emergency culture.

The condition of spectacularization within which media aesthetics develop today regenerates and sustains by way of conditioning our experience and stimulating our behavior. As systems of *voluntary control*, our contemporary data culture industries are embedded in our behavioral infrastructures in emergency culture. Behavioral mechanisms of this condition feedforward into our adaptation towards the constant optimization of services and entertainment that uphold our cultural, productive participation in nonstop-networked communicative activities. This is conditional for our cultural situation, which encourages certain cultural-behavioral norms for how we develop and engage with media aesthetics. In a mode of voluntary control our behavior is adjusted to the features and functionalities with which we are presented, and we accept the limited range of behavioral options offered, resulting in a cultural mode of *sameness*. An effect of homogenization, our behavior is to some extent mass synchronized; the range of behaviors at our disposal in the interfaces, templates and norms cultivated in our communications platforms and programs are delimited and narrowed by the options made available to us, by what makes sense to others in our communicative culture, and by what we intuitively find to be meaningful responses and acts in this culture. It becomes more difficult for us to uphold conscious deliberation and reflection in relation to what we experience, and we potentially resist new media aesthetic inventions – which we tend to adopt and adapt to in a mode of *indifference*, as exemplified with the rapid global adaptation of Pokémon Go. We become largely indifferent towards the nature and motivations behind media aesthetics, and how they position our perspectives or us in a certain way. When lack of consciousness in memory operation between the *feedback* and

feedforward mechanisms inform our behavioral responses to media aesthetic environments, languages or modalities, they eventually emerge from automation-response in the form of *impulse* detached from our inner ethical nature and deep reflection, as seen in the example of the illuminations of Le Tricolore. Eventually will be seen a tendency in media aesthetic imperatives of *mirroring* our cultural situation and literally *synching* with our communicative existence, when aesthetic expressions and inventions emerge from aggregated data of our socio-cultural behavior. This makes it ever more difficult to see how we are positioned in never-neutral conditions of media aesthetic immersion. After all, they reflect *us*; our traces that reflect our patterns, choices, emotions, behaviors and sensibilities of increasingly more granular and detailed information.

My attention now returns to the art – to reflection on how the art may be considered to interfere with and respond to these deep-rooted urgencies in our contemporary technologically developed society. As I will suggest in the following chapter, it is not in spite of but *by means of* urban media art's participation in the spectacularist current, as contingent with our technological, media aesthetic reality, that we can understand the art's specific 'contemporary' quality.

6. On the Contemporaneity of Urban Media Art

In my inquiry into the images of emergency culture with which urban media art engages in a contingent relationship, they have been examined in terms of their media aesthetic imperatives of intensifying media effects and of upgrading our urban environments and life worlds with intelligent, computational applications. The close perceptual encounter with media aesthetic images in immersive experience has been examined with the proposal that we can characterize this by the way media aesthetics affect our experience and stimulate our behavior in *spectacularizing* manners; spectacularization concerning not merely domination of visual, spectacular 'images' that we *look at* but rather images that surround us and that we *live through* and that mediate the temporalities of sensible impressions in media aesthetic 'experience' today. In this sense, spectacularization of contemporary culture concerns not only how people are positioned or invited to *see* but rather, as noted by Jonathan Crary, how they are disempowered to "inhabit time."[406]

This chapter will return to the argument aired previously on spectacularization, that it is not in spite of but *by means of* urban media art's participation in the spectacularist current – as this is entangled with our technological, media aesthetic reality and the image-temporalities this entails – that we can understand the art's qualities as contemporary art form, by which we can name it *radical temporal art*. In the meeting with our urban reality, the art holds a potential for real-time interference with the temporal frameworks for experience and organization of our reality with twenty-first century media. Intervening in the media aesthetic experience frames of our mediated reality, urban media art provides alternative, temporal experience frames that allow for bodily and intellectual reflection, and potentially for developing consciousness. I will suggest that the art's contemporary qualities lie in this interference, which concerns how we inhabit time, and which regards how our attention and sense of presence is mobilized in experience. Besides this subjective level perspective it is important to consider more broadly how the images of urgency in urban media art interfere with the distribution of sensibility.

[406] Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge: MIT Press, 2001), 3.

A supplementary state of mediation

In Chapters 2 through 5 I have identified some of the urgencies concerning how media aesthetics affect our contemporary duration, in a networked, technologically advanced urban reality increasingly upgraded with intensifying and intelligent media aesthetic applications. In order to determine these experience frames it is vital to ask:

How are temporalities of our contemporary experience constructed, and what human processes participate in these constructions? In our contemporary communicative existence, we experience simultaneous presence in multiple temporalities in various media environments, having 'access' to temporalities of information and narratives from every corner of the Internet, and in our environmental state of 'being' (or becoming) continuously experiencing affection by many microsensible sensibilities simultaneously. Through algorithmic processes and intelligent images operating on machinic temporal scales, mediated image impressions not only exist as *feedback* mechanisms from our environment but also as *feedforward* mechanisms that operate as forces on our present. The human processes participating in these constructions involve hyper-attention and machine reading, involving scanning through vast amounts of images and information while accepting our deliberation of intuitive responses sometimes without grasping the analytical and machinic processes that forge them; only our datasense may register the sensory impressions from machinic temporalities, a-signifying signs of machinic temporalities, which thereby may bypass our consciousness.

Along what time scales do interactions occur between humans and technical objects? Technical objects allow us to operate, communicate, react and navigate faster as human beings, and speed up exchanges between humans, and between humans and machines. As elaborated in Chapter 4, in our current communicative condition we are experiencing and are significantly affected by temporalities that emerge in discrepancy between machine operation and human awareness. We are affected by the fast operational times between machines, and between machines and humans, as pinpointed in Chapter 3 in, for example algorithmic operations that increasingly take the place of consciousness, and mediating between our machinic-sensible environments and us.

How do the temporalities of technical objects and humans co-constitute one another? This is considered on the one hand, with reference to Simondon, by how machinic temporalities participate in our process of individuation. As part of the sensory complex of

our surroundings, at the level of pre-individuality at which 'being' is still a field of potentialities, we absorb energy from this complex, while a-signifying signs and machinic temporalities of artificial images cause a state of difference by which we adapt to our techno-cultural context. This happens in a simultaneous process of feedback impact of these sensibilities and feedforward in the resolution of difference. In this sense, in our state of technogenesis, the temporalities of our machines become co-constitutive of our human temporality. As artificial image-impressions overwriting natural ones in our dynamic memory framework, they come to affect our selection of images that participate in attentive, perceptive experience.

In consideration of how art might engage meaningfully with contemporary media aesthetics, if the above line of questioning reveals the experiences that contemporary media aesthetics (beyond art) solicit, then what resources do we require to live with and access them?

Mark B. N. Hansen considers that a supplementary stage of mediation is required to bring the operation of technical media into our purview in order to make it available to conscious human modes of experience, such as memory or perception.[407] Hansen explains that the tactics of re-appropriation of cultural processes and products, or attempts to activate a deliberate decision in the individual to 'do something' with a given cultural product, are powerless in today's condition. This is because the agency produced through the acts of, for example cultural re-appropriation, are *subsequent* to the operational impact of the cultural products of today that it would re-signify or divert. This argument reflects Hansen's notion of *temporal disjunction*, involving machinic processes 'exploiting' the temporal gap of experience between the operationality of media and the subsequent advent of consciousness, and thus capturing sensibility long before we can.[408] Therefore, acts of cultural re-appropriation, decoding, demystification, culture jamming and re-signification become reduced to symbolic comments – meaning effects – but do not intervene in our cultural logics or behavioral structures at the level where these are being formulated: the level of our sensible experience of presence effects. We need to introduce new methods by, Hansen considers, a 'supplementary state of mediation.' This supplementary state of mediation may be considered as a source of compensation in the correlation between technical media and the human being,

[407] Mark B. N. Hansen, *Feed-Forward: On the future of twenty-first century media* (Chicago: The University of Chicago Press, 2015), 43.
[408] Ibid., 58.

of that of which perception is deprived; the mechanism we found in the concept of the *pharmakon* as introduced in Chapter 4. Because the pharmakological recompense with environmental sensibility (as expanded microtemporal sensible contact with the world) cannot be experienced directly through any mode of human self-reference, a technical interface is necessary to translate the sensible experience into a form that can be experienced through human self-reference. Hansen envisions that involved in this pharmakological situation is an interface in the sense of a mediated distribution of experience that can accomplish the coupling of human and machinic operations. This kind of interface, in a mode of pharmakological recompense, we might find in the experience frames of the media aesthetic artwork, as it helps us with broadening and 'accessing' our experience. As expressed by curator Inke Arns, "The more people shift activities to the realm of data (for instance, to the Internet), the more important an awareness of the empowering or, as applicable, obstructing attributes of the code on which these virtual realms are based becomes."[409]

Images of urgency

If our dominant cultural mode of duration is inflicted with images of emergency – understood as images-sensibilities that stimulate and sustain us in certain intuitive modes of thinking and behaving aligned with the logics of emergency culture – then what might be an *alternative* to this mode of duration? My inquiry into media aesthetic tendencies has mainly been concerned with what is urgent in the contemporary media aesthetic conditions of our communicative existence, and focused on images of emergency as aesthetic impressions that encourage us to automatically participate in and reproduce our dominant neoliberal emergency culture. What has not yet been addressed is that Bergson actually characterizes an alternative durational mode to the homogeneous one that aligns with spatialized time, or as considered here in a contemporary perspective, spatialized temporalities. This alternative mode of duration is heterogeneous, qualitative, continuous and virtual; one that cannot be reduced to numbers or quantified measures. As opposed to the homogeneous spatial mode of duration that only allows for difference or change to be more of the same, Bergson describes how a *heterogeneous* mode of duration entails a kind of discrepancy or "rupture" that changes the

[409] Inke Arns, "Interaction, Participation, Networking: Art and Telecommunication," *What Urban Media Art Can Do: Why When Where & How*, eds. Susa Pop, Tanya Toft, Nerea Calvillo, and Mark Wright (Stuttgart: av edition, 2016), 210.

state of something; changes how we feel or think about matter.[410] For example, in divergence from the growth imperative of some light festivals conditioned by quantitative, calculable estimates and more or less homogeneous development incitements of more of the same, art installations may alternatively follow their own trajectories and explore new 'languages.' In the alternative logic of duration, rather than giving people what you anticipate them to want or know how to decode (which is often 'more, bigger, brighter'), people might be invited to experience in new ways, expand their perceptual framework and *learn* how to make sense of an experience. The heterogeneous mode of duration allows for discrepancy between what we expect and what we experience, for something to become something else – as opposed to more of the same. It operates by a force that Bergson describes "…has a real cause,"[411] and which is "…the transference of a state rather than of a thing."[412] Essentially, Bergson describes a distinction between two modes of duration: between time that can be measured (spatialized time) as opposed to time that is *felt* in this alternative mode of duration.

We recognize Bergson's thinking and this alternative mode of duration in what Irit Rogoff suggests by the term "culture of urgency."[413] I assert the concept of *urgency* as an alternative to that of emergency. As opposed to a characterization of emergency in relation to problems occurring from our own making that require our immediate fixing and response, as per Rogoff's definition with reference to neoliberal logics, she proposes the concept of 'urgency' as somewhere between the importance of requiring swift action, and our immediate, dedicated attention *and* an earnest, persistent quality. Urgency goes beyond topicality, beyond superficial contemporariness, and beyond something that can be pointed at as a problem emerging out of short-term cultural constructions. It goes deeper than the fad and is tied in with longer durable issues and courses of development. In other words, urgency concerns a bigger picture of our human, societal and environmental progression, emancipation and wellbeing. It contains the restrictions that the real world poses rather than problems and

[410] Gilles Deleuze, *Bergsonism* (New York: ZONE BOOKS, 1991), 38.
[411] Henri Bergson, *Matter and Memory* (1911), trans. N.M.P. and W.S.P (Mansfield Centre: Martino Publishing, 2011), 257. In Bergson's account of force in real movement he draws on Lord Kelvin who "supposes a perfect, continuous, homogeneous and incompressible fluid, filling space. Instead of an atom he considers a whirling 'vortex ring."' Ibid., 265.
[412] Ibid., 267.
[413] Irit Rogoff makes the distinction between a culture of emergency and a culture of urgency in her discussion of the crisis in Europeean higher education in the essay "Turning," *e-flux Journal* 0:11 (2008), accessed February 5, 2015, www.e-flux.com/journal/turning

restrictions of our own making.[414] That which is urgent is that to which we cannot *not* respond.

In my adoption of Rogoff's term of urgency and in view of Bergson's alternative mode of duration, *images of urgency* concern a kind of nature in images that is not confined to the logics of the emergency-cultural treadmill. These we have glimpsed in the various interludes presented earlier, in their qualities of questioning, making visible, and pointing at, for example discrepancies between human and machine temporalities in experience structures in mediation (0.25 FPS), relations between the scientific paradigm and perception of material space (Fivefold dodecahedron lamp), relations between speed and consciousness in our urban reality (Coisa Lida), processes of scientification participating in shaping our social behavior (SelfieSãoPaulo), or assimilation of 'alien' elements (of algorithmic behavior and machinic temporalities) into our environments and cultural logics (Lagoglyphs: Animation). From my curatorial point of departure, as much as my attention in the dissertation has concerned what the art points us to as urgent, I am concerned with the aesthetic qualities in the art by which it may be considered to interfere with and respond to these urgencies in our contemporary technologically developed society. Hence the wording *Images of Urgency* in the title.

Images of urgency in art concern not merely an aesthetic dimension or theme but a direct, environmental and virtual-future rupture that the artwork solicits, which comes into effect in the human encounter with a temporal experience in a combination of meaning and presence effects. Images of urgency come into effect via the *experience frames* that the artworks offer to our perceptual experience. Experience frames concern how we pay attention to the world. Experience frames in urban media art concern how we pay attention to the world *with* the art; with our perception affected by the media aesthetic images-sensibilities the art distributes and that blend with all other images we register.

In this conception of paying attention *with* the art lies a fundamental difference from the notion of paying attention *to* the art. Modern art emphasized formal relations and taught us to pay attention to the painting, sculpture or other art object as a superficial composition, like an 'image' producing thoughts, sensations and deliberations in our mind-body-system and sends us on a mental voyage of imagination. Throughout this dissertation the understanding of the art image as an isolated entity in a modernist sense, as equivalent to an object, medium, app

[414] Irit Rogoff, "FREE," *e-flux journal* 14:03 (2010), accessed February 17, 2015. www.e-flux.com/journal/14/61311/free

or tool, or as delimited to any visual aesthetic field with a geometrical point source has been abandoned. Rather than considering how we pay attention *to* the art, as per the modernist paradigm, I am interested here in on how we pay attention *with* the art – which informs my methodological use of empirical experience, presented through interludes, and which evokes my reflections on how perception may be considered to be construed in our contemporary communicative existence in Chapter 1, "The Art of Our Times." This is not in a distanced relation to the surface of the world, as per the pre-modern paradigm; and also not as the subjective position of the mobile observer of the nineteenth century embodied in the flâneur. Perception in our contemporary reality may rather be considered in a framework of global, networked, and environmental-relational human experience, as our attention is dispersed across multiple communicative activities and perspectives simultaneously, while we are sensibly affected by multiple temporalities of mediation. With the conception that we pay attention *with* the art, I consider how the art interferes with all layers of this perceptual condition. That the art introduces us to certain *experience frames* thus concerns how the art, by guiding or informing our *attention*, introduces and intensifies certain sensible images, signs, and experiences to our perceptual experience and memory framework, and, by way of reconfiguring our senses, proposes and embodies certain orders that (re-)model our perception.

We can locate the difference between paying attention *to* the art versus paying attention *with* the art in Bergson's distinction between a "represented image" and a "present image." These refer to the two distinct modes of duration. Bergson explains: "That which distinguishes […] a *present* image, as an objective reality*,* from a *represented* image is the necessity which obligates it to act through every one of its points upon all the points of all other images, to transmit the whole of what it receives, to oppose to every action an equal and contrary reaction, to be, in short, merely a road by which we pass, in every direction, the modifications propagated throughout the immensity of the universe."[415] While a *represented* image is characterized by repetition, expansion, homogeneity and value that can be quantified, thereby reflecting the mode of duration aligned with spatialized time, a *present* image reflects the alternative mode of heterogeneous duration. What Bergson describes above is how the present image 'acts' on other images – as proposed here, by way of interfering with their sensibilities.

[415] Bergson, *Matter and Memory*, 28.

We can grasp the philosophical conception of the *present* image in urban media art if considering how the *temporal* dimension in urban media art is rooted in *light*. Of course, urban media art employs mediums of any form of light by, for example using neon, projection technology, laser light, search light, monitors and other screens, lighting technology, and virtual reality, as well as light transmission via fiber optics in mobile devices, sound systems, gaming devices, cameras, drones, and various other computational elements and functionalities. However, the conception of urban media art in terms of light concerns more than its 'material' or an illuminated or illuminating 'object' of installation. As essentially *light source,* the art extends in time and space. Rather than an initiative of mediation with meaning effects, of a visual display area determined by a field source (which might seem adjacent when observing rectangular projections of video art on urban surfaces, for example), as 'light source' we move the conception of the art from a focus on a relationship between viewer and aesthetic field (delimited to what is 'seen') to an environmental relationship with the spaces it intervenes with and are conditioned by. This then takes us beyond fixation on the formal modes of use or experiences achieved by means of the technical properties of the art's medium – as prescribed by a certain cultural predominant under which the art would easily be reduced to the contemporary status of the medium's cultural, communicative and ideological functions.

With the conception of urban media art as light source, rather than transporting us into other image worlds – as experienced in the enclosed space of cinema, and which Giuliana Bruno considers an imaginative and haptic quality of "surface encounters" in her modernist approach to the arts – the images in urban media art integrate and interfere with our sensible, physical, material world as *present* images. In this, the art potentially interferes with all other images of our world, as per Bergson's description; significantly with media aesthetic 'materiality,' with the *temporal experience frames* that form our contemporary experience with media aesthetics (some of which are sketched out in the introduction to this chapter).

Radical temporal art

In approaching a conclusion to how urban media art can be considered *contemporary*, the conception of urban media art as light source enables an understanding of the art based on its temporal conditions – as a *radical temporal art* form that interferes directly with the temporal, processual conditions of our urban reality. We can consider a certain commitment to 'radical

temporality' as an aesthetic quality in contemporary urban media art – in its immaterial, process-oriented, ephemeral and performative nature – operating 'real-time' on the sensible condition of the urban environment. Boris Groys has proposed that contemporary art can be distinguished from that which prevailed during the modern era significantly by its core commitment to *radical temporality*.[416] He explains this to reflect how, in our contemporary context, the substance of our contemporary being is considerably affected by instabilities such as temporality, flux, immateriality, event, and virtuality; by temporal frames of embodiment and conditions of immersion, by temporal processes of network culture and computers, and temporal conditions for encounters. Thus the notion of radical temporality in art indicates how contemporary art engages with a situation in which every element may be considered temporary and which leaves the art (and our conception of it) to be conditioned by this temporality. This reflects my conception of *real-time* as a temporal dimension in urban media art, as introduced in Chapter 1, "The Art of Our Times," and in which I observe a potential in urban media art for engaging directly with our contemporaneity. The temporal dimension in urban media art's aesthetic material is a *condition* for how it intervenes in our reality, by way of intervening in the experiential structures of our contemporary, ontological experience.

However, it is possible to go one step further and develop Groys' notion of radical temporality with regard to urban media art by considering how urban media art (and other variations of media-based art) is made from that same material of artificial light that constitutes our world *and its sensibilities* at rapid speed. As essentially light source, urban media art shares material (of light) with the media aesthetics that are substantial to the world's appearances, infrastructures, news and media formats, organization of markets, economy and social life, as well as functionalities of computationally intelligent services that transform our behavior and ways of doing things in life. I consider the radical-temporal dimension in urban media art as it intervenes in processes of mediation in our urban reality, namely, in media aesthetic immersion as argued to increasingly characterize our communicative existence. It is by means of this radical temporality that urban media art can be considered to carry fundamentally different potentials as *contemporary* art from other art forms. So, how may urban media art interfere with the temporalities that condition our experience frames in emergency culture?

[416] Boris Groys, "On the New," in *Art Power* (Cambridge: MIT Press, 2008), 40.

One possibility, for example, is in a mode of *temporal overlay* via projection onto urban surfaces that, with the use of still image and video, present video-based art in public spaces on existing and temporary display surfaces, as was the methodology behind the Nordic Outbreak exhibition introduced in the introduction. Temporal overlay here is considered in terms of non-interactive *overlays* of material reality with light, sound, video or other media aesthetic forms, which we also find in site-contextual virtual reality art as in the example of Jon Rafman's *L'Avalée des avalés* (2016). Such artistic, media aesthetic overlays introduce images-sensibilities – sensibilities that oscillate between presence and meaning – to our experience of an environment that typically follow different imperatives than images-sensibilities we encounter in other socio-cultural environments.

In a mode of *temporal rupture*, urban media art might present us scenarios of temporal manipulation while revealing the manipulation, for example in sound or visual imagery that reacts directly to sensors or other data sources and reveal the relation between what is measured and what is displayed, such as in Lucas Bambozzi's *Coisa Lida* (2014) in which the displayed video reacts to the speed of traffic. Temporal rupture may also concern artistic experimentation with computational light schemes that react to a visible data source, or it may concern artistic modalities of data visualization in representations of phenomena, patterns, or behavior, capturing and revealing hidden, emotional or unconventional aspects of the urban environment.

Urban media art may also present us with experience frames of *interactivity*, a temporal feature by which the artwork's presence is responsive to our presence, our engagement or input. Interactive art allows audiences to participate by providing some kind of input while a dialogue is established between the artwork and the participant. Anaísa Franco and Jordi Puig's installation *Onirical Reflections* (2013) is an example of an interactive artwork in which visuals on the gallery façade immediately respond to audiences' facial movement in the white frame. The experience frames established with interactivity invite engagement with machinic temporalities in a direct experience, not only allowing us to manipulate or control the presence of the art but also heightening our awareness to these machinic processes.

Urban media art also enables us to connect across time-space in different interfaces and social spaces than those offered by data culture industries, by means of alternative experience frames of *networkedness*. These experiences break with the transmitter-receiver paradigm and allow for data transfer, delay, feedback and open, distributed cooperation models, as

conditions our communicative reality. But when employed in artistic schemes, they may be coded to allow for different premises for and experiences of 'connection.' Custom-made interfaces built around networkedness connect virtual space to real urban locations, as we find in Rafael Lozano-Hemmer's *Vectorial Elevation* (1999), for example, and may allow participants from elsewhere or online to interfere with, control or contribute to an installation in a fixed physical location. By typically delimiting, or rather, focusing the conditions of access to the networked scenario, experience frames of networkedness in urban media art reveal the procedures of network culture and allow virtual forces to operate on our consciousness about the potential effects of connective behavior and participation.

Finally, urban media art may present us with experience frames in forms of *telepresence* by which artworks involve computer-mediated human-to-human interaction aimed at establishing meetings and situations of interconnection, and perhaps cooperation, between participants that are separated by physical distance. Telepresence is encountered in the art examples briefly described in Chapter 1; in Kit Galloway and Sherrie Rabinowitz' *Hole In Space* (1980); and also characteristically in the telematics art installations in public space by Paul Sermon, which connect participants in remote locations in a connected virtual space third-space on a screen. In telepresent encounters, the participant experiences in three different spaces simultaneously: 1) the real space in which one is physically located; 2) per tele-perception in the virtual and simulated visual space that reproduces a visual sphere; and 3) per tele-action at the physical location different from where you are physically present, in which one is tele-present, for example on a screen, façade or other display.[417] Telepresence introduces experience frames that allow us to examine the dispersal of our presence, and of everyone else's presences, as an ontological condition of our communicative existence today, while forcing us to reflect on the meaning, losses, rewards, and changing conditions of locational self-reference entailed in this condition.

It is particularly by means of these temporal qualities, which formulate in oscillation between presence and meaning, that we can understand urban media art as *contemporary*; that urban media art, in its real-time presence in and interference with our material reality, may be considered the art of our *times*. This is, in a sense, by way of acting "untimely," as Friedrich Nietzsche would say when in *The Birth of Tragedy* (1872) he describes those who are truly contemporary as those who neither perfectly coincide with nor adjust themselves to the

[417] See Arns, "Interaction, Participation, Networking: Art and Telecommunication," 205.

demands of their times. Because of this disconnection and anachronism, in Nietzsche's account, 'contemporaries' are more capable than others of perceiving and grasping their own time.[418] As acting *untimely*, urban media art provides experience frames that differ from those that comply with the demands and cultural logics of emergency culture. We can understand the experiences solicited in urban media art as relics of activities that take place in the digital realm and characterize our communicative existence. This is at a level of experiences of meaning or emotion that we can decode, but also at a sensible level of experiencing machinic temporalities that reflect other media aesthetic experience. It is with regard to these, as I will shortly examine, that the art may reconfigure our attention and 'sensible education.'

We find across these temporal experience frames a quality of slowing down and drawing out certain conditions of temporal media aesthetic experiences that are characteristic to our technological life world. In 'stretching' moments and expanding experiences and perceptual processes, urban media art may be considered to be involved with a sense of *production of time*. Art has 'produced' time since long before 'moving art' and media aesthetic art, such as in depicting multiple simultaneous situations in baroque art, in multiple simultaneous perspectives in cubism, in perceptual movement in expressionism, and in producing perception of time and movement in op art and kinetic art. We may even consider that all art that 'touches' us produces time in a way of expanding our sensible, perceptual framework and perhaps our consciousness. In relation to urban media art, production of time concerns, first of all, the orientation of people's attention to *what* they encounter in the mediated experience, *how* they encounter it, and perhaps an invitation to experience a different (non-automatic) range of possible bodily and perceptual reactions to it. In this notion of *producing time*, urban media art can make visible politics, discourses, norms and forces we cannot 'see' but that we become familiar with through the extended experience.

In this we find a pharmakological opportunity for enhancing a certain sense of *literacy* of our sensible system. In this context, 'literacy,' commonly referring to the ability to read, write and use arithmetic, represents our ability to decode 'languages' of sense impressions. Our literacy develops (or narrows) in every media aesthetic experience. Our senses are affected (even if just a little) in for example augmented or virtual environments in which our perception is expanded (even if only for a little while). However, parts of our perception may

[418] Friedrich Nietzsche, *The Birth of Tragedy: Out of the Spirit of Music* (1872), ed. Michael Tanner, trans. Shaun Whiteside (London: Penguin Books, 1993), 60.

'permanently' be expanded since the aesthetic experience will have affected our technogenetic process of individuation, as explored in Chapter 4. Literacy concerns the expanding intensity we are able to cope with, but also diversity of experiences we can relate to. It is necessary to develop our literacy in order to be able to understand and appreciate ('succeed in') new forms of art. However, the same could be stated for other modes of experience, including media aesthetic experience beyond art. If our sensible system is not trained or prepared for the experience, we cannot relate to it or, in the worst case, we are unable to identify and potentially resist how it affects us. The question is if this development of our literacy stirs us into a mode of duration in alignment with emergency culture, or if it develops more in the direction of the alternative mode of duration, that which is attentive to actual urgencies of our time.

Speaking of the mode of homogeneous duration, Walter Benjamin writes how "technology has subjected the human sensorium to a complex kind of training."[419] He considers how technology constitutes not only a prosthetic extension of the human sensory capacity that enables a paired series of reactions, but also a training school for the human sensorium that enables its subsistence in the modern world, for example, how technologically controlled traffic signals control the chaos of the streets. Benjamin considers this training of the human sensorium in a mode of adaptation to the cultural logics of capitalism, as per his metaphor of the amusement park that I visited in Chapter 5. He compares the amusement park to the industrial factory in considering how pleasure activity is as 'productive' to the system of capitalism as factory work itself because it equally 'trains' people and their human sensorium in a technological organization of behavior under capitalist culture.

With reference to the alternative mode of heterogeneous duration, we can consider a different mode of training of the human sensorium through mediation, suggested by Bergson – to whom the nervous system is not regarded as an apparatus that serves to fabricate or prepare representations – as in Walter Benjamin's cultural-critical account. Bergson considers that we need to continuously educate our senses (rather than our intellect) in order to cope with our world, and this does not concern accommodating our senses to *things* as much as accommodating our senses to *each other*.[420] "The aim of this education is to harmonize my senses with each other, to restore between their data a continuity of the needs of my body, in

[419] Walter Benjamin, "On Some Motifs in Baudelaire," in *Illuminations*, ed. Hannah Ahrendt, trans. Harry Zohn (New York: Shocken Books, 1936), 191.
[420] Bergson, *Matter and Memory*, 46.

short to reconstruct, as nearly as may be, the whole of its material object."[421] Bergson explains how we encounter perceptions in intervals, and the task of our senses and for which they need education is to fill out gaps between our 'needs.' We need to "…bring together all sensible qualities, restore their relationship, and re-establish among them the continuity broken by our needs."[422] These 'needs' can be considered from the perspective of our selective memory function. As suggested and based on Bergson's philosophy, our perception of matter depends on a selectionist framework of sorting among images that 'interest us,' by means of helping us to decode and understand an impression or a situation. The theory now added to this is that advancement of our literacy – education of our senses – can sophisticate our selection process. The more advanced our sensory apparatus is, the more options we have for decoding something across multiple meanings. Through the aesthetic experience with urban media art, we tune in on a frequency of attention to particular images in matter. The art contributes to reprogramming our perceptive system (and selective framework) and helps us pay attention to different images in our reality – perhaps even to consciously sense their affect on our human sensorium, which expands and develops in our adaptation to the experience. This might lead to perceptual diversity in our dynamic memory relating to our sensory system. In media aesthetic experiences other than those aligned with emergency culture, we may train or educate our senses and expand our ability to take in and make sense of a diversity of chosen images in perceptual experience, while we sophisticate – in our sensible system as much as our intellect – our connections between images of machinic temporalities and our intuitive, behavioral reactions.

Re-distributing sensibility in direct, environmental and virtual dimensions

This final section will examine how images of urgency in urban media art interfere at a more atmospheric level, perhaps, at the level of the sum of human sensible experiences, beyond the intimate human, sensible experience.

[421] Ibid., 47.
[422] Ibid., 48.

Photo: Tanya Toft

Interlude No. 10[423]

Nordic Outbreak installation under the Manhattan Bridge Archway, NYC, with *Landskaber* (2006/2007) by Mogens Jacobsen, *First Level* (2012) by Styrmir Örn Gudmundsson, *Rewind* (2011) by Jessica Faiss, and *Sea* (2013) by Miia Rinne

On April 4, 2013, between 6pm and 9pm, four video works were projected under the Manhattan Bridge Archway in Dumbo, Brooklyn. The installation was one among five installations in urban public spaces in New York City for the opening week of Nordic Outbreak in April 2013 – a video art exhibition program curated for public space by Director of Streaming Museum, Nina Colosi and myself. In addition to the Manhattan Bridge Archway, Nordic Outbreak presented installations in Times Square in collaboration with the Midnight Moment, in Dag Hammarskjold Plaza, Big Screen Plaza, a building on Bowery Street across from the New Museum, as well as indoors at Scandinavia House, the institutional anchor and symposium host for the program. Throughout the Fall of 2013 the exhibition traveled through a network of institutions, festivals and organizations across the

[423] The artwork descriptions are based on my descriptions on www.nordicoutbreak.com

Nordic region.[424] The exhibition and public program was conceived under Streaming Museum's Nam June Paik-inspired curatorial-conceptual starting point as a global exhibition structure for the museum without walls, showing moving image artworks in a network of screens around the world.

The video works installed in the more than hundred-year old archway under the Manhattan Bridge were selected particularly for this site, speaking to themes of movement, memories and transition. Mogens Jacobsen's *Landskaber* (2006/2007) visually illustrated images reminiscent of a landscape watched through the window of a moving train. After a while the lines are displaced; lines of what appear to be green fields move up into the sky, and blue lines from the sky mix with green lines appearing as fields. Gradually, the spatial representation of a landscape disappears, no longer one decodable structure. By this, what we thought was a form of nature is revealed as only a screen formed by our own ideas. Styrmir Örn Gudmundsson's *First Level* (2012) featured the artist walking and balancing on train tracks in a one-minute playful and performative narrative. With each jump from one track to the other the colors of his clothes change. The simple 'game' of jumping between the tracks becomes a leap into another dimension, by way of the video editing, resembling a journey through a video game, until the level is complete. This is when the artist lands in the middle between the two tracks and disappears. Jessica Faiss' *Rewind* (2011) illustrated a journey of approaching a future-like city. The video is filmed on the way to the Narita airport in Tokyo on an early December morning but manipulated as a horizontal line mirrors the minimalist urban landscape. The destination is never reached, and in a surrealist and silent atmosphere we travel in a dreamy landscape through buildings and roads, but seeing only a sky. Miia Rinne's video work *Sea* (2013) appeared like water drawn with watercolor behaving in a photographic manner. The work was part of a series of 'film paintings' in which the artist reuses celluloid by painting new works on top of earlier ones in what ends up appearing like water – or the sea – in watercolor aesthetics, accompanied by the sound of water in a river. The works were projected across from each other, two on each side of the archway, and two of them with sound that blended slightly.

[424] During Fall 2013 and Spring 2014 the Nordic Outbreak program visited the Museum of Contemporary Art Kiasma and Media Facades Festival in Helsinki, the Danish Architecture Center in Copenhagen, Reykjavik Art Museum, Screen City Festival in Stavanger, Katuaq the Cultural Centre in Greenland in Nuuk, and in January 2014 it visited Umeå in northern Sweden. See www.nordicoutbreak.com.

Maybe it was the contrast between the delicate works and the iconic construction of the industrial bridge, which somehow added nuances to the works; maybe it was the thematic exchanges of sound from the physical movement of cars and trains on the bridge and the abstraction of movement in the works; but somehow both site and installation added up to more than the sum of their impressions and materialities. The sensibilities of the work in a sense 're-distributed' the sensibilities of the environment, not by subversion but by fusion and reconfiguration.

Jacques Rancière considers how in order to enact a political potential, the art has to ensure the production of a double effect: the readability of a political signification *and* a sensible or perceptual effect caused by that which resists signification.[425] "Political art," he argues, "cannot work in the simple form of a meaningful spectacle that would lead to an awareness of the state of the world," as we find in post-war avant-garde discourse, for example.[426] Rancière argues from his critical theoretical position that the trajectory of the Situationist discourse that developed as a radical critique of politics in the 1960s, and which has informed a trajectory of 'resistance' in discourse in public art, is absorbed today into the routine of disenchanted discourse that acts as a critical stand-in for the existing order. This, he notes, is symptomatic of a contemporary "ebb and flow of aesthetics and politics" and also of the transformations of "avant-garde thinking into nostalgia."[427] He suggests that, rather than seeking to enact resistance in the sense of subversion, art may intervene in the *distribution of the sensible*, which in his vocabulary refers to the implicit 'laws' or modes of perception that govern sensible orders and that are common to the participants of a community. The distribution of the sensible describes a form of system that denotes the aesthetic experience we can understand by configuring habitual ways of seeing, saying, feeling, doing – and being. We can imagine how sensibility is distributed within horizons and modalities of what is 'sensible,' which are tied in with the discourses within which we form our understanding of

[425] Jacques Rancière, *The Politics of Aesthetics*, ed. and trans. Gabriel Rockhill (London and New York: Bloomsbury Academic, 2015), 59.
[426] Ibid., 63.
[427] Ibid., 9.

what conditions the world. This involves what characterizes its rules and our sense of agency and opportunities within it.[428]

Similar to how Bergson emphasizes the delimitation of the selectionist framework for recalling memories to support representations for understanding situations, Rancière is concerned with the *sensible delimitations* that narrow or fix the norms, laws or modalities for communication and participation in society. The political work, Rancière suggests, is one that seeks to transmit meanings in the form of a *rupture* in the very logic of meaningful situations, in the mode of 'an unexpected short-circuit.'[429] However, this rupture would not necessarily have to be presented as an antithesis but rather as a modification of the system of sensibility. Rancière's theorizing on the distribution of the sensible thus offers a modality for considering urban media art as able to engage with our contemporaneity with sensible images (of urgency) that interrupt the given distribution of sensibility in a community, society, or in an environmental, global context.

However, consideration has to be given to what this sensibility entails in our contemporaneity with twenty-first century media; how our current machines *assist* our everyday actions that constitute our channels of sensibility – our ways of speaking, hearing, seeing, writing, and feeling in conditions of mediated immersion, as found in contemporary operative images and a-signifying signs. In problematizing Rancière, Mauricio Lazzarato considers how the critical theorists and linguistics have forgotten about the essentially machinic nature of capitalism that configures the function of language in a different way.[430] They remain, he argues, in a "logo centric" world and neglect that signs and semiotics operate according to two heterogeneous and complementary logics (as introduced in Chapter 4): on the one hand, via social subjection, where signs and semiotics produce meaning, signification, interpretations, discourse and representations through language; on the other hand, via 'machinic enslavement' where a-signifying signs produce operations, induce action, and constitute components of a social or technological machine.[431] Our contemporary images involve both sense-based impressions (see, hear, feel) *and* signs – which involve a-signifying signs of current capitalist sign machines. Lazzarato considers that Rancière's popular account

[428] Ibid., 73.
[429] Ibid., 73.
[430] Mauricio Lazzarato, *Signs and Machines, Capitalism and the production of subjectivity* (Los Angeles: Semiotext(e), 2014), 60.
[431] Ibid., 39.

of the "distribution of the sensible" *without* the machinic assemblage of our society and its molecular, microphysical operations and non-human dimension, amounts to an idealism of the subject.[432] This point reflects the prevailing concern with regard to our current communicative existence with regard to the degree of subjectivity that can be granted the individual, considering that she is immersed in temporally dispersed experiences influenced by machinic processes and speeds – some of which avoid our consciousness. Here we can recall the considerations on subjectivity in Chapter 4, alongside the positions of Lazzarato, Guattari, Simondon, Hayles and Hansen, as constructed beyond individual perception through complex technogenetic processes of *individuation* with our technological reality. Based on this my application here of Rancière's theory of the distribution of the sensible considers the 'sensible' to encompass all modes of sensibilities of our contemporary communicative existence, based on a conception of the subject to be in a process of individuation rather than 'possessing' a certain subjectivity. This is fundamental to how aesthetics affect us in our current contemporaneity.

In my reflection here on how the *contemporary* aesthetic qualities in urban media art interfere with media aesthetic sensibilities by re-distributing sensibility at a more atmospheric level – the level of our (calculative) horizon – we need to take into account that this differs in every environment. This especially concerns the *visual* level of sensibility, which can be exemplified with a brief comparison between two different urban contexts I have worked with, Paulista Avenue in São Paulo, in which the urban ambiance is almost 'clean' of advertisement, and Times Square in New York City, one of the most densely advertised and illuminated urban environments in the world.

Paulista Avenue, a busy and polluted business center representing the modernist urban project that in the 1950s replaced the original residential neighborhood in São Paulo, is unlike most others because of what there is *not* – advertisement. In 2006, the city's conservative mayor Gilberto Kassab passed the Clean City Law, effective from 2007, which outlawed all outdoor advertisement. The law included a ban on outsized billboards and screens, even advertisement on the sides of buses and taxis, and the dimensions of store signs were regulated. The law was passed with the aim of combating pollution, and in particular, visual

[432] Ibid., 90.

pollution.[433] As a result, the center of São Paulo has no billboards, no flashing neon signs, no electronic panels, and no large LED advertisement screens.[434] In fact, the streets of inner São Paulo are rather dark at night. As my colleague and creative director of Verve Cultural, Marília Pasculli, brought to my attention at an early stage of my involvement with the SESI Digital Art Gallery, the low light levels have resulted in people not feeling safe in the streets – and for good reason, considering the high crime rates for the city. Consequentially, although the fourth biggest city in the world, São Paulo's urban environment does not subscribe to a visual urban system designed for consumer society and ruled by capitalism. Artworks presented on the LED Gallery stand out in the urban context, are not confused with advertisement of which there is none, and are free to develop a media aesthetic language more or less on their own terms with regard to the site-specific media aesthetic – and significantly visual – ecology. Rather than redistributing existing media aesthetics, art installations in this environment may be considered to introduce and distribute a new visual language to the environment, while introducing experience frames that mirror those we encounter with media aesthetics in other situations and contexts.

The conditions for the distribution of the sensible in the media-aesthetic environment of São Paulo are completely different from those of Times Square in New York City. Since the first electric sign was installed in Times Square in 1904,[435] the site has become covered in first billboards and then electric billboards, evolving into the densest media aesthetic environment in the United States, and clearly revealing the face of capitalism; signifying the free market and hierarchy of brands, neoliberal optimism, and consumption. This environment hosts the Times Square Arts' Midnight Moment, the most comprehensive and expensive urban digital gallery to date. Since 2012, the Midnight Moment has engaged Times Square as a gallery venue by coordinating twenty-three LED screens and showing video-

[433] Explained in the mayor Gilberto Kassab's own words: "We decided that we should start combating pollution with the most conspicuous sector – visual pollution." David Evan Harris, "The World's Fourth-Largest City Outlaws Billboards, Calls It 'Visual Pollution,'" Alternet, August 20, 2007, accessed March 10, 2015, www.alternet.org/story/60084/the_world's_fourth-largest_city_outlaws_billboards,_calls_it_'visual_pollution'

[434] Tanya Toft, "Situations of presence: reclaiming public space in the urban digital gallery," in *Proceedings of the 2nd Media Architecture Biennale Conference: World Cities*, eds. Martin Brynskov, Peter Dalsgaard, Ava Fatah, S. B. Pold, Marcus Foth (ACM: New York, 2014).

[435] The first electric sign in Times Square was an advertisement for Trimble Whiskey placed on the north side of the 47th Street between Broadway and 7th Avenue. See Bowery Boys, "A trip to Times Square 1904: Lights and old whiskey," The Bowery Boys: New York City History, December 14, 2010, accessed December 2, 2016, www.boweryboyshistory.com/2010/12/trip-to-times-square-1904-lights-and.html

based art at 11.57pm and for three minutes every night.[436] As Sherry Dobbin, curator of the Midnight Moment notes: "This is Times Square. This is never going to be a meadow or a pasture or a place with wide-open sky for a great contemplation; it's never going to be a nature reserve. So, screens or no screens, it's not going to change that part of the place's identity. There are always going to be hyper, hyper-realized and hyper-intense environments. You've got to sort of collaborate with it."[437] Nina Colosi and I realized this when presenting one of the installations for the exhibition program Nordic Outbreak in the Midnight Moment, a performance 'cut' of the video work *Mutual Core* (2012) by the Icelandic musician and artist Björk and Andrew Thomas Huang. The piece was chosen for this site because it contained a rhythm, color density and visual appeal strong enough to stand out in the environment of Times Square, and which would engage with the aesthetic character of the environment by redistributing its media aesthetic intensities, redirect people's attention, and for three minutes allow for a different mode of presence.

From the perspective of our current condition with twenty-first century media, it is also necessary to consider the distribution of the sensible with regards to different dimensions of the artwork's sensible effect. During a visit to Hong Kong in May 2016, I encountered a new 'artivist'[438] work by Sampson Wong and Jason Lam (part of the activist-artist group Add Oil Team) that made me think of the various levels on which urban media art 'redistributes the sensible.' The work was part presented on the façade of the ICC Tower, commissioned for the Human Vibrations festival that coincided with the International Symposium on Electronic Art (ISEA). The artists' work was initially titled *Our 60-second friendship begins now*, showing a clock counting down as a reminder to treasure every moment. However, it turned out that the artists had hidden a different piece 'inside it.' This was a video sequence showing a clock counting down to July 1, 2047, when Hong Kong will no longer be politically or legally divided from China. The hidden video sequence was explained and documented on the Add

[436] "Midnight Moment," website of Times Square Arts, accessed December 4, 2016, ://www.timessquarenyc.org/times-square-arts/projects/midnight-moment/index.aspx

[437] Sherry Dobbin, interview with Tanya Toft, New York City, November 2013, accessible at www.urbanmediaaesthetics.org

[438] In *Global Activism, Art and Conflict in the 21st Century* (2015), Peter Weibel suggests 'artivism' as a recent mode of art evolving around a model of conflict. This term denotes a combination of art and activism, developing in between performative, interactive and participative art forms in particularly media arts.[438]

Oil Team website.[439] The critical political comment in this was emphasized by the timing of the work, as it was shown for the first time on the same day that one of China's top leaders, Zhang Dejiang, visited Hong Kong. A part of the work was thus embedded as a kind of Trojan horse, as a visual sequence making a resistance element, entitled *Countdown Machine*. This dimension was extended and explained on the accompanying website and actualized in the reactions to the work that occurred after the artists had contacted the New York Times and CNN, as well as other news outlets, blogs and news channels in Hong Kong and internationally that paid attention to its critical political comment. Interesting was how the artivist work operated on multiple levels: from direct experience of the work in its site of installation in Hong Kong; in a relational or environmental mode stirring ruptures in the sensibilities also beyond Hong Kong, catching global attention; and evoking a future-present anxiety about the two-system principle of the relationship between Hong Kong and China coming to an end in 2047. Art images may interrupt the distribution of sensibility on at least these three levels: At the level of 'direct' experience with the artwork, the level of the artwork's environmental dimension and reach, and at a virtual level at which certain forces surround and act on the present and affect current actualizations.

In a dimension of *direct experience*, people encounter an artwork situated in its context. At this level, the art initiative is involved with the social or cultural sphere, the level of concrete experience, service or function. Similarly, at this level we can consider the contextual, cultural signification and decoding of the work, for example when a subversive artwork or guerilla initiative makes a critical comment. This is the level of potential intimate, direct-immersive experience with the work – not experience *of* the work as if an isolated situation, but experience *with* the work, as modifying the distribution of the sensible in the local site and context. For *Countdown Machine* in Hong Kong, at this level audiences experienced the work installed on the skyscraper in its urban site of Kowloon. When studying the work more closely, and in the urban context and current discoursive environment of Hong Kong, one may recognize the vague appearance of human figures at the top of the tower, beyond the counting clock. One may even notice that the figures suddenly make a move. In my decoding of these meaning effects they resemble the movement of the position of what

[439] As the artists write, due to technical reasons the number shown on the facade is not the accurate countdown number – the work was not real-time but rather symbolic. "Count down to 0:00, 1st July 2047," Add Oil Team, accessed November 20, 2016, www.addoilteam.hk/countdown

appears to be rifles, by which I immediately associate the figures with soldiers – perhaps on their way to invade or stand up for Hong Kong?[440]

In a *relational*/*environmental* dimension, the art engages with an ecosystem of global attention and participates in producing and re-distributing global sensibility. The environmental perspective of cosmological sensibility grants mediated urban images significance beyond the situation of their direct encounter or address in physical space. With regard to art, this concerns how the artwork not only exists in its site of installation but also in our online ecology, distributed via social media, blogs and by official news media on the Internet. From the environmental perspective, aesthetic encounters always exists with a horizon of images – challenging the calculative ambiance of Crandall's "defining horizon." In Bergson's account of our world as made up of images, he equally uses the term 'horizon' to explain how our surrounding images seem like "painted upon a more uniform background." However, if we consider art images to interrupt the distribution of sensibility at this environmental level, they also affect this background to perhaps become slightly less uniform. Media aesthetic urban images can be considered then to affect us not only at the level of visually and sensible direct experience but also to impact a peripheral ambiance in our horizon of environmental experience.

In this case, urban media art can be considered to interfere with sensible distribution at a third, *virtual* level, in a dimension of future relation, with which we can consider it to have a virtual quality. Here we can recall the conception of virtuality along with Bergson's consideration introduced in Chapter 4 – how the real divides between two realms, the actual and the virtual: the actual referring to what has been historically actualized, and the virtual evolving from actual history but not yet 'reality,' only existing as forces that surround the present and await their actualization. In this way, the virtual is 'acting' on the present. At the level of virtuality, Countdown Machine reveals the potential reality of the anxiety of the people of Hong Kong, how this anxiety (although not yet grounded in any concrete threat) eventually makes Hong Kong restrict itself in a mode of self-controlling panopticon effect. We can consider how the artivist dimension of Countdown Machine was *actualized* in the press attention and the reactions this stirred in the arts community in Hong Kong,[441]

[440] However, when I contacted the artist Sampson Wong in September 2016 and asked him about what the figures meant or represented, he noted that they did not mean anything.

[441] As it happened, together with my co-author of *What Urban Media Art Can Do – Why When Where & How*, Susa Pop, we had invited the activist-artist Sampson Wong to a panel together with curator of the Open Sky

eventually causing that the Open Sky Gallery to cease to exist during the summer of 2016. At this level of virtuality, the artwork comes to reveal what is not (yet) actual reality, but somehow still pressures the present: how the visual regulations in Hong Kong do not tolerate self-directed critical messages, but rather follows overall an agenda of 'entertainment' with light and sound shows. At this virtual level, the art modifies our memory-images which feedforward into our perception of and practices with media aesthetics in the future.

Conclusion

This chapter has taken a step back from the inquiry into the media aesthetic images of emergency culture, which I have examined throughout as conditioning our contemporary communicative existence in technologically developed urban contexts today. The consideration here is urban media art as contemporary – by means of its *temporary* qualities. As *images of urgency*, referring to images of sensible impression that redistribute the sensible away from the logics and impulses of emergency culture, urban media art presents an alternative to the images derived from media aesthetic immersion common to our everyday socio-cultural experience. As a form of pharmakological recompense, the art interferes with the temporalities of our media aesthetic experiences of everyday life by means of its temporal experience frames in, for example temporal overlay, temporal rupture, interactivity, networkedness and telepresence. By these temporal qualities, which formulate in oscillation between presence and meaning, the art offers a form of *production of time*, providing temporal experience frames that 'stretch moments' and redirect people's attention in order to allow for bodily and intellectual reflection. These temporal experiences may help us with slowing down and making machinic processes perceptible, or at least, make us aware of their operations.

Art images participate in developing our sensible literacy, by way of educating and expanding our senses to cope with the images of our time. This is by way of 'training' our sensorium and developing intuitive, bodily and reflective awareness about how images affect our duration, and us. Urban media art may invite people to experience a different (non-automatic) range of possible bodily and perceptual reactions to what they encounter, and in this process 'educate their senses' and perceptive system (and selective framework), thereby

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Gallery Maurice Benayoun (though not curator of the Human Vibrations festival, who in 2016 was Caroline Ha Thuc) and also artist Christa Sommerer, just a few days after the first presentation of the work. This became the first occasion for the artist to share his incitements behind the artivist intervention in public.

improving the ability to pay attention to different images in reality – perhaps even to consciously sense the affect of operative images on the human sensorium. In this occurs a possibility for developing consciousness – bodily and intellectually – in a process of expanding one's memory framework. The gain of this consciousness is not necessarily to support other 'conscious moments' but to store a wider range of images in our memory. By entering our memory pool and becoming part of our intuition, images of urgency gradually cause our memory framework to change, affecting our technogenesis and process of individuation. Urban media art can thus help us with developing an awareness of *how* we are present in our technological reality, and allow us to experience the 'presence' of other temporalities and perhaps help us to realize (even if unconsciously) what our modes of experiencing presence entail.

In acknowledgment of Rancière, the effect of images of urgency in a notion of *(re)distribution of the sensible* can be considered as interrupting the implicit or common modes of perception that govern sensible orders in a community – including machinic sensibilities and a-signifying signs. Sensibility is context-specific, depending on both the intensity and technological conditions of the particular environment, and it regards multiple dimensions of sensibility, both direct experience, a relational/environmental dimension beyond the local context, and a level of future/virtual experience, at which the art may activate a potential future condition that comes to surround and 'act' on the present.

Conclusions: Images of urgency

From what used to be my living room on Kent Avenue in South Williamsburg, Brooklyn, I had clear sight of downtown Manhattan across the East River. On September 11, I could see how the skyline changed and two gigantic light pillars sprung up, the size of skyscrapers, just next to the new One World Trade Center, disappearing into the sky. The memorial installation *Tribute in Light*, conceptualized by artists Julian Laverdie and Paul Myoda, was inaugurated in 2001 in remembrance of the September 11 attacks by al-Qaeda on the United States.[442] *Tribute in Light* consists of two shafts of light made of eighty-eight searchlights clustering 8,000-watt lights. These are projected skyward from the roof of the Battery Parking Garage on Morris Street on September 11 every year, in memorial and mourning of the destruction of the twin towers on 9/11, 2001. The installation can be seen from more than sixty miles away on a clear night. Unfortunately, on September 11 in 2015 it was necessary to shut off the *Tribute in Light* four times because thousands of migrating birds had gotten trapped in the light from the extremely powerful beams. The birds are used to navigating by light, using sunlight, moonlight and starlight as an external compass to find their direction, but confused by the light source from the beams some would drop down from collision with other birds or from exhaustion, after circling around the beams for hours.[443] It has not been reported if this incident also occurred in previous years, but it is likely. While the unfortunate fate of the exhausted birds speaks for itself, the incident points to a global problem: consider just how many artificial light beams, building light schemes and illuminated displays that increasingly populate our cities, disturb the ambiance of the sky. Artificial lights interfere with the instinctive behavior of migrating birds that usually navigate after patterns of light.[444] We are

[442] *Tribute in Light* (2001) is produced by the Municipal Art Society of New York in collaboration with the public arts organization in New York City, Creative Time.

[443] Chris Pleasance, Ashley Collman and Joel Christie, "Tribute in Light shut off four times after THOUSANDS of migrating birds get 'trapped' like moths in the most powerful beams ever produced on Earth to commemorate the victims of 9/11," Mail Online, September 12, 2015, accessed December 14, 2015, www.dailymail.co.uk/news/article-3232091/Tribute-Light-shut-four-times-THOUSANDS-migrating-birds-trapped-like-moths-powerful-beams-produced-Earth-commemorate-victims-9-11.html

[444] In recognition of this problem, Toronto shuts off most of its lights during the bird migration season (mid-March until June), advised by the Fatal Light Awareness Program, a non-profit initiative working to safeguard migratory birds in the urban environment through education, policy development, research, rescue and rehabilitation. Also other cities across North America are recognizing this problem and coming together in the

reminded how, when we interfere with the environment through mediated intensities, we simultaneously interfere with the world's ecosystem.

In this 'disillusion of light' we find a metaphor of a symptom not only concerning the disturbance to bird migration routes but also ecologies relating to human sensibility. Perhaps the situations whereby the effects of intensifying urban media aesthetics on birds touched upon in this dissertation – affecting change in behavior, sound level, and circadian rhythm in adjusting to the brightness and noise of cities, light entrapment, and disturbing migration patterns – are not so different from our human affect and 'entrapment' in contemporary media aesthetic conditions. Perhaps the dominant 'cultural compass,' after which we intuitively navigate in our current mode of duration, is equally disturbed by mediated sensibilities that confuse our inner nature. This reflection indicates the direction in which this dissertation has developed as an inquiry into the media aesthetic conditions – and urgencies – of experience in our contemporary communicative existence.

From my philosophical point of departure in Henri Bergson, my writing was initiated under the consideration that in order to be able to examine media aesthetic experience today, we need to step back from *what* is being experienced to what *conditions* our experience. Only then, Bergson would argue, can we carefully attend to what we take in during conscious experience and not force a conceptualization of that experiential content – which our societal logics, discourses, spectacularization schemes and habits tend to make us do.[445] Bergson reminds us to pay attention to how we are subjected to thinking, intuition, behavior and action along the lines of discourse and logic of our dominant societal imaginations. At the time of his writing, around the turn of the nineteenth century, he characterized a condition of "spatialized time." This indicates a contemporary excitement for relativism, time measurement, and synchronization as well as measurement and quantification of the world and life within it, which at the time informed the dominant imperatives of realist and idealist philosophy, essentialist conceptions of knowledge, and mechanistic and totalitarian approaches to urban development. In bringing Bergson's philosophy into contemporary purview we can problematize our current condition from a similar position of concern with

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Great Lakes Lights Out Initiative. "Lights and Nighttime Collisions," website of FLAP, accessed September 22, 2016, www.flap.org/lights.php

[445] Bergson is interested in experience *before* it becomes relative to human needs and intelligence. Henri Bergson, *Matter and Memory* (1911), trans. N.M.P. and W.S.P (Mansfield Centre: Martino Publishing, 2011), 184-185 and 321.

quantification and homogenization of our contemporary life worlds. I thus consider his notion of "spatialized time" in perspective of our current mode of duration along "spatialized temporalities" – by which our movement is aligned with the forces that condition the multiple spaces and temporalities we continuously move through while navigating our communicative existence with twenty-first century media. In a contemporary light of Bergson's concern, I have inquired into contemporary media aesthetic phenomena and experiences while paying attention to their cultural-behavioral mechanisms.

This dissertation has progressed by means of inquiring into tendencies of urban media aesthetics as a condition of our communicative existence – beyond the art, but derived from attention to urban media art's contingency with these tendencies, as contemporary art form. These are conditions that I locate in the contingent relations between urban media art and our mediated urban context: intensity, intelligence, and immersion. Intensity and intelligence relate to how urban (and other) environments are being upgraded with intensifying media aesthetics driven by increasingly intelligent, computational functionality that allows for increasingly granular measurement and increasingly sophisticated calculative processes to streamline, secure and entertain us in our everyday life worlds. As grounded in Hans Ulrich Gumbrecht's theory on presence in Chapter 2, "Intensity," we have developed a desire for media effects that may help us with establishing a *sense of presence* in our temporally fragmented existence today. Contemporary media aesthetic conditions of intensity and intelligence concern a matter of *immersion* in the present moment, a quality of technology that makes us feel presence in something other than matter – which we recognize from experience in virtual reality. This involves an experience that manipulates our nervous system to accept mediation to be authentic as part of our present environment. The chapters on these three media aesthetic tendencies have lead from reflections on urban media art's contingent relations with our technological reality to deeper philosophical reflections on how intensity relates to changing conditions of presence, how intelligence relates to spatialization of temporalities, and how immersion concerns behavioral change in memory.

In light of the operational function of twenty-first century media, a sense of *mediated existence* has become characteristic to our contemporary experience. Our mediated existence requires, as explored in relation to Bergson's philosophy, that the image-impressions that enter our dynamic memory framework in experience are increasingly mediated and artificial. What I describe as an overwriting of natural sensibilities with artificial ones, involves that

artificial, media aesthetic images become part of our memory framework, from where we develop our intuition, impulse, behavior and mode of responding to the world. In other words: this is from where we formulate our mode of duration. *Immersion* has become a quality of a culture stimulated and organized by the logics of our media aesthetic environments. In immersion we accept that what we are exposed to is just part of our experience. In this condition we more easily become subjects of involuntary control, since we don't notice how our consciousness is suspended or playing a role of only part awareness. When immersed in media aesthetic environments, as I have examined with reference to research on virtual reality, our attention is repositioned, and potentially our thinking, behavior and actions reconfigured.

What is suggested in Chapter 5, "Spectacularization of Behavior" to be a condition characterized by *emergency culture* concerns our cultural immersion in a constant, 24/7 pursuit world with neoliberal foundations, characterized by media aesthetic intensification and optimization of intelligent functionality. These inform our media aesthetic imperatives in a kind of treadmill situation of continuous upgrades, improvements, and new media aesthetic experiences. Emergency culture denotes a condition of our contemporaneity that we can identify in corporate, political, and also cultural and artistic initiatives, which inform logics of progress as well as basic cultural, social and increasingly also political means of participation. I suggest that this cultural state to a large extent conditions how we experience media aesthetics in our urban reality today; the imperatives for how contemporary media aesthetics are designed and develop, which eventually affect our perceptual experience and participation in everyday life. Media aesthetics increasingly *make* architectural constructions of our life world as environments that direct our attention and stimulate modes of thinking, behavior and action. In this situation, by means of the voluntary control mechanisms of the new data culture industries, we are more or less voluntarily contributing to maintaining a system that facilitates experiences of convenience, excitement and spectacularization in media aesthetic augmentation – both online and in our material life world.

In describing our current media aesthetic condition as characterized by *spectacularization*, I depart form a conception rooted in critical theory and post-war avant-garde in terms of communicated messages of, for example advertisement or other idioms designed for subjective seduction, passivity and disillusionment of the spectator. I rather consider spectacularization in terms of sensation in environmental ambiance and emotion, as

is characteristic of our media aesthetic condition of immersion. Rather than manipulating our subjectivity, I consider spectacularization to concern experience in a complex cocktail of presence and meaning effects in which simultaneously artificial, mediated sensibilities are overwriting natural ones – affecting us while bypassing our experience by which we might be more likely to accept how we are being 'positioned' – directly or indirectly – in the experience. Our spectacularized, media aesthetic immersion concerns an integrated machinic-operational and human-behavioral condition in which we participate and that we simultaneously generate without time for deliberation on our overall pathway of duration towards actualizing our future reality. As a result, we act in a mode of indifference and sameness, more in terms of the 'nature' of emotional encodings of the given media aesthetic environment than according to our inner human, ethical nature.

The conclusion to my initial question of "what is urgent?" points to the *behavioral consequences* of this condition. The urgent situation explored in this dissertation occurs when media aesthetics condition our immersion in a manner of aligning our mode of duration with the logics of emergency culture. Under these circumstances, our intuitive modes of thinking and acting – our automatic selections of perception images from our memory framework – tend to respond to the world as this appears to be laid out before us, according to the logics, templates and delimitations of interfaces it represents. As such, the urgent dimension of the media aesthetic tendencies and related urban conditions highlighted here do not primarily concern particular media aesthetic design, expression or development imperatives in themselves. They rather concern how the experience frames we are offered constitute a foundation for human intuition and behavior that is detached from conscious, critical and ethical reflection.

My inquiry has developed around these overall concerns that our duration is affected by media aesthetics, which go far beyond the aesthetic discourse of the urban media artwork – the aesthetic phenomenon of my point of departure. This reflects the consideration that we cannot understand and approach media aesthetic phenomena – artistic or otherwise – as single, isolated or only 'one-site' specifics, but must take into account the communicative reality that conditions these (and future) phenomena. This also entails that we have to consider the meaning and power of media aesthetic phenomena – artistic or otherwise – in terms of a hybrid, environmental commons, rather than offline public spaces in a traditional sense.

In my methodological reality, my attention to urban media art's relations to broader media aesthetic conditions of our contemporary communicative existence has been cultivated through praxiodoxical curatorial practice. During my academic research I have been actively, theoretically and conceptually involved with artistic employment of media aesthetics in art and exhibition making. I have accumulated knowledge in a mode of zigzagging between ideas, epiphanies, realizations, experiences and reflections that have emerged from my development of an acquaintance with this art form through curatorial practice; some of these fading again before turning into questions or concepts, others growing stronger and directly informing my practice; some ideas occurring on the spot and some emerging in post processing. Organized in a non-temporal chronological order, some of these reflections appear in 'interludes' as they have progressed my thinking and inquiry as *images of urgency*. In summary, these interludes include ideas concerning urban media art's relationship with our contemporaneity in a condition of contingency, as indicated with:

- the installation of Maurice Benayoun's *Occupy Wall Screens*, which has informed my approach to urban media art as overall contingent with our communicative existence;

- an initial critical consideration on the dominant scientific conception of 'space' as challenged by the dodecahedron's indication of the solid of aether in Olafur Eliasson's *Fivefold dodecahedron lamp*, which guided my point of departure in the philosophy of Henri Bergson and his problematization of spatialized time;

- attention to various and accelerating speeds in our contemporaneity, as indicated in Lucas Bambozzi's installation *Coisa Lida* in direct responsive interference with Paulista Avenue in São Paulo, which guided my inquiry to rethink Bergson's problematization of spatialized time in a contemporary condition of spatialized temporalities;

- considerations on the relation between images and memory in human experience, as depicted in *Onirical Reflections* by Anaísa Franco and Jordi Puig, which led me to further identify with Bergson's attention to the aspect of his philosophy concerning dynamic memory as an active and central dimension of our perceptual experience;

- concern with the role of algorithmic functionality, logic and image behavior, an alien-machinic operation assimilated into our 'natural' urban experience, as brought to my awareness in conversation with the artist, Eduardo Kac during installation of his work *Lagoglyphs: Animation*, also on Paulista Avenue, which informed my understanding of urban images as also operational and a-signifying;

- consideration on the wide expansion of media aesthetics in the urban domain, visually expressed by the application of LED technology on buildings, as in the SESI SP Digital Art Gallery in São Paulo, which presents a dimension of art's contingency with technological developments in our contemporaneity, and which speaks to a global tendency of intensifying presence effects with media aesthetic upgrades;

- attention to the discrepancy between human and machinic temporalities in processes of mediation today, as suggested with the interactive dimension of the installation *0.25 FPS* by Radamés Ajna and Thiago Hersan, reflection on which has directed my thinking to consider the fundamental difference in current image sensibilities of machinic temporalities from previous modes, as bypassing our human conscious awareness;

- consideration of our current media aesthetic condition as characterized by experience of immersion, a situation of experience in which artificial images-sensibilities replace natural ones, as the installation of Anders Weberg's *Here All Alone* in Copenhagen points to, and which has directed my inquiry to examine our experience in virtual environments;

- consideration of our ontological condition of desubjectification as is at stake in the installation *SelfieSãoPaulo* by Moritz Stefaner, Jay Chow and Lev Manovich with significant regard to the socio-cultural experiences offered by data culture industries, which led my examination to reflect on our own participatory role in upholding current mechanisms of spectacularization via modes of involuntary control;

- from experiencing how the sound and images of the four video installations under Manhattan Bridge directly onto the archway in the Nordic Outbreak installation interfered with the distribution of sensibility in the space, especially as trains passed overhead, I have had to consider a broader option for art images' interference with our contemporaneity. As examined in Chapter 6, this is by way of (re-) distributing sensibility rather than enacting resistance as a question of meaning.

My methodology of inquiring *with* the art into conditions of media aesthetic perceptual experience today reflects a consideration of the curatorial as a position of locating oneself inside contemporary thinking and seeking to respond to deep challenges in our contemporaneity. Rather than focusing on practical curatorial practice, my inquiry has departed from a concern with the broader, media aesthetic urgencies that I consider relate to the critical pursuits in urban media art's *contemporary* material and raison d'être.

By inquiring *with* the art into our contemporary media aesthetic, communicative reality, I have endeavored on a somewhat philosophical journey of trying to progress this investigation through questions beyond the immediately urgent. As Terry Smith reminds us, in relation to his writing on contemporaneity in curatorial practice and thinking, we should be careful not to go only for the immediately, obviously urgent, which is to invite superficial contemporariness.[446] Superficial contemporariness occurs when we act in effect of the forces of globalization or when we presume priorities of 'the contemporary.' In reflection on what it means to avoid the 'immediately urgent,' rather than leaning on immediate answers and swift solutions, as provided by artistic discourse, art history or moral societal imagination, I have chosen my methodological approach from the perspective that sometimes we tend to make up problems rather than respond to what is urgent. This is, for example, when sticking to image perceptions that are tied to previous contemporaneities, such as the spectacular image rooted in a space-time conception and philosophical model of the camera obscura, nurtured through theories on suppressed urban experience in the nineteenth and twentieth century and finding its way to the art as a distant 'image' we *look at* in the modern image, as elaborated on in Chapter 5. If we stay with a sense of obligation to an imperative developed by critical theory, cultural studies and the avant-garde, we miss out on the opportunity to discover aesthetic qualities in emerging art forms that may follow completely different trajectories. Such qualities, examine here in terms of urban media art's temporal dimensions, might 'show' us the way to new sensible encounters with media aesthetic images, and by exploring them we might gain experiences that equip us to better deal with the experience frames of our contemporary communicative existence – with how we are *present*, conscious and participating in this condition.

In the final chapter, "On the Contemporaneity of Urban Media Art," I suggest that we find an alternative to images that further emergency culture in *images of urgency*. The difference between emergency and urgency is the difference between when we adjust our (media aesthetic) environments to our self-constructed desire for visually larger and brighter phenomena versus when we adjust our needs to the world's environmental ecosystem and its urgent issues. Eventually, I arrived at the position of how urban media art may be considered *contemporary* – as proposing experience frames that interfere with temporalities of our contemporary experience with media aesthetics. I have located some of the qualities in the

[446] Terry Smith, *Thinking Contemporary Curating* (New York: Independent Curators International, 2012), 219.

art's media aesthetic nature for engaging with our contemporaneity, which I emphasize by the art's temporal qualities – with examples of temporal overlay, temporal rupture, interactivity, networkedness and telepresence – which we experience in a combination of presence and meaning. These temporal experience frames offered with the art relic experience frames characterize our broader communicative existence. In tension between presence and meaning, art presents us with experience frames as alternatives to those we are granted in emergency culture. At a sensible level, they stretch moments and produce time, direct our attention to how we experience being present in situations of media aesthetic immersion, perhaps making the machinic processes that characterize our ontological experience today a little more perceptible. By these temporal qualities, I suggest, images of urgency in urban media art engage with a redistribution of sensibility in our urban public domain – sensibilities that concern and condition our contemporary communicative existence.

It is in reaction to the condition of emergency culture, mainly its media aesthetic, temporal experience frames – which, I argue, characterize our contemporary communicative existence – that I eventually locate a potential for urban media art to exercise a form of interference with our contemporaneity, as an *art of our times*. Marshall McLuhan states: "Art is the antenna of our species," and perhaps urban media art is the very tip of that antenna. We can think of urban media art as *radical temporal art form*, not only by means of its engagement with our communicative existence but also by virtue of its broader contingent relations with our world, working in and with the now, in direct, live contact with the real world – its urban issues, practices and disciplines, aesthetic fields, and the media aesthetic conditions of our communicative existence.

On a note of perspectivation, as potentially offering experience frames that expand our sensible system, urban media art may help us with developing more 'languages' for communication; languages that are intuitive, bodily, and multisensory. Rather than languages of direct communication or translation of meaning, I consider the sensible languages in art as visible and invisible interferences with our distribution of sensibilities, by which they may engage or release certain perceptive sensibilities in our world. This speaks to a greater urgent challenge of our contemporaneity, of finding ways of disseminating meaning that make alternatives, or even bridge between calculated, rational argument, and emotional and sensational rhetoric, which we've recently witnessed dividing the Western world.

On a self-reflective note, in my consideration on how media aesthetics condition our experience in the twenty-first century media city, I have sketched a picture of a technologically advanced situation as characterizing our contemporaneity. We should however be careful, as Jonathan Crary warns about representing global contemporaneity in the form of a new technological epoch, whereby changes in large-scale economic developments and related micro-phenomena of everyday life are considered inevitable, with the idea of technological change as 'quasi-autonomous driven by some process of autopoiesis or self-organization.'[447] This, Crary argues, allows various aspects of our contemporary social reality to be accepted as necessary, as unalterable circumstances, or akin to facts of nature.[448] In McQuire's account of the media city, which frames many of the urban media aesthetic references discussed throughout the dissertation, he names a historically distinctive milieu that has been in the process of becoming since the development of technological images in the mid-nineteenth century – significantly since the application of artificial light after Edison's invention of the light bulb in 1879 which transformed our modern society.[449] However, as argued by Shannon Mattern, our cities were mediated also long before innovations of the nineteenth century.[450] If we look beyond – or before – the industrialized city in which, as suggested in Chapter 3, growth, acceleration and incitements of commodification and promotion of space have driven imperatives of media aesthetics, media aesthetics of contemporary technology might find reference and genealogical foundation in inventions of alternative imperatives.

We can, for example, learn from the ancient light festival that media aesthetics have once been used for something else than profit, progression and commodification of places. We find this in one of the oldest traditions and predecessor of what we know today as the light festival, the Hindu festival of lights known as the *Diwali*, which dates back to ancient times in

[447] Jonathan Crary, *24/7* (London and New York: Verso, 2014), 36.
[448] Ibid.
[449] This is not entirely correct, as a number of incandescent lamp models were introduced prior to the version of Joseph Swan and Thomas Edison. Edison's version presumably outstripped the others because of its effective incandescent material, a higher vacuum than others were able to achieve (by use of the Sprengel pump) and a high resistance that made power distribution from a centralized source economically viable. See Robert Douglas Friedel, Paul Israel, Bernard S. Finn, *Edison's electric light: biography of an invention* (Rutgers University Press, 1987).
[450] Shannon Mattern, *Deep Mapping The Media City* (Minneapolis: University of Minnesota Press, 2015).

India. "Diwali" translates to "series of lights"[451] and has been celebrated as a festival of lights in the northern hemisphere as an official holiday of Fiji, Guyana, India, Pakistan, Malaysia, Myanmar, Nepal, Singapore, Sri Lanka, Suriname, and Trinidad and Tobago. It celebrates the victory of light over darkness, good over evil, knowledge over ignorance, and hope over despair.[452] During the celebrations that take up a five-day period, lights shine from housetops, from inside and outside decorating doors and windows, around temples and other buildings, and culminate in fireworks. Today, in addition to *diyas*, which are wax candles of various colors and forms, colored electric bulbs of different shapes and sizes are also illuminated after dusk. A photography series by Indian photographer, Arko Datto documents how slums bordering the Suburban Transit rail tracks in and around Kolkata which house the city's dispossessed and underprivileged, celebrate Diwali today by not only lighting diyas but also by decorating their homes, and with sculptures made from boat wrecks and other temporary constructions draped with chains of electric, colored lights. What we see in these photographs is a natural updating of an ancient media aesthetic tradition with contemporary media aesthetic technology. Perhaps they also indicate a crossroad; on the one hand a continuation of an ancient tradition applying contemporary technologies of light, on the other hand the transition of tradition from ancient to contemporary media.

In the ancient roots of Diwali, we find an alternative imperative for using mediation to establish a sense of presence than that offered by contemporary continuations of the concept of the light festival, such as in its most extreme examples like that of the Vivid Sydney which have turned it into a multi-million industry and city branding effort. We should realize that our cities will continue to progress with enhanced intensity, intelligent functionality and conditions of media aesthetic immersion, but this mode of progress is not on autopilot. Until actualized, our technological, media aesthetic imperatives and inventions are aspects of our 'virtual real,' meaning they are forces acting on our present that *may* bring into existence certain modes of thinking, acting and responding to the world. As media aesthetics increasingly create the architectures, infrastructures and ambiances of our life worlds, it matters greatly how we formulate the imperatives behind aesthetic innovation. No matter the extent and multi-dimensionality to which our media aesthetic environments – artistic, cultural or corporate – will grow, we need to search for references closer to our human nature and

[451] James G. Lochtefeld, "Diwali" in *The Illustrated Encyclopedia of Hinduism 1, A–M* (New York: Rosen Publishing, 2002), 200–201.
[452] National Geographic Society, "Celebrate Diwali" (National Geographic Society, 2008).

further from technologically determinist, virtual ‘truths’; we need to aspire to create *images* that inquire into the urgencies of our contemporaneity.

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Abstract

This dissertation unfolds through an inquiry into media aesthetic conditions of our contemporary communicative experience. It examines how *urban media art*, denoting media aesthetic art forms in the urban context, may be considered *contemporary* – emerging from, responding to, and co-existing with time and temporal experience. Approaching this topic from a combined academic and curatorial perspective, I approach this with the point of departure being how the art is contingent with our contemporaneity characterized by a technological reality, and finding its raison d'être as response to changing conditions in our contemporaneity. In inquiring into three media aesthetic tendencies today: intensity, intelligence and immersion, I search beyond the art's 'material' in light of how our perception is challenged in media aesthetic experience today. In my consideration on the conditions of experience and urgencies entailed in media aesthetic experience and perception today, I problematize an ontological condition of media aesthetic *spectacularization*, which I argue characterizes our duration: our condition of change in movement through time. I characterize this condition by *images* we live through, rather than 'images' we look at, in light of Henri Bergson's philosophy of images as sense-impressions between matter and memory. I suggest that urban media art – as *images of urgency* situated 'real-time' in the urban environment – potentially interfere with the temporal experiences we are offered in our contemporary communicative context. Based on this, we can consider urban media art as contemporary, especially because of its temporal qualities, as a form of radical temporal art.

Resumé (in Danish)

Afhandlingen er centreret om en undersøgelse af medieæstetiske tilstande i vores samtidige 'kommunikative eksistens.' Den undersøger overordnet hvordan *urban mediekunst* – medie æstetiske kunstformer situeret i den urbane kontekst – kan betragtes som samtidskunst i forståelsen af kunst der oprinder fra, responderer på og sameksisterer med 'tid' og tidslig oplevelse. Fra et kombineret akademisk og kuratorisk-praktisk perspektiv griber jeg dette emne an med udgangspunkt i hvordan kunsten forandrer sig i relation til sin kontekst – karakteriseret ved en teknologisk virkelighed – og finder sit eksistensgrundlag som svar på forandringer i vores samtidighed. I undersøgelser af særligt tre medieæstetiske tendenser i dag: intensitet, intelligens og immersion søger jeg ud over kunstens materiale i undersøgelser af hvordan menneskelig perception udfordres i medieæstetisk oplevelse i dag. I min overvejelse af de tilstande og "nødtilstande" (urgencies), der knytter sig til medieæstetisk oplevelse og perception i dag, problematiserer jeg en ontologisk tilstand af medie æstetisk *spektakularisering*, som jeg argumenterer karakteriserer vores 'forandring i bevægelse igennem tid' (duration). I lyset af Henri Bergsons filosofi om billeder som sanseindtryk mellem 'stof' og hukommelse karakteriserer jeg denne tilstand ved *billeder* som vi 'lever igennem' snarere end 'billeder' som vi 'kigger på.' Jeg foreslår at urban mediekunst – som en sensibel konstruktion af tidslige *nødtilstands-billeder* (images of urgencies), situeret i 'real-time' i det urbane miljø – potentielt kan blande sig med de temporære oplevelser vi tilbydes i vores kommunikative kontekst i dag. Med dette foreslår jeg en betragtning af urban mediekunst som 'samtidig' særligt på grund af sine tidslige kvaliteter; som en form for *radikal tidslig kunst*.