Seeing Beyond the Visual: Sensory Perception and Synesthesia

in Contemporary Installation Art

By

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Submitted to OCAD University in partial fulfillment of the requirements for the degree of Master of Arts in Contemporary Art, New Media and Design Art Histories

Toronto, Ontario, Canada April, 2015

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Abstract

In this paper, I utilize scientific theories surrounding the neurological condition synesthesia to identify how multisensory installation art can challenge our understanding of the singularity of the senses. This exploration will form the basis of my theory of "synthetic synesthesia," a term derived from my observation of synesthetic components in installation artworks that possess elements of multisensoriality, embodiment and immersion. This theory is applied to my analysis of select pieces by Marla Hlady and Peter De Cupere whose works involve sensory combinations, such as vision/hearing/touch (Hlady), and vision/olfactory (De Cupere). The works of both of my case studies reconsider how the participant interacts with an artwork by creating installations which augment the traditional *visual* art experience.

Acknowledgements

I would like to extend a special thank you to my advisors Dr. Barbara Rauch and Dr. Caroline Langill for their guidance and assistance during the writing of this paper. I would also like to thank my family for their encouragement and generosity along with Angelissa Shum, Madalen Benson and Grace Tsurumaru for their support. Finally, a heartfelt thank you to the members of my cohort: Brittany Higgens, Marsya Maharani and Marianne Fenton for their positivity and friendship during our studies at OCAD University. For my parents

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Preface

The research I present in this paper takes on an interdisciplinary character, proposing synesthesia, and scientific studies on perception and neuroscience as a means to identify and interpret trends of sensory engagement in contemporary installation art. This serves as a foundation for my theory of synthetic synesthesia, a term designed to summarise my discussion of the immersive and multisensorial characteristics of the works of my chosen artists.

Before beginning my examination of the synesthetic elements of multisensorial installation art I must make a note of the language I use in my paper. Throughout, I utilize the terms interact/interactive when discussing how the audience engages with the work. Due to the ties between "interactive" and descriptions of participatory art I must clarify the type of audience/work interaction that occurs with my case studies. "Interact(ive)" is not used in my paper to refer to an artwork that requires action on the part of the audience, but rather to explain how the artwork engages with the participant through the physical body and through the senses. In addition, due to my argument that the works of Marla Hlady and Peter De Cupere decenter vision and engage with multiple senses in an immersive environment the term "viewer" typically used in art discourse is replaced. Using a word that implies that the experience of an artwork is synonymous with, and can be fully explained by, a word steeped in visuality only serves to undermine my argument. For this reason, when I discuss

the multisensorial nature of my case studies I refer to the "viewer" as either the participant, the audience or the "immersant" (a term borrowed from Canadian artist Char Davies) which better encapsulates my argument that perception is inherently multisensorial, interactive and synesthetic.¹ Viewer still appears in the context of my paper depending on the content. For example, in my discussion of synesthesia in cinema studies, I use the word viewer when the chosen source refers to the participant as the viewer as seen in Laura U. Marks's theory of haptic vision, and cases where the senses are evoked *by* vision rather than being physically stimulated.

¹ As Oliver Grau notes in his book *Virtual Art: From Illusion to Immersion*, Davies refers to the viewer as the "immersant." Oliver Grau, *Virtual Art: From Illusion to Immersion*, trans. Gloria Custance (Cambridge: The MIT Press, 2003), 198.

Introduction

In order to apply the science of synesthesia to the way art is experienced; I consider the phenomenological effects of the artwork through an analysis of artists who challenge singular modes of perception and sensory hierarchies. In order to investigate this phenomenon, I research Marla's Hlady's Basement Bass (2011, 2013, 2014) projects and Peter De Cupere's pieces Smoke Room (2010) and Smile Room (2010).² I examine these works to determine how they interact with the immersant in ways that challenge traditional definitions of the human senses as independently operating. I also explore how the artworks of both Hlady and De Cupere upset the prevalence of the visual in the art experience. It is important to consider the works of more than one artist for this study to illustrate the various forms of synesthetic responses that can be triggered through multiplesensory pairings. This paper explores how the inter-relation of the senses has often been addressed in scientific discourse, specifically in studies concerning the neurological condition synesthesia. I argue that an appropriation of scientific theories surrounding synesthesia and the senses can be utilized to identify trends in contemporary art which contradict the ocularcentric lens traditionally applied to artworks. This is considered along with the potential for multisensory artworks to

² The titles for Marla Hlady's *Basement Bass* vary according to the gallery it was installed in. The features of *Basement Bass* that pertain to this paper can be found in all of its renditions. Therefore, when I discuss the versions of the piece in general I refer to it simply as *Basement Bass*. For images of Marla Hlady's *Basement Bass (Gairloch Gardens Gallery)* and *Basement Bass (Boréalis)*, please see figures 1-4. For images of Peter De Cupere's *Smoke Room* and *Smile Room* please visit: http://www.peterdecupere.net/.

challenge the singularity of the senses by manipulating the phenomenological and immersive experiences of the participant.

I chose to research Marla Hlady's *Basement Bass* due to its manipulation of the immersant's phenomenological experience of a space as well as the predominance of sound in this project. *Basement Bass* is of particular interest to me because, along with a visual form, it contains an additional sensory layer of acoustic vibrations that act on the immersant once they come into contact with the platform. I also research Belgian artist Peter De Cupere's olfactory artworks. In this analysis, I focus on his pieces *Smoke Room* and *Smile Room*. I chose these works as a focal point because they stage an environment that envelopes the immersant in a scent while physically representing the source of the scent (in this case cigarettes and toothpaste). In this way, the works stimulate the olfactory senses as well as the visual. Through the multisensory combination of an olfactory sense with the visual component of the materials from which the scent originates, the impact of both senses is heightened. It is through this dual sensory stimulation that the work's synesthetic impact on the immersant is achieved.

The premise for this paper was derived through my observations regarding the multisensorial qualities of select contemporary installation artworks. I found that there are a number of texts considering the immersive effects of installation artworks, which address a correlation of the senses but do not directly label this as "synesthesia." My paper amalgamates these thoughts under the umbrella of synesthesia studies in order to decipher how contemporary artistic production interacts with its audience. While the relationship between synesthesia and art has often been considered, studies pertaining to this subject have primarily been centered on artists with synesthesia and the use of synesthesia as inspiration for the creation of artworks. An example of this can be seen in the writings of Crétien van Campen, such as in his text The Hidden Sense: Synesthesia in Art and Science (2008), which documents the history of synesthesia in creative production through early experiments that sought to combine music and color (Alexander Wallace Rimington, Louis-Bertrand Castel, Alexander Scriabin, Wassily Kandinsky), as well as examples of contemporary artists who use their synesthetic abilities to produce their compositions (Marcia Smilack, Carol Steen, Anne Salz, Clara Froger). Authors have also utilized synesthesia to gain further insight into an artist's work. Nicholas Chare did so in his text After Francis Bacon: Synesthesia and Sex in Art (2012), an inquiry into the synesthetic aspects of Francis Bacon's paintings, achieved through the artist's rendering of the human body and sensory organs.

While the artists I chose may not explicitly state that they experience synesthetic responses nor consciously utilize synesthesia in the production of their works, my analysis, with an emphasis on science, can be used to better understand how an immersant interacts with an artwork on a phenomenological basis. The interaction between artwork and immersant can, in turn, be used to unpack how the presence of synesthetic elements serves to achieve the artist's purported intentions. An interdisciplinary lens coincides with shifts occurring in the relationship between the artwork and participant that reached a head in the establishment of installation art as a distinct methodology in the contemporary era. Studies such as this can become a means to extend the influence of artistic practice outside of its domain generating a mutual osmosis of knowledge and avant-garde potential between disciplines.

I begin this paper with an overview of the artworks I analyze and the practices of each artist. In doing so, I examine the parallels that exist between *Basement Bass, Smoke Room* and *Smile Room*, namely that they utilize banal sounds or objects as means to challenge the immersant's previous experiences and conceptions of like spaces and materials. My examination of each artist's practice becomes a springboard for my argument pertaining to the immersive qualities of their pieces and the ability for the phenomenological effects of the work to reshuffle the conventional hierarchies of sensory engagement in art.

The second section of my paper presents a consideration of the scientific definition of synesthesia and the scientific background of the condition. This provides the reader with context and clear understanding of what I am referring to when I am writing about synesthesia. In order to build this section of my paper I consider my key readings from authors who are experts on synesthesia and come

from neuro-scientific backgrounds.³ Their definitions of synesthesia and multiple case studies are an asset in structuring the frame of my thesis argument.

In the third and fourth sections of my paper I analyze the individual practice of each artist and how synesthesia relates to each of them. To do so I present Martino and Marks's concept of weak synesthesia, a synesthesia they argue to be present in all humans.⁴ I argue that this form of synesthesia can be related to synesthetic elements prevalent in literature and cinema as well as artworks. In addition, to better explain how synesthesia can be used as a lens to examine disciplines outside of the sciences and how these methods can affect the audience and surpass the parameters of each respective discipline, I examine references to synesthesia in literature and cinema. I also reference immersive and phenomenological theories related to multisensory perceptions in order to establish groundwork for my study into how my chosen artworks are able to act on the immersant in a way that parallels synesthesia. This portion of my text is an important part of my analysis because, not only does it provide a theoretical background for my own theory of synthetic synesthesia, but it also aids in situating this study within existing scholarship.⁵ Most importantly however, it

³ Van Campen (2008, 2014), Cytowic (2002, 2011), Simner and Hubbard (2014), van Leeuwen (2014), Baron-Cohen and Harrison (1997), Martino and Marks (2001) and Ward (2008).

⁴ Gail Martino and Lawrence E. Marks utilize the term "weak" synesthesia in their text "Synesthesia Strong and Weak." Gail Martino and Lawrence E. Marks, "Synesthesia: Strong and Weak," *Current Directions in Psychological Science* 10, no. 61 (2001).

⁵ Scientific studies surrounding synesthesia and art historical studies centered on installation art, immersion theory and the sensory dimensions of artworks.

provides an additional dimension to my reader's perspective on how the artworks affect the viewer within the confines of this theory.

The fourth section of this paper examines each artist's installations which are outlined as case studies. I present specific research into how the senses of hearing and olfaction, affect the immersant and destabilize a focus on visual stimuli through unique sense pairings, such as vision/aural/tactility (Hlady), and vision/olfactory (De Cupere). These observations and inquiries comprise the bulk of my argument and create links between each of the works and the scientific positions of the paper. The main focus of these sections is my use of synesthesia as a tool/window of study to explain how each artwork functions in the presence of its viewership in order to support my thesis statement. Due to the locations of the works at the time that I wrote this paper it was not possible for me to personally view all of the works, which may be seen as disadvantage to a research project that addresses sensory perception.⁶ It is for this reason that I exclusively worked with sources that provided the most in depth descriptions of the works and sensory processes when my own engagement with the work was not possible.

⁶ Moreover, given the sensorial and material characteristics of these artworks, particularly the scents utilized by De Cupere and Hlady's vibrational sounds, the works are inherently ephemeral and restricted in terms of documentation. As a result, access to these pieces is limited in comparison to purely visual artworks.

Section I: The Quotidian Object

The works of Marla Hlady and Peter De Cupere are richly diverse in their materials, inspirations, and approaches. However, there are many threads, both subtle and overt, that connect the practices of these artists. Both manipulate the immersant's perception, encouraging them to become more in-tune with their senses, and perceive their environments in new ways. Indeed, all of the works that are discussed in this section are highly sensorial, appealing to the immersant through multiple senses. They engage with the immersant in ways that involve sensorial interventions, the body and memory. The most blatant and powerful similarity between the practices of the artists are their references to the quotidian object which is realized through their use of materials – whether it be sound or trash respectively. In all cases, these objects are presented in new and profound ways. It is through the use of forms and materials, which stimulate multiple senses that the artworks are able to resonate with the immersant, perhaps more effectively than a purely visual work ever could. By immersing the participant in a multisensory environment the artists present the unexpected, upsetting the immersant's expectations and catatonic familiarity, to shock, distort and reveal the unseen in the everyday environments we inhabit.

Marla Hlady: Manipulating Ambient Sound

Toronto based artist Marla Hlady's Basement Bass (2011, 2013, 2014) project is designed to reflect the spaces it has been exhibited in.⁷ Hlady maintains the unique integrity of the location by incorporating a prominent sound component, recorded from the installation site, which is then amplified to create a sonorous bodily experience. Hlady installs these works in a minimalist setting, emptying the enclosed spaces of all furniture apart from the vibrating platform – at times stationary (as seen in her Basement Bass (Gairloch Gardens Gallery) installed in Oakville Galleries in Gairloch Gardens project) and at other instances a revolving platform (as seen in *Basement Bass (Justina M. Barnicke Gallery*) installed at the Justina M. Barnicke Gallery and Basement Bass (Boréalis) installed in the Boréalis Museum).⁸ The cables and machinery required to project the sounds are often hidden or streamlined to maintain a minimalist aesthetic.⁹ While each installation has evolved from the next and has variable aesthetic components, sound is always present. The sounds also vary from space to space, but are utilized to achieve the same nuanced and jarring interactions with the immersant. In *Basement Bass*, the participant enters an immersive soundscape that audibly changes in volume as they move closer to the platform from which the sound

⁷ The dimensions of the platforms vary with each installation at the Oakville Galleries the floor was approximately 19' x 14' x 0.5' at the Justina M. Barnicke Gallery the floor was approximately 15'5" x 12' x 9" and the rotating floor 10' in diameter finally at the Boréalis Museum the floor was approximately 10' x 10' x 0.5" and the record player unit approximately 18' x 16' x 11' (all measurements are w x l x h).

⁸ Installed in Oakville Galleries in Gairloch Gardens in Oakville, Ontario, 2011, the Justina M. Barnicke Galley in Toronto, Ontario, 2013, and at the Boréalis Museum Trois Rivieres, Quebec, 2014 respectively.

⁹ More detailed descriptions of Marla Hlady's Basement Base are forthcoming in the final section of this paper.

emanates. The sounds vary from deep bass rumbles, scratchy vinyl shifts and sharp raspy pops. In one case, *Basement Bass (Boréalis)* for example, the platform is accompanied by a working record player featuring a vinyl turntable whose slow spin mimics the revolving action of the round black disc of Hlady's bass stage.

As previously noted, Hlady's practice is largely influenced by, and tailored to, each individual space and this is why Basement Bass is never truly duplicated regardless of how many different galleries the artist installs it in. Therefore, her practice requires an intimate engagement with the space beyond what the public perceives. This hyperaware engagement with sound is after all the crux of her practice. The creation of Hlady's aural sculptures requires her absolute concentration and strict attention to the particularities of the sounds that are present in the specific site she exhibits in. A glimpse into how Hlady sampled the sounds of the Oakville Galleries' historic building to create her first rendition of Basement Bass, Basement Bass (Gairloch Gardens Gallery), is offered by curator Marnie Fleming in her text "In the Place of Sound, In the Sound of Place." Fleming explains that Hlady took the time to understand how sound moved through the space and how it was influenced by the building's unique architecture. She discovered various effects including reverberations, dead zones and resonances. Each room was recorded at an equal volume from various points

and perspectives to best represent the range of sounds present in each room.¹⁰ Arguably, the sounds present in every gallery space, and even in the spaces we inhabit every day, are exquisite, beautiful and distinct, but with our constant exposure to them they melt into dull white noise. Hlady challenges our obliviousness to these sounds, staging a perceptual intervention that presents the sounds in ways that reassert their presence, lending them the power to disrupt the audience's relationship with the space. By recording and drawing the immersant's attention to the seemingly banal sounds consistently present in the everyday, Hlady gives the listener a glimpse into the way she experiences spaces through their unique aural fingerprint. Hlady's illumination of the forgotten dimensions of sound at Oakville Galleries is further explained by curator and writer Shannon Anderson:

It was all the little peculiar noises emanating from the rooms—the humming of the boiler, the fits and starts of the radiators, the beeping of the security system—that her installation highlighted with a series of sculptural interventions. Visually, each construction was precisely scaled in relation to particular rooms in the gallery... Hlady amplified the inner workings of the building as if revealing its very breath.¹¹

Ultimately, in her site-based project *Basement Bass*, Hlady exposes the nuances of the space with her recordings and gives the visitor a new perspective. She also highlights the uniqueness of each space in her faithful recordings and carefullyplanned constructions created to complement the space they are made for.

¹⁰ Marnie Fleming, "In the Place of Sound, In the Sound of Place," in *Marla Hlady: Rooms and Walls*, ed. Meg Taylor (Markham: Oakville Galleries and Hallwalls Contemporary Arts Center, 2013), 23.

¹¹ Shannon Anderson, "Seeing Sound: Marla Hlady and the Art of Noise," *Canadian Art*, May 24, 2013, accessed April, 2015, http://canadianart.ca/features/2013/05/24/marla-hlady/.

Therefore each piece, while centered on a common concept with similar mechanical functions, remains distinct.

While Hlady's choice of sound is an integral part of her pieces, the contraptions she designs to house them are equally important. Contrary to what one may expect from a sound artist, each soundtrack is not housed in a sculptural form that has been specifically designed for the sounds it discharges. Instead, Hlady's conceptualization of her pieces begins with the fabrication of the container and the sounds are then tailored to complement these sculptures. These objects are the concrete visual and at times tangible forces that encounter the immersant in the space, and are therefore largely responsible for the influential sensorial qualities of Hlady's work. Hlady's method and interest in conceptual constructions is further outlined by Fleming in her quotation of Hlady speaking about her practice. According to Fleming, Hlady wanted to combine the conceptual aspects of the building with our experiences of the building. It was this interpretation of the characteristics of the architecture that aided in her design of the contraptions that would house the sounds. It was only after these forms had been outlined that she could determine how to shape the sounds and begin her compositions.¹² In *Basement Bass* these elements work together to create the aural and haptic experience felt by the immersant. In the Basement Bass (Gairloch *Gardens Gallery*) version, Hlady constructed a deceptively plain and slightly elevated platform that came alive when touched, perhaps to better maintain the

¹² Fleming, "In the Place of Sound," 24.

integrity of the space's dimensions. In later generations however, her construction has become more elaborate and compact. The circular rotating platforms of these versions incorporate the aforementioned element of movement to the piece, which arguably enhances the sensorial impact of the work as a whole and lends it an aesthetic value that balances the vibrancy of her recordings. Through her manipulation of ambient sound to create an environment that physically interacts with the immersant's body in *Basement Bass*, Hlady not only increases the immersant's aural sensitivity to the sounds of the space, but elevates those sounds to a level where they can phenomenologically impact the immersant as never before.

Peter De Cupere: Enveloping Odors

Most people are familiar with the strong scents of cigarettes and toothpaste which is perhaps precisely why they hold such interest for Belgian artist Peter De Cupere. These common odors are profusely presented in his pieces *Smoke Room* (2010) and *Smile Room* (2010) to create overwhelming and enveloping installations. The cloying scents of these products are accompanied by rich visual textures and muted color pallets. De Cupere's *Smoke Room* incorporates discarded cigarettes in a way reminiscent of his previous series of "cigarette paintings" such as *Please Smoke* (1999) and *Cross* (2002) that featured a mephitis set of canvases patterned with cigarette residue to form slogans and shapes. In *Smoke Room* the walls of the enclosed space are covered with neatly arranged cigarette butts. The room is sparsely furnished with a single desk and

chair, which are also strategically layered with cigarette butts in both precise arrangements and heaping piles. Furthermore, the concrete floor is scattered with both butts and ashes. A prominent feature of the room is the variety of texture – from stacked butts on the walls and furnishings to the fine ashy dust on the floor. Initially, the immersant is accosted with a combination of the room's monochromatic palette of ochre and mustards and the reeking smell, engulfing them in "yellow smog." As one moves into closer proximity to the installation, the minute details of the piece become apparent.

In *Smile Room* De Cupere uses a cleansing/hygienic bathroom material as similarly seen in his work *Model For Disappearing Art, Pink Madonna* (2009) made of the caked substance used to disinfect urinals, or his soap paintings such as *Soft Green Soap Painting* (2002) created with stacked bars of soap. Interestingly enough, these substances are meant to mask the unpleasant human body odors De Cupere works with in a number of his pieces. Ultimately, the banal heady scents of these neutralizing materials, especially those of toothpaste, are meant to be pleasant however, the artist presents them in a way that renders them noxious and unbearable. In *Smile Room* the immersant is struck by a similar sensation as *Smoke Room*, but in the case of this piece the materials are more concentrated on a particular portion of the space. This space mimics a washroom including fixtures commonly found in bathrooms like a sink, mirror and tub. These sparse furnishings, much like those of *Smoke Room* are layered with De Cupere's chosen material, toothpaste. The color pallet of the room is, again,

minimal consisting of the sterile chalky white and pale blue pastes of various brands. The pastes are presented in a way that belies their viscous texture. De Cupere has methodically squeezed the toothpaste from the tubes in neat hatched and squared lines in ways that mimic tiles, the curves of the sink, and the frame of the mirror. In addition, the sheer quantity of the toothpaste used to transform the surfaces of the room is blatantly emphasized by De Cupere's inclusion of the crushed empty tubes filling the hollow of the tub to the brim. This excess of product brightens the room with a blinding pallor simultaneously filling it with a fresh minty fragrance that straddles the border of sickening and sweet.

The use of found and commonplace objects in *Smoke Room* and *Smile Room* is a central element of De Cupere's work that originally developed out of necessity. Many materials De Cupere has used – from cigarette butts to food scraps to garbage – are not only ordinary but are items that generally slip through the cracks of both society and material culture studies, simply because they are "waste." In this way, much like Marla Hlady gathers sound, De Cupere collects items people would normally ignore. He then presents them in original and mesmerizing ways that physically affect the immersant through their intense odors. De Cupere's fascination with salvaging and repurposing discarded objects in his work is explained by the artist:

I recycle different sorts of materials in my art. Most of the time, the choice of the recycled materials is made based on the concept and context I am working on. I began working with recycled materials years

ago as an art student, when I had little money to buy stuff. I depended on waste materials that people threw away. I found a beauty in it.¹³

Indeed De Cupere presents his materials in Smoke Room and Smile Room in aesthetically pleasing ways that, though unbearably smelly, illuminate the beauty that he perceives in them. While the cigarettes of *Smoke Room* are waste items that De Cupere asked students to help him collect, the toothpaste De Cupere used in Smile Room were in contrast not waste items.¹⁴ However, De Cupere does not fail to reflect an excess of waste and garbage by displaying the empty packaging of the toothpaste. By separating both butts and tubes from their everyday contexts/sensorial associations, De Cupere isolates them from the negative associations of trash and bestows them with a distinct aesthetic value. It must be noted that although De Cupere uses familiar materials, he does not allow his participants to get too comfortable with the work. Alternatively, the artist quickly dismisses any possibility of a banal gallery visit by simultaneously adding a counter-aesthetic stink to the works. As noted in the text "About Scents and the Work of Peter De Cupere," "...everyone who has ever smelt Peter De Cupere's work cannot fail to recognise that his works prompt quite a reaction. You either love it or you feel attacked via your nasal senses."15 This olfactory assault, whether deemed pleasant or agonizing by the immersant is completely

¹³ D. Dominick Lombardi, "Repurposing With a Passion," *Huffington Post*, July 14, 2014, accessed April 13, 2015, http://www.huffingtonpost.com/d-dominick-lombardi/repurposing-with-a-passio_b_5582192.html.

¹⁴ Ibid.

¹⁵ "About Scents and the Work of Peter De Cupere," *Peter De Cupere*, accessed April 13, 2015, http://www.peterdecupere.net/index.php?option=com_content&view=article&id=62&Itemid=15.

involuntary. This is due to the fact that smell is rapidly processed by the brain giving rise to an instantaneous union between the perceived scent, the subconscious mind, emotions and memory.

Peter De Cupere's work, as mentioned above, places his audience in challenging and uncomfortable situations that envelope them in an otherworldly experience. However, it can also be said that his works test more than the immersant's noses but also directly dismantle their understanding of aesthetic traditions. The bulk of art production is clearly visually based while, contrastingly, the art of olfaction has only recently joined the ranks of "official" art. As suggested above, while De Cupere's practice creates a situation that does not stray from having visual content or content that stimulates the other senses; he utilizes scent in a way that subverts the sterile character of the conventional gallery experience. An unnamed author references the trans-sensory nature of De Cupere's work noting that, "By exploiting the subjective, associative impact of smells, in combination with visual images, Peter De Cupere generates a kind of meta-sensory experience that goes beyond purely seeing or smelling."¹⁶ In doing so De Cupere is able to create the unusual environments and subsequent reactions outlined above while opposing the dominance of the visual.

The practices of Marla Hlady and Peter De Cupere incorporate banal sounds/objects and present them in unexpected ways. They present these ordinary materials in ways that are extraordinary and unexpected. Most importantly, in the

¹⁶ Ibid.

context of this paper, they combine their chosen mediums, be it sound or odor, which are interestingly invisible with visual and tangible representations of them. While the artists do not reject visual material completely, their creation of works that are simultaneously visual and aural or visual and olfactory act to subvert the ocularcentric aesthetic and distanced experience that traditionally defines interactions with artworks. This method also exacerbates each sense's capacity to affect the immersant's physiological response as it stimulates the participant visually and through senses (aural and olfactory) which are immediately processed together. As made apparent in the following sections, this multisensorial quality produces an automatic reaction in the immersant due to the nature of the senses involved, which is similar to the combined sensory reactions of people who experience the neurological condition synaesthesia. These parallels between synaesthesia and multisensorial artworks form the basis of my argument. For this reason I explore the properties of synesthesia in my next section. I do so in order to form a theoretical platform from which to analyse how the works of Hlady and De Cupere immerse the participant in a sensorially-charged environment that privileges a multisensorial interaction.

Section II: Combined Senses: Current Studies in Synesthesia

A prominent feature that the works of Marla Hlady and Peter De Cupere share is the fact that they challenge the idea of the senses as independently operating. Instead, the artists have designed their works in ways that require the immersant to engage with them on more than one sensory level, causing them to become hyper-aware of how the works affect their sensorial dimensions. The impact of these works is largely owed to the challenging multisensorial environments evoked by the artworks. This is a key element present in all of the works discussed in this paper even across the diverse practices of each artist. Arguably, the intra-sensorial nature of the works and how they act on the immersant can be better understood through an analysis of a condition in which the sensory hierarchy is dislocated, allowing the senses to organically merge and intermingle. This condition is scientifically identified as synesthesia, a rare neurological phenomenon where the stimulation of one sense causes a reaction in another sense modality. This trans-stimulation of the senses is important to this study because it challenges the way the majority of the people in western civilization understand how the senses are categorized.¹⁷ Additionally, the study of this phenomenon has rapidly expanded in recent years with the development of brain mapping technologies and specialized tests.

¹⁷ For further information on the western categorization of the senses (into five distinct senses) please see my discussion of Aristotle's sensory philosophy in my introduction to section IV.

The application of this science to the evaluation of artworks gives rise to questions that I answer in the following pages such as: How is synesthesia relevant to someone who does not experience it? Or, how can the study of synesthesia be helpful to an examination of art making and perception to the general audience? It is important to note in this case that although only a small percentage of people experience synesthetic responses, mild forms of the condition that share similar underlying characteristics have been argued by scientists and researchers to exist in all humans. This form of synesthesia, sometimes called "weak" synesthesia, can be found in everyday language associations and metaphors like "sweet smell" or "sharp cheese."¹⁸ Furthermore, this induced synesthesia has been used by scholars to study the nuances of film and cinema as well as elements of literary style. It is this template that I adapt and transfer in the later portion of this paper to the artworks of my chosen artists. This aids me in determining what is essentially happening in the works that causes a multisensorial response in the immersant.

What is Synesthesia?

Synesthesia studies are still developing today but scientists in the field are consistently unearthing new ways to aid our understanding of how the human brain functions. An in-depth discussion of these discoveries is presented later in

¹⁸ Gail Martino and Lawrence E. Marks, "Synesthesia: Strong and Weak."

this paper, but it is important to contextualize this discussion with past views of synesthesia and how they have changed. Scientific developments and testing methods have allowed researchers to determine the authenticity of the condition. Ultimately, recent advancements in neuroscientific technology have inevitably challenged the way we have previously understood our senses, and the negative preconceptions that may accompany discussions of synesthesia. The validity of synesthesia studies is still debated, and for this reason, new studies that are deployed in the quest to better comprehend the condition, and map exactly how it works in the brain, are of the upmost importance. The role of current synesthesia studies in broadening our understanding of the condition as well as its links to our awareness of the senses is explained by scientific researcher Crétien van Campen in his text *The Hidden Sense: Synesthesia in Art and Science*: ¹⁹

What makes synesthesia such a fascinating phenomenon is that it raises questions that scientists cannot answer at present. Synesthesia is not an isolated phenomenon in human perception. It is not a fantasy, nor can it be marginalized as an unimportant by-product of a human brain process gone awry. The synesthetes to whom I have talked regard it as essential in their lives. And since the phenomenon really exists...studying synesthesia just might turn our common image of the senses on its head. Reorganizing our concept of the sensory channels of the mind can change our view of the human mind, and possibly of the physical world.²⁰

Van Campen's observation highlights the impact that a greater understanding of synesthesia can have on our environmental perception as a whole. The fact that

¹⁹ Dr. Crétien van Campen is a researcher, writer and lecturer at Synesthetics Netherlands, the Netherlands Institute for Social Research and Windesheim University of Applied Sciences.

²⁰ Crétien van Campen, *The Hidden Sense: Synesthesia in Art and Science* (Cambridge: The MIT Press, 2008), 6-7.

synesthesia has been scientifically recognized as a neurological condition (largely due to new technology), allows scientists to evaluate how our senses operate in new and profound ways. In other words, these analyses of the neural functions that underlie the condition can aid in a greater understanding of how the sensory pathways of the brain develop and influence our perceptions. In addition, the importance of these studies in relation to contemporary artistic production can be clarified with a consideration of synesthetic experiences, its neural imprint, development and brain scan findings examined in the following pages.

What do Synesthetes Experience?

In order to establish a discussion of how synesthesia affects the brain's functions as well as its link to multisensorial installations it is useful to examine what the synesthete feels sensorially. This generates links between the relay response of the senses that a synesthete commonly experiences, and the stimulation of the senses that occurs in artworks that engage with more than one sense. Overall, it is clear that synesthetes experience their world differently than people without synesthesia, and these experiences are both consistent and automatically present.²¹ To begin this inquiry, it is important to note that while there are various sensory pairings that synesthetes can experience, all forms of synesthesia share a common trait. They all follow a basic systematic linear

²¹ Tessa M. van Leeuwen, "Individual Differences in Synesthesia," in *The Oxford Handbook of Synesthesia*, ed. Julia Simner and Edward M. Hubbard (New York: Oxford University Press, 2014), 242.

reaction that begins from the *inducer*, or trigger sense and the *concurrent*, or experience/percept that occurs in the other sense.²² However, while it was previously speculated by scientists that these linear synesthetic processes are solely unidirectional, recent studies have shown that synesthesia can work both ways, through an interchange of information between senses rather than a singular relay process. Van Campen explains this development in his text noting that:

It was discovered that information is exchanged between sensory domains, which contradicts the assumption that in synesthesia information is transported from one sensory domain to another in just one way...for synesthetes who experience numbers in colors, the colors also helped them to recognize numbers. What is striking is that the synesthetes were not aware of the latter exchange. They consciously perceived colored numbers, but were not aware of the fact that colors evoked a sense of numbers, too.²³

This sheds light on the fact that synesthesia studies, like many scientific projects, are constantly in flux and new perspectives are continuously surfacing. Ultimately, van Campen's research points to the intrinsic nature of synesthesia and how synesthesia affects the perceptions of the synesthete. The difficulty in pinpointing what the term "synesthesia" means is further evident in the linguistic and perceptual way synesthesia is divergently described by those who do and do not experience it.

Types of synesthetic reactions are scientifically labeled based on their familial sense-reaction pairing as exemplified by grapheme-color synesthesia

 ²² Julia Simner, "The 'Rules' of Synesthesia," in *The Oxford Handbook of Synesthesia*, ed. Julia Simner and Edward M. Hubbard (New York: Oxford University Press, 2014), 150.
²³ van Campen, *The Hidden Sense*, 16-17.

where a letter or number triggers a color reaction.²⁴ As noted above, these reactions are consistent and stay within the sensory pairing. However, as I discuss below, the reactions are unique from synesthete to synesthete in the type of colors or tastes perceived. While the sensory pairings involved can vary greatly, in all cases they give rise to reactions that are perceived as commonplace to the synesthete and almost unfathomable to the non-synesthete. Cognitive neuroscientist Jamie Ward considers the way that synesthetes perceive their condition/ reactions in comparison to how it is described by non-synesthetes it in his text The Frog Who Croaked Blue: Synesthesia and the Mixing of the Senses.²⁵ Ward notes that many scientific descriptions of synesthesia present it as consisting of an extra sense that accompanies the perceptions a non-synesthete would experience. This is because, to a synesthete who sees colors upon hearing a sound for example, the causal stimulus (sound) is still perceived while its product (color) also becomes present. However, to this synesthete the color evoked by the sound is not seen as extra because these associations have always occurred and therefore the color is an integral part of that sound; a characteristic that is missing from the perceptions of others.²⁶ In relation to Ward's point, it becomes apparent how the basis of a non-synesthete's understanding of synesthesia is limited even

²⁴ Julia Simner and Edward M. Hubbard, "Overview of Terminology and Findings," in *The Oxford Handbook of Synesthesia*, ed. Julia Simner and Edward M. Hubbard (New York: Oxford University Press, 2014), xxi.

²⁵ Dr. Jamie Ward is a Professor of Cognitive Neuroscience at the University of Sussex.

²⁶ Jamie Ward, *The Frog Who Croaked Blue: Synesthesia and the Mixing of the Senses* (New York: Routledge Press, 2008), 3.

through our means of describing it. Not only do synesthetes experience the world differently, but they see their condition from a unique first-hand perspective that an outsider may not fully understand. The difficulties involved in gaining a comprehensive view of how a synesthete is affected when a reaction occurs is also complicated by the multitude of forms synesthesia can take across individuals.

To continue an analysis of what a synesthete experiences it is interesting to consider that every synesthete's set of interconnected senses produce unique reactions even with synesthetes who have the same type of synesthesia. As cognitive neuroscientist Tessa M. van Leeuwen points out, while the experience of synesthetes with the same kind of synesthesia are basically alike, meaning for instance, to a person with grapheme-color synesthesia, letters will always appear in colors, different grapheme-color synesthetes may disagree on which color is evoked by each letter.²⁷ Additionally, as exemplified by van Leeuwen's note below, *how* these colors appear to the synesthete may also vary, appearing either as a color association between a letter and color in the mind or as a color that is projected onto the letter. These processes and characteristics of grapheme-color synesthetes are explained by van Leeuwen in her text "Individual Differences in Synesthesia."²⁸

The first distinction is the "projector-associator" distinction which concerns the spatial location where *concurrent* synesthetic colors are

²⁷ van Leeuwen, "Individual Differences in Synesthesia," 241.

²⁸ Dr. Tessa M. van Leeuwen is a postdoc at Max Planck Institute for Brain Research.

perceived...Projector and associator synesthetes do not differ in the type of inducers that elicit synesthesia, but rather, it is the way the colors appear that is different. Projector synesthetes describe their colors as "being out there on the page" or on a "mental screen" in the peripersonal space around them, whereas associator synesthetes report their colors are located "in the mind's eye," in "the inner eye," or that they know what the color is but they do not experience this anywhere at all...²⁹

This exemplifies how different synesthetes can perceive their synesthetic reaction (concurrent) differently even if they share a common form of synesthesia, in this case, grapheme-color. While the synesthete's personal experiences are always stable, the product, duration and frequency of synesthetic responses from one synesthete to the next are highly inconsistent. This is further exemplified through a consideration of lexical-gustatory synesthesia. This variation of synesthesia is described by experimental neuropsychologist Julia Simner as a form of synesthesia where the subject tastes a flavor in their mouth that is triggered by speaking, reading, listening, or ruminating on words.³⁰ Depending on the synesthete, these taste reactions can be caused by particular words or all of the words in a language, and can induce a response that quickly fades or remains for an extended period of time.³¹ Much like the previous example of grapheme-color synesthesia, Simner describes the results of lexical-gustatory synesthesia as fluctuating with respect to the tastes evoked by words and the duration of the synesthetic response. With so many variations on how synesthesia can affect a

²⁹ van Leeuwen, "Individual Differences in Synesthesia," 242.

³⁰ Dr. Julia Simner runs the Synaesthesia and Sensory Integration lab at the University of Edinburgh.

³¹ Simner, "The 'Rules' of Synesthesia," 155.

person it is comprehensible that difficulties arise in describing and identifying exactly what occurs during a synesthetic episode. Nonetheless, since the fundamentals of the responses themselves are unwavering, scientists retain the ability to study the phenomenon in greater depth and determine the condition's feasibility through the use of repetitive testing methods.

Testing Synesthesia

While there are a number of different types of synesthetic sensory pairings, the majority of the studies referenced in this paper, and synesthesia studies in general, consider grapheme color synesthesia because this subcategory of synesthesia is one of the most common.³² The methodologies of synesthesia studies over the years have ranged from the Synesthetic Stroop Test to the MRI scanning technique. The Stroop test is a common testing method and involves measuring the consistency of a synesthete's reactions evoked by the trigger in comparison to non-synesthetes (with synesthetes often scoring higher in consistency). The results of such a test and the testing process are explained by Simon Baron-Cohen and John E. Harrison in the introduction to their book *Synesthesia: Classic and Contemporary Readings*: ³³

Our own attempts at testing for the presence of the condition have relied upon gauging a subject's *consistency* at relating color descriptions for words across two or more occasions, when the subject has no prior

³² van Leeuwen, "Individual Differences in Synesthesia," 242.

³³ Dr. Simon Baron-Cohen is the Director of the Autism Research Centre (ARC) and a Professor of Developmental Psychopathology at the University of Cambridge and a Fellow of Trinity College, Dr. John E. Harrison is a Research Associate at the University of Cambridge.

warning of the retest and when the length of the interval between testing sessions is irrelevant...Using this method (sic) consistency is typically as high as 90 per cent, even when retested over years.³⁴

However, a common argument related to this type of testing is that these results could be achieved by a non-synesthete upon sufficient practice. While this method leads to outcomes open to speculation there are other methods of testing that can give scientists more definitive results, namely positron emission tomography (PET) and magnetic resonance imaging (MRI) brain scanning methods which utilize an injected radioactive tracer or generated magnetic fields and radio waves respectively.³⁵ While the underlying methods of the tests are diverse they both have the ability to track activity in the different areas of the brain on a physiological level. The kinds of results these brain-imaging techniques are able to achieve can be illustrated by neurologist Julia Nunn and her team's MRI control test of grapheme-color synesthesia.³⁶ Jamie Ward explains this project in his aforementioned book, noting that Nunn tested synesthetes with tendencies to see words in color with an MRI scanner to observe the brain's functions when they heard speech. Nunn blindfolded her subjects to eliminate any external visual stimuli and upon MRI testing it was revealed that there was definite activity in the

information/diagnosis-and-treatment/tests-and-procedures/positron-emission-tomography-petscan/?region=bc. For information on MRI scanning processes see: "Magnetic Resonance Imaging (MRI)-Body," *Radiologyinfo.org*, accessedApril26,

³⁴ Simon Baron-Cohen and John E. Harrison, "Synesthesia: An Introduction," in *Synesthesia: Classic and Contemporary Readings*, ed. Simon Baron-Cohen and John E. Harrison (Cambridge: Blackwell Publishers, 1997), 5.

³⁵ For information on PET scanning processes see: "Positron Emission Tomography (PET) Scan," *Canadian Cancer Society*, accessed April 26, 2015, http://www.cancer.ca/en/cancer-

^{2015,} http://www.radiologyinfo.org/en/info.cfm?pg=bodymr.

³⁶ Dr. Julia Nunn is affiliated with the Department of Clinical Neurology at the University of Sheffield.

region of the brain specialized for color perception (notably V4), an activity which would result in any non-visual stimulus causing such a reaction to be colored. In addition, her team also trained a control group to memorize colorword associations. These subjects were then asked to think of a specific color during the scan when a certain word was said. Even with these memorized associations the control group did not show any activation in the V4 sector. This in turn challenges the theory that synesthesia is merely learned associations and enabled the researchers to determine that the synesthetes do in fact see colors.³⁷ Methods of testing synesthesia are constantly advancing and while neuroscience's ability to determine how the senses are connected in the brain of synesthetes has yet to be developed, technologies such as brain scans have allowed scientists to determine the legitimacy of the condition. Certainly, at this point the scientific understanding of how synesthesia works on a neurological and developmental basis is largely theoretical. Although this element of synesthesia studies is still undergoing advancements, evidence exists which points to the possibility that all humans have a predisposition towards synesthesia and even that all humans are born with it.³⁸

How the Synesthetic Brain Functions

³⁷ Ward, *The Frog Who Croaked Blue*, 28.

³⁸ For more information on the inherent and neonatal presence of synesthesia in humans see my presentation of developmental researcher Daphne Maurer's research in the following pages.

The sensorial functions of the brain and the links between synesthetes and non-synesthetes are perhaps not as distinct as once believed. This concept opens the doors for art historians to apply synesthesia studies in an examination of the immersive nature and sensorial crossovers that can occur in various installation artworks. The probability and usefulness of this lens can be solidified upon consideration of how synesthesia may develop in the brain. As noted in the introduction to this section there are some characteristics of synesthesia that strongly suggest that the processing of sensorial information in the human brain does not occur in as segregated a fashion as often believed. Theories such as this can be supported by the existence of drug induced synesthesia and how synesthesia acts on the brain. Additionally, theories on the development of synesthesia suggest that the human brain has the capacity for synesthesia in general and that all humans are potentially born with synesthetic abilities that are then grown out of. This is illustrated by Crétien van Campen's analysis of developmental researcher Daphne Maurer's theories centering on neonatal synesthesia in babies in his text The Hidden Sense: Synesthesia in Art and Science. In his discussion of Maurer's work (which is be explored in greater depth in the following pages) van Campen notes that "...the neural connections between sense modalities in the brain are never pruned completely...Everyone is probably born a synesthete, although most people lose this perceptual ability in the course of the first year of life."³⁹

³⁹ van Campen, Crétien. *The Hidden Sense*, 32.

To explore the existence of sense interconnectivity in the non-synesthetic brain one can look to the synesthetic responses that can arise from the use of certain mind-altering drugs. For example the ingestion of LSD, a hallucinogenic drug, has been known to cause neurological responses in the user that closely mimic synesthesia. The ability for drugs to alter the state of the user's perception has given scientists cause to hypothesize that drugs such as LSD have the potential to unlock existing neurological pathways that connect the senses. As Jamie Ward notes, the consequences of these types of drugs take almost immediate effect, often inducing synesthesia within an hour. It is evident that the brain could not reorganize its sensory pathways in the drastic way this time frame would require; therefore, it is probable that our senses are already closely linked and the drug merely acts to unblock those connections.⁴⁰ Indeed theories exist concerning the development of the brain from an infant to an adult that suggest that the senses are completely boundary-less in babies and only develop their distinctness as the child grows. These theories can give the researcher a basis to understand how the synesthetic brain develops and how closely non-synesthetes and synesthetes are neurologically related. For example, Crétien van Campen introduces the work of Daphne Maurer, to illustrate his discussion of the development of the senses in the brain in his aforementioned text.⁴¹ His discussion of Maurer's work provides important insight into the fact that

⁴⁰ Ward, The Frog Who Croaked Blue, 21.

⁴¹ Dr. Daphne Maurer is a Professor and the Director of the Visual Development Lab at McMaster University.

synesthesia may have been, at one point, experienced by us all. He points out that Maurer argues in the neonatal stage the neural pathways are both abundant and in extremely close proximity to each other which may cause a sensory reaction across all the senses upon a single stimulus. In the first few months of life this rudimentary synesthesia that babies experience begins to disappear and the superfluous neural connections between the senses are, in Maurer's term, "pruned" to ensure the development of more specialized connections.⁴² Maurer's theory that all people are born synesthetes is a concept that could illuminate why humans have a predisposition for synesthesia that can be accessed through certain stimulants. This is not to say that adult synesthetes experience their world exactly as a newborn does. This would be impossible since the brains of synesthetes are in no way neurologically underdeveloped. Instead, the neuron pathways that coincide with each sense develop as they would in any person and only a selection of the senses maintain a connection. The links and differences between the sensory processes of the brains of newborns, synesthetes and non-synesthetes are further illustrated by van Campen's consideration of Maurer's theory in his discussion of how sensory modalities develop. He explains that while most people are likely born synesthetes adult synesthetes retain some elements of this original synesthesia in an alternative form. Unlike newborns, adult synesthetes possess specialized sensory organs (just like non-synesthetes) however; some of these sense modalities are linked. Additionally, adults are aware of both their distinct

⁴² Cretien van Campen, *The Hidden Sense*, 30-31.

senses and the numbers and letters that enable the occurrence of grapheme-color synesthesia. Traces of our original synesthetic state still exist in the majority of adult perceptions of taste and smell, two senses which are often difficult to perceive separately and in our metaphorical language through phrases such as "sharp smell."⁴³ While there are a number of differences between newborn and adult brain functions, Maurer and van Campen's observations give insight into the way senses are linked in all human brains and even why synesthetic tendencies permeate our perceptions. This in turn can be related to how variations of the synesthetic condition can influence our language and, most importantly in the context of this paper, how installation art can serve to evoke synthetic synesthetic experiences in the participant.

⁴³ Crétien van Campen, *The Hidden Sense*, 32-33.

Section III: Introducing Synthetic Synesthesia

In the previous section of this paper I outlined the parameters of synesthesia, and presented Daphne Maurer's theory that all humans possess synesthetic tendencies in the neonatal stage. I also briefly mentioned the existence of synesthetic metaphors present in our language such as "sweet-smell" or "sharpcheese." It is this latter form of synesthesia that I address further in this section. More specifically, I focus on theories surrounding elements of synesthesia that are ingrained in our culture and therefore, experienced by the general population, specifically in the context of literature and film. These theories present varied findings, notably that our language can act to instigate synesthetic ideas in the reader and also, that film presents a multisensorial interaction with the immersant that simulates the symptoms of synesthesia experienced by true synesthetes. It is through the exploration of these linguistic and film theories that I establish a foundation for my theory of synthetic synesthesia. This theory is derived from my observation of synesthetic components in installation artworks that possess elements of multisensoriality, embodiment and immersion. In order to accurately explore how the works of my chosen artists impact the immersant in a way akin to synesthesia I further draw on phenomenological and immersion theories centered in film and virtual art. It is through these studies that I analyse the way the works of my chosen artists act on the immersant to upset the dominance of the visual through the activation of multiple senses.

Before delving into an exploration of synthetic synesthesia it is helpful to consider the difference between the neurological condition scientifically recognized as synesthesia and Gail Martino and Lawrence E. Marks's concept of "weak" synesthesia. Weak synesthesia, while not producing the same sensorial reactions as true synesthesia, still creates cross-sensorial relations that can act on our perceptions both conceptually and phenomenologically. In this way, weak synesthesia can be considered as a form of synesthesia induced by external factors such as language or moving pictures. The similarities and differences between true synesthesia and weak synesthesia are considered by Gail Martino and Lawrence E. Marks in their article "Synesthesia: Strong and Weak." In this text the authors present two different forms of synesthesia "strong" synesthesia and "weak" synesthesia. Strong synesthesia refers to the inherent reactions experienced by true synesthetes while weak synesthesia consists of linguistic and perceptual associations that are experienced by most humans. The distinctions between these types of synesthesia are further outlined by Martino and Marks; they explain that weak synesthesia "... describes milder forms of cross-sensory connections revealed through language and perception. In both [strong and weak] types of synesthesia, cross-modal correspondences are evident, suggesting that the neural processes underlying strong and weak synesthesia, although not wholly identical, nonetheless may have a common core."44 Strong synesthesia is, as noted above, sensorially different than weak synesthesia in that it is an automatic

⁴⁴Martino and Marks, "Synesthesia: Strong and Weak," 62.

process that produces real sensorial reactions rather than an instinctive association between stimuli. However, it is interesting to consider Martino and Marks's theory that similar neurological functions exist between the brains of a synesthete or non-synesthete. Martino and Marks further outline the prevalence of synesthetic tendencies in the general population and theorize how synesthetic associations could be paired. The studies related to weak synesthesia presented in their text suggests that weak synesthetic associations are based on rational sensory pairings. Martino and Marks argue that laboratory experiments support the claim that most people can understand cross-modal associations. In studies like this, subjects are asked to pair a stimulus from one sense with that of another, with results indicating that such pairings are both systematic and dependant on context (for example participants presented with a set of sounds and a set of colors consistently pair the lightest color with the highest pitch).⁴⁵ These types of associations suggest that people can logically pair senses together with consistent results. However unlike true synesthesia these connections are based on context in a fixed laboratory setting rather than an instantaneous pairing of senses. In other words, while sensorial pairings are possible in a non-synesthete they do not occur in the same complex way true synesthesia does, it is a limited version of the condition. However, studies such as this do indicate, as Martino and Marks point

⁴⁵ Ibid, 64.

out, that "...strong and weak synesthetes share an understanding of how visual and auditory dimensions are related."⁴⁶

Synesthesia as Lens

A discussion of synthetic synesthesia in installation art can also be supported by inquiries into applications of the concept of synesthesia to disciplines outside of the sciences, namely in literature and film. Some film theorists have even gone so far as to label the phenomenological aspects of their chosen subject as synesthesia. I investigate these examples in this section in order to gain a greater understanding of the artworks in question within this paper. This is important as it can give insight into how an emulation of synesthesia can act as a device that artists can use to reach their audience in new and unexpected ways. I begin this inquiry with an analysis of synesthetic literature which serves as a springboard to delve into instances of synesthesia being used as a means of inquiry in film and new media studies. These types of analyses are closely related to the premise of this paper due to their interdisciplinary nature. More specifically, these applications of the subject of synesthesia to a multidisciplinary theoretical analysis provide a rich resource to recognise how the application of synesthesia studies can serve to push the limits of their respective disciplines.

Synesthetic Characteristics in Literature

⁴⁶ Ibid, 64.

Synesthetic metaphors commonly present in language act as a literary device that can be understood by the majority of people. As a result of both their commonality and unusual juxtaposition of words these types of metaphors have the potential to be used by authors to disrupt the conventions of literary representation. An example of an analysis of the synesthetic metaphors can be found in a recent paper by Brenda McNary entitled "Synaesthesia and Transgression in Story of the Eye." In this paper McNary evaluates the synesthetic elements present in the short novel Story of the Eye by French author Georges Bataille. Bataille's outrageous, sublime and deeply erotic text that documents the sexual exploits of a pair of young lovers (the narrator and his lover Simone) contains several allusions to metaphorical associations and cross-modal occurrences that mimic the sensual symbolisms of the plot itself. McNary argues that the synesthetic elements of Bataille's text are a vital literary device that allows the author to reach a level of the sublime that transcends the limitations of the text and interacts with his reader in a way that challenges the boundaries of the possible. As McNary points out in her abstract: "Experimenting with unexpected sense-language descriptors in 'Story,' Bataille confronts readers with sensory experiences that exist outside the text-provoking a disruption in the normally separate spaces between reader, author, and text."⁴⁷ In other words, Bataille seeks to evoke the impossible in his text in order to interact with the

⁴⁷ Brenda McNary, "Synaesthesia and Transgression in *Story of the Eye*," *Critical Theory and Social Justice Journal of Undergraduate Research Occidental College* 2, no. 1 (2011): ii, accessed April 13, 2015, http://scholar.oxy.edu/ctsj/vol2/iss1/8/.

reader on a more intimate level. McNary also notes that Bataille's fascination with the potentialities of unusual representation through language is apparent in his other texts as well. For example, McNary describes Bataille's interest in the impossible and synesthetic language by considering his annotation in his poetic collection, "The Oresteia." As McNary argues, "Bataille includes his own commentary on the simultaneous difficulties and possibilities of approaching the impossible through language, specifically through poetry. In Bataille's work, the impossible becomes a tantalizing possibility. Thus, Bataille's critical project emerges: how to write the impossible, unmentionable, and even unimaginable."⁴⁸

Bataille experiments with language in his synesthetic combinations in order to form new modes of representation though, as McNary explains, he was fully aware that this endeavor could be met with failure. However, she is quick to point out the irrelevancy of whether or not Bataille's synesthetic metaphors are successful because either way they still point to the possibilities and impossibilities of representation and language. She looks to the sublime aspect of Bataille's synesthetic combinations in order to discern how they upset and surpass the reader's expectations. In order to make her point, McNary considers Jean-François Lyotard's theory that sublimity in text is solely achieved through unusual literary combinations that go beyond existing conventions. Using this theory, McNary argues that Bataille's sublimity is owed to his use of synesthetic metaphors, which in turn allow the author to create an alternative dimension of

⁴⁸ Ibid, 3.

linguistic potential, thereby reaching unprecedented levels of literary interpretation. McNary further extrapolates her point with an explanation of Lyotard's idea that sublime literature establishes a disruption through atypical linguistic combinations. This disruptive field "shocks" the reader in a way that creates a secondary sublime space of new interpretations and possibilities. An example from Story of the Eye that McNary references in her discussion is Bataille's phrase "The caress of the eye over the skin is so utterly, so extraordinarily gentle, and the sensation is so bizarre that it has something of a rooster's horrible crowing." Bataille's combination of the sound of a rooster and tactility of the eye operates outside of linguistic norms by pairing two different sensory components. Here, McNary argues, is where Bataille surpasses the parameters of literature, thereby demanding a new (and unconventional) mode of analysis.⁴⁹ It is only through his combination of words commonly associated with synesthesia, as evident in the previous quotation that likens the sensation of touch with the sound of a rooster, that Bataille is able to jolt his readers. These synesthetic pairings mimic the shocking content of his erotic text; both of these tactics solicit extraordinary images for the reader overturning the conventions of how the text engages the reader both in a sublime literal and sensorial sense.

As mentioned above, there is potential for failure in this type of literary device, a potential Bataille was aware of. While, upon consideration of McNary's analysis, the disruptive elements in *Story of the Eye* are clarified in their ability to

⁴⁹ Ibid, 7-8.

surpass literary convention and therefore our expectation of language, it is arguable that Bataille's work is nonetheless still limited by the characteristics of language itself. The author's unusual combinations are disruptive, synesthetic and sublime; however, the text cannot fully extend into the reader's world. This is due to the fact that text may cause the reader to conjure up images and sensory memories it cannot actually depict. For this reason I look to the realm of synesthetic cinema and virtual art. These disciplines, while they may not be able to mimic true engagement with certain senses such as scent or taste, can manipulate the participant's perception in a way that better alludes to the multisensory experience in tandem with, and due to, visual stimulation.

Synesthetic Characteristics in Cinema

As the above argument suggests the synesthetic potential of literature is restricted by the principles of linguistics. Debatably, unlike linguistics, the realm of cinema and the moving image can access the viewer in a way that arouses multisensorial experiences. In a similar vein as literature, cinema is able to suggest a sensory dimension that may not be directly stimulated. In other words, cinema can reference sensory pairings and experiences through the images presented. The ability for the moving image to stimulate sensory modalities is discussed by artist and media theorist Laura U. Marks in her book *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses.* In this text, Marks explores the propensity of intercultural cinema to take on a haptic character in order to establish an embodied relationship with the viewer and re-present culturally specific sensoriums.⁵⁰ Marks employs her discussion of the multisensorial dimensions of film to analyze the diasporic, postcolonial, and cultural qualities of various film, video and cinematic works. What is of particular interest to me in the context of this paper is the way Marks's examination of intercultural cinema employs the senses through both the haptic image and representations of images that trigger associations with past sensory encounters.

The synesthetic possibilities of film are apparent in Marks's concept of haptic visuality or visual touch in which the "...eye is compelled to 'touch' an object..."⁵¹ This way of seeing relates to a visual form of touch that causes the viewer to become immersed in the viewing process, opening the doors for an interaction with other sensory engagements. In her explanation of the haptic image in cinema, Marks outlines two different modes of seeing that are equally necessary in our perceptions. These modes include optical and haptic visuality. As Marks explains, both forms are often involved in any process of seeing but, while a solely optical perception focuses on the representational aspect of the image, haptic perception "...privileges the material presence of the image."⁵² While both optical and haptic vision are always present and can be used in tandem in intercultural cinema, it is the haptic image that encourages the viewer to interact

⁵⁰ Marks defines the "sensorium" as "...the bodily organization of sense experience." Laura U. Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (Durham: Duke University Press, 2000), 2.

⁵¹ Ibid, 173.

⁵² Ibid, 163.

with the surface of the images by disrupting the narrative presented through rendering the images unrecognizable. Ultimately, Marks argues that multisensorial cinema can engage in relevant postcolonial discourse through haptic imagery that eschews automatic interpretation. Laura U. Marks explains that haptic images can be created through various effects in both film and video by manipulating the exposure, focus and the grain of the moving image. These methods negate the viewer's ability to focus on objects in the image thereby promoting their relationship with the screen itself. When the haptic image is used along with aural elements, camera movements and montage, or accentuated through the inevitable decay of the artist's chosen media, it can further encourage the viewer's multisensory and embodied interaction with the film.⁵³ Haptic images, according to Marks, can be used as a means to disrupt or delay the viewer's gaze, preconception and recognition causing them to engage with other senses. Through this disorientation the viewer is compelled to reaffirm their relationship to the screen, synesthetically entering the images by turning a tactile eye to them in an attempt to understand them.

In her analysis of sensory cinema, Marks also comments on the synesthetic potential of cinema as a means for diasporic artists to represent their cultural memories and experiences. These images can enable artists to regain their cultural identity by visually recreating their cultural memories and sensorium through visual means. This method can act as a criticism because it operates as an

⁵³ Ibid, 172.

entry-point for a viewer of a specific culture thereby avoiding an exoticized and fetishized representation of the other. In other words, the memories evoked by the artists' chosen image can trigger different reactions in each viewer because of their unique cultural background and conditioned sensory awareness. How this can be achieved is clarified by Marks's explanation of the ability for sense associations appearing on the screen to link the viewer's memory of a sensory experience to the synesthetic cinematic experience. She notes that the inclusion of familiar sensory-laden images into the narrative of a film is the most direct way for moving images to achieve a sensory character:

Characters are shown eating, making love, and so forth, and we viewers identify with their activity. We salivate or become aroused on verbal and visual cue...it is common for cinema to evoke sense experience through intersensory links: sounds may evoke textures; sights may evoke smells (rising steam or smoke evokes smells of fire, incense, or cooking).⁵⁴

Marks's description of synesthetic images explains how cinema can move beyond the screen to appeal to the viewer's body and their memories both consciously and unconsciously. These sense experiences can be manipulated by diasporic artists to represent their own cultural sensorium and identity. By including images of culturally unique routines, such as interacting with other bodies or preparing food, in their films artists are able to engage with specific viewers in a personal way. This method, along with haptic images, empowers the artist by giving them an element of control over which viewer can engage with the image in a desired way, or how the artist's culture is both represented and interpreted.

⁵⁴ Ibid, 213.

Literary and cinematic manifestations of synesthesia are consciously used by writers and artists in the creative ways examined above. In doing so they can be considered critical methodologies that can simultaneously present a desire to surpass the established practices and meanings associated with a medium. They also present examples of how a consideration of synesthesia can act as an analytical platform from which to examine how the writer/artist is able to communicate their intended meaning to an audience. It is from the presentation of the methodologies of McNary and Marks that I convey the value of engaging with an interdisciplinary lens in the analysis of the critical and sensory aspects of installation art, specifically in relation to my case studies.

Section IV: Synthetic Synesthesia

The above examples of the presence of synesthesia outside of the sciences provide insight into how an interdisciplinary lens can act as a means to review how writers and artists surpass the boundaries of their respective disciplines. It is through a similar methodology that I now present my own theory of synthetic synesthesia in installation art. The presence of synesthetic tendencies in literature and especially cinema highlight how sensory combinations that resemble true synesthesia are both widely present and accessible to most people. To begin my theoretical discussion I first explain my concept of "synthetic synesthesia." Following this description I present theories surrounding phenomenology and immersion as a means to explain how the works of my chosen artists are able to supplant the visual, engage with multiple senses and interact with the immersant at a bodily level.

By synthetic synesthesia in installation art I am referring to the stimulation of two or more senses at the same time. These senses, in relation to my case studies, combine visual elements with other sensory stimulants. A consideration of the phenomenological theory – which states that all modes of experience are multisensory (as noted below) – can clarify how the synesthetic character of the works of Marla Hlady and Peter De Cupere act to upset the idea of an ocularcentric experience of art by emphasizing the presence of multiple senses. It must be noted that by speaking to a denial of ocularcentrism and labeling artworks such as these synthetic synesthetic I do not mean to imply that they employ a total rejection of vision. Rather I propose that they augment the visual by engaging with a combination of senses in order to create an immersive multisensory experience. For example, Marla Hlady combines aural, haptic and visual stimuli while Peter De Cupere combines olfaction and vision. In both of these cases – the carefully designed platforms of Hlady's *Basement Bass* or De Cupere's *Smoke Room* and *Smile Room* – the installations are visually pleasing, but work with other senses in order to enclose the immersant in a sensuous space.

The concept of synthetic synesthesia has been named such in order to avoid confusion with true synesthesia while maintaining a connection to it. This is because, while the works may engage with multiple senses at once in a way that parallels synesthesia, they cannot cause the immersant to become a true synesthete. Instead, much like Martino and Marks's theory of weak synesthesia, they create a diplomatic and widely accessible version of the condition that draws on, and emphasizes, an underlying unity of the senses. Synthetic synesthetic artworks do so by drawing attention to the fact that our perceptions are always mingled. This concept becomes clearer with my discussion of immersion and phenomenology below. Synthetic synesthetic artworks also exacerbate the artificiality of the division of the senses which is common in modes of thinking based on Aristotelian scientific philosophies.⁵⁵ They act as a physical version of

⁵⁵ In his text *The Frog Who Croaked Blue*, Jamie Ward explains that the common belief in Western culture that humans have five senses and that each sense corresponds with a specific

the literary synesthetic metaphor, bringing together seemingly opposite senses to create one complete and dynamic immersive experience.

Immersion and Perception

Various labels have been placed on works that seek to extend the experience of the audience beyond the work itself to involve the immersant on a sensorial level, including multisensory and immersive. In this portion of my paper, I address, with a consideration of phenomenology and immersion, that visual art is never purely visual but rather that the senses work together in any perceptual situation. Works like those of Marla Hlady and Peter De Cupere challenge the notion of the purely visual art experience by decentering vision and drawing the immersant's attention to their other senses as they encounter a work. Hlady and De Cupere's use of the inherently immersive senses of sound and scent render a distanced interaction with the work impossible and create an automatic reaction to a multisensorial environment that mimics synesthetic experiences.

It is important to consider phenomenological theories of perception in order to comprehend how humans perceive the world around them. This can explain how an understanding of the intersensory characteristics of perception can be used to revolutionize a discipline that is dominated by visual material. Turning back to film theory for a moment, an interesting and relevant interpretation of the

sensory organ is based on Aristotle's scientific philosophies and teachings. He notes that, as a result, cultures who do not know of Aristotle have other beliefs of how the senses are categorized and what those categorizations may be. Ward, *The Frog Who Croaked Blue*, 31-32.

inherently multisensorial nature of perception is presented by critic and theorist Vivian Sobchack in her book *The Address of the Eye: a Phenomenology of Film Experience*. In this text Sobchack considers the phenomenological experiences of the viewer when encountering a film. She presents an interpretation of phenomenological perception (drawing on Maurice Merleau-Ponty's classic phenomenological theory) as a perceptual process that involves the whole body and therefore all of the senses. As Sobchack notes:

...as the irreducible existential structure of consciousness animated by and as a sensible body, perception is... always *synaesthetic* and *synoptic*. That is, perception is not constituted as a sum of discrete senses (sight, touch, etc.), nor is it experienced as fragmented and decentered. *All* our senses are modalities of perception and, as such, are co-operative and commutable. Such cooperation among and commutation of our senses occurs in existence because our senses all figure on the finite and situated field that is our body.⁵⁶

Sobchack's point focuses on the fact that the senses always operate together and can never be truly separated. For example, when a person walks down the street, vision is involved in navigating the path but other senses, such as the feeling of the impact of their feet against the ground, the sounds of traffic and the smell of exhaust, rain and dirt are also present and unavoidably so. As a living body moving through and interacting with the surrounding environment all of the senses must be involved though they may not be at the forefront of consciousness. This is illustrated by Sobchack's discussion of vision. She notes that "…although sight is differentiated from our other modes of perception, it is not isolated from

⁵⁶ Vivian Sobchack, *The Address of the Eye: A Phenomenology of Film Experience* (Princeton: Princeton University Press, 1992), 76.

them... [There is] no such sense as 'pure' sight and no such activity as 'just' seeing. Rather, seeing is informed by perception in all of its modalities."⁵⁷ This is especially interesting when considering the realm of dominantly visual art. While the gallery in which most works are found are made to appear neutral in order to allow for a pure, uninterrupted visual space, the senses are still engaged. This is because the body must move about the space, interact with it and navigate it; it is subject to all of the factors of the environment. Sobchack's argument that a purely visual experience cannot exist further points to how the concept of "visual" art is illusionary; therefore it is comprehensible that an artwork can be created to emphasize the immersive and multisensory quality of seeing.

Two genres of immersive artistic practice that have gained increasing prominence in the last fifty years are that of virtual and new media works. Experimentations with new technologies have allowed artists of these disciplines to create immersive and interactive environments. These types of works, for example the renowned immersive virtual realities of Canadian artist Char Davies, often mimic the sensory, spatial, and kinesthetic stimulants that a person would feel moving through an environment.⁵⁸ Immersive art in general can be tied to synesthesia and has been by aforementioned scientific researcher Crétien van Campen in his article "Synesthesia in the Visual Arts". While the study of the immersive environment in relation to synesthesia is relatively new and

⁵⁷ Ibid, 94.

⁵⁸ For example, her digital work *Osmose* (1995) requires the participant to wear a headset and vest as they are immersed in a virtual 3D world.

underdeveloped, van Campen recognizes the link between the disciplines and the potential for further research. In this article van Campen notes that immersive art is a relatively new art form that has exposed perceptual undercurrents that could be related to synesthesia. The experience of the subjective body in a sensorial environment is a topic still in the theoretical stage in synesthesia studies. But, while they may not employ strict scientific methods, artists have created experimental methods to consider this subject.⁵⁹ Van Campen's comments explain how immersive artworks have parallels to synesthesia and the potential for these artworks and artists to broaden the scope of scientific studies of the neurological condition. Undoubtedly, as seen in the case of virtual art, immersive art can create environments that affect the immersant in a synthetic synesthetic way through its enveloping properties, and its imitation of reality. Moreover, the immersive nature of the senses stimulated in the works of Marla Hlady and Peter De Cupere enable the artists to cause an immediate reaction in the immersant, this immediacy being an element of their work that allows the pieces to cause a reaction that closely parallels the automatic experiences of synesthetes.

An analysis of how installation art can engage with the immersant's senses can be aided with a consideration of immersive virtual reality artworks. While, like cinema, virtual spaces may not engage with senses such as smell or taste there are some parallels between this medium and that of multisensory installation

⁵⁹ Crétien van Campen, "Synesthesia in the Visual Arts," in *The Oxford Handbook of Synesthesia*, ed. Julia Simner and Edward M. Hubbard (New York: Oxford University Press, 2014), 639.

art. This is because virtual reality artworks seek to mimic reality in such a way that it can affect the participant bodily and sensorially through senses such as hearing, vision and touch. The premise of most virtual art of this kind is to surround the immersant in an enveloping space that confuses the distinction between reality and illusion. The parameters of immersion in relation to virtual art are analysed in Oliver Grau's text Virtual Art: From Illusion to Immersion. In this text, Grau explores the history and origins of virtual art methods from the Renaissance to the contemporary. He also offers an explanation of the immersive properties of the virtual medium. In his introduction to immersion, Grau explains that most virtual realities are designed to enclose the immersant, isolating them from external stimuli and surrounding them in a 360-degree space of illusion and immersion. They are an extreme form of image media, which intervenes on and expands the immersant's perception of real space, creating a completely alternate reality. They can both enable the artist to create their desired "all-embracing" image and present the immersant with the option to unite with the image, affecting them sensorially. In doing so they avoid the separation that occurs between the immersant and the image in mediums such as illusionistic painting, television and theater in which the boundaries of the medium and frame are always apparent and disruptive, rendering full engagement with the senses impossible.⁶⁰ Grau's argument that the immersive potential of art is heightened by the absence of the frame can be related to my case studies. Not only is the frame

⁶⁰ Grau, Virtual Art, 13-14.

not physically visible in the work of both Hlady and De Cupere, the distance that the frame and picture plane would provide is non-existent. This is because the senses they employ cannot be contained within a frame nor avoided once the immersant enters the space. In particular, sound, touch and smell, the prominent senses in each artist's respective works, interact with the immersant in a way that is both immediate and intimate, and cannot be avoided as the corresponding sensory organs of the body cannot be shut to them. As a result, the works encapsulate the audience in an all-encompassing sensory space that requires active participation and automatically causes a synthetic synesthetic response.

Marla Hlady: Tactile Sound

How Marla Hlady's use of sound and tactility acts on the immersant's body in *Basement Bass* was briefly discussed in the first section of this text. Both of these senses influence the immersant by encompassing the space and the surface of the platform. Because of *Basement Bass*'s design, the immersant is confronted with two modes of sensory interaction. First, when entering the space they are both visually stimulated by the presence of the platform and aurally through the sounds emanating from it. The second level of stimulation is reached when the immersant comes into contact with the platform and the sound is able to physically affect their bodies. While touch is an important aspect synesthetically speaking, it is the sound of Hlady's piece that invites the immersant to interact with the platform of *Basement Bass*, and the means by which the platform is given the ability to interact with the participant through the sense of touch. It is with sound, in both its aural and physical form, that the piece truly becomes immersive. The immersive quality of sound is discussed in the book *Sounding New Media: Immersion and Embodiment in the Arts and Culture* by writer and artist Frances Dyson. In her text Dyson examines the little studied role of sound in new media artworks. In the introduction to her book she discusses the immersive potential of sound noting the differences between sound and the dominant sense of vision. She explains that:

...[sound is] [t]hree-dimensional, interactive, and synesthetic, perceived in the here and now of an embodied space, sound returns to the listener...that feeling of being here now, of experiencing oneself as engulfed, enveloped, absorbed, enmeshed, in short, immersed in an environment. Sound surrounds. Its phenomenal characteristics – that fact that it is invisible, intangible, ephemeral, and vibrational – coordinate with the physiology of the ears, to create a perceptual experience profoundly different from the dominant sense of sight. Whereas eyes have a visual range of 180 degrees, projecting from the front of the subject, ears cover a 360-degree expanse, hearing all around. Whereas eyes can be closed, shutting out unwanted sights, ears have no lids.⁶¹

Dyson's discussion of the qualities of sound illuminates two important features about the characteristics of sound; that it is all-encompassing and overpowering. This observation can give insight into how the immersant is affected when they approach Marla Hlady's *Basement Bass*. Due to the surrounding attributes of sound the immersant is immediately confronted with Hlady's recorded sounds when encountering the installation. This interaction is both immediate and

⁶¹ Frances Dyson, *Sounding New Media: Immersion and Embodiment in the Arts and Culture* (Berkeley: University of California Press, 2009), 4.

unavoidable since the structures of the human ear cannot close itself off from the sound.

However, while listening is an essential component of *Basement Bass*, the immersant is meant to interact with the piece beyond this visual and aural landscape. It is only when the immersant comes into contact with the platform that the true impact of the piece is felt. The immersant is invited to become the stylus to play Hlady's record as they are encouraged to sit, stand or lay on the huge platform and palpably experience the sound through their bodies. The effect of Hlady's recordings on the body are alluded to in Shannon Anderson's discussion of the installation of Basement Bass (Gairloch Gardens Gallery) at Oakville Galleries in 2011 in her aforementioned article "Seeing Sound: Marla Hlady and the Art of Noise," "...sonically, the exhibition was highly fluid, as sounds crossed over from one piece to the next. In one case, sound flowed through the viewers' bodies, if they stood on a false floor in the central gallery that steadily vibrated from bass speaker drivers that carried up sounds..."⁶² Not only are the ears assailed with the steady bass-pop concerto emitted from the speakers affixed to the bottom of the platform, but the very sounds that the listener hears tangibly move *through* the body. These sounds jolt the flesh and clatter bones and teeth as they radiate from the parts of the body directly touching the surface of the disk. Additionally, the immersant's encounter with the piece changes depending on their pose. For example, if the immersant were to lie with

⁶² Anderson, "Seeing Sound."

their back on the platform, their experience of the space would shift entirely as their field of vision narrows and their perception becomes concentrated on what they can feel and hear with their body. On the other hand, if the immersant were to sit or stand on the platform they would experience an additional sensory layer. In these positions they would be able to move around the platform more freely and be able to see the walls of the room and the components of the sculpture from a different perspective with each step. If the platform rotates as it did in *Basement Bass (Justina M. Barnicke Gallery)* and the *Basement Bass (Boréalis)* they would experience a slight disorientation as their movements clash with those of the slowly turning contraption. These shifts are then mirrored by small changes in volume as the immersant's ears move farther away from the speakers. These elements work together to create an unconventionally fluid and richly sensorial experience of both the spatial dimensions and sounds of the gallery space.

Basement Bass ultimately challenges the division of the senses by transforming sonic vibrations into a physical force that can be felt by the immersant. This changes the quality of the aural experience from one that can be interacted with from a distance to a sense that can, and must be felt, through direct bodily contact. It is through Hlady lending sound a tactile dimension that her work truly achieves the qualities of synthetic synesthesia. Her brand of synesthesia, being able to feel the sounds through the body, also surpasses the parameters of sound in art. Through this amalgamation, Hlady is able to counteract and exceed any expectations or previous experiences of an aural artwork, or orthodox listening, that the immersant may hold when entering the space. As noted by Anderson, "Her sculptures, which tend to have a deceivingly utilitarian aesthetic at first glance, engage viewers in experiences that explore and challenge our auditory perceptions. As Hlady puts it, she allows viewers to 'see sound' by 'taking the everyday and unpacking it in a way that's surprising."⁶³ While this article points to the artist's sculptural designs as adding a visual element to the sound, I argue that in the case of *Basement Bass* the sense of touch surpasses that of vision due to its minimalistic aesthetic. While the streamlined platform or rotating disk is visually interesting, and acts as a container from which the sound emits, its power does not affect the immersant in the same bodily and immersive way that the sound is made to. Instead, in this case, Hlady's work allows the immersant to see and *feel* sound. The participant becomes immersed in the installation by listening to the sounds in the piece and feeling those same sounds vibrate through their bodies when they touch the piece. Hlady challenges our perceptions of sound by manipulating it into a dimension in which it can be processed by an alternative sensory modality that can immerse the participant through sound in its aural and physical form. Hlady makes the invisible vibrations and effect of sound tangible and synesthetic in Basement Bass and raises the immersive possibilities of sound exponentially.

Peter De Cupere: Scented Vision

⁶³ Ibid.

As noted above Peter De Cupere's pieces, Smoke Room and Smile Room are created with cigarettes and toothpaste respectively. These materials, in their forms and scents, combine both visual and olfactory stimuli that create a synesthetic experience for the immersant. The cigarettes and toothpaste De Cupere utilizes have different visual effects that are perceived by the immersant from a harsh dirty yellow to a fresh and bright off-white tone. In addition to the visual presence of the objects/substances, these pieces involve the drastically different scents of cigarettes and toothpaste that permeate the space and are immediately perceptible to the immersant. The sheer quantity of the materials creates an unpleasant pungent atmosphere in the space that can influence the immersant once they enter the room in a way that could have profound personal effects. A description of the immersant's experience when entering the space is noted on Peter De Cupere's website, "Via an intimate long corridor covered with retro wall paper, the visitors steps into two different rooms; a bathroom and a living room which are both filled with its opposite hardly bearable smells. Living the experiences of the intense odours might generate an activation of lost memories...⁶⁴ Due to the overpowering scents of the materials and the nature of olfaction itself Smoke Room and Smile Room are able to conjure up the immersant's recollections of past olfactory encounters. Akin to Laura U. Marks's discussion of the sensory dimensions of cinema, Peter De Cupere's works act on

⁶⁴ "Art Brussels-Artist Project," Peter De Cupere, accessed April 13, 2015,

http://www.peterdecupere.net/index.php?option=com_content&view=article&catid=1:exhibition-news&id=79:art-brussels-artist-project

the immersant in a way that triggers memory, making an additional layer of potential engagement possible, while rejecting the inert experience of an artwork common to traditional ocularcentric mediums.

The ability for scent to cause an immediate association to a memory is tied to how olfactory stimuli are processed in the brain. Unlike other sensory stimuli, scents are processed in a part of the brain directly related to memories.⁶⁵ This seems to be a process unique to humans and is developed through learned associations from past exposures to a scent. Laura U. Marks elucidates how scent is processed in the brain in her text in order to contextualize how symbolic representations of scent in cinema can have personal effects on the viewer. Marks explains these connections drawing on the texts of Pamela J. Hines (1997), Michael S. Stoddart (1990) and Frank R. Schab (1991), noting that, unlike most animals, which have genetic codings for various scents, humans are wired to develop strong learned and contextual responses to them. Marks elucidates that there are two areas of the brain that develop paths to process the senses; the first is the cortex which is the center of cognition. The second is the noncognitive region known as the hypothalamus which, along with other areas of the limbic system, is tied to emotions and memory. She also points out that olfaction is the only sense modality which has a direct neural pathway to both the hypothalamus and the cortex. This, according to Marks, means that olfaction alone is a simultaneous

⁶⁵ Marks, *The Skin of the Film*, 205.

process occurring in the noncognitive and cognitive parts of the brain inevitably linking the precognitive memory of a scent to our recognition of it. Because of this link, smell memories have learned emotional responses tied to them and, as a result, we respond to senses emotionally before discerning what they are.⁶⁶ Marks's explanation in the context of cinema can give insight into how the scent installations of Peter De Cupere can affect the immersant. He achieves this through the use of banal scents that most of the immersants have undoubtedly been exposed to. This ensures that each person has an individual response to his pieces and bestows the work with an influential character that remains unfixed and unexpected. True to the nature of olfaction, memories are easily evoked by the smelly arsenal of Smoke Room and Smile Room. The olfactory experiences of these works depend on the materials used and induce emotional responses and trigger memories such as smoky European bars and the homes of a chain-smoking loved one or accidently using too much toothpaste/ mouthwash, and the noseburning eye-watering sharpness of menthol cold and flu creams. Memory is an intrinsic quality in both Smoke Room and Smile Room that lends the works a fluidity of meaning because the interpretation of the work is subject to the immersant's own memories. This associative recognition of the scent is further cemented by the artist's excessive inclusion of the physical materials from which the scents are sourced. These both heighten the overpowering presence of the smells and the synesthetic dimensions of the piece by visually wrapping the space

⁶⁶ Ibid, 205.

with the scent in a way that mirrors the immersive atmosphere created by the smells.

In my introduction to De Cupere's pieces *Smoke Room* and *Smile Room*, I explained how the olfactory artist uses commonly found materials in visually pleasing arrangements in order to create an immersive scent installation that envelopes his participants. The reaction that the immersant will have when participating in the installation is dependent on their learned associations attached to each scent. The unfixed meanings of De Cupere's pieces along with the unusual combination of visual and olfactory stimuli can create an uncomfortable reaction in the immersant since they may become unsure as to how to respond to the smells. In this way, De Cupere's use of scent can be seen, similarly to Hlady's work as a way to destabilize the participant's expectations of the gallery space and highlight multisensorial perceptions. The sense of olfaction is especially adept at causing this disturbance since olfactory art is a relatively new discipline and the gallery space has been conditioned to be completely devoid of scents.

Peter De Cupere's work experiments with the limited spectrum of sensory engagement traditionally present in exhibition spaces by creating scent works that reject distanced methods of engaging with an aesthetic experience. His work presents a situation that requires the immersant to participate intimately with a piece on a level that cannot be achieved through sound or vision. The sensorial capacity of olfactory art is outlined by Larry Shiner and Yulia Kriskovets in their 2007 article "The Aesthetics of Smelly Art." Shiner and Kriskovets argue that

olfactory installations and performance works contest the restricted aesthetic experiences common in the neutral Modernist "white cube" space. They are able to do so through the stimulation of "contact" senses that require scent or taste molecules to contact their respective receptors rather than the "distance" senses (hearing and vision) that enable indirect engagements.⁶⁷ Therefore, De Cupere upturns the conventions of distanced and measured experience seen in purely visual works. In subverting this tradition by highlighting scent, the artist lends his works a force that cannot be disregarded, making for an uncomfortable experience that is all the more unexpected and powerful. These reactions are very much influenced by scent's pervasive character which enables De Cupere to design a complex installation that entraps his audience. Additionally, De Cupere's work, similarly to Hlady's, synesthetically includes visual elements rather than solely presenting invisible scents. In doing so he does not simply supplant the dominant presence of vision with another sense, but elaborates on the visual experience and emphasizes its multisensorial nature.

Peter De Cupere's ability to counteract the museum goer's expectations in interacting with artwork is owed to the nature of olfaction noted above, the conventions of the exhibition space and the synthetic synesthetic qualities of his works. Here I discuss the synesthetic and immersive characteristics of *Smoke*

⁶⁷ Larry Shiner and Yulia Kriskovets, "The Aesthetics of Smelly Art," *Journal of Aesthetics & Art Criticism* 65, no. 3 (2007): 277, accessed June 10, 2014,

http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=4e174164-926b-41b3-a443-83ee67e59d71%40sessionmgr4004&vid=4&hid=4107.

Room and *Smile Room* as a means to describe how the works can act on the immersant by phenomenologically drawing the experience of art away from its focus on vison to present a unique means of interacting with an artwork. The unexpected and synesthetic elements of De Cupere's work are explained by Ruth Renders in her text "Fasten Your Nostrils: The Exploration of the Aesthetical Potential of Odors in the Work of Peter De Cupere." She points out that:

He works magic with recognizable visual elements and thereby generates, in combination with scents, unanticipated synaesthesias between different sensual experiences. Confronted with his scent-related sculptures, installations, objects, paintings, drawings, photographs, videos, performances, graphic designs, scent-concerts, etc., we are encouraged to reposition our perception of smell in relation to other senses.⁶⁸

In my presentation of the phenomenological understanding of how we perceive the sensorial world around us in the previous section I argued how any interaction with our environment is multisensorial. De Cupere highlights this by pairing striking visual stimuli with scents. This combination arguably emphasizes the multisensorial quality of perception because both vision and olfaction can affect the immersant in a more powerful way precisely due to the presence of the other sense. Multisensorial perception is also addressed through scent's ability to compel the immersant to become more aware of their whole body and its senses because of the contact between the body and stimulus that occurs in the process of

⁶⁸ Ruth Renders, "Fasten Your Nostrils: The Exploration of the Aesthetical Potential of Odors in the Work of Peter De Cupere," *Peter De Cupere*, accessed April 13, 2015,

http://www.peterdecupere.net/index.php?option=com_content&view=article&catid=1:exhibition-news&id=79:art-brussels-artist-project.

olfaction. Critic and curator Jim Drobnick addresses the ability for odor to reinforce the importance and presence of the body in his article "Reveries, Assaults and Evaporating Presences: Olfactory Dimensions in Contemporary Art." As Drobnick states:

A prominent characteristic of olfactory artworks is their intimacy because odours are sensory stimuli that cannot be turned off. We must constantly breathe and this compelled intimacy challenges the distance and detachment central to visually-based aesthetic theories. An artwork that must be inhaled, that fills the air with fragrance and envelopes the viewer, that seems to seep into one's very pores, breaks the illusion that a viewer exists solely as a scopic viewpoint, that is, without a body, sensations or feeling.⁶⁹

This observation highlights the fact that the immersant is not simply a spectator but an entity that involves and possesses the ability to perceive scents and process them. The sensorially-sensitive body of the immersant can interact with the scents in the space regardless of where they are situated within it through the active act of breathing and the way odors disperse in the air. However, the immersant's experience can fluctuate as they interact with the installation space. For example, when they move closer to the objects and the walls of the space, both the visual texture of the pieces and the smells become more pronounced and overpowering.

Both Marla Hlady and Peter De Cupere combine sensory elements in ways that mimic synesthesia. In doing so they are able to create artworks that interact with immersants in unexpected ways. Hlady combines visual, aural and tactile

⁶⁹ Jim Drobnick, "Reveries, Assaults and Evaporating Presences: Olfactory Dimensions in Contemporary Art," *Parachute Contemporary Art Magazine*, January 1998, 15.

stimulants in her sculptures in order to represent the ambient sounds of her chosen exhibition spaces, giving sound an added dimension of visual and tactile that affects the immersant on a bodily level. De Cupere combines visual elements with strong scents in ways that emphasize the all-encompassing and personal nature of scent. It is their immersive qualities that lend these artworks a synesthetic edge because they cause automatic reactions and associations involving multiple senses much like the simultaneous reactions felt by true synesthetes. The methodologies of both artists also enable them to create immersive works that surround the participants and create experiences that surpass the conventional stimuli and experiences associated with galleries designed to exhibit visual art. The immersants are made aware of their bodies and the multisensorial nature of their everyday perceptions through a decentralization of the visual that has long been given precedence in the art world. The works are not contained within a confined frame, which allows for distanced aesthetic appreciation in traditional art forms like painting. Instead, like all installation artworks, they have surpassed this frame to encroach on the space of the participant and reconsidered the interactive limits between the artwork and the audience. Hlady and De Cupere take the interactive potential of installation art to an exaggerated level by creating sensually rich artworks. In doing so these works redefine previous classifications of aestheticism and aesthetic appreciation, thereby encouraging a mode of interaction that includes senses besides vision.

Conclusion

My aim for this paper has been to argue that synesthesia is a viable methodological lens that can broaden current interpretations of contemporary art precisely because, as I have noted, synthetic synesthesia exists in the way Marla Hlady's *Basement Base* and Peter De Cupere's *Smoke Room* and *Smile Room* influence the immersant. Through the presentation of data from contemporary artistic practice and scientific studies I have provided a novel interdisciplinary perspective on existing scholarly analyses concerning the art historical influence of these and like works. I also exhibited an examination of how the artworks included in my analysis create an immersive environment that totally stimulates the immersant through the unavoidable nature of the various senses the artists employ. In doing so, I established a connection between how these artworks point to the immediate and total phenomenological experience and the neurological condition of synesthesia.

To elaborate on this point, it was my intention with this paper to address the fact that in the case of *Basement Base, Smoke Room* and *Smile Room* there is a primary non-visual sense(s) (which, in the case of Hlady or De Cupere, are either hearing/touch or olfaction) that is directly and overwhelmingly stimulated and a secondary sense (vision) that is stimulated in tandem with the first. This is related to how synesthetes perceive stimulants, where the stimulation of one sense causes a reaction in another sense modality. While it must be noted that both senses involved in a synesthetic response may not be stimulated by an external sensory force but, as explained in my section on synesthesia, the part of the brain related to both senses involved *are* stimulated as if the sensory stimulants were actually present. Therefore, a multisensory environment could have similar effects on a non-synesthete because multiple senses are congruently processed in multiple sense modalities. I also noted in my section concerning the scientific perspectives on synesthesia, that many scientists have argued that the way synesthesia works suggests that sensory pathways in the brain are already interconnected but are blocked from communication with each other. Thus, in relation to art discourse, my paper considers the science surrounding synesthesia, a marginally-tapped resource, which reinforces the theory that the human senses are not as segregated as once believed. This is arguable as these artworks artificially unlock these sensory pathways, or simulate this occurrence, working to create a complete sensory/art experience. My chosen artists, whether knowingly or not, utilize elements of synthetic synesthesia in their works that push the boundaries of art experience and reject the distanced appreciation of art seen in the Modernist paradigm. Marla Hlady does so in *Basement Bass* by immersing the participant in sound and accentuating its vibrations to such a degree that it is enabled to interact with, and directly affect, the body of the immersant. Peter De Cupere, in both Smoke Room and Smile Room, uses the tangible sense of smell to permeate the gallery space and surround the immersant with a sense traditionally rejected, annihilated and/or ignored in the discussion and production of artistic interactions. With their synesthetic artwork the artists also problematize the notion of "viewing" an artwork. The concept of viewing a work is so ingrained in art discourse that it is relatively rare to find alternate ways of describing the interaction between the artwork and its audience. Indeed terms and phrases such as viewing the work, looking at the exhibit or going to see the latest blockbuster show, all underscore the precedence that vision is given in both the art world and daily life. By rejecting the monosensory environment of the gallery in which one sense is solely acknowledged and catered to, the types of immersive work noted in this paper can, hopefully, begin to revolutionize the way we consider and discuss artworks. Arguably, in supplying visual cues in tandem with other sensory stimuli my case studies have reached a means to dissolve the hierarchy of the senses and point to the engagement of multiple senses that naturally characterize perception as a whole.

The potential implications of the interdisciplinary nature of my research are multiple; by addressing an element of sensory perception in contemporary installation and immersive art that has been minimally addressed in the past and expanding on current scientific studies it can broaden the scope of existing research in art history, art criticism and science. From a scientific perspective, my research can potentially illustrate how synesthesia studies can be utilized outside of science and reinforce existing theories. My practical and theoretical contribution to the artistic sphere could also give artists a research platform from which to design and develop pieces that intentionally provoke synesthetic responses in their viewers. Additionally, by labelling the inter-sensory perception present in my chosen works as "synesthetic," I present a theory that could be applied to the discourse surrounding other works of art ranging from *Gesamtkunstwerk* pieces to immersive video and virtual reality artworks.⁷⁰ In doing so my research can provide an example of an interdisciplinary approach that can offer the researcher and their audience a greater understanding of the achievements of contemporary artists who work with multiple senses and how multisensory installation art can instigate ocularcentric criticisms through their phenomenological effects.

⁷⁰ By *Gesamtkunstwerk*, I mean artworks which, in Crétien van Campen's words, "…integrate music, image, dance, and other disciplines…" Crétien van Campen "Synesthesia in the Visual Arts," 631.

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Appendix A

Figure 1. Marla Hlady, Basement Bass (Gairloch Gardens Gallery), 2011.



Materials: wood, bass speaker drivers with amplifiers, sound Dimensions: floor is approximately 19' x 14' x 0.5' (w x l x h)

Photograph by Toni Hafkenscheid, image courtesy of the artist.

Figure 2. Marla Hlady, *Basement Bass (Gairloch Gardens Gallery)* (Detail), 2011.



Materials: wood, bass speaker drivers with amplifiers, sound Dimensions: floor is approximately 19' x 14' x 0.5' (w x l x h)

Photograph by Annie Onyi Cheung, image courtesy of the artist.

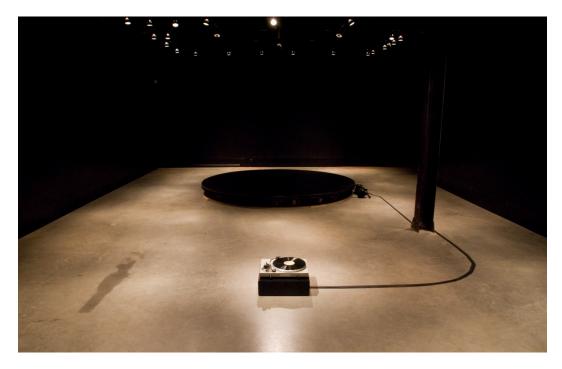


Figure 3. Marla Hlady, Basement Bass (Boréalis), 2014.

Materials: mechanical floor with speed control, wood, bass speaker drivers with amplifiers, sound, record player with record (*Sounds of Silence*), guitar amplifier, miscellaneous audio equipment Dimensions: floor approximately 10' x 10' x .5' / record player unit approximately 18' x 16' x 11' (w x l x h).

Image by, and courtesy of, the artist.

Figure 4. Marla Hlady, Basement Bass (Boréalis) (Detail), 2014.



Materials: mechanical floor with speed control, wood, bass speaker drivers with amplifiers, sound, record player with record (*Sounds of Silence*), guitar amplifier, miscellaneous audio equipment Dimensions: floor approximately 10' x 10' x .5' / record player unit approximately 18' x 16' x 11'(w x l x h).

Image by, and courtesy of, the artist.

Figure 5. Peter De Cupere, *Smoke Room*, 2010. http://www.peterdecupere.net/ Figure 6. Peter De Cupere, *Smile Room*, 2010. http://www.peterdecupere.net/