Olfactory Experiences in Museums of Modern and Contemporary Art

SMELL AS A NEW CURATORIAL STRATEGY

Anne Nieuwhof

s0912972
a.nieuwhof@umail.leidenuniv.nl

First reader: Prof.dr.ing. R. Zwijnenberg
Second reader: Prof.dr. C.J.M. Zijlmans

Research Master Arts & Culture
Academic year: 2016-2017
Words: 24.939

Und so geschah es, daß Grenouille zum ersten Mal in seinem Leben seiner Nase nicht traute und die Augen zuhilfe nehmen mußte, um zu glauben, was er roch. Die Sinnesverwirrung dauerte freilich nicht lange. Es war tatsächlich nur ein Augenblick, den er benötigte, um sich optisch zu vergewissern und sich alsdann desto rückhaltloser den Wahrnehmungen seines Geruchssinns hinzugeben.

Patrick Süskind, *Das Parfum*

TABLE OF CONTENTS

PROLOGUE

Although I already could appreciate and enjoy the particular flavors of wine circulating through my mouth, it was only about two and a half years ago that I thought I could not tell the difference between a wood matured chardonnay and an acidic sauvignon blanc. In the summer of 2014, I came across an advert for a wine course and, driven by cautious curiosity, I decided to enroll. At that time, I could not yet assess the impact of this seemingly frivolous decision. The course has not only introduced me to the rich diversity of wine, but it particularly has made me aware of the functioning and tremendous power of smell. Around the same time, my interest in educational issues and innovations was sparked. Resulting from a widespread and growing dissatisfaction with the Western formal education system, I started to delve into social debates on recent and prospective reforms in education. This thesis builds on and embodies the theoretical cement between these two newly gained interests and my continuing fascination with novelties in contemporary art and museums. Moreover, it does not only represent the culmination of my study Arts & Culture at Leiden University, but this thesis marks even more a new beginning in which I aim to continue to interweave contemporary art, education and wine.

INTRODUCTION

Touching the cold, solid surface of an Umberto Boccioni, tasting the soft meringue clouds of a René Magritte or being immersed in the vibrant, colorful spaces by Vincent van Gogh: these are recent examples of art museum experiences.[1] In the last two to three decades, there has been an increasing interest in the making of multisensory museums. Whereas art museums used to provide their visitors a visual and unhindered encounter with their artworks, contemporary museum professionals have begun rethinking this restrictive sensory politics and started welcoming non-optical senses in many different ways. "In our fast-paced, hyper-real society of today," artist and cultural theorist Linda Solay argues, museums must provide immediate sensory involvement in order to remain attractive to this "experience-hungry society."[2] However, such multisensory art museum initiatives are indeed numerous and various nowadays, but they are usually spectacle-oriented and centered around an empty conception of *total experience*. Is it possible to reframe and reshape the multisensory museum as a meaningful and educative environment?

At the same time, we are witnessing a flowering of specialized museums and art exhibitions that draw specific attention to the olfactory sensorium. Only a handful of museums are wholly devoted to smell, such as the French museums Musée du Parfum in Paris (founded 1983) and the Osmothèque in Versailles (founded 1990), but there seems to be an increasing, albeit still on a very modest scale, global interest in curating art exhibitions that explore olfactory art. Recent leading examples of such art exhibitions include *reminiSCENT* (2003) at the FADO Performance Art Centre in Toronto (CA), *Odor Limits* (2008) at the Esther M. Klein Art Gallery in Philadelphia (US), *The Art of Scent 1889-2012* (2012) at the Museum of Arts and Design in New York (US), *The Art of Scent 1889-2014* (2014) at the Círculo de Bellas Artes in Madrid (ES), *Belle Haleine – The Scent of Art* (2015) at Museum Tinguely in Basel (CH), *Es liegt was in der Luft!* (2015) at Museum Villa Rot in Burgrieden (DE) and *Dig in! Scent and Art* (2016) at the KVD Gallery in Dachau (DE). These exhibitions present a diversity of (artistic) perfumes and olfactory artworks by artists such as Peter de Cupere (BE), Job Koelewijn (NL), Gayil Nalls (US), Ernesto Neto (BR), Sissel Tolaas (NO), Maki Ueda (JP), Clara Ursitti (CA), Luca Vitone (IT) and others.[3]

However, although these two relatively recent and seemingly overlapping phenomena –the multisensory museum and the institutional interest in olfactory art– run parallel to each other, there are

[1] In the first example, I refer to the London's Tate Modern's touch tours, in which participators are allowed to touch a selection of sculptures in the museum, including *Unique Forms of Continuity in Space* (1913) by Boccioni. The second example refers to the 2013 event *Edible Magritte* in the Museum of Modern Art in New York. Five paintings by Magritte were reinterpreted as a meal. Lastly, the third example refers to the Van Gogh Alive, a travelling exhibition in which visitors navigate "through the life and art of Vincent van Gogh in a symphony of light and sound" (see www.vangogh-alive.com, consulted on March 3, 2016).
[2] Solay, 2012, p. 2.
[3] Some artists, such as Niklaus Mettler and Liza Witte, aim to blur the distinction between commercial perfume and the fine arts. For interesting discussions on the aesthetic differences and similarities, see: Shiner, L., "Art Scents: Perfume, Design and Olfactory Art" in: *British Journal of Aesthetics*, vol. 55, no. 3 (2015) pp. 375-392 and Shiner, L. and Y. Kriskovets, "The Aesthetics of Smelly Art" in: *The Journal of Aesthetics and Art Criticism*, vol. 65, no. 3 (2007) pp. 273-286.

rare cases of museums of modern and contemporary art employing *smell* as a *curatorial strategy*.[4] Such art museums either curate multisensory exhibits or tours that particularly focus on the interaction between sight, hearing and touch, *or* display contemporary olfactory artworks.[5] Other types of museums, such as ethnographic, science or (natural) history museums, already more commonly employ scent as an active agent, but when they do, these museums usually design these scents as illustrations of a presented object or idea. In other words, these smells function as mere examples and do little more than support what is already available visually. The need for art museums to *olfactorily reproduce* visual or auditory artworks seems less urgent for there seems to be no apparent additional value of scent to these displayed works. The relevance of scent in such case is unclear, or comical at best.

In this thesis, the sense of smell will function exemplary to discuss the tension between the conventional art museum, which educational principles have been shaped by ocularcentric practices, and the multisensory art museum, which seems to have less educational value. This thesis aims at bridging the gap between these two types of museums by both advocating to dethrone the Eye as the most eminent sense in the art museum and connecting the notions of productive experience and learning. I will create a theoretical framework for understanding multisensory art museum experiences as meaningful and educative, and propose smell as a new legitimate curatorial strategy for it should not be considered differently than any other agent in the museum. In other words, I argue that olfactory experiences can be meaningful to *all* museum visitors. Whereas multisensoriality in museums is often linked to the debate of inclusivity and accessibility, the focus of this thesis shifts to the topic of learning. I argue that smell can be a potentially meaningful, or *educative*, instrument to both those who have been excluded from *and* to those who are already included in the museum.

Interestingly, the sense of smell has not always been excluded and shut out from the museum. In the article "Museum Manners: The Sensory Life of the Early Museum," cultural historian Constance Classen concentrates on the ways in which the senses were engaged within cabinets of curiosities and early museums, and gets into detail on how visitors in those days were allowed to "rub, pick up, shake, smell, and even taste the artifacts on display."[6] It was only just at the end of the eighteenth century that Western philosophers and scientists began to reevaluate and delineate our sensory modalities. Sight gained mastery over the other senses and smell was placed at the bottom of the epistemological hierarchy. In 1754, for example, the French philosopher Étienne Bonnot de Condillac remarked that "of all the senses [smell] is the one that seems to contribute the least to the operations of the human mind."[7] His contemporary, Immanuel Kant, similarly wrote: "To which organic sense do we owe the least and which seems to be the most dispensable? The sense of smell."[8] These philosophers and scientists agreed

[4] Smell refers to both scent and the sense of smell. Note that the noun 'smell' and its synonyms (e.g., odor, scent, aroma, perfume, stench) generally carry a strong negative or positive connotation in common English language. However, 'odor' has a neutral connotation in science and is therefore at times used interchangeably with 'scent' in this thesis.
[5] Few museums that do employ scent as a curatorial strategy will be specified in the second chapter of this thesis.
[6] Levent, 2014, p. xvii.
[7] Condillac, 1930, p. xxxi.
[8] Kant, 1978, p. 46.

and dictated that visual perception was the preeminent sense of reason and civilization. Art museums have since then been highly ocularcentric institutions, in which artworks are put on display and visitors are required to keep distance. In addition, the sense of hearing –second on the hierarchical ladder– also came to play a prominent role. For example, "as early as 1904," historian Naomi Reden explains, "curators began recommending the use of phonograph recordings in exhibitions as audio-visual aids to provide contextual information."[9]

Although a number of well-known modern artists –such as Marcel Duchamp and Andy Warhol– and artistic movements –such as the Symbolists, Futurists, Dadaists, and Surrealists– already directed their attention to the olfactory sensorium, this aspect of their focus has been largely overlooked by art historians, museums and other academics and institutions. The museological turn towards the non-canonical senses was only first set in motion in the 1960s through a revolution in exhibition design: the first *hands-on* exhibitions appeared during this decade. Later on, gustation also gained prominence in museums through the emergence of gallery cafes. One such example is the Neue Galerie in New York. Art historian Nina Levent and neurologist Alvaro Pascual-Leone write that "this museum houses not one but two restaurants in its relatively small space, Café Sabarsky and Café Fledarmaus, both featuring traditional Viennese menus. In these cafes patrons are seated in chairs designed by the modernist Austrian architect Adolf Loos, and in the restaurants spaces are other period objects, including lighting fixtures by Josef Hoffmann and banquettes upholstered with a 1912 Otto Wagner fabric."[10] In other words, the themed café and menus function as part of this art museum.[11] "Another way to incorporate taste in the museum," Reden adds, "is by displaying recipes in exhibits or selling cookbooks in the gift shop that are from the appropriate time period or somehow associated with the subject of the exhibition or museum."[12] Now, the time is ripe for art museums to also include smell as a curatorial strategy.

This thesis moves within the sensory turn in contemporary scholarship and pushes further the museological turn towards the non-canonical senses, but should nevertheless read as tasting a great glass of wine. Before tasting a wine, appropriate conditions and circumstances surrounding the tasting (e.g., temperature of the room and the wine, enough water and spittoons) should be created. Only then, the taster can start creating his/her framework of the wine by analyzing its appearance (e.g., color, clarity, maturity). Analogously, I will begin with building the basic structure underlying this thesis in its first chapter "Reframing Experiences of Olfaction and Museums." I will bring together recent insights from neurosciences, museum studies, and learning theories in order to present a new museological model, that of the multisensory museum, which allows smell to function as a *meaningful* agent. The meaning of *meaningful* will be examined through an exploration of the notions of *olfactory experience* and

[9] Reden, 2015, p. 20.
[10] Levent, 2014, p. xix.
[11] Today, museum theorists and professionals also focus on the educational potential of food's materiality. For interesting case studies and more references, see Mihalache, I.D., "Taste-full Museums. Educating the Senses One Plate at a Time" in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, N. Levent and A. Pascual-Leone (eds.) Lanham/Plymouth: Rowman & Littlefield (2014) pp. 197-212.
[12] Reden, 2015, p. 19.

museum experience, in which both these notions will be reconceptualized and *reframed* as potentially productive learning events. In this sense, this thesis bares a strong political element for it challenges our traditional educational thinking on which our current validation system and, hence, our financial rewarding of museums inextricably depends.

The next step in wine tasting involves smelling (e.g., intensity, aromas, complexity) and sipping and slurping (e.g., mouthfeel and levels of sweetness, acidity, alcohol, and tannins). In other words, the taster actually consumes and delves into the wine. In the second chapter of this thesis, "Nosing into Olfactory Curatorial Strategies," I will comparably dig into two already existing olfactory initiatives of the progressive art museums Tate (UK) and the Van Abbemuseum (NL): respectively, *Tate Sensorium* and *Inhaling Art*. Due to the utter sparsity of art museums that employ smell as a curatorial strategy, these two prototypes function as concrete examples for other future olfactory curatorial strategies. Therefore, I will examine the particular challenges of curating smell and the pedagogic meanings of these smell interactives.

Finally, tasters complete their analysis of the wine by focusing on some extra points of attention (e.g., *élevage*, grape variety, type of climate, vinification). Likewise, the third and final chapter, "Shopping for Future Olfactory Curating," will concentrate on different, interdisciplinary, approaches to olfactory curating and will hence theoretically complement the two previous chapters. The novel *Das Parfum* (1985) by Patrick Süskind will serve herein as the point of departure. Although its "main character is a psychopath who reiterates the stereotype of the degenerate olfactophiliac," smell theorist Jim Drobnick writes, "the evocativeness of the novel's world –completely suffused and oriented around odors– stirred literary and critical analyses within and beyond its own context."[13] I will expand these analyses by taking the novel's literary and cinematic translations as point of departure for thinking about olfactory curatorial strategies. What can these interpretations teach us about olfactory curating? I will argue that the literary concept of metaphor is helpful in designing productive smell interactives and the lens of ciné-theory sheds light on how audiovisual media can induce productive sensorial experiences.

In summary, the *terroir* on which this thesis blossoms is highly interdisciplinary and essentially consists of museum, learning, neurological, film, and literary theory. I bring these theories together in the domain of smell. Regarding academic writing concerning the sense of smell itself, there is little compared to other sensory modalities. It has only been since recently that this topic has received more attention in scholarly circles ranging from the neurosciences to history and anthropology. In the field of cultural studies, the book *Le Miasme et la Jonquille* (1982) by historian Alain Corbin is one of the earliest and most significant studies.[14] In his book, Corbin analyzes the historical relationship between odor and hygiene, and their effects upon social and political events in eighteenth- and nineteenth-century France. Two other pioneering theorists are anthropologist David Howes and cultural historian Constance Classen. In their celebrated book *Aroma: The Cultural History of Smell* (1994), they discuss the cultural

[13] Drobnick, 2006, pp. 3-4.
[14] The book was translated in 1986 as *The Foul and the Fragrant*.

meanings of smell from antiquity to the present in both Western and non-Western societies.[15] Another essential read for anyone interested in the relation between culture and smell is *The Smell Culture Reader* (2006) by smell theorist Jim Drobnick. This interdisciplinary anthology deals with issues ranging from the spatial roles of smell to olfactory aesthetics, and from scent and identity to spiritual practices. Following in the footsteps of these authors, this thesis aims at opening the topic of smell to greater philosophical and critical exploration, and at inspiring both multisensory museum practices and further investigation into the sensorium as a meaningful agent in museum experiences.

[15] This book is also co-authored by sociologist Anthony Synnott.

1. REFRAMING EXPERIENCES OF OLFACTION AND MUSEUMS

Much of late twentieth century thought has been dominated by a shift in understanding the relationship between language and our world in what has been named 'the linguistic turn.' Many influential theorists including Wittgenstein, Foucault and Derrida have built on the notion of linguistic systems as constitutive of our lived world for we would not be able to approach this world other than through our vocabulary. However, followed by the pregnant exclamations "*Il y a du hors texte!*" and "the limits of my language are not the limits of my world," sensory anthropologist David Howes analyzes that "it has taken an ideological revolution to turn the tables and recover a full-bodied understanding of culture and experience."[1] In the past few years, academics have slowly been overturning the linguistic paradigm and have increasingly been paying attention to the language exceeding notion of experience. Although this word, experience, is deeply rooted in our daily ways of expressing ourselves, many academics and thinkers have been puzzling over this complex idea and, as philosopher Hans-Georg Gadamer already remarked in the 1970s, "the notion of experience seems […] one of the most obscure we have."[2]

Today, also museum theorists, professionals, and academics working in the field of sensory research have picked up on the notion of experience, although they rarely explain their interpretation of the term. In this chapter, I will particularly delve into experiences of olfaction and museums without striving to present a singular meaning of these concepts. I aim to build a new conceptual framework in which we can understand olfactory experiences as potentially meaningful art museum experiences. In the first section, I will explore what it means to have an *olfactory experience*. Compared to our other senses, smell has unusual and unique qualities that we need to understand in order to think through its power. I will argue that the potency of olfactory experiences can be located "somewhere in between the stimulus and the sign," as anthropologist Alfred Gell analyzes, "for it would seem that we are dealing neither with a system of 'chemical communication' which could be handled within a purely ethological perspective, nor yet with a 'sign-system' – since the smell-aspect of the world is so intimately bound up with its purely physical and physiological constitution that it can in no sense be considered conventional."[3] In the second section, I will disentangle the notion of *museum experience*, because contemporary museum theorists and professionals employ this concept in two different ways: either as an all-encompassing adventure of spectacle (museum-centered) or as an equivalent of learning (visitor-centered). Within the framework of this second interpretation, albeit with a small yet crucial alteration, I will introduce the olfactory experience as a meaningful museum experience. Additionally, in doing so,

[1] Howes, 2005, p. 1. First, "il n'y a pas de hors-texte" is a famous quote by Derrida in his book *De la grammatologie* (1967). However, I need to mention that this phrase is (widely) misunderstood as meaning that nothing exists outside of *texts*, whereas a more correct interpretation would be that nothing exists outside of *contexts*. Second, "die Grenzen meiner Sprache bedeuten die Grenzen meiner Welt" is a famous quote by Wittgenstein in his book *Tractatus Logico-Philosophicus* (1922).
[2] Gadamer, 1975, p. 310. More recent discussions on the notion of experience include Jay, M., *Songs of Experience. Modern American and European Variations on a Universal Theme*, Berkeley: University of California Press, 2005; Wierzbicka, A., *Experience, Evidence, and Sense: The Hidden Cultural Legacy of English*, New York: Oxford University Press, 2010.
[3] Gell, 1977, p. 26.

I aim to stimulate critical thinking about *learning* and *education* and present a thorough reconceptualization of these notions. Next, elaborating on this new line of thought, I will reflect on three different perspectives on museum education in the third section of this chapter. These three perspectives (of the deodorized cube, the constructivist museum, and the multisensory museum) each represent a different approach regarding the relation between our senses and epistemology, learning, and pedagogy in the museum.

1.1 THE SENSE OF SMELL AND OLFACTORY EXPERIENCE

Since smell responds to chemicals in our environment, it is commonly referred to as one of our 'chemical senses.'[4] Certain compositions of such individual chemicals together constitute a particular scent. "Coffee, for example," psychologist Richard Stevenson explains, "has several hundred constituent chemicals, and the brain's task in perceiving coffee odor is to recognize this *combination* of chemicals."[5] As to how many individual smells humans can perceive, a recent and much cited article in one of world's top academic journals *Science* has argued that humans have the ability to discriminate more than one trillion individual chemicals, though most other literature resources hold on to the claim that we can only smell between 4,000 and 10,000 different odor molecules. However, as neuroscientist Tim Jacob clarifies, "no two substances smell exactly alike and the current understanding of smell discrimination means that there is an infinite number of odors to which we would be sensitive."[6] Therefore, it is not (yet) to be determined how many smells humans can distinguish, though we can establish that our privileging of sight and our limited attention to the sense of smell "obstructs the richness in information enclosed in these signals."[7] For example, it is a common misconception that people who are blind or visually impaired develop a *better* sense of smell in order to compensate for their visual handicap. This does certainly not seem to be the case as they are merely more *aware* of the smells around them.[8] Another controversial theme in the research on human olfaction is the capacity to perceive pheromones. Although popular science suggests these odorless hormones are powerful stimuli of sexual attraction, scientists do not agree on whether (all) humans can process pheromones.[9]

Smell perception begins with the entering of minute, volatile, airborne chemicals into the two nostrils. The air flows at a different speed through both nasal passages for some odor molecules are only perceivable when they stream slowly, or quickly, through the nostrils. After these chemicals have been

[4] Taste would be our other 'chemical sense.'
[5] Stevenson, 2014, p. 153.
[6] Jacob, 2015a.
[7] Brakel, 2014, p. 20.
[8] See Beaulieu-Lefebvre, M. et al., "Odor Perception and Odor Awareness in Congenital Blindness" in: *Brain Research Bulletin*, vol. 84, no. 3 (2011) pp. 206-209; Rosenbluth, R., E.S. Grossman and M. Kaitz, "Performance of Early-Blind and Sighted Children on Olfactory Tasks" in: *Perception*, vol. 29, no. 1 (2000) pp. 101-110; Wakefield, C.E., J. Homewood and A.J. Taylor, "Cognitive Compensations for Blindness in Children: An Investigation Using Odour Naming" in: *Perception*, vol. 33, no. 4 (2004) pp. 429-442.
[9] For a brief, but comprehensive, TED talk on pheromones, see Wyatt, 2013.

breathed in during each of the approximately 20,000 breaths we take each day, they dissolve in the mucus and make contact with specialized receptors on the olfactory epithelium at the roof of the nasal cavity [fig. 1]. These receptors are unique as they are the only nerves in our bodies directly exposed to the environment. From there, the olfactory signal usually travels to its first brain's processing station, the olfactory bulb.[10] Only odors to which we have been exposed for a while do not activate the receptors in the nasal cavity anymore to prevent an overloading of the nervous system. This is called olfactory fatigue and it is for this reason that initial heavy smells (such as perfume or strong spices) can seem to dissipate and fade away though the concentration of odor molecules has remained at the same level.[11] Back to the olfactory bulb, media theorist Laura Marks explains that this "tremendously sensitive and receptor-rich [bulb] is already *thinking* when smells activate certain receptors."[12] By this, she means that whereas other sensory modalities are most prominently processed in the higher cortical brain regions involved in language, interpretation and abstract thought, the olfactory response is *immediate* as it travels first to the limbic system and only thereafter to these higher regions. "The limbic system," Jacob clarifies, "is a collection of brain structures situated beneath the cerebral cortex that deal with emotion, motivation, and association of emotions with memory."[13]

This unusual neuroanatomy holds several equally unusual psychological implications. First, since the olfactory pathway does not immediately lead through the brain parts responsible for language, smells are hard to put into words. When trying to name one, we often retrieve its source (it smells like bananas) or refer to the other senses (it smells heavy or fresh). In addition, the absence of distinctive

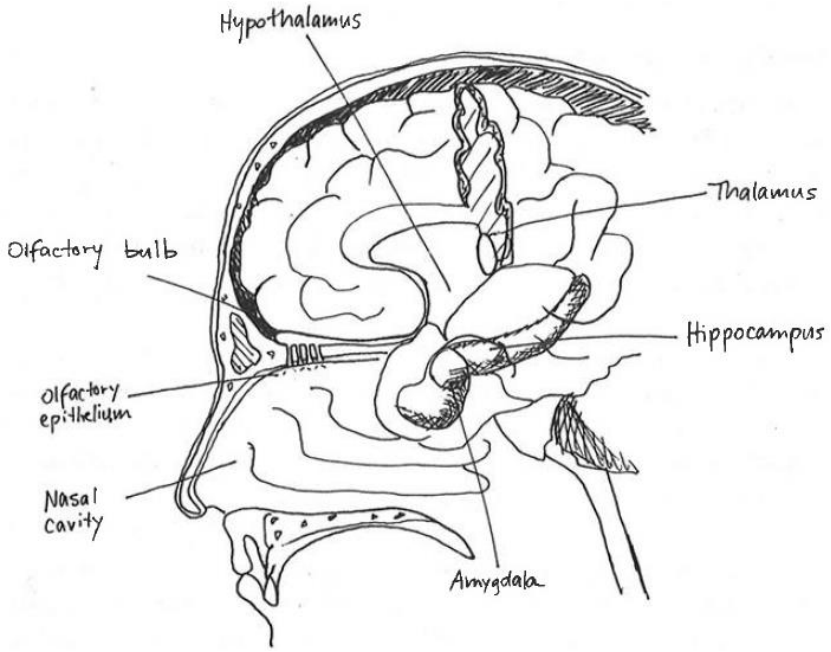

Figure 1 The Human Olfactory System

[10] For different theories on how exactly this information is processed, see Jacob, 2015b.
[11] Only warning smells, such as burning smell, continue sending signals to the olfactory bulb and thus remain perceivable.
[12] Marks, 2002, p. 119.
[13] Jacob, 2013, p. 187.

olfactory lexicons is most probably invigorated by the Western denigration of the sense since not every human culture lacks a similar void in their vocabulary.[14] Second, the unique neuroanatomy of olfaction generates a sense of phenomenological proximity to the odorant. "Smell is a radical example of what Deleuze calls the *affection image*," Marks analyzes, "an image that connects directly to the body."[15] Smelling can cause a feeling of direct physical contact and, in extreme cases, may even lead to migraines or trigger involuntary reflexes, such as gagging and vomiting.[16] During the 2006 exhibition *Sensorium: Embodied Experience, Technology and Contemporary Art*, for example, many visitors complained feeling physically uncomfortable and having headaches.[17] The galleries were filled and dominated by unpleasant, musky smell of cold sweat emanating from the exhibit *The FEAR of smell – the smell of FEAR* by artist Sissel Tolaas.[18] Third, smells can emotionally *manipulate* and have a very powerful effect on behavior without people being aware of its cause. This capacity of smell has particularly been noticed in the field of marketing where brands and businesses use different scents in an attempt to influence their customers, e.g., to stimulate buying or to improve their opinion on the brand or business. Fourth, smell can generate a narrative as it has the ability to trigger powerful, visceral emotions and vivid memories before it is consciously recognized. Often, this is referred to as the Proustian Effect. In the first volume *Du côté de chez Swann* (1913) of his novel *À la recherché du temps perdu*, French novelist Marcel Proust describes his olfactory experience of a little piece of madeleine cake dunked in his tea of *tilleul*:

> "…immediately the old grey house upon the street, where her room was, rose up like the scenery of a theatre to attach itself to the little pavilion, opening on to the garden, which had been built out behind it for my parents (the isolated panel which until that moment had been all that I could see); and with the house the town, from morning to night and in all weathers, the Square where I was sent before luncheon, the streets along which I used to run errands, the country roads we took when it was fine."[19]

Instead of such personal character, these memories can also be social in nature. For the public art piece *U-deur* (2000), for example, artist Helgard Haug dispensed a smell of bread, cleaning agents, oil, and electricity at the subway station Alexanderplatz in Berlin. "The public response to the project was extraordinary," art historian Larry Shiner and historian Yulia Kriskovets comment, "people wrote that the little sniff-bottle brought to mind memories and associations with the smells of a divided Berlin, for instance, the 'dead' stations that West Berlin subway trains went through after passing the Wall, as well

[14] Classen, 1994, pp. 109-113. Some non-European languages have a greater variety of olfactory terms, but these vocabularies often do not have terms for particular scents. At page 113, Classen, Howes and Synnott write that "there is a general tendency, however, for odours [odors] (like flavours [flavors], but unlike colours [colors]) to be classified according to a division of pleasant/unpleasant."
[15] Marks, 2002, p. 114.
[16] Sensory overload has even been used as a no-touch torture technique.
[17] Ngowi, 2006, p. 32.
[18] Tolaas collected the sweat of nine different men with chronic phobias and processed this sweat as paint, which, in turn, was applied to the white gallery walls. Visitors could release and activate the odor molecules by touching the walls.
[19] Proust, 1922, para. 117.

as thoughts about the Stasi archive with its items saturated with the body odor of East German criminals and dissidents."[20] This indicates that not only individuals, but also different cultures or social groups give different meanings to similar scents.

Interestingly, because olfactory experiences are thus highly influenced by personal and cultural memories, the *experience* itself greatly differs per person. In other words, the smell sensation is not merely the perception of a scent, but also the elicitation of memories and emotions associated with the scent. In fact, whether we perceive a scent as stinking or fragrant is learned. You may fancy the smell of hyacinths because it reminds you of an early morning stroll enjoying spring's first sunbeams, yet someone else may be repelled by the smell because the flowers remind him or her of the funeral of a loved family member. Two other reasons why smell sensations can greatly differ per person have to do with genetic variability and contextual cues. First, all humans have a different amount of receptors on their olfactory epithelium and "up to 15 percent of the population experiences some type of olfactory dysfunction, due to aging, disease, injury, or congenital conditions."[21] Second, the context in which a scent is perceived strongly influences the experience. A convincing example of this is a study by wine researchers Gil Morrot, Frédéric Brochet and Denis Dubourdieu. In 2001, they observed that "white wine was perceived as having the odor of a red wine when colored red."[22]

This last point also touches upon a last issue I want to address: the culturally constructed division of the five sensory modalities into the segments of sight, touch, taste, and smell is a nineteenth-century invention. To put it in other words, the senses cannot be clearly split up into strictly defined and limited categories. The 2001 wine study has showed that we smell with our *eyes*, but smell also plays with *touch* (for a smell can sting and hurt), *taste* (for flavor depends on olfaction), and many other senses which do not fit within the traditional classification, such as *thermoception* (for a smell can be perceived as cold).[23] In addition, as art historian Caro Verbeek writes: "Whenever I smell I start feeling, tasting and seeing, I even experience something in between the tactile and visual: shapes which are simultaneously tangible and visual appear. Entire landscapes of sounds and images unfold when the scent in question is linked to a memory buried deep in the past."[24] For these reasons, the olfactory experience is, in fact, a multi-sensory experience.

In contrast to a conventional understanding of smelling, the notion of olfactory experience more vigorously alludes to the qualities and power of scent and its sensation. It is for this reason that I choose to employ this term. In summary, the sense of smell has traditionally been considered as a banal and dispensable sense, but deserves more appreciation: olfactory experiences are *direct* and *immediate*, they generate a sense of phenomenological proximity, can have subliminal effects, are highly personal but

[20] Shiner, 2007, p. 274.
[21] Drobnick, 2014, p. 189.
[22] Morrot, 2001, p. 8. Especially Denis Dubourdieu (1949-2016), French winemaker and professor of oenology at the University of Bordeaux, is considered one of the greats of winemaking and wine science.
[23] There is much debate on how many senses humans actually have. Non-traditional human senses include, for example, equilibrioception, hunger, itch, pressure, proprioception, thermoception and thirst.
[24] Verbeek, 2013.

also have social meaning, are narrative (or, more specifically, *imaginative* since they are difficult to communicate in words) because they can trigger powerful emotions and memories, and are highly multisensory in nature. However, it is important to keep in mind that the affective domain of an olfactory experience is located on the narrow path between Scylla and Charybdis for smells could quickly cause either olfactory fatigue or sensory overload.

1.2 MUSEUMS IN THE AGE OF EXPERIENCE

In 1998, architectural historians Annmarie Adams and Helen Dyer wrote a review of the exhibition *The American Lawn: Surface of Everyday Life*. They lauded the interactive display styles that engaged all kinds of senses, but pitied the absence of smell: "Our suspicions that the *museum experience* can never truly simulate the real thing are confirmed, however: the fragrance that is so much a part of the 'lawn experience' is missing."[25] Although it could be interesting to take a closer look at their argument, the usage of the phrase 'museum experience' particularly caught my eye here. The museum learning theorists John Falk and Lynn Dierking employ this term differently by arguing that "the *museum experience* includes feelings of adventure, of awe, of affiliation with loved ones or friends; of seeing, perhaps of touching; and definitely of learning new things."[26] Whereas Adams and Dyer depart from the position of the *museum*, Falk and Dierking think from the perspective of the *visitor*. This discrepancy of the term is notable in many more scholarly writings, although theorists and museum professionals rarely explain how they employ the concept. Because I think that we should be more specific about the kind of experience, I argue that we can roughly distinguish two different ways in which the notion of museum experience is employed: either as *the* entire museum visit (museum-centered) or as the entirety of *a* museum visit (visitor-centered). These experiences are not two opposite poles for they can occur simultaneously: while being immersed in *the* museum experience, all visitors will have *a* different museum experience. In the following subsections, I will successively discuss the conceptualizations of these two notions of museum experiences.

1.2.1 *THE* MUSEUM EXPERIENCE AS SPECTACLE

"At an open day as part of an exhibition on the Caribbean at Leicester Museum and Art Gallery," museum theorist Eilean Hooper-Greenhill writes, "Caribbean food was served, and, if visitors wanted, it was even possible to obtain a Caribbean hair-do during the event."[27] Today's art museums are no longer conceptualized as mere reservoirs and preservers of artworks for new types of art museums often provide a range of services: from shopping and amusing activities to dining in cafes and restaurants, at

[25] As cited in Drobnick, 2005, p. 268.
[26] Falk, 2013, p. 174.
[27] Hooper-Greenhill, 1992, p. 203.

which they increasingly try to appeal all the senses. Broadly, these "totalising [totalizing] institutions" aim at offering their audience an all-encompassing, holistic but highly personal, immersive, and multisensory *experience* – which, however, should not be mistaken for presenting one authorative master narrative.[28] Some art museums, such as the example of the Leicester Museum and Art Gallery, offer a small scaled *total experience* by organizing thematic events. Other art museums, such as the example of Van Gogh Alive as mentioned in the introduction of this thesis, make the *total experience* a bigger show and immerse their visitors in a new world full of impressive sounds and lights.

In this type of art museum, mere entertainment and spectacle looms large. As smell theorist Jim Drobnick notes, "in some postmodern attractions, the rhetoric of total experience is nothing but a gimmick: a Madame Tussaud's exhibit supposedly featuring 'the smells of London' consists merely of theatrical smoke in the Chamber of Horrors."[29] There are academics that strongly disapprove of such museological strategies, because they consider them closely tied to neoliberalism's denigration of culture and valuation based on the numbers of visitors and financial sustainability.[30] Up to a certain point, I agree that these art museums rather focus on the frivolous *reproduction* than the *generative quality* of experience. However, I do not reject this state of affairs for I do acknowledge that such museum experiences can be fulfilling and pleasing to visitors. People have different motivations for visiting museums, some of whom can be identified as Experience Seekers: "visitors who are motivated to visit because they perceive the museum as an important destination. Their satisfaction primarily derives from the mere fact of having been there and done that."[31] However, although I recognize that smells could contribute to a *fuller total* museum experience, I argue that the employment of smell in such museum settings often has an overwhelming and numbing effect to visitors, and does not exploit the fullest potential of olfactory experiences. As I have pointed out in the previous section, scent can rapidly induce olfactory fatigue or cause sensory overload. Therefore, the implementation of smell as a part of a meaningful museum experience should be carefully balanced; which is usually not the case in *spectacle-oriented* exhibitions. It is for this reason that I will direct my argument to a second conceptualization of the notion of museum experiences.

1.2.2 *A* MUSEUM EXPERIENCE ECHOING LEARNING

It is no secret that museums are widely considered as educational institutions. However, at first glance, many recent museum theorists and professionals increasingly seem to undermine the educative function of museums for they dichotomize between education (traditional museums) and experience (recent museums).[32] Does this mean that these theorists and professionals think that museums are losing their

[28] Hooper-Greenhill, 1992, p. 215.
[29] Drobnick, 2005, pp. 269-270.
[30] Bishop, 2013, p. 61. See also Marks, 2013, pp. 243-246 for an intelligible outline on how corporations deploy smell to induce consumers to spend time and money.
[31] Falk, 2013, p. 48.
[32] Bruce, 2006, p. 134; Dziekan, 2012, p. 63.

didactic position? Does the notion of experience contradict education? The short answer is no. Although both notions of education and experience carry deeply rooted connotations that seem to negate each other, it is my view that it is not constructive to set those terms against each other since, as I will argue, they both meet on the subject of *learning*.[33] Traditionally, learning has been understood as the acquisition, retention and reproduction of knowledge, but "we all know through both common sense and research in museum learning [that] museums are not effective or efficient communicators of large amounts of information. People do not read very well standing up, and every study of the outcomes of museum [visits] tells us that people remember very little of a museum's content."[34] Therefore, this conventional notion of learning is too narrow to do justice to museum learning and needs thorough reconceptualization. It is at this point where the notion of experience enters the debate too. In the following section, I will briefly elaborate on this idea and, furthermore, argue that this renewed concept of learning is already an echo of a second understanding of museum experiences that is to be found in recent museum literature. It will, at the same time, result in a powerful reimagination of *olfactory* experiences as profound *learning* experiences.

In our new frame, the idea that learning takes place within a confined yet crucial period as preparation for life has been displaced by the broader notion of learning that occurs throughout life. As learning theorists Roger Harrison et al. explain, "we learn not only for the purposes of gaining formal qualifications but also to obtain and keep employment, develop expertise in a leisure activity, deal with changes in relationships, or manage personal finances."[35] This renewed idea of cradle-to-grave learning has been labeled by theorists as *lifelong learning*. "In contemporary conditions," Harrison et al. adds, "learning becomes not only *lifelong*, suggesting learning as relevant throughout the life course, but also *life-wide*, suggesting learning as an essential aspect of our whole life experience, not just that which we think of as *education*."[36] Learning has thus become a key ingredient of all facets of life. Importantly, this means we do not regard learning as "a necessary but painful process that one 'graduate[s]' from sometime in adolescence," but we *need* and *want*, hence *free-choice learning*, to learn throughout our lives in order to keep up with all the new information.[37] Within this concept, we cannot be dependent on only formal educational institutions, such as schools and universities, to meet our needs for learning.

"Museums have an important role to play in this arena [of *life-long*, *life-wide* and *free-choice learning*]," Falk and Dierking write.[38] In their celebrated book *The Museum Experience Revisited*, they construct a convincing theory on how learning in museums transpires. They state that "all museum *visits*, as well as the *meaning* brought to and taken away from them, can be understood as occurring at the

[33] Different theories of learning are constantly being developed. I here build on the ideas of education philosophers and theorists such as John Dewey (1859-1952), Maria Montessori (1870-1952) and Jacques Rancière (1940).
[34] Skramstad, 2004, p. 128.
[35] Harrison, 2002, p. 1.
[36] Ibid.
[37] Falk, 2011, pp. 323-324.
[38] Ibid., p. 324.

intersections of […] three contexts [italics added]."[39] In other words, these contexts together constitute both the visitors' museum experience and the *Contextual Model of Learning*, hence the museum experience itself *is* the learning experience. The three contexts:

1. The Personal Context: the unique background of an individual, or the sum of all personal motivations, interests, knowledge, beliefs, and values;

2. The Sociocultural Context: every visit is influenced on a macro-sociocultural level (the museum as a societal institution) and a micro-sociocultural level (interactions with others inside the museum);

3. The Physical Context: all aspects of the physical environment that visitors choose to enter, react to and engage with.[40]

Furthermore, in addition to these three contexts, Falk and Dierking emphasize the importance of time: each museum [and learning] experience "begins before the visit to the museum, includes experiences within the museum […], and continues [and changes] long after the person leaves the museum."[41] Both museum and learning experiences thus evolve over time and are not clearly delineated moments.

Interestingly, I would like to point out the fact that Falk and Dierking do not separate between learning and museum experiences. In 1938, the prominent American education philosopher John Dewey (1859-1952) wrote that "all genuine education comes about through experience [but not] all experiences are *genuinely* or *equally* educative [italics added]."[42] Whereas Falk and Dierking indeed acknowledge that not all aspects of a museum experience are *equally* educative since these experiences are highly personal, they do not discuss potential differences between learning and museum experiences. More explicitly than their theory accounts for, I argue that museum experiences can *become* educative, at short notice or after a long time. According to learning theorists Lee Andresen, David Boud, and Ruth Cohen, "a key element of experience-based learning […] is that learners analyse [analyze] their experience by reflecting, evaluating and reconstructing it (sometimes individually, sometimes collectively, sometimes both) in order to draw meaning from it in the light of prior experience."[43] A museum experience is thus not intrinsically educative. Therefore, I conceptualize the notion of museum learning as an *echo* of a museum experience: *a* museum experience comes about through personal, sociocultural and physical contexts and, subsequently, a learning experience can follow through *reflection*. In other words, a learning experience resembles a museum experience for it is similarly assembled, but it can only occur *after* a museum experience and does not inevitably or by definition transpire whilst visiting a museum.[44]

[39] Falk, 2013, p. 26. The first edition of this book, *The Museum Experience*, was published in 1992. In this book, Falk and Dierking do not make a division between *the* and *a* museum experience.
[40] Ibid., p. 33.
[41] Ibid.
[42] Dewey, 1998, p. 13. My use of *the* and *a* museum experience alludes to Dewey's notion of *an* experience.
[43] Andresen, 2001, p. 225. As will become apparent in the third section, I would prefer another verb for "reconstructing."
[44] It is also interesting to note that an echo can be distorted and take on a new character.

Finally, I would like to briefly return to the topic of smell to show that, once the link is made between olfactory, museum, and learning experiences, smell becomes an evident agent in art museum exhibitions. Although Falk and Dierking silence the authoritative voice of the museum and put a lot of emphasis on the visitor *controlling* his or her experience, the inclusion of the physical context shows that they also value the museum's input. They write, for example, that exhibitions "should be designed to engage the visitor in a learning experience that involves her stopping, looking, and making sense of the information presented."[45] Museums act upon the visitor's museum (and learning) experience in their selection and arrangement of objects, labels, lighting, route, colors, display styles, furniture, audio, and other interpretive tools and curatorial strategies. In other words, objects always gain meaning through their surroundings. It requires little imagination to realize that a painting presented in a dark far corner of a museum conveys different messages and meanings to its beholders than the same painting would as the focal point of a show, well-lit, and directly entering into debate with other works in the exhibition. Therefore, since these curatorial strategies are richly various and already address the entirety of the visitor's body (not exclusively the distant eye), why is smell not already a widely used and accepted agent in museum exhibitions?[46] Like any other interpretive tool in the museum, smell can be a meaningful agent, especially since, as pointed out in the first section of this chapter, the sense is highly effectively operating on personal, sociocultural, and physical levels.

1.3 EDUCATION AND THE SENSES IN THE MUSEUM

Museums exist in many forms and shapes: not only physically, but also conceptually. In the anthology *New Museum Theory and Practice*, art historian Janet Marstine elaborates on the four most commonly heard metaphors of the museum as shrine, market-driven industry, colonizing space, and "post-museum, [which] is the most hopeful."[47] In contrast to the traditional modernist museum, Marstine writes that "the post-museum listens and responds sensitively as it encourages diverse groups to become active participants in museum discourse."[48] Whereas the modernist museum tries to veil its agenda and conceptualizes its visitors as one homogeneous mass, the post-museum recognizes the plurality of its audiences and the multiplicity of possible frames. However, "the post-museum is still embryonic," Hooper-Greenhill, who originally coined the term post-museum, writes, "its identity is still overshadowed by the personalities and characters of its parent."[49]

In this section, I will delve deeper into the models of the modernist museum and the post-museum, which in turn will be subdivided into two more types, and explore their inherent assumptions

[45] Falk, 2013, p. 105.
[46] Just as Drobnick convincingly argues, "it is inconsistent to single out smells just because they are artificially produced (that is, mediated), or variable in interpretation, and not also critique other museum information that is also mediated or variable; this would basically undermine the entire museological enterprise." Drobnick, 2005, p. 271.
[47] Marstine, 2006, p. 19.
[48] Ibid.
[49] Hooper-Greenhill, 2000, p. 22.

of the relation between education and the senses.[50] Following in the footsteps of learning theorist George Hein, I will examine these three models on the levels of epistemology (what do we conceive as knowledge?), learning (how do people learn?), and pedagogy (how should we teach?).[51] However, because epistemology is for the most part implied, I will particularly focus on the issues of learning and pedagogy. The three museum models are presented in a more or less time chronological order, although, as Hooper-Greenhill already points to in the quote above, they are all three practiced to a greater or lesser extent in museums of the present. The views and ideals of the first model, for example, still shape many current art museums for they primarily concentrate on the (interaction between the) eye and the mind. The second model is extensively discussed in theory, practiced in more innovative or up-to-date art museums, and conceptualizes the senses as *tools* for the mind. However, whereas these two models only disagree on an ideological basis, the third model differs on an ontological level. In this last model, I will present a critical review of the prevailing ideas about (museum) education and propose a new post-museum model that takes embodied understanding as its basic assumption and, therefore, affirms and upholds olfactory experiences as (potentially) meaningful phenomena.

1.3.1 MODERNIST MUSEUM MODEL: THE DEODORIZED CUBE

The pedagogic approach of the modernist museum is based on a behaviorist idea of education for visitors are conceptualized as cognitively passive consumers of knowledge. Visitors are "those who [are] in search of something they [do] not have, who [lack] information, who [are] in need of instruction, and who [are] intended to act as receivers of knowledge, empty vessels to be filled."[52] This generalized mass audience is to be educated by knowledgeable and authorative experts, the museum's curators. Hooper-Greenhill argues that this way of communication is based on the idea of transmission: "knowledge is seen as factual, objective, singular and value-free, and therefore able to be *transferred* from those who are knowledgeable to those who are not [italics added]."[53] Since the displayed art objects are the main sources for communicating this expert knowledge, galleries ought to be designed as clean and neutral environments that offer the best conditions for observing and contemplating works of art. It is for this reason that the snow white, undecorated walls, windowless galleries, artificial lighting and minimalist esthetics of the white cube have become the emblematic features of modernist art museums. The visitor should not get distracted by fringe issues; the gallery design serves the distant eye. As to smell, the white cube has, therefore, been renamed the deodorized, or anosmic, cube. "Inodorateness is essential," Drobnick writes, "to the white cube's ability to assume a neutral status, and to its disassociation from

[50] These three models show interesting similarities with the 1.0, 2.0 and 3.0 museum model come up with by theorist Stephen Wright in *Toward a Lexicon of Usership* (2013). He characterizes the 1.0 Museum as having a focus on spectatorship; the 2.0 Museum tried to move away from this notion, but did not succeed; and the 3.0 Museum is typified by usership.
[51] Hein, 1998, p. 16.
[52] Hooper-Greenhill, 2000, p. 125.
[53] Ibid, p. 133.

the economic and social worlds. Being inodorate permits the white cube to define itself as a zero-degree status of display, the mythic fundament out of which art objects emerge *ex nihilo*."[54]

Nowadays, the model of the modernist museum is widely criticized as a "patrician institution of elite culture" for such ocularcentric museums are designed to primarily address the elite males in Western society, and, therefore, exclude and shut out both the lower senses and cultural minorities, such as women, children, disabled people and (other) colonized peoples.[55] Museum professionals realize they need to transform their exhibiting strategies, among other things, in order to engage with the plurality of audiences. Yet, "despite [these] numerous challenges and critiques," Drobnick remarks, the white cube "remains the paradigmatic architectural form for experiencing contemporary art."[56] Although the modernist museum model may seem outdated, both white cube esthetics and behaviorist learning strategies are still widely adopted in art museums of today. For example, visitors are usually not allowed to touch objects on display. Ideally, artworks should be preserved as fixed, consolidated objects. "In contemporary art-conservation discourse," Drobnick writes, "smells are pathologized as a form of pollution or symptomatic of pests, a threat to both the collection and personnel, thus rendering [these smells] as immediately suspicious if not dangerous."[57]

1.3.2 POST-MUSEUM MODEL I: THE CONSTRUCTIVIST MUSEUM

In the 1990s, a paradigmatic shift took place in ideas on museum learning. Next to Falk and Dierking, Hein is one of the most influential writers in this field. In his seminal 1998 book *Learning in the Museum*, he dissected different education theories in relation to exhibition strategies of museums [fig. 2]. On the vertical continuum, two divergent epistemological positions appear at the extremes: from realist ("the 'real' world exists out there, independent of any ideas about it that humans may have") to idealist ("knowledge exists only in the minds of people and does not necessarily correspond to anything 'out there' in nature").[58] The horizontal continuum moves between two contrasting theories of learning: on the left, we see learning theories based on the notion of *transmission-absorption* and, on the right, we see learning theories based on the notion of knowledge as a *construction*. Because these two continua function independently of each other, they create four domains of educational theory. The modernist museum model (§1.3.1) fits into the top left-hand quadrant, the domain of "didactic, expository." Art museums organized on discovery, the top right-hand quadrant, or stimulus-response, the low left-hand quadrant, lines are not typical, however. Characteristic examples of discovery education are to be found in natural history and science museums, where collection presentations are often designed in such way that especially children are encouraged to physically interact with the objects, which makes them learn

[54] Drobnick, 2005, p. 267.
[55] Bishop, 2013, p. 5.
[56] Drobnick, 2005, p. 266.
[57] Ibid.
[58] Hein, 1998, p. 17.

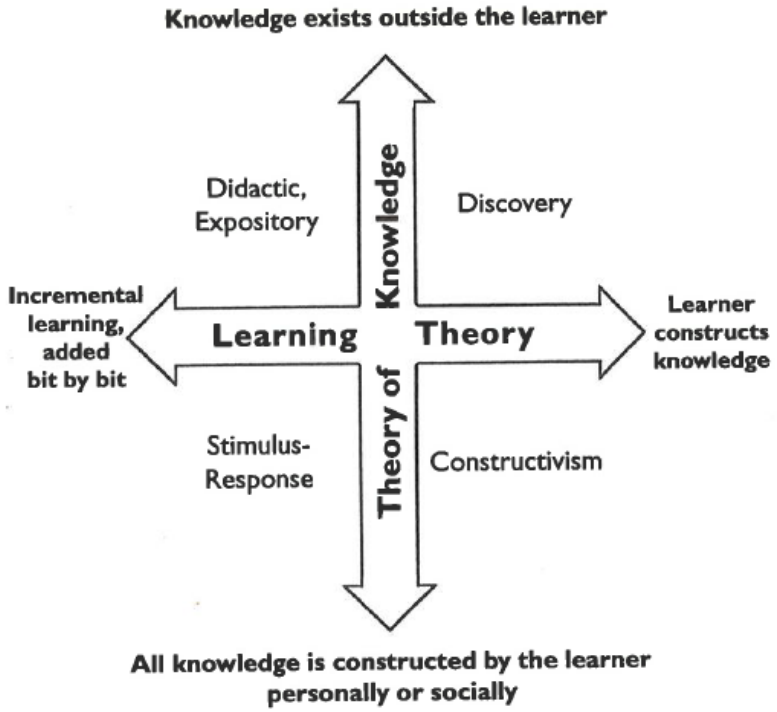

Figure 2 George Hein's diagram of education theories

'factual information' about, for example, the evolution of a particular species or chemical reactions. Stimulus-response presentations, on the other hand, often have "*reinforcing* components that *repeatedly* impress the stimulus on the learner and reward appropriate [not absolute] response [italics added]."[59] For the rest of this section, however, I will take a closer look at the lower right-hand quadrant in particular for Hein is particularly well known for advocating a constructivist museum pedagogy.

Building on cognitive learning theories, Hein does not think of knowledge as something to be *piled up* upon prior knowledge, but to be *constructed* and *restructured* in the mind of the individual learner. In other words, "constructivism promotes the idea of an individual learner who experiences an external world by making internal representation of it in their mind," educational scientist Vaike Fors explains. Because all learners will undeniably create a different internal representation, knowledge is understood as plural and open to interpretation. Fors further adds that "[g]iven the opportunity to interact with the external world, the individual may extend or remodel the already existing internal representations and thereby construct a new understanding of the represented issue."[60] Instead of the metaphor of *transmission*, the metaphor of *acquisition* would be best to describe this approach to learning. Knowledge is not merely absorbed and accumulated, but "when knowledge or any other entity [concepts, conceptions, ideas, notions, and contents] is acquired, it can be applied, shared with others, or transferred to another situation."[61] The pedagogic style of such museums, therefore, requires employing diverse strategies and approaches for different audiences and their interpretations whereby

[59] Hein, 1998, p. 29.
[60] Fors, 2013, p. 272.
[61] Mason, 2007, p. 2.

prior knowledge is taken into account. Within this framework, the curator functions as a facilitator or designer, with expertise, instead of merely an authorative expert.

Next to cognitive learning theories, Hein also takes up the element of 'the social,' put forward by sociocultural learning theories. These theories are largely shaped by the writings of the Russian psychologist Leo Vygotsky (1896-1934) and support learning as a social process in which the learner's environment has a pivotal role to play. This approach could as well be summarized by the metaphor of *participation*, because "the social is not 'outside' the individual but exists in and through interaction, participation and communication."[62] In other words, although the learner ultimately constructs his or her own interpretation, Hein understands the mental functioning of individuals as shaped by the interaction with others. This interaction can take place directly, with museum guards or other visitors, or on a larger cultural, institutional or historical level. Learning in museums can, therefore, not be thought of separately from the specific museum space.

Furthermore and interestingly, Hein spends one and a half page in his extensive book on the senses. "One way to categorize learning modes," he writes, "is sensory, and how we can use them to learn. How many of the senses can be used in the exhibition?"[63] In other words, Hein perceives museum learning as the constructing or restructuring of knowledge in the mind, whereby *individual* senses could be *optionally* addressed to *aid* learning. In the next section, I will present a second post-museum model, which holds a different, and more radical, understanding of museum education and the senses.

1.3.3 POST-MUSEUM MODEL II: THE MULTISENSORY MUSEUM

In her article "Education, Postmodernity and the Museum" from 2007, Hooper-Greenhill notes that the transformation from the modernist to the constructivist museum has repeatedly been characterized as a paradigm shift.[64] She, however, claims that this assertion is too strong; "while there are substantial ongoing changes within museums, these proceed on the basis of interrogating and renegotiating earlier practices and philosophies, many of which continue in one form or another to underpin the identity of museums today."[65] Therefore, modernist frameworks should be mapped and analyzed in order to build "an appropriate pedagogy for the post-museum."[66] Although I too have categorized the constructivist museum within the parameters of the post-museum, and I adhere to this classification, I would like to take out and clear away one aspect of this interpretation of the model and propose a new one that will be more *on the nose* as regards an apt post-museum pedagogy.

Cutting to the chase, the constructivist museum model as mentioned above, thus including the seminal writings of Hein, Falk and Dierking, continues to support the modernist, Cartesian idea of the

[62] Hodkinson, 2008, p. 38.
[63] Hein, 1998, p. 164.
[64] Hooper-Greenhill uses a different terminology for the constructivist museum, namely the postmodern museum.
[65] Hooper-Greenhill, 2007, p. 368.
[66] Ibid.

separation of body and mind for "questions of thought and cognition remain central."[67] Not only does the constructivist museum model imply a split between body and mind, the model moreover preserves a long-standing repressive tradition of hierarchy, because it prioritizes the mind over the body. As convincingly demonstrated by Fors, the cognitive and sociocultural ideas of learning "suggest there are five sensory organs that comprise five different channels of sensory input to the brain, that in turn organize these data into a representation of what is experienced."[68] This is a widespread conception that is also shared by many other theorists and writers in various fields of study [fig. 3]. However, the latest neurosciences have presented us a different view of the interaction between mind and body:

> "The brain is not a passive recipient of information through the senses but instead an active seeker of information to confirm or refute predictions. Human neuroscience has taught us that our internal representations of reality, and thus the predictions we approach experience with and the nature of such experiences themselves, are intrinsically multisensory."[69]

This means that the sensory apparatus of the body is no longer a subservient *means* to knowledge, but both our senses and our brain *operate* bi-directional and on equal level. In comparison to the model of the constructivist museum, the multisensory museum thus signifies a more radical understanding of the interaction between the learner's mind, the different senses, and the environment. It recognizes that sensory experience is inherent, ubiquitous and *not* an *optional approach* to learning and museum experiences. In other words, both the learning and museum experience are thus multisensory by nature. This ontologically different understanding obviously results in a vitally different pedagogical approach for the emphasis of the museum's design is not only on what is to be *seen*, but what is to be experienced by the total sum of the senses.

Although the models of the multisensory and constructivist museum fundamentally differ in their ideas, they share some other notions. First, both models understand knowledge as plural and open: artworks do not have a fixed meaning and one can understand every work from different angles. Within the specific frame of the multisensory museum, this suggests that to have an olfactory experience is to have knowledge for such experiences are exceptionally narrative, imaginative, memorative and associative. Second, I argue that the metaphor of *participation* remains of crucial importance. As I have already drawn attention to (in §1.2.2), it is the analyzing and making meaning of a museum experience which makes the difference between the museum experience and a learning experience (meaningful museum experience). Therefore, I stress the point that museums should provide specific environments in which their visitors are encouraged to *participate*, interact and communicate with others. This has fundamental consequences for the pedagogical approach of museums as it means that they should invest in, for example, interactive tools and physical or online meeting places. Notably, this is certainly not only my own individual assessment for many museums and museum theorists have already turned the

[67] Fors, 2013, p. 274.
[68] Ibid., p. 273.
[69] Levent, 2014, p. xiii.

spotlight on new technologies and the notion of visitor participation.[70] However, I aim to introduce scent as a new approach on this thought. In other words, art museums should thus create environments in which visitors are encouraged and inspired to *echo*, or draw meaning from, their smell experience in order to transform it into a meaningful olfactory experience (or possibly transform their already meaningful olfactory experience).

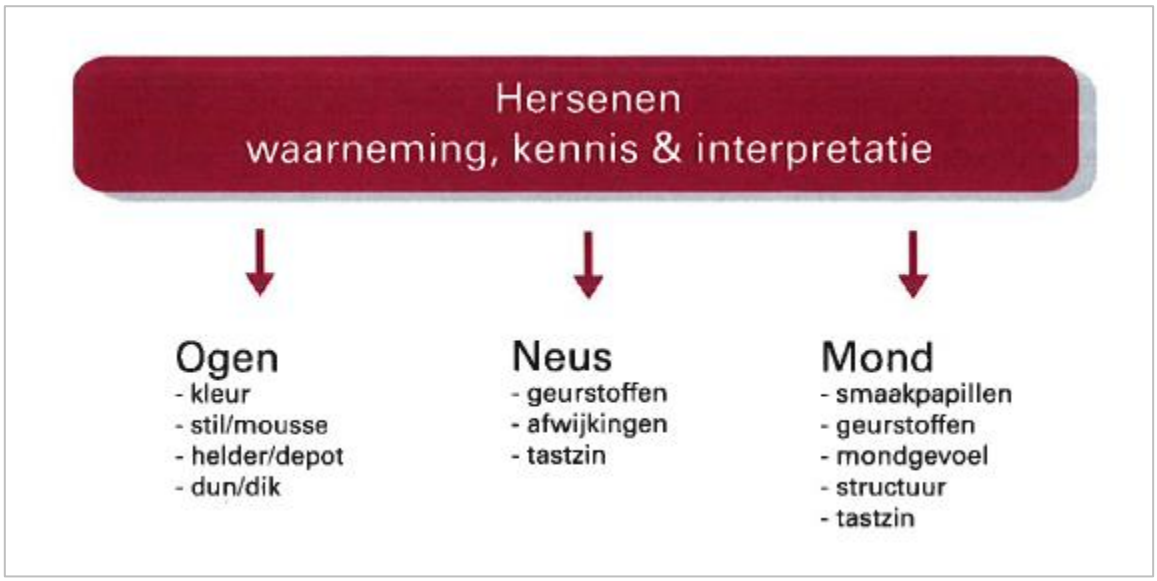

Figure 3 The hierarchy of mind and senses taught by the Wijnacademie (the Dutch wine specialist academy)

[70] For example, the book *The Participatory Museum* (2010) by Nina Simon contemplates participation. This practical guide is considered as a required read for museum professionals.

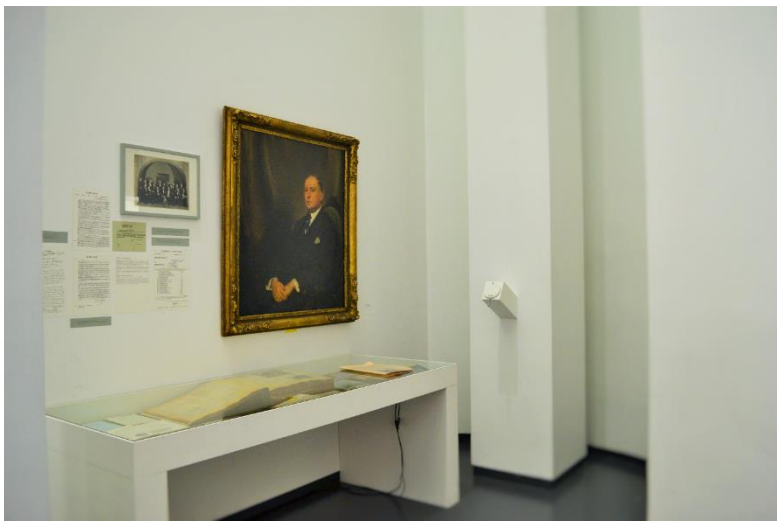

Plate 1 Scent station I: an artistic impression of the early days of the Van Abbemuseum

Plate 2 Scent station II: *Blick auf Murnau mit Kirche* (1910) by Kandinsky

Plate 3 Scent station III: *sans titre (IKB 63)* (1959) by Klein. Left: Caro Verbeek

Plate 4 Scent station IV: *Igloo Nero* (1967-1979) by Merz

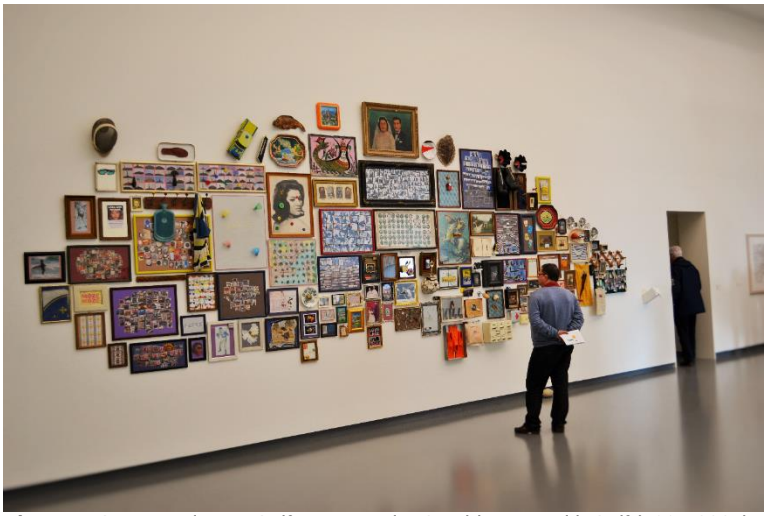

Plate 5 Scent station V: *Self-Heterotopia, Catching Up With Self* (1991-2007) by Alptekin

Plate 6 Entrance to *The Collection Now* and the *toolshop*

Plate 7 Inside the *toolshop*

Plate 8 Wall in the *toolshop* on which visitors can leave their message behind

Plate 9 Richard Hamilton's *Interior II* (1964) at *Tate Sensorium*

Plate 10 John Latham's *Full Stop* (1961) at *Tate Sensorium*

Plate 11 David Bomberg's *In the Hold* (around 1913-4) at *Tate Sensorium*

Plate 12 Francis Bacon's *Figure in a Landscape* (1945) at *Tate Sensorium*

2. NOSING INTO OLFACTORY CURATORIAL STRATEGIES

There are no spaces or areas without scent. Churches are typically fragrant with aromas of incense, the disinfectant smell of hospitals is redolent of disease, and even outer space appears to reek of a peculiar odor somewhere between burning metal and a freshly seared steak.[1] Although art museums have, traditionally and ideologically, been pictured as non-odoriferous environments, the museum space too has never been free of scent. Not only do art materials have a smell, but "cleaning products can leave traces of their use," smell theorist Jim Drobnick exemplifies, "the aromas of restaurants and cafes can waft around corners, and overperfumed visitors can trail clouds through the galleries."[2] However, art museums that *intentionally* welcome smells in their environment are few and far between, even though olfactory experiences can be exceptionally powerful and transformative as demonstrated in the previous chapter. Therefore, I argue that art museums should seize upon the opportunity to play with the unique and surprising qualities of olfaction instead of passively awaiting how already present smells may, either positively or in a not so pleasing way, mold visitor experiences of the museum.

In this chapter, I will critically examine the olfactory curatorial strategies of two experimental art exhibitions and elaborate on their different types of smell interactives.[3] Both prototypes function as valuable models for future initiatives. The first case study is the scented route, *Inhaling Art*, through the Van Abbemuseum in Eindhoven, the Netherlands. This museum identifies itself foremost as a hospitable and radical institution, and disassociates itself from conventional notions of education as it profiles itself as an active *mediator* between art and society at large. The amount of museum staff is limited, however, which translates in the combined department of Marketing, Mediation and Fundraising. The second case study focuses on the multisensory exhibition *Tate Sensorium* at Tate Britain in London, United Kingdom. Since the scale and organization of this museum family are much larger than of the Van Abbemuseum, the educational department of Tate, named Learning, consists of no less than 41 staff divided over seven teams. Furthermore, by launching the *Tate Research Centre: Learning*, Tate has stimulated exploring gallery education and learning more in depth. Yet both the Van Abbemuseum and Tate are considered progressive in their strategies and thinking.

In the first section, I will frame, portray, and describe both the museological environments and the specific smell interactives of respectively *Inhaling Art* and *Tate Sensorium*. This information is not only necessary for understanding the diverse meanings underlying smell as a curatorial strategy, but also functions as a concrete example to other museums. Next, in the second section, I will analyze the

[1] There are many reports of astronauts and space tourists describing the odor of space, for example, NASA astronaut Don Pettit ("the best description I can come up with is metallic; a rather pleasant sweet metallic sensation") and the first female space tourist Anousheh Ansari ("it was strange… kind of like burned almond cookie"). Space also has a particular sound.
[2] Drobnick, 2014, p. 183.
[3] The few other examples of exhibitions and tours in museums of modern and contemporary art that have employed smell as a curatorial strategy are the multisensory tour *Scented Visions* (September 12, 2012) at Tate Britain in London, the tour *Tinctures, Tastes, and Textures: Layered Histories* (September 20, 2014) at the Royal Academy in London, the sensory tours at the Brooklyn Museum of Art in New York, and the four-part-exhibition *Schnupperschau* (2016) at Projektraum Enter in Thun, Switzerland.

particular curatorial challenges regarding the unconventional medium of smell.[4] Here, I will not only highlight some important aspects to be taken into account for future olfactory exhibits, but I will also touch upon the diverse possibilities and motives for implementing smell. Finally, in the third section, I will reflect on and compare the two olfactory museum pedagogies. This analysis is complemented by my own experiences and research during my internship at the Van Abbemuseum.

2.1 PROTOTYPES OF OLFACTORY CURATING

2.1.1 *INHALING ART* (SEPTEMBER 27, 2014 – ONGOING) AT THE VAN ABBEMUSEUM

"Can a museum be anti-hegemonic?" is a question art historian Claire Bishop poses.[5] In her 2014 short book *Radical Museology or, What's 'Contemporary' in Museums of Contemporary Art?*, she argues that the Van Abbemuseum answers this question in the affirmative. The doors of the Van Abbemuseum first opened in 1936, after the local cigar industrialist Henri van Abbe had decided to donate his art collection to the city of Eindhoven. "The museum comprises two buildings," Bishop writes, "the original structure from 1936 (a symmetrical suite of modestly proportioned, top-lit galleries) and a postmodern extension, which opened in 2003, with five stories and an auditorium."[6] Bishop continues that since the current director, Charles Esche, took up office in 2004, the museum has been relentlessly radical and experimental, and does "not speak in the name of the one percent, but attempt[s] to represent the interests and histories of those constituencies that are (or have been) marginalized, sidelined and oppressed."[7]

In the light of this ideology, the Van Abbemuseum has put the exhibition *Once Upon A Time… The Collection Now* (later renamed, and hereinafter referred to as, *The Collection Now*) on display since November 2, 2013. In its postmodern wing, artworks from the museum's *own* permanent collection have been gathered and presented as a (long-term) temporary exhibition. Furthermore, these artworks have been brought together with "archives, *histories* and relations in *historical constellations* that connect individual artworks to the social and political *contexts* in which they were made and exhibited [italics added]."[8] The emphasis on the plural form of most of these nouns indicates that the exhibition thus explicitly deals with multiple past*s*, or positions, as seen from a present perspective. The historical periods are divided over five stories: 1933-1948 (basement), 1909-1975 (ground floor), 1965-1985 (first floor), 1980-present (second floor) and 1973-2006 (third floor).

In order to further accentuate the versatility of positions and viewpoints regarding *The Collection Now*, the curators introduced the concept of *Storylines* (later renamed, and hereinafter referred to as, *tools*). They invited "people from outside the museum, individuals with a different kind

[4] This section is a rewritten adaptation of my paper "Olfactory Experience in the Art Museum. Towards a More Inclusive Space" that I wrote for the course *Museums and Collections: Museum Matters* (2015) at Leiden University.
[5] Bishop, 2013, p. 56.
[6] Ibid., p. 29.
[7] Ibid., p. 6.
[8] Van Abbemuseum, 2016a.

of knowledge and a different background, to add their own stories and interpretations" of (a selection of) the exhibited artworks in *The Collection Now*.[9] One of the responses to this open call came from art historian Caro Verbeek and aromajockey Jorg Hempenius with their proposal of *Inhaling Art*, which was inaugurated in September 2014 after being approved by the museum.[10] This free of charge tour directs visitors along five white scent stations throughout the museum [fig. 4] that correspond to an artistic impression or artwork nearby: (1) an artistic impression of the early days of the museum [pl. 1], (2) the 1910 painting *Blick auf Murnau mit Kirche* [pl. 2] by Wassily Kandinsky, (3) the 1959 painting *sans titre (IKB 63)* [pl. 3] by Yves Klein, (4) the 1967-1979 installation *Igloo Nero* [pl. 4] by Mario Merz and (5) the 1991-2007 collage *Self-Heterotopia, Catching Up with Self* [pl. 5] by Hüseyin Bahri Alptekin. Each corresponding scent station is designed as a small closed container affixed to the wall and has a cap that visitors can swing to the left or right in order to open the container and sniff the scent present inside. We might consider the grounds of this curatorial choice. What other options do we have? Are closed containers indeed the best choice in designing scent as an active agent in the museum?

A visit to *The Collection Now* starts in a large, pale room at ground floor level, where one can also find the *toolshop* in a small annex [pl. 6, 7, 8]. In this *toolshop*, five different *tools* are introduced and visitors can freely pick up the *tools*' materials, which, in case of *Inhaling Art*, are a lanyard with a small jar filled with coffee beans and a small information booklet. From there, the paths through the exhibition appear as a multicursal maze for the visitor can choose among an array of routes of which

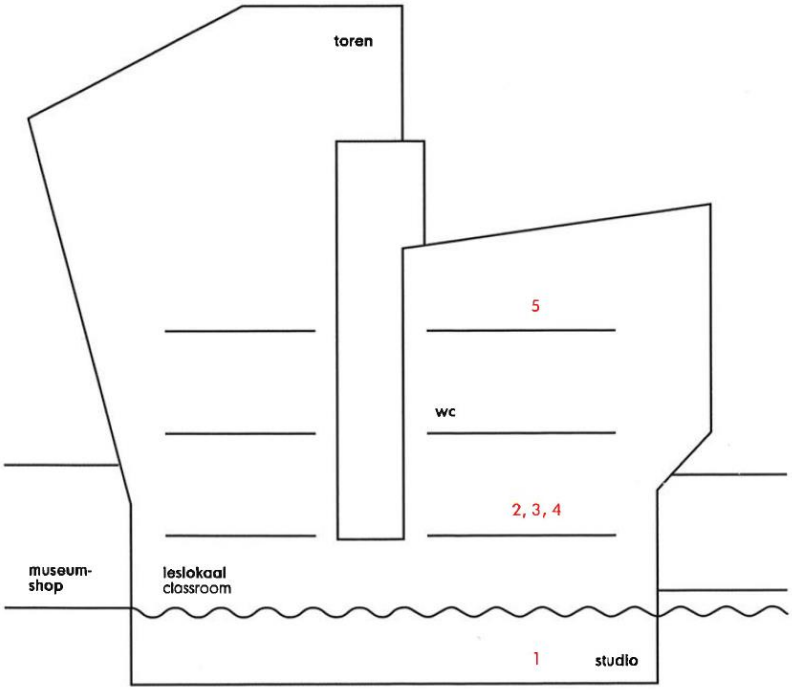

Figure 4 Schematic outline of the placement of the scent stations in the postmodern wing of the Van Abbemuseum

[9] Van Abbemuseum, 2016b.
[10] The other *tools* are the audioscape *This is not a space*, the do-it-yourself-tour *Punt.point*, the audio tour *No Kiddin'*, and the route *Qwearing the Collection*.

some lead to a dead end. Ideally, however, participators of *Inhaling Art* would descend one floor and begin their journey in the basement. Several paintings of the original Van Abbe collection are shown here alongside some old documents and archive items from the period around the beginning of the Second World War. In this setting, visitors encounter the first scent station, which dispenses a warm, heavy, and ashy smell with hints of liquor. Some visitors immediately pull back their head, because they associate the scent with dirty and smoky cafes, whereas others inhale deeply and close their eyes, because the smell reminds them of their late grandfather smoking cigars.

The next three scent stations can be found one floor up. The ground floor is devoted to artworks and documentation from the period of the avant-gardes and modernism. In the gallery named "Herwarth Walden and the European avant-garde," *Blick auf Murnau mit Kirche* by Kandinsky embodies the era's search for a new visual language of the real world.[11] The scent station adjacent to the painting spreads a heavy, green-yellow but not too *bright* odor with citrus notes. The third scent station is located below Klein's painting, which is located in the gallery "The world system after 1945" as an ironic critique on commercialization of the post-war art market, and has a cold, transparent and fresh character.[12] In the subsequent gallery, "*Op losse schroeven* – a generation speaks out," the black igloo by Merz is accompanied by a heavy odor of ash.[13] In contrast to the other scents, practically every visitor indicates that s/he feels repelled by this particular odor. What effect would this have for an overall museum experience and does it fit the curator to make use of such heavy smells? Finally, the *Inhaling Art* path proceeds to the second floor, which is dedicated to contemporary globalization and the aftermath of Western hegemony. Here, a collage by Alptekin is exhibited together with another totally different light, refreshing, and bright yellow smell.

2.1.2 *TATE SENSORIUM* (AUGUST 26, 2015 – OCTOBER 4, 2015) AT TATE BRITAIN

The museum network Tate is, just like the Van Abbemuseum, named after an industrialist, the sugar refiner Henry Tate. In 1889, he donated his private collection of British paintings and sculptures to the nation and eight years later, a small newly built museum with a classical portico and a central dome opened its doors to the public. Since then, Tate has undergone some major organizational and building extensions. Not only did Tate Liverpool, Tate St Ives and Tate Modern open in respectively 1988, 1993, and 2000, but Tate Britain has also quadrupled in size over these years [fig. 5]. Today, the museum houses historical and contemporary British art. "The juxtaposition of the contemporary with the historic is a feature of Tate Britain," current director Nicholas Serota writes, "Our understanding of the past is

[11] Esche, 2015, p. 12. During the exhibition *Pracht und Prinzip* (September 24, 2016 – March 26, 2017), the wall behind Kandinsky's painting is covered with a decorative design by Bas van Beek.
[12] Ibid., 20.
[13] In the summer of 2016, the igloo by Merz was removed from the gallery. The scent station is currently positioned next to *Meeting Place* (1977) by Richard Long.

affected by the present, just as much as history influences contemporary practice and the interests of living artists living artists play a vital role in the future of Tate."[14]

In 2014, Tate called into life the IK Prize, which is an award given to "an idea that uses innovative technology to enable the public to discover, explore and enjoy British art from the Tate collection in new ways."[15] The first winning project was named *After Dark* and invited people from all over the world to log in into a web controlled robot and stroll along the galleries at night. In the following year 2015, the multisensory exhibition *Tate Sensorium* was proclaimed winner of the award. This exhibition encouraged its visitors to experience artworks from the Tate collection through hearing, touch, taste and smell. In order to create in-depth sensory sensations, the initiating team, Flying Object, enlisted a group of sensory specialists, including haptic technologists, a master chocolatier and the "purveyor of olfactory adventures" Odette Toilette, whose actual name is Lizzie Ostrom. Before entering the galleries, visitors were asked to put on a biometric wristband that measured their physical reaction to the paintings and stimuli. At the end of each exhibition journey, visitors could look into their individual data [fig. 6] and decide whether or not they wanted to cooperate in a study by the University of Sussex in which their and others' data would be analyzed.

In the period from August 26 to October 4, free tickets were released in Tate Britain every day on a first-come first-served basis. This meant that visitors could not make a reservation for a time slot and sometimes had to wait for six hours or more before they could enter *Tate Sensorium*. Then, within fifteen to twenty minutes, visitors in groups of four were led around through four small, sequential, and theatrically lit galleries in which iconic twentieth century British paintings from Tate's own collection

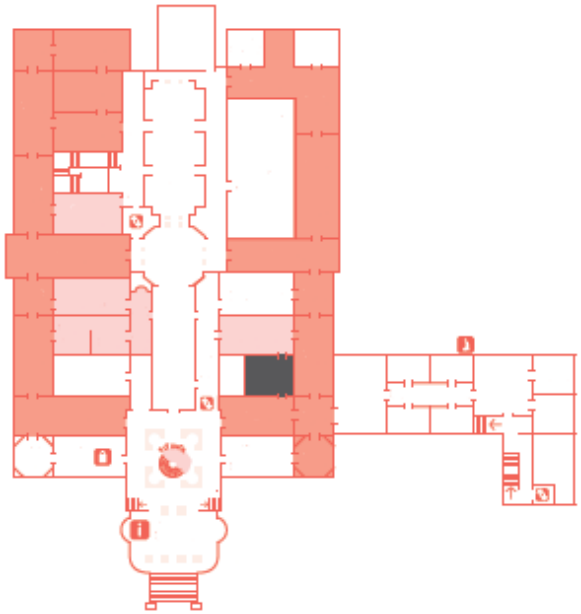

Figure 5 Today's map of Tate Britain's ground floor. The gray area represents the space in which *Tate Sensorium* took place.

[14] Serota, 2014, p. 1.
[15] Tate, 2015a.

were hung: *Interior II* [pl. 9] from 1964 by Richard Hamilton, *Full Stop* [pl. 10] from 1961 by John Latham, *In the Hold* [pl. 11] from 1913-14 by David Bomberg, and *Figure in a Landscape* [pl. 12] from 1945 by Francis Bacon. Throughout the exhibition, a bodiless and seemingly omnipresent voice gave specific instructions to the visitors, e.g., to seek "your own interpretation," "it is now time to move on to the next painting," and what the visitors had to eat, touch, smell or listen to in each gallery space.[16] Notably, the second gallery, in which the painting *Full Stop* was displayed, was the only space without a deliberate olfactory element.

In the first gallery, visitors walked in on Hamilton's *Interior II*. Next to the sound of clapping high heels and murmured conversations that played over the speakers, the painting was flanked by three scent diffusers that emanated different smells. Eddie Bulliqi, an art historian working in the fragrance industry, identifies these smells respectively as "a bracing and fresh scent with slight green woody and dry undertones," "a very aldehydic, slightly sweet accord that feels diffusive and fast on the nose," and "a sugared bright citrus scent with a hazy background."[17] However, many other critics and reviewers make only mention of one or two different scents in this gallery. Art critic Mark Hudson, for example, merely describes "a vaguely medical but still perfumy tang, evoking a used surgical swab dunked in dilute Chanel No 5."[18]

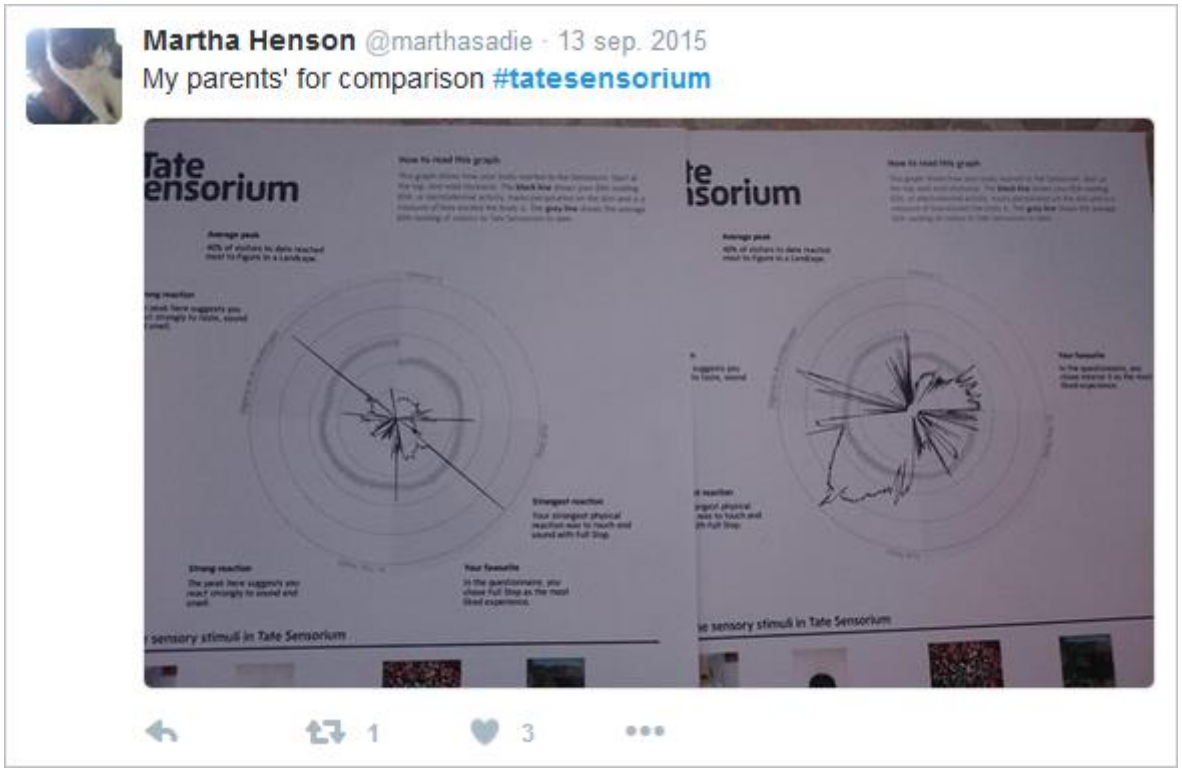

Figure 6 Tweet by a visitor of *Tate Sensorium* showing two graphs depicting different bodily reactions to the artworks and stimuli. Each quadrant depicts the level of intensity of an individual's physical reaction in a gallery.

[16] Da Silva, 2015.
[17] Bulliqi, 2015.
[18] Hudson, 2015.

In the third gallery, visitors were invited to pick up and shake two odoriferous ramblers in front of *In the Hold*. One scent can be described as "a calone bomb – oceanic, slightly salty, needle-like and fresh" and the other one as a "warm cashmeran-esque softly smoked tobacco scent that felt low, rich, and dusty."[19] Finally, in the fourth gallery, an ambient earthy smell with green and animalic notes was slowly released through a diffusion machine and the visitors were told to eat the round, little chocolates that were presented on a platter. "Afterwards," art critic José da Silva writes, "the gallery attendant praise[d] us for being one of the few groups foolish enough to keep eating despite the foul taste."[20] The so-called chocolates were not smooth and creamy in flavor, but consisted of charcoal, sea salt, cacao nibs and smoky lapsang souchong tea.

2.2 CURATORIAL CHALLENGES OF SMELL

In "Legibility and Affect: Museums as New Media," cultural theorist Michelle Henning points out how the medium of film inverted the museological space from a *white* cube into a *dark* cube. Moreover, this new medium not only "brought in the night into the museum," but also changed the social and physical dynamics of the space as, for example, darkness allows viewers "to isolate themselves and concentrate their attention" and the duration of a film affects the spatial possibilities to sit down.[21] In this article, Henning draws attention to the fact that it would be blunt to merely celebrate curatorial inclusions of new media without identifying the particular challenges. From this point of view, I argue that museum theorists and curators should reflect and theorize on how to adapt present museum settings to the medium of smell. In this section, therefore, I will identify and articulate four central challenges of olfactory curating as primarily derived from interviews with Caro Verbeek, Jorg Hempenius and Lizzie Ostrom. This new variation on curating involves special issues of positioning, effect, maintenance, and ethics.

One of the challenges is to determine how to steadily position odors in space. "Odor clouds cannot be spatially delimited," neuroscientist Andreas Keller writes, "and when there are several odor sources in a room, the odors overlap and blur and are perceived as a blend."[22] Furthermore, he adds that "odor clouds are also in constant movement and cannot be tied to a specific point in space."[23] However, it could be a curatorial choice to completely fill galleries with ambient smells. In case of the exhibition *Inhaling Art*, this was indeed the preferred and first choice of Verbeek and Hempenius, but the curators of the Van Abbemuseum intervened as they did not want to force these different odors upon their guests. This meant that motion sensors that would squirt odor chemicals into the air were also not an option. Their argument, however, seems to be rather paradoxical for the *tools* were explicitly designed to break

[19] Bulliqi, 2015. Calone is a perfume ingredient that produces an oceanic olfactory effect.
[20] Da Silva, 2015.
[21] Henning, 2007, pp. 25-28.
[22] Keller, 2014, p. 168.
[23] Ibid.

through the barriers of the conventional art museum. It seems as if the curators are actually reserved about really transforming the museum and want to keep control over the museum experience.

Interestingly, none of the reviews of the exhibition *Tate Sensorium* mention the ambient earthy smell that was present in the fourth gallery space. Art historian Beáta Hock, for example, analyzes that the complex sensory experience of Bacon's painting led her to "a quite unexpected reading of the work," but only because of the "unidentifiable horrendous tasting input" and she makes no mention of a smell at all.[24] This seems to indicate that *if* curators want museum visitors to be *consciously* aware of smell as an *intended* interpretive tool, contextualizing elements are required. Such elements should not be authoritative, but can range from physical appearances to reflective activities. Finally, next to the options mentioned above and the focused sniff sources containing odorized crystals that the curators of both exhibitions primarily opted for, a few alternatives for positioning odors remain; e.g., pumps that spray whiffs of fragranced *air*, or portable kits with perfume flasks or odorized items. According to Verbeek, however, the particularity of the museological environment makes these options easily dismissible as fragranced air evaporates too quickly, perfumes can be spilled too readily and small odorized items run a high risk of being stolen.[25]

Another significant curatorial challenge is to assess the density of odor concentration. On the one hand, heavy and strong smells can make visitors feel physically uncomfortable and could therefore chase them away. What are the boundaries within curators are allowed to play with the level of odor concentration? Are these boundaries different for curators than for artists? Interesting, for example, is the case of "Clara Ursitti's *scentorship* in which a gallery director attempted to tune down the exhibition scent, yet without Ursitti's consent. It turned out that the director, despite being enthusiastic about the idea, felt the smell would be too strong for the public."[26] On the other hand, Keller points out that "it is difficult to get people to pay extra for odors that they cannot smell" and "to defend a budget for the olfactory component of a museum exhibit when many of the visitors will report that they did not smell anything."[27] However, he nevertheless argues that museums should use very small concentrations of odor for "subliminal odors have been shown to have profound influences on mood, behaviors, and cognitive performance" and "some studies have even identified cases in which an odor is *more* effective when it is not consciously perceived than when it is perceived."[28] In other words, one and the same composition of an odor can have very divergent effects depending on the level of chemical concentration. The *aim* of the olfactory component in an exhibition should thus determine the odor's density. As regards to *Inhaling Art* and *Tate Sensorium*, these exhibitions are explicitly designed as *active* sensory explorations of the shown artworks. This means that visitors need to be consciously aware of the scents and the level of concentration thus needs to be clearly perceivable.

[24] The Courtauld Institute of Art, 2015.
[25] Verbeek, personal interview, April 20, 2015.
[26] Solay, 2012, p. 12.
[27] Keller, 2014, p. 171.
[28] Ibid., p. 170.

This brings us to a third major curatorial challenge: keeping the odor, consciously or subconsciously, perceptible for the museum's audience. Smells are highly ephemeral as "they exist for only a designated period and oftentimes change or are transformed during the time of their appearance."[29] The optimal conditions for most odors are at a relatively high temperature and high humidity and, therefore, usually clash with conservational strategies in museums. The curators of the Van Abbemuseum circumvented this problem by heightening the level of odor concentration of the perfumed crystals and refreshing these crystals regularly. In contrast, many visitors of *Tate Sensorium* complained that they barely noticed the smells.[30] Since art museums understandably attach more value to the preservation of their artworks, it could be a good compromise to distribute portable scents so visitors can warm these up in their hands. Furthermore, the risk of olfactory fatigue of visitors is another concern in keeping odors perceptible. "Olfactory fatigue is a more dramatic condition than the general museum fatigue phenomenon," Drobnick writes, "because when it occurs, the entire sense of smell virtually shuts down."[31] To prevent this from occurring, curators could carefully choreograph pauses between the different smells, as, for example, the more or less scentless third gallery space of *Tate Sensorium*. An even better tactic is to give each visitor a tool to neutralize and revitalize their sense of smell, such as the *Inhaling Art*'s lanyard with a small jar filled with coffee beans. Not only do coffee beans cause such nasal reboot, smelling your own skin or materials with a singular scent profile, like coffee beans, will also have this effect.

Last but not least, curators should take notice of the ethical aspects and limitations of smell. Since visitors cannot escape breathing and odor chemicals unavoidably invade their bodies, the use of odors is highly relevant to those visitors who have allergic reactions to airborne fragrances or certain chemicals.[32] Furthermore, "ideas about scent slavery and mind control perfumes may seem akin to paranoid obsessions or science fiction scenarios," Drobnick aptly states, "but the ethics of olfactory manipulation – or sensory engineering as the industry prefers to designate it – is a topic with implications that have been ominously unaddressed by its advocates."[33] Up to what point should curators, who rarely have a degree in mental health, be allowed to affect and play with the mood, emotion, and behavior of visitors? Is it acceptable to arouse potentially unwelcome involuntary thoughts or memories when most museumgoers only expect a rather joyful and pleasant visit?[34] Is it all right to subconsciously affect visitors' opinions about the subject matter of an exhibition? Yet, at the same time, other forms of sensory stimulation are hardly considered unethical. As theorist in ethics Jack Marshall exemplifies on his blog: "we approve of the use of colors, furnishing, art and cultural symbolism to make offices and environments more pleasing and comfortable."[35] He then adds that music also has powerful

[29] Drobnick, 2014, p. 180.
[30] Gosling, 2015.
[31] Drobnick, 2014, p. 191.
[32] Kay, 2003, pp. 2-3.
[33] Drobnick, 2005, p. 274.
[34] Think about the possible severe impact of transporting people back in time (through their memories). Several war museums and exhibitions in the world have already utilized smell to make the horrors and hardship of these wars physically palpable.
[35] Marshall, 2011.

psychological effects, but "nobody has suggested that having a string quartet playing in a restaurant is deceptive because diners will think their food tastes better."[36] In my opinion, however, it is not so much the problem that the sense of smell is extremely powerful in eliciting vivid memories and strong emotions, but that (subliminal) odors are highly pervasive and, unlike visual and aural input, cannot be blocked. In case of the exhibitions *Inhaling Art* and *Tate Sensorium*, the visitors were informed beforehand and, furthermore, ambient smells were intentionally avoided or limited.[37] The ethics of olfactory experiences in art museums, however, remain an important issue that deserves more in-depth attention.

In summary, olfactory curating involves several specific challenges, because smells are highly volatile, uncontrollable, and diverse. Ambient subliminal odors in low concentrations may have the most powerful effects on visitors, but may also clash with conservational strategies and ethical opinions. In contrast, steadily positioned odors in high concentrations might not result in the most affective olfactory experiences, but do ensure that visitors will be aware of the scents as an intentional curatorial strategy.

2.3 OLFACTORY MUSEUM PEDAGOGIES

Since our two prototypes *Inhaling Art* and *Tate Sensorium* concentrate on the sensory experience of art and the museum, the exhibitions seem to correspond to the post-museum model of the multisensory museum (§1.3.3). They explicitly encourage visitors to be attentive to the conventional optical mode of display in museums and thus intrinsically seem to challenge ocularcentric thinking. In this section, I will test this hypothesis by exposing the ideological framework of the two olfactory curatorial strategies. I will particularly delve into their different forms of pedagogy and examine *how* and *what* these exhibitions *teach* their visitors. "The pedagogy of the museum," renowned museum theorist Eilean Hooper-Greenhill states, "can be analysed [analyzed] in relation to both content and style."[38] Although these notions of style and content greatly overlap, they function as the starting point for my analysis. The subsection on style will focus on the design issues of routing, rhythm, display style, and interface. Although this latter term is very wide-ranging, I use it to refer to the ways in which the two art museums have devised different methods to receive feedback from their visitors, which also function as contemplative tools to visitors themselves. The following subsection on content will elaborate on the conceptual thought of the smell interactives.

As will be demonstrated in the following two subsections, both the style and content of the exhibitions *Inhaling Art* and *Tate Sensorium* teach ambiguously for they appeal to tenets of the post-museum's multisensory museum, but still adhere to conventional values too. Both museums aim at reshaping themselves, but seem to refrain from the consequences. The smell interactives could thus yet

[36] Marshall, 2011.
[37] A sign at the entry of *Tate Sensorium* explicitly mentioned: "A visit to the display incorporates scent diffusion and fragrance applied to the skin. If you have any health conditions for which this would be a concern, speak to a visitor assistant."
[38] Hooper-Greenhill, 2000, p. 5.

be considered, in the words of sociologist Kevin Hetherington, mere "optical prostheses."[39] Furthermore, resulting from the analysis below, I stress that future smell interactives and other olfactory curatorial strategies should be accompanied by methods or tools that encourage reflective thought in order to stimulate olfactory learning experiences.

2.3.1 OLFACTORY MUSEUM PEDAGOGY ON THE LEVEL OF STYLE

The first issue involves the *routing* of visitors along 'the olfactory path' through the galleries of *Inhaling Art* and *Tate Sensorium*. In order to analyze the pedagogic function of these paths, I would like to turn to an illuminating essay by anthropologist Paul Basu. In "The Labyrinthine Aesthetic in Museum Design," he identifies two paradigms of labyrinth design: the unicursal and the multicursal [fig. 7]. "The unicursal maze features a single path, which may twist and turn to the point of desperation, but which entails no dead ends or choices between paths," Basu states.[40] This type of design can be recognized in the routing of *Tate Sensorium* for the exhibition followed a non-bifurcated path though the visitor had to actively search for next gallery accesses since these openings were poorly lit and not positioned facing each other. Subsequently, Basu comments that "the multicursal, on the other hand, features an array of choices between paths and embodies frequent testing and repeated confrontations with uncertainty."[41] Since the five olfactory stations of *Inhaling Art* are spread throughout the postmodern wing of the Van Abbemuseum, the multicursal type of design corresponds to the routing of this exhibition. The differentiating between these two paradigms of labyrinth design is more than merely a trivial remark, because they convey different notions of pedagogy: "the unicursal maze-walker, having no choice but to pursue a singular, predetermined route, follows a universal and authorative curriculum, learning by

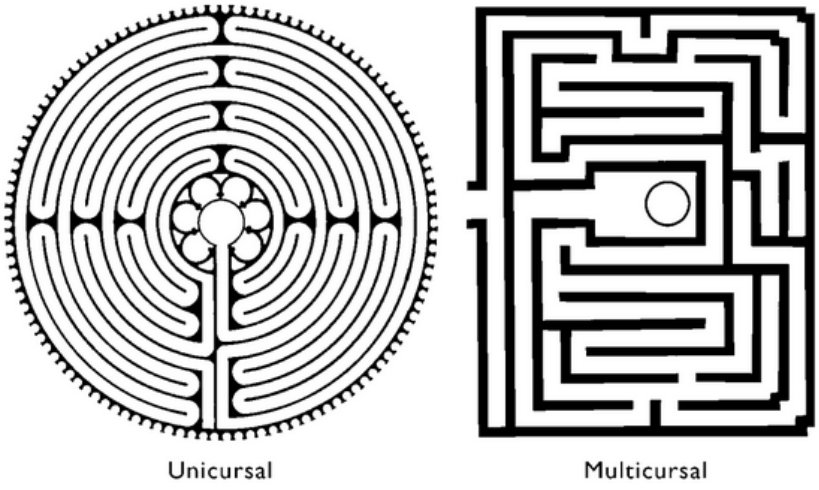

Figure 7 Two paradigms of labyrinth design

[39] Hetherington, 2002, p. 197.
[40] Basu, 2007, p. 49.
[41] Ibid., p. 50.

precept; whereas, the multicursal maze-wanderer participates more actively in her own education, proceeding by trial and error, learning by dialectic."[42] In other words, the routing of *Tate Sensorium* conceptually adheres to the modernist museum model and positions the group of visitors as passive consumers of presented ideas, whereas the routing of *Inhaling Art* encourages each individual visitor to actively explore the museological environment and stimulates critical thinking.

In addition, these contrasting pedagogic attitudes are emphasized by the distinctive *rhythms* of the routings. Whereas the so-called "maze-walkers" of *Inhaling Art* are free to control their own flow and pulse through the museum, the rhythm of *Tate Sensorium* was strictly directed by the museum's curators. Many visitors, such as Da Silva ("you feel time as a constant watchman on your shoulder, voiced by a female actress with a kind but firm tone") and Hock ("[the rhythm of the visit] blocked abandonment to the senses"), have remarked that they felt rushed because of the limited amount of minutes they were allowed to spend in each gallery space.[43] In other words, the rhythms accentuate and reinforce the different (personalized versus authoritative) pedagogies of the exhibitions. In the next chapter, I will briefly return to this notion and argue that rhythm can also induce sensorial experience.

However, first we need to put the seemingly open pedagogy of *Inhaling Art* into perspective, because the *display style* does not seem to support this way of thinking. "It is the experience of displays that for the most visitors defines the museum," Hooper-Greenhill notes, "and it is through displays that museums produce and communicate knowledge."[44] Visitors of *The Collection Now* are not very likely to pick up any *tool*, because the *toolshop* is tucked away in an inconspicuous corner of the museum and gray sitting boxes regularly obstruct access to it. Less than four percent of all visitors of *The Collection Now* pick up a *tool*, let alone they take up the materials of *Inhaling Art*.[45] The fact that the museum addresses this little amount of attention to the introduction of the different *tools* stresses them as *additional* modes for looking at the conventional display. In other words, it underscores the visual quality of art and accentuates smell as a secondary or even inferior option to experience artworks and the museum.[46] Moreover, the white, undecorated scent stations support, and are redolent of, modernist white cube aesthetics. These scent stations are placed against the museum walls so visitors can hardly look and smell simultaneously. The design of *Tate Sensorium*, on the other hand, more starkly highlights the olfactory mode as an equal sensory approach of experiencing the collection. Visitors are able to examine a certain artwork visually, kinesthetically, auditory, gustatory, and olfactory at the same time and a different sense is highlighted in each gallery space. Furthermore, the exhibition's display style is not singular for the medium of smell is differently presented through scent stations on the wall, portable

[42] Basu, 2007, p. 51.
[43] Da Silva, 2015. The Courtauld Institute of Art, 2015.
[44] Hooper-Greenhill, 2000, p. 4.
[45] Nieuwhof, 2015, p. 4.
[46] Visitors do not necessarily have to discover the *toolshop* in order to spot the scent stations in the galleries. However, interestingly, visitors who are unaware of *Inhaling Art* as a *tool* but who do encounter one of the scent stations in the galleries, usually tend to *look* into or put their *ears* onto the white scent units.

hand shakers and in ambient form. The various display styles of *Tate Sensorium*, in contrast to the display style of *Inhaling Art*, thus communicate the versatility of and many positions regarding smell.

The fourth and last issue concerning the design of the exhibitions is that of *interface*. How does the design of *Inhaling Art* and *Tate Sensorium* give visitors the opportunity to communicate to the museum and does this design technique simultaneously promote profound learning experiences? As already argued in the previous chapter, art museums that employ curatorial strategies of olfaction should, in order to be culturally and socially valuable, provide a setting to encourage visitors to draw meaning from their smell experience so it can transform into a meaningful olfactory experience. In other words, the ways visitors can reflect on their museum experience is crucial in transforming any experience into a *learning* experience: "the experience alone is not necessarily educative," learning theorists Lee Andresen, David Boud, and Ruth Cohen write, "debriefing and reflective thought are employed as essential stages."[47] This reflective thought is reinforced through interaction and communication. In other words, visitors should be encouraged to *participate* in the process of making meaning. Visitors of *The Collection Now* are only invited to participate by writing their feedback on cards in the *toolshop* [pl. 8]. In this sense, the *interface* of *Inhaling Art* is rather inadequate for the feedback cards are tucked away in a corner of the museum, the design does not provoke challenging dialogues (because visitors are not encouraged to respond to one another and, from my experience, the museum staff ignores the responses), and, moreover, the posed questions are not well formulated, ambiguous, and too abstract.[48] In general, we could say the design is unsuccessful, because it almost solely focuses on "the creation of user-generated content."[49] In *The Participatory Museum*, museum theorist Nina Simon criticizes many cultural institutions for this narrow mindset. "People who create content," she writes, "represent a narrow slice of the participatory landscape, which also includes people who consume user-generated content, comment on it, organize it, remix it, and distribute it to other consumers."[50] The museum staff of the Van Abbemuseum could have better developed the design of the *interface*, and thus potentially enhancing the learning experiences of visitors, by also taking into account other forms of participation, e.g., critics, collectors, and joiners.

The *interface* of *Tate* Sensorium was also focused on user-generated content and fairly simple and small (though probably expensive!) in design. However, the design communicates more clearly with the visitors and does not exclude diverse forms of participation. As figure 6 shows, visitors are handed a sheet with their own data, which they can take home and share with others. These data can serve as a tool for dialogue and reflection, because they encourage visitors to contemplate their own and possibly other people's bodily responses to the diverse stimuli. How do my physical reaction and my thoughts correspond to each other? How do my data relate to yours? In fact, these data represent the metaphorical

[47] Andresen, 2001, p. 227.
[48] The feedback cards read: (1) What feedback do you want to give the creater [creator] of the tool?; (2) Was there a greater commitment to the displayed art or the museum?; (3) The offer of tools has surprised me, because…; (4) The selected tool suits me, because…
[49] Simon, 2010, p. 8. The design also satisfies the needs of spectators.
[50] Ibid.

echo of a museum experience. After the museum visit, the personal experience is reproduced on a sheet of paper, which may trigger reflective thought.

2.3.2 OLFACTORY MUSEUM PEDAGOGY ON THE LEVEL OF CONTENT

The next step is analyzing whether the conceptual thought of the individual smell interactives adheres to the principles of the multisensory museum. Of course, individual visitors can be empowered by their personal olfactory imaginations and associations through which the museum's control becomes destabilized. Yet what conceptual notions prompt the museological practices of *Tate Sensorium* and *Inhaling Art*, and are being communicated to the visitor?

Besides personal connotations, the six smells of *Tate Sensorium* seem to function as either *time warp experiences*, *literal translations* or *contextualization* of the visual images. In the first gallery space, for example, one of the three scents was intended to take visitors back in time by recreating the atmosphere of a mid-century home: the original scent of furniture spray polish Pledge. The two other chemical aromas functioned as a translation of the painting for "the central character is brought to life with the scent of vintage hair-spray, and a glue/solvent smell hints at the collage process."[51] However, it is important to note that this underlying thought was not shared with the visitors. In the third gallery space, on the other hand, an accompanying fact sheet told visitors that the scents were "abstract: shrill, bringing out the blue color [of the painting] and "diesel and tobacco."[52] Here, thus, the particular smells were again chosen in order to olfactorily translate the visual depiction of an abstract dockyard. The last odor in the fourth gallery space was designed to frame Bacon's painting in a new manner by evoking the atmosphere of a park through the smells of soil, grass, and animals. Again, the curators did not inform the visitors about this smell. In other words, the curators of *Tate Sensorium* did either not at all inform their visitors about the possible meanings of smells or dictate one sole understanding of a particular scent.

The smell interactives of *Inhaling Art*, in contrast, seem to array heteronomous positions on how to understand smell for the diverse qualities of olfaction and smell are disentangled and individually explained in relation to the chosen artwork or impression. The smells are not only framed as *time warp experiences* and *literal translations*, but they are also created to teach a lesson in *art history* and to demonstrate the diverse *social*, *multisensorial*, *memorative*, and *phenomenological proximate* qualities of olfaction. The first scent is a composition of tobacco extract, cigar extract, clove and fume extract, and is put on show as a *time warp experience* in order to bring visitors back to the early days of the museum, when the interior was regularly covered by a thick blanket of smoke.[53] The second smell serves as an opening to teach about the painter Kandinsky, who was a synesthesist, and the creation of his

[51] Tate, 2015b.
[52] Da Silva, 2015.
[53] Hempenius, personal interview, June 4, 2015.

paintings. At this point in the accompanying booklet, the reader is invited to join in the discussion: "What would a round shape smell like? And what form does this aromatic composition take?" Next, the third smell interactive is both an olfactorily translation of blue, just like Klein's painting, and an active performance of the multisensorial quality of smell for it *feels* cold. The fourth smell interactive is also designed to play a double role: the ashy smell was created to tell about the unusual natural materials of the artistic movement Arte Povera and about the quality of generating a sense of direct physical contact with the odorant. Lastly, the fifth scent is a composition of Eau de Cologne, "the oldest and most famous perfume on earth that is still available."[54] "Nowadays, it is used as 4711 on napkins in airplanes so that it is associated with travel," but many people will recognize the smell and may have memories of "grandmother's perfume."[55] However, the text in the small information booklet does little to encourage the visitor to develop his/her own opinion. *Inhaling Art* points to the diverse qualities of olfaction, but instead of challenging multiple positions per smell, the booklet offers merely one interpretation per individual scent. Each individual smell interactive is designed to tell something about 'the' context of the artwork and a quality of olfaction, but does not encourage visitors to contemplate or reflect on these statements.[56]

Yet, despite the overall didactic tone of *Inhaling Art*, it is better to actively frame the smell interactives than to give no information at all. As became evident to me during my internship at the Van Abbemuseum, visitors who had not read the information from the small booklet often did not know what to expect and lacked a framework for understanding the smells. Since most visitors are not used to making meaning of smell, the booklet primarily serves as a framework for interpreting smells in order for the visitor to be able to reflect and make the experience meaningful. In this respect, it becomes clear on what grounds art critics differ in their opinions on *Tate Sensorium*. Some critics are overly enthusiastic, because they focus on the overall intention of the exhibition. Others deem the exhibition not very thought-provoking, because they miss *content* of the scents. However, interaction appeared to be a more crucial aspect of reflection. At the Van Abbemuseum, I noticed that visitors who kept their thoughts and ideas initially for themselves, often did not know how to respond to the smell interactives. *I like the smell, but I have no idea what to do with it*. Most people, however, do have olfactory experiences as defined in the previous chapter, but they are not conscious about the diverse possibilities of interpretations of smell. It was due to interaction, reflection, participation, and dialogue that visitors could frame and reflect on their smell experience, and could perhaps even transform it into a learning experience.

[54] Description of the fifth smell interactive in the information booklet of *Inhaling Art*.
[55] Ibid.
[56] The feedback cards in the *toolshop* do offer the possibility to respond to the statements eventually.

3. SHOPPING FOR FUTURE OLFACTORY CURATING

"Im achtzehnten Jahrhundert lebte in Frankreich ein Mann, der zu den genialsten and abscheulichsten Gestalten dieser an genialen und abscheulichen Gestalten nicht armen Epoche gehörte," runs the opening sentence of Patrick Süskind's first and best-selling novel *Das Parfum – die Geschichte eines Mörders* from 1985.[1] The man referred to in this first line is the orphan named Jean-Baptiste Grenouille, who is born with a superior and exceptional olfactory sense, but lacks a body odor of his own. He becomes a perfumer and uses these skills to distill the essences of beautiful young virgins he murders in order to create world's most luscious perfume. Later, in respectively 1986 and 2006, *Das Parfum* was translated into an English novel by John E. Woods and an Anglophone film by Tom Tykwer, both named *Perfume: The Story of a Murderer*. What could museums gain from this literary translation of Süskind's novel in their interpretation of smell interactives? And what do audiovisual film practices tell us about olfactory translations? In other words, what can these literary and cinematic renditions of smell teach us about olfactory curating?

This chapter is an experimental and theoretical exploration of the possibilities of olfactory curating in art museums. Comparable to the Van Abbemuseum's *toolshop*, this chapter functions as a locus where we can pick up interdisciplinary tools, or concepts, in order to reframe and push the limits of our understanding on the subject matter, which in our case is the olfactory experience in art museums. "If [such concepts are] well thought through," cultural theorist Mieke Bal argues, "they offer miniature theories, and in that guise, help in the analysis of objects, situations, states, and other theories."[2] In the first section, I will elaborate on the generative quality of olfactory experiences by examining the literary concept of metaphor. The difference between smell as a gimmick or a potential learning experience, as argued in the first chapter of this thesis, has to do with accentuating either the frivolous *reproductive* or the *generative* quality of the experience. Since I have already explored what it means to have a generative olfactory experience, this section will focus on the conceptual meaning of *generative*. Next, in the second section, I will respectively approach the material and phantosmic olfactory metaphor through the lens of ciné-theory.[3] First, the subsection on the material olfactory metaphor will shed extra light on the ways in which smell can open up the museum and its artworks. Second, in the sub-section on the phantosmic olfactory metaphor, I will argue that the multisensory museum can elicit and intensify olfactory experiences by accounting for the whole sensorium instead of starkly differentiating between individual senses.

[1] "In eighteenth-century France there lived a man who was one of the most gifted and abominable personages in an era that knew no lack of gifted and abominable personages."
[2] Bal, 2002, p. 22.
[3] Phantosmia (phantom smell) is a medical phenomenon, which has also been called olfactory hallucination. In this thesis, however, I employ the term as a conceptual tool. Nonetheless, it is interesting to note that only reading an odor-related word already activates the olfactory regions in the brain.

3.1 LITERARY TOOLS ON OLFACTORY CURATING

In the novel *Das Parfum*, the illusion of objective distance is already broken down on the first page from the moment that the reader is included. "Zu der Zeit, von der *wir* reden [italics added]," the second paragraph begins.[4] Such literary device would have lesser impact in museological practice than on paper, but curators have the advantage of being able to work with real, physical scents to engage visitors. Smells directly relate to visitors, and hence *do* something. They constantly flow, change, and can trigger emotions, memories, and imaginations. They have the power to constitute new meanings and relationships through the 'smeller.' In other words, they continuously *perform*. This is part of what I have called the *generative quality* of olfactory experience. Yet what defines a well-executed performance? That is to say, how *should* curators employ smell as a productive agent in the museum space?

As mentioned in the introduction of this section, Süskind's novel was translated into English as *Perfume* by John E. Woods in 1986. Interestingly, reviews varied remarkably between the two versions for those who read the German edition primarily focused on the rich references to Romantic literature, whereas Anglophone critics "largely confined their attention to the work's plot."[5] In the article "Scent in Translation," literary theorist Amy Dyer argues that this difference comes about because the English translation of *Das Parfum* misses depth, and conveys "a shallower view" and "is much less allegorical" than the original.[6] Whereas the German language in *Das Parfum* manifests scent as intrinsically belonging to *being*, *Perfume* concentrates on "the perversities of Grenouille's murderous lusts" and accentuates scent as a mere physical phenomenon.[7] Dyer presents a diverse list of differences in meanings between German and English vocabulary and grammar.[8] For example, after Grenouille murders his first victim, a redheaded girl, he "riß ihr Kleid auf, und der Duftstrom wurde zur Flut, sie überschwemmte ihn mit ihrem Wohlgeruch," which Woods translates as "tore off her dress, and the stream of scent became a flood that inundated him with its fragrance."[9] Dyer points to the ambiguous agency of scent in *Das Parfum* for German is a gendered language and both 'die Flut' and the redheaded girl are referred to with 'sie,' the feminine pronoun. "When translating to English," she writes, "a non-gendered language, one must decide whether to choose whether the flood or the girl overwhelms Grenouille."[10] Clearly, Woods opted for the first option. Dyer continues that "in making this decision, Woods ties the girl's smell to the purely physical world. If it was the girl who overwhelmed Grenouille,

[4] The English translation reads "In the period of which we speak […]"
[5] Fleming, 1991, p. 71.
[6] Dyer, 2009, pp. 20-21.
[7] Ibid., p. 1.
[8] My favorite example is that of the difference in meaning between Grenouille's drowning in his '*Eigengeruch*' or 'own body odor.' Whereas '*Eigengeruch*' is a neutral concept that puts forth Grenouille's scent as intrinsic yet separate from his body, 'own body odor' conveys a negative and purely physical connotation. Dyer (2009) writes on page 12, "The image of someone drowning in their own stench […] evokes comedy more readily than horror. […] Drowning in his '*Eigengeruch*' conveys a very different idea: that Grenouille is actually drowning in an olfactory void. […] In some sense, this is a type of metaphorical death to Grenouille: if death is an infinite void, a void of scent must be death to Grenouille."
[9] Süskind, 2007, p. 44-45. Süskind, 1986, p. 43.
[10] Dyer, 2009, p. 18.

the scent is more of a metaphysical quality, her 'Eigengeruch.' In the translation, the redheaded girl does not dominate or overwhelm Grenouille; merely her pleasant smell intoxicates him."[11]

However, Dyer does not, as a consequence, claim that the novel is untranslatable; she argues that "it simply needs an *interpretation* with more nuance and care in vocabulary [italics added]."[12] Following her line of thought, this interpretation should pay more attention to the rich, meaningful layers of the concept of scent. A comparable argument to translation we find in Bal's writings. In her book *Travelling Concepts in the Humanities* (2002), she zooms in and elaborates on the concept of metaphor as a *para*synonym of translation. She writes that 'to translate' and 'to metaphor' share similar meanings for both actions give an interpretation, but "whereas translation is reputed to pursue slavish adequacy," metaphor carries meaning *beyond* in order "to seek innovation."[13] By analyzing Bourgeois' *Femme-Maison* (1983) as a metaphor of Bernini's *Ecstasy of Saint Teresa* (1647), Bal argues that the metaphor liberates the object from a one-directional reading and produces multiplicity instead by offering a more diverse conception of what the object is and does.[14] Moreover, in "The Discourse of the Museum," she argues that artworks in general are widely regarded as metaphors for they communicate cultural world views or social conceptions, but remain readable *as art*. "The ethnic artefact, in contrast," Bal elaborates, "is first and foremost considered to be a representative of the larger context of the culture it comes from. Hence, it is not metaphor but synecdoche."[15]

Taking these ideas together, the concept of translation and synecdoche could thus be equated with each other for both their purpose is to literally mirror a certain given. Their function is not necessarily to enrich or add meaning, which *is* the role of translation *through* metaphor, *metaphoring*. However, as Woods' *Perfume* shows, translation can never be adequate. Hence, *metaphoring* the literary device of metaphor to the audiovisual domain of exhibitions, I suggest that well-executed performances of smell interactives should be approached through the concept of metaphor. The smells should not be mere *reproductions*, or "slavish" translations, but should enhance the experience. It is for this reason that it would not be productive to present, for example, the scent of roses adjacent to a painting depicting a bouquet of roses. The scent should, as a metaphor, present an interpretive reading of the artwork.

Lastly, the concept of metaphor allows us to briefly reevaluate the smell interactives of *Inhaling Art* and *Tate Sensorium an sich*, which were thoroughly analyzed in the previous chapter. Several of these smell interactives can be considered metaphors for they are explicitly designed to offer different and new conceptual frameworks for interpreting artworks (§2.3.2). However, both the smell interactives of *Inhaling Art* adjacent to the paintings of Klein and Merz, and the smell interactives of *Tate Sensorium* adjacent to the paintings of Hamilton (except for the scent of Pledge) and Bomberg seem to function as

[11] Dyer, 2009, p. 18.
[12] Ibid., p. 22.
[13] Bal, 2002, p. 65.
[14] In this chapter, Ball tries to problematize the concept of translation and argues that *Femme-Maison* could also be rendered *one of the many possible translations* of *Ecstasy of Saint Teresa*. Although I find her argument compelling, the productive character of metaphor and the "slavish" character of translation remain manifest throughout the chapter. She indeed opens up the concept of translation, but names the productive side of translation 'metaphor.'
[15] Bal, 1996, p. 206. A synecdoche is a *pars pro toto* or *totum pro parte*.

mere synecdoches for they are all *designed* as literal translations of either the subject or surface of an artwork. This first analysis, however, would need more in-depth research. Furthermore, we need to keep in mind that visitors themselves play a crucial role in *metaphoring* scents, because of the highly personal and evocative character of smells. The scent's performance plays and unfolds *within* the visitor. In other words, my hypothesis is that smell interactives adjacent to the paintings of Klein, Merz, Hamilton, and Bomberg are not explicitly well designed, but they *can* generate olfactory experiences within individual visitors.

3.2 CINEMATIC TOOLS ON OLFACTORY CURATING

3.2.1 THE MATERIAL OLFACTORY METAPHOR

In April 1965, the BBC aired an interview with an alleged scientist from London University who announced that he had come up with an innovative and improved technique of watching television at home. He proclaimed that his reinvented device named *Smell-O-Vision* was able to break down odor molecules that were produced in the television studio and could diffuse them through screen, which allowed viewers to smell these exact odors at home. After a live demonstration, "a number of viewers phoned in to confirm that they had indeed detected through their television sets the chopped onions and freshly brewed coffee that they saw on the screen."[16] Unfortunately for these enthusiastic callers, it turned out that the BBC played an April Fool's Day hoax on their viewers.

However, the concept of *Smell-O-Vision* had already been introduced five years earlier in the American film *Scent of Mystery* by Michael Todd Jr.[17] Its slogan read, "First they moved (1895)! Then they talked (1927)! Now they smell!"[18] In this film, the British actor Denholm Elliott gets wind of a plan to murder an American heiress and adventures through the Spanish landscape to find this mysterious woman, who is only identified by her characteristic perfume until the final scenes of the film. Together with a taxi driver, played by Peter Lorre, Elliott tries to warn her of the forthcoming murder attempt. During the screening, the system of *Smell-O-Vision* piped different odors, such as garlic, coffee, and freshly baked bread, directly to individual theater seats and released them after triggering by signals of the film's soundtrack. "Some of the smells […] were little more than background smells that had nothing to do with the story. But others were instrumental in advancing the plot."[19] For example, "the audience learns that Peter Lorre's character is a drunk [because] when he and Elliott are drinking coffee in one scene, Lorre takes a sip from his mug and the theater fills with the smell of brandy. Later, when Lorre

[16] Bradley, 2015, p. 1.
[17] Three weeks earlier, in 1959, a similar but competing system *AromaRama* was launched with the film *Behind the Great Wall*. It diffused over a hundred aromas through the air-conditioning system of the cinema. The rivalry between the two films, *Scent of Mystery* and *Behind the Great Wall*, was termed "the Battle of the Smellies."
[18] Paterson, 2006, p. 360. In 1895, the Lumières screened motion pictures for the first time. Thirty-two years later, in 1927, the first sound film, also known as a *talkie*, *The Jazz Singer*, was released.
[19] Miss Cellania, 2015.

and Elliott are on the trail of the wrong woman, they (and the audience) learn as much by getting a whiff of her perfume, which is the wrong scent."[20]

Although the technical design of the *Smell-O-Vision* encountered a number of difficulties and the film itself was badly reviewed, this example demonstrates that some have already experimented and played with olfaction in the audiovisual domain. Moreover, it gives insight into how to employ smell interactives as metaphors, beyond the concept of synecdoche. In "Olfactory Performances," dance historian Sally Banes brings this basic assumption to another level by introducing a taxonomy of aromatic rhetoric in theatrical representations. She lists six categories: scent as illustration; as evocation of a mood or ambience; as evocation of memories; as ritual framing; as a mode of defamiliarisation and as a complement of/contrast to aural and visual signs.[21] I think the two last mentioned functions, in particular, remain noteworthy and Banes presents two respective examples of such performances. First, in the production of *The Whiteheaded Boy* (1997), "an actor holds a piece of bread up to a patently fake fireplace and suddenly, magically, the smell of toast wafts through the theatre."[22] Here, the olfactory effect serves as a means to alienate the performance from the audience, as a mode of defamiliarisation. Second, "a striking example of the contrastive use of aroma," Banes writes, "took place during the British performance artist Cosey Fanni Tutti's performance *Women's Roll* (1976), in which Tutti slashed her clothing and created artificial wounds using both makeup and crushed berries."[23] Banes argues that the unpleasant visual stimulus but pleasant olfactory stimulus disturb the viewer's mind "of how to interpret this display of a woman's body."[24] This function of scent, partly, corresponds to what smell theorist Jim Drobnick has coined "dialectical odors."[25] Interestingly, I argue that both functions –scent as a mode of defamiliarisation and as a complement of/contrast to aural and visual signs– act similarly. In both aromatic rhetorical strategies, the scents bring in new information, create new relations, and unsettle the viewer. This approach is highly useful and insightful in approaching scent as a metaphor in art museums.

Finally, and returning to the cinematic concept of *Smell-O-Vision*, it is interesting to note that although this device was nominated for a Golden Turkey Award in the category 'Most Inane and Unwelcome Technical Advance in Hollywood History' and was listed in *Time* magazine as one of the worst inventions of all time, research into the betterment of olfactory technologies continues.[26] The USB-connected spraying device *iSmell*, for example, and in contrast, won the Best New Technology award at the Best of RetailVision Awards in 2000. This device, as Marks comments, "was no joke: it received $20 million from investors as well as from Pacific Century Cyber-Works, which planned to

[20] Miss Cellania, 2015.
[21] The first four categories have been thoroughly explored in the previous chapters. I consider the fourth category, scent as a ritual framing, as an evocation of a mood or ambience.
[22] Banes, 2001, p. 71.
[23] Ibid., p. 70.
[24] Ibid., p. 71.
[25] Drobnick, 2005, p. 277. On the same page, Drobnick explains that "[d]ialectical odors contradict the conventional assumptions of place and space, render them more openly schizophrenic, introduce complexes of competing meanings and draw out the implicit political dynamics."
[26] Sobchack, 2013, p. 83.

introduce the product to the Asian market, and it formed alliances with Procter and Gamble, known for the branded odors of Crest toothpaste, Pampers diapers, and Pringles potato chips, and with RealNetworks, makers of the streaming media software RealPlayer."[27] Although the software company that had designed *iSmell*, DigiScents, ultimately had to close its doors in 2001, other digital scent technologies are still being developed, e.g., *Pinoke*, *Multi Aroma Shooter*, and *Scentee*.[28] Such olfactory technologies could certainly add value to present exhibition spaces too, but we might also wonder whether physical odor molecules are indeed required and essential in creating olfactory experiences. Could it be possible to leave viewers with a powerful impression of smell without actually utilizing odor chemicals?

3.2.2 THE PHANTOSMIC OLFACTORY METAPHOR

In both her article "The Logic of Smell," which is a wordplay on Deleuze's *The Logic of Sense*, and her book *The Skin of the Film*, Marks intends to *touch upon* and explore the subject of olfactory haptics. Focusing on cinema, she argues that the audiovisual image inescapably evokes other sense experiences, because the "optical image is one that requires the viewer to complete the image by searching his or her own circuits of sense memory."[29] She points to three ways through which audiovisual media can generate olfactory experiences without utilizing odor chemicals.

"The first and most usual means," Marks writes, "is identification: we watch someone smell something and we identify with them."[30] In other words, as film theorist Vivian Sobchack eloquently rephrases, "we may (and often without a thought) engage in the actual *act of smelling* an imaginary world – even if we're not successful in realising [realizing] its smells."[31] Our own lived bodies thus recognize and understand what it is like to smell. In Sobchack's analysis of the film *Perfume*, she further explains this by noting that when viewers see the protagonist Grenouille "trying to identify a scent that attracts him, we watch and *understand* as Grenouille shuts his own eyes and concentrates his attention [italics added]."[32] However, Marks calls attention to the issue that viewers not only relate to the olfactory *act*, but also to the olfactory *object*. Indeed, I agree on the stance that such identification is likely to operate in film, but it is problematic to actually put such scenarios into action within the museum environment. Should museums exhibit solely scent associative art? Should museums pay people to go stand in the galleries and show to visitors that they are sniffing and smelling? That would rather be barking up the wrong tree. However, this point does indicate that museum visitors do not necessarily

[27] Marks, 2002, p. 113.
[28] Both *Pinoke* and the *Multi Aroma Shooter* emit small amounts of aroma when triggered by digital signals. However, *Pinoke* is a portable device and the *Multi Aroma Shooter* is a USB-powered device. *Scentee* is a small device attached to smartphones that releases aroma when activated by, for example, a clock alarm or text messages.
[29] Marks, 2000, pp. 212-213.
[30] Marks, 2002, p. 117.
[31] Sobchack, 2013, p. 87.
[32] Ibid.


Figure 8-9 Selection of establishing shots of *Perfume*. Left: maggots crawling over a pile of fish offal. Right: newborn Grenouille crying at the fish market.

have to perceive physical odor chemicals –which they do though, because they are standing in an actual odoriferous museum environment– in order to have a sense experience, because *seeing* smell signs (e.g., icon of a nose) or smelling acts (e.g., of other visitors) can also prompt smell associations.

"A second way that films can evoke an olfactory association," Marks continues, "is through the use of sound, especially in association with a close-up."[33] Again, the establishing shots of *Perfume* [fig. 8-9] function as an example par excellence. In this film, the olfactory landscape of stench is generated by "a montage of quick flashing images that include maggots feasting on decomposing flesh, a wild dog chewing viciously on whatever scraps of meat it can find, rats crawling in and out of butchered meat, the process of gutting fishes and removing innards from pigs; a close up of what seems to be intestines; a man in soiled clothes vomiting by the alley, and a close up of the end product."[34] Synchronously, amplified sounds of sloshing, butchering, and vomiting play over these close-ups, which simultaneously create "a temporal suspension that invites the viewer to linger in the multisensory moment."[35] Because sound is comparably proximal and phenomenologically close to the body as scent, Marks asserts that sound "draws the spectator closer to the image presented, almost close enough for one to actually smell."[36] This olfactory generative strategy could be *metaphored* into the museum space by introducing smell associative sounds, such as cooking, burning, sniffing and smoking, into audio guides. These sounds should, of course, be tuned to the specific museum environment.

This ties in closely with Marks' first point, because spectators who have been exposed to certain smells, sounds, and textures are better able to *identify* with and establish links between these sensory experiences. However, such experiences do not necessarily have to be familiar to the viewer in order to inspire an olfactory effect. The film *Perfume* is "indeed a fragrant film, less because we identify with characters who taste and smell than because it makes sound and vision *synesthetic* [italics added]."[37] Synesthesia refers to the entwinement of all our senses; our senses mutually interact and do not operate in isolation.[38] Sounds thus do not exclusively evoke strictly defined smell experiences. They are, just

[33] Marks, 2002, p. 117.
[34] Jiaying, 2014, p. 114.
[35] Marks, 2002, p. 117.
[36] Jiaying, 2014, p. 114.
[37] Marks, 2000, p. 222.
[38] The book *Art & the Senses* (2013) provides an interdisciplinary collection of essays on the intersection of culture and synesthesia. For example, smell anthropologist David Howes elaborates on the rich synesthetic conceptions of non-Western

like smells and olfactory experiences (§1.1), intersensory, synesthetic, links that address all our senses. In other words, I argue that in order to get full effect out of smell and olfactory experiences in art museums, curators should not limit themselves to the traditional notion of olfaction, but they should attempt to create a close network of interrelationships between art and the senses.

A third way of generating phantosmic smell experiences is through the haptic, or synesthetic, image. "By resisting the control of vision," Marks writes, "for example, being blurry, haptic images encourage the 'viewer' to get close to the image and explore it through all of the senses, including touch, smell, and taste."[39] In a way, we could say that the curators of *Tate Sensorium* have engaged this strategy by darkening the museum galleries. In the end, however, this was only a conservative attempt, because visitors were still instructed to keep considerable distance from the presented paintings. Yet, in her analysis of the film *Perfume*, film theorist Jennifer Barker offers another approach on achieving synesthetic images by examining the "camera 'movement' [which] marks out very dramatically the space between inside and outside; between hearing, vision, and smell as sources of knowledge; and between objective and subjective viewpoints."[40] She argues that the slow lingering of the camera, which then picks up speed again, makes that the viewer experiences a sensorial feeling rather than the sensorial subject of the film does. The film *Perfume* does not visualize smell, but the camera moves like smell. In other words, it is the movement, the *rhythm*, that communicates a sense of smell. Curators could play with the visitor's pace through the museum galleries in order to embody a sensorial experience.

In summary, haptic ciné-theory provides us an entrance into understanding how museums can spark olfactory experiences without actually utilizing odor chemicals. For we depart from our ontological model of the multisensory museum, we already conceive the museum as an environment in which our complete sensorium is addressed. This subsection on the phantosmic olfactory metaphor moreover argues that olfactory experiences can be elicited and intensified by a range of other kinds of sensory input. The film *Perfume* shows that also sounds, textures, and movement can evoke experiences of smell. The multisensory museum should, thus, not focus on strictly defined individual senses, but should create close interrelationships between *all* senses in order to provide productive experiences to visitors. Establishing such interrelationships can be done by, for example, organizing extra activities or hands-on workshops and by designing specific educational materials (e.g., audio guides) or exhibition routings (e.g., rhythm).

cultures. In a totally different yet similar way, cyborg artist Neil Harbisson has attached an 'electronic eye' to his head that turns color into sound and, hence, greatly affects his perception of the world.

[39] Marks, 2002, p. 118.

[40] Barker, 2009, p. 313.

CONCLUSION

This thesis examines the notion of productive multisensory experiences in museums of modern and contemporary art, as well as the pedagogy of current olfactory curatorial strategies and fruitful conceptual tools for such future strategies in art museums. It sets out to develop a theoretical framework for understanding immersive, multisensory art museum experiences as meaningful and educative. The sense of smell functions exemplary in this for it is an exceptional multisensory sensation in itself that requires thorough reconceptualization since it has long been repressed in Western epistemology.

The first chapter argues for a radical shift in our thinking on the notions of olfactory experience, museum experience, and learning. By bringing these concepts together, I formulate a new, inter-disciplinary conception of smell as a potentially meaningful agent in art museums, as well as a new ontological understanding of museum experiences. First, the chapter explores the powerful and unique qualities of olfactory experiences: they are *direct* and *immediate*, they generate a sense of phenomenological proximity, can have subliminal effects, are highly personal but also have social meaning, are profoundly *imaginative* because they can trigger strong emotions and bibliographical memories, and, above all, they are fundamentally multisensory. Not only does olfaction include other sensations such as touch, taste, and sight, but, what is more, the division of the five sensory modalities is a nineteenth-century invention that we can no longer scientifically, culturally, or politically uphold.

In this light, it is not coincidental that the modernist art museum made its entry in the nineteenth century. However, this thesis argues that museum experiences are, just like olfactory experiences, inherently multisensory. This shift in the ontological understanding of museum experiences takes embodied knowledge as its basic assumption. The visitor is neither a passive consumer of knowledge nor a rational brain guided by the senses, but s/he is an active body in which the senses and brain operate bi-directional and on equal level. As anthropologist Paul Basu puts it very eloquently, the museum is "an immersive, three-dimensional environment, which calls visitors to explore actively with all their senses and with their 'muscular consciousness' as well as their intellects."[1] Sensory experience is not an optional approach during a museum visit, but an inevitable given.

However, not all such experiences are equally productive or meaningful. Therefore, I differentiate between two types of (multisensory) museum experiences: either as *the* total adventure of spectacle (museum-centered) or as the totality of *a* museum visit, which may result in learning (visitor-centered). I argue that *the* museum experience rather focuses on the frivolous *reproduction* of experience and that this approach is commonly practiced in current initiatives of multisensory exhibitions of art. *A* museum experience, on the other hand, revolves around the *generative quality* of experience. It comes about through personal, sociocultural and physical contexts and is not equal to learning, but can *become*

[1] Basu, 2007, p. 14.

educative, at short notice or after a long time. In other words, *a* museum experience can *echo* into learning through *reflection*. Therefore, an olfactory experience is to be considered as a productive agent or pedagogical tool, because it can make visitors reconsider and *reflect* upon themselves and their lived world. Smell can transform *a* museum experience into a learning experience by inspiring new relations within and between visitors, artworks, and museums for olfactory experiences do not only conjure up personal imaginations and make social meanings tangible, but they can also unsettle viewers. If we really understand knowledge to be open and plural, like many museum professionals and theorists claim to, than smell is to be taken seriously as a powerful means for generating knowledge.[2]

The second chapter explores the strategies and pedagogies of the scented route *Inhaling Art* and the multisensory exhibition *Tate Sensorium*. Both case studies indicate that it seems highly controversial to curate smells, because smells are extremely volatile, uncontrollable, and diverse. Visitors are usually not aware of scent unless these smells are intensely heavy and/or steadily positioned. However, it turns out that such steadily positioned odors in high concentrations do not result in the most affective olfactory experiences. Ambient subliminal odors in low concentrations, on the other hand, have the most powerful effects on visitors, but they can clash with conservational strategies and ethical opinions. Yet in regards to these curatorial strategies and resulting museum pedagogies of *Inhaling Art* and *Tate Sensorium*, this thesis argues that both initiatives succeeded poorly in their aim to empower the visitor with smell. The smell interactives predominantly function as mere optical prostheses and thus continue performing modernist repressing forces. In other words, both museums annex olfaction instead of breaking through their own barriers. But *can* they break down modernist conventions when their curatorial strategies focus on the demarcation of olfaction and they thus reiterate the nineteenth-century division of the sensory modalities?

Resulting from the analyses of these two olfactory prototypes and the notion of the phantosmic olfactory metaphor, I argue that in order to get full effect out of smell and olfactory experiences in art museums, curators should not limit themselves to the traditional notion of olfaction, but they should attempt to create a close network of interrelationships between art and the senses. Since smells can both quickly cause either olfactory fatigue or sensory overload, and easily drift into mere entertainment or gimmickry, curators should primarily focus on making the interrelationships tangible (or *sensible*). In other words, museums should not create tools for *reflecting on* scent, but they should invest in designing multisensorial *reflexive elements*, such as *Tate Sensorium*'s *interface* or *Inhaling Art*'s multicursal routing, or *reflexive activities*. An example of such activity is the wine tasting event that I held at the Van Abbemuseum in 2015. The analysis of the multisensory experience of wines (e.g., color, viscosity, aromas, mouthfeel) functioned as the point of departure to open up and discuss several artworks from

[2] In our current outcome-driven society, the difficulty of experiential learning seems to be that it is hard to *measure* the learning outcomes in museums. However, this problem has been tackled by many museum learning theorists. See Falk, J.H. and L.D. Dierking, *The Museum Experience Revisited*, Walnut Creek: Left Coast Press, 2013; and Allen, S., "Looking for Learning in Visitor Talk: A Methodological Exploration" in: *Learning Conversations in Museums*, G. Leinhardt, K. Crowley and K. Knutson (eds) New Jersey: Lawrence Erlbaum Associates (2002) pp. 259-303.

the collection. Notably, this discussion proved to be thought-provoking for each participator could give an interpretation from their own bodily experience and, *through* the discussion, it became apparent everyone had a different experience. Furthermore, not only did they enjoy the evening sipping some wine, some participators commented that they learned more on how to taste wine and changed their views on how to perceive the artworks in the museum's collection. This activity thus concentrated on the interlinking between the different senses without overloading participators with different kinds of sensory input, and simultaneously encouraged them to *reflect* upon issues that they brought into the discussion themselves. It empowered the participators and motivated learning. As regards future productive multisensory experiences in art museums of modern and contemporary art, museums should thus address the complete sensorium of visitors, design sensory interactives according to the concept of metaphor, and stimulate reflection and dialogue in order to transform multisensory museum experiences into productive learning experiences.

Finally, I would like to return to the wine tasting metaphor in the introduction of this thesis, in which I remark that this thesis should be read as a great glass of wine. The individual chapters resemble the different steps in the analysis of wine, and, ultimately, a great wine should finish long and leave a pleasant aftertaste. In other words, the wine should *echo* through your mouth. Analogously, this thesis hopes to accomplish just that. It hopes that these words do not evaporate quickly from your mind, but that it has inspired you, or at least, will *echo through your body* the next time you walk into a museum.

LIST OF ILLUSTRATIONS

FIGURES

PLATES

Pl. 1 *Scent station I: an artistic impression of the early days of the Van Abbemuseum.* Photograph: author.

Pl. 2 *Scent station II:* Blick auf Murnau mit Kirche *(1910) by Kandinsky*. Retrieved November 28, 2016, from https://mediabank.vanabbemuseum.nl.

Pl. 3 *Scent station III:* sans titre (IKB 63) *(1959) by Klein*. Retrieved November 28, 2016, from https://mediabank.vanabbemuseum.nl.

Pl. 4 *Scent station IV:* Igloo Nero *(1967-1979) by Merz*. Photograph: author.

Pl. 5 *Scent station V:* Self-Heterotopia, Catching Up With Self *(1991-2007) by Alptekin*. Photograph: author.

Pl. 6 *Entrance to* The Collection Now *and the* toolshop. Photograph: author.

Pl. 7 *Inside the* toolshop. Photograph: author.

Pl. 8 *Wall in the* toolshop *on which visitors can leave their message behind*. Photograph: author.

Pl. 9 *Richard Hamilton's* Interior II *(1964) at* Tate Sensorium. Photograph: Paul Grover. Retrieved May 17, 2016, from www.telegraph.co.uk/art/what-to-see/sensorium-tate-britain-review.

Pl. 10 *John Latham's* Full Stop *(1961) at* Tate Sensorium. Photograph: Joe Humphrys/Tate Photography. Retrieved April 11, 2016, from www.itsnicethat.com/articles/tate-sensorium-ik-prize-review.

Pl. 11 *David Bomberg's* In the Hold *(around 1913-4) at* Tate Sensorium. Photograph: Joe Humphrys/Tate Photography. Retrieved November 28, 2016, from www.tate.org.uk/about/press-office/press-releases/ik-prize-2015-tate-sensorium-opens-tate-britain-today.

Pl. 12 *Francis Bacon's* Figure in a Landscape *(1945) at* Tate Sensorium. Retrieved November 28, from www.widewalls.ch/multisensory-exhibition-tate-sensorium.

BIBLIOGRAPHY

Andresen, L., D. Boud and R. Cohen, "Experience-Based Learning" in: *Understanding Adult Education and Training*, G. Foley (ed.) Sydney: Allen & Unwin (2001) pp. 225-239.

Bacci, F. and D. Melcher, *Art & the Senses*, Oxford: Oxford University Press, 2013.

Bal, M., "The Discourse of the Museum" in: *Thinking About Exhibitions*, R. Greenberg, B.W. Ferguson and S. Nairne (eds.) London/New York: Routledge (1996) pp. 201-218.

Bal, M., *Travelling Concepts in the Humanities. A Rough Guide*, Toronto/Buffalo/London: University of Toronto Press, 2002.

Banes, S., "Olfactory Performances" in: *The Drama Review*, vol. 45, no. 1 (2001) pp. 68-76.

Barker, J.M., "Neither here nor there: synaesthesia and the cosmic zoom" in: *New Review of Film and Television Studies*, vol. 7, no. 3 (2009) pp. 311-324.

Basu, P., "The Labyrinthine Aesthetic in Contemporary Museum Design" in: *Exhibition Experiments*, P. Basu and S. MacDonald (eds.) Malden/Oxford/Carlton: Blackwell Publishing (2007) pp. 47-70.

Beaulieu-Lefebvre, M. et al., "Odor Perception and Odor Awareness in Congenital Blindness" in: *Brain Research Bulletin*, vol. 84, no. 3 (2011) pp. 206-209.

Bishop, C., *Radical Museology, or What's 'Contemporary' in Museums of Contemporary Art?*, London: Koenig Books, 2013.

Bradley, M., *Smell and the Ancient Senses*, London/New York: Routledge, 2015.

Brakel, M. et al., *Sense of Smell*, Breda: The Eriskay Connection, 2014.

Bruce, C., "Spectacle and Democracy: Experience Music Project as a Post-Museum" in: *New Museum Theory and Practice: An Introduction*, J. Marstine (ed.) Oxford: Blackwell (2006) pp. 129-151.

Bulliqi, E., *A Review of Tate Britain's Sensorium*, 2015. Retrieved October 21, 2016, from www.basenotes.net/features/3179-a-review-of-tate-britains-sensorium.

Classen, C., "Museum Manners: The Sensory Life of the Early Museum" in: *Journal of Social History*, vol. 40, no. 4 (2007) pp. 895-914.

Classen, C., D. Howes and A. Synnott, *Aroma. The Cultural History of Smell*, London/New York: Routledge, 1994.

Condillac, E.B. de, *Treatise on the Sensations*, G. Carr (trans.) Los Angeles: University of Southern California Press, 1930.

Corbin, A., *La Miasme et la Jonquille: L'odorat et l'imaginaire social aux XVIIIe et XIXe siècles*, Paris: Aubier Montaigne, 1982.

Da Silva, J., *Maybe it works: José da Silva on Tate Sensorium. The exhibition makes the paintings difficult to see, but it forces something new*, 2015. Retrieved May 17, 2016, from

www.theartnewspaper.com/comment/reviews/exhibitions/maybe-it-works-jos-da-silva-on-tate-sensorium.

Dewey, J., *Experience and Education: The 60th Anniversary Edition*, A.L. Hall-Quest (ed.) West Lafayette: Kappa Delta Pi, 1998.

Drobnick, J., "Volatile Effects. Olfactory Dimensions of Art and Architecture" in: *Empire of the Senses. The Sensual Culture Reader*, D. Howes (ed.) London/New York: Bloomsbury (2005) pp. 265-280.

Drobnick, J., *The Smell Culture Reader*, Oxford/New York: Berg, 2006.

Drobnick, J., "The Museum as Smellscape" in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, N. Levent and A. Pascual-Leone (eds.) Lanham/Plymouth: Rowman & Littlefield (2014) pp. 177-196.

Dyer, A., *Scent in Translation*, AHS Capstone Projects, Olin College, 2009.

Dziekan, V., *Virtuality and the Art of Exhibition. Curatorial Design for the Multimedial Museum*, Bristol/Chicago: Intellect, 2012.

Esche, C., *De Collectie Nu*, Eindhoven: Van Abbemuseum, 2015.

Falk, J.H., L.D. Dierking and M. Adams, "Living in a Learning Society: Museums and Free-choice Learning" in: *A Companion to Museum Studies*, S. MacDonald (ed.) Malden/Oxford/West Sussex: Wiley-Blackwell (2011) pp. 323-339.

Falk, J.H. and L.D. Dierking, *The Museum Experience Revisited*, Walnut Creek: Left Coast Press, 2013.

Fleming, B.E., "The Smell of Success: A Reassessment of Patrick Süskind's 'Das Parfum'" in: *South Atlantic Review*, vol. 56, no. 4 (1991) pp. 71-86.

Fors, V., "Teenagers' Multisensory Routes for Learning in the Museum" in: *The Senses and Society*, vol. 8, no. 3 (2013) pp. 268-289.

Gadamer, H., *Truth and Method*, W. Glen-Doepel (trans.) London: Sheed and Ward, 1975.

Gell, A., "Magic, Perfume, Dream…" in: *Symbols and Sentiments. Cross-Cultural Studies in Symbolism*, I. Lewis (ed.) London/New York/San Francisco: Academic Press (1977) pp. 25-38.

Gosling, E., *Should we have to smell and hear art to enjoy it? We went to Tate's Sensorium to find out…*, 2015. Retrieved April 11, 2016, from www.itsnicethat.com/articles/tate-sensorium-ik-prize-review.

Harrison, R. et al., *Supporting Lifelong Learning. Volume I. Perspectives on Learning*, London/New York: Routledge, 2002.

Hein, G.E., *Learning in the Museum*, London/New York: Routledge, 1998.

Hempenius, J., personal interview, June 4, 2015.

Henning, M., "Legibility and Affect: Museums as New Media" in: *Exhibition Experiments*, P. Basu and S. MacDonald (eds.) Oxford: Blackwell (2007) pp. 25-46.

Hetherington, K., "The Unsightly. Touching the Parthenon Frieze" in: *Theory, Culture & Society*, vol. 19, no. 5-6 (2002) pp. 187-205.

Hodkinson, P., G. Biesta and D. James, "Understanding Learning Culturally: Overcoming Dualism Between Social and Individual Views of Learning" in: *Vocations and Learning*, vol. 1, no. 1 (2008) pp. 27-47.

Hooper-Greenhill, E., *Museums and the Shaping of Knowledge*, London/New York: Routledge, 1992.

Hooper-Greenhill, E., *Museums and the Interpretation of Visual Culture*, London/New York: Routledge, 2000.

Hooper-Greenhill, E., "Education, Postmodernity and the Museum" in: *Museum Revolutions. How museums change and are changed*, S.J. Knell, S. MacLeod and S. Watson (eds.) London/New York: Routledge (2007) pp. 367-377.

Howes, D., "Introduction: Empire of the Senses" in: *The Empire of the Senses. The Sensual Culture Reader*, D. Howes (ed.) London/New York: Bloomsbury (2005) pp. 1-17.

Hudson, M., *Sensorium, Tate Britain, review: 'less than the sum of its parts'*, 2015. Retrieved May 17, 2016, from www.telegraph.co.uk/art/what-to-see/sensorium-tate-britain-review.

Jacob, T., "The Science of Taste and Smell" in: *Art & the Senses*, F. Bacci and D. Melcher (eds.) Oxford: Oxford University Press (2013) pp. 183-205.

Jacob, T., *Odour Code*, 2015a. Retrieved March 15, 2016, from www.cf.ac.uk/biosi/staffinfo/jacob/teaching/sensory/olfact1.html#Odour%20code.

Jacob, T., *Theories on Olfaction*, 2015b. Retrieved March 3, 2016, from www.cf.ac.uk/biosi/staffinfo/jacob/teaching/sensory/olfact1.html#Theories.

Jay, M., *Songs of Experience. Modern American and European Variations on a Universal Theme*, Berkeley: University of California Press, 2005.

Jiaying, S., "An Olfactory Cinema: Smelling *Perfume*" in: *Acta Universitatis Sapientiae, Film and Media Studies*, vol. 8, no. 1 (2014) pp. 113-127.

Kant, I., *Anthropology from a Pragmatic Point of View*, V.L. Dowdell (trans.) Carbondale/Edwardsville: Southern Illinois University Press, 1978.

Kaye, J., *Smell as Media*, Cambridge: MIT Media Lab, 2003.

Keller, A., "The Scented Museum" in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, N. Levent and A. Pascual-Leone (eds.) Lanham/Plymouth: Rowman & Littlefield (2014) pp. 167-176.

Levent, N. and A. Pascual-Leone, "Introduction" in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, Lanham/Plymouth: Rowman & Littlefield, 2014.

Marks, L.U., *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*, Durham: Duke University Press, 2000.

Marks, L.U., *Touch. Sensuous Theory and Multisensory Media*, Minneapolis/London: University of Minnesota Press, 2002.

Marks, L.U., "Thinking Multisensory Culture" in: *Art & the Senses*, F. Bacci and D. Melcher (eds.) Oxford: Oxford University Press (2013) pp. 239-250.

Marshall, J., *Scent Branding, Mind-control, and Ethics*, 2011. Retrieved October 19, 2016, from www.ethicsalarms.com/2011/07/31/scent-branding-mind-control-and-ethics.

Marstine, J., *New Museum Theory and Practice: An Introduction*, New York: Wiley-Blackwell, 2006.

Mason, L., "Introduction: Bridging the Cognitive and Sociocultural Approaches in Research on Conceptual Change: Is it Feasible?" in: *Educational Psychologist*, vol. 42, no. 1 (2007) pp. 1-7.

Mihalache, I.D., "Taste-full Museums. Educating the Senses One Plate at a Time" in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, N. Levent and A. Pascual-Leone (eds.) Lanham/Plymouth: Rowman & Littlefield (2014) pp. 197-212.

Miss Cellania, *Smell-O-Vision: That Movie Really* Did *Stink!*, 2015. Retrieved November 1, 2016, from www.neatorama.com/2015/04/27/Smell-O-Vision-That-Movie-Really-Did-Stink.

Morrot, G. and F. Brochet and D. Dubourdieu, "The color of odors" in: *Brain & Language*, vol. 79, no. 2 (2001) pp. 309-320.

Ngowi, R., "MIT's 'Smell of fear' exhibit elicits 'visceral reaction'" in: *Bangor Daily News* (December 7, 2006) p. 32.

Nieuwhof, A., *Evaluatie van Gebruik en Beleving Introroom, Toolshop & Tools*, internship research, Leiden University, 2015.

Paterson, M.W.D., "Digital Scratch and Virtual Sniff. Simulating Scents" in: *The Smell Culture Reader*, J. Drobnick (ed.) Oxford/New York: Berg (2006) pp. 358-367.

Perfume: The Story of a Murderer, T. Tykwer (dir.) Munich: Constantin Film Produktion, 2006.

Proust, M., *Swann's Way. Remembrance of Things Past*, C.K. Scott Moncrieff (trans.) New York: Henry Holt and Company, 1922.

Reden, N., *Sensory History and Multisensory Museum Exhibits*, master thesis, Buffalo State College, 2015.

Rosenbluth, R., E.S. Grossman and M. Kaitz, "Performance of Early-Blind and Sighted Children on Olfactory Tasks" in: *Perception*, vol. 29, no. 1 (2000) pp. 101-110.

Serota, N., *Tate's Vision: Championing Art and its Value to Society*, London: Tate, 2014.

Shiner, L., "Art Scents: Perfume, Design and Olfactory Art" in: *British Journal of Aesthetics*, vol. 55, no. 3 (2015) pp. 375-392.

Shiner, L. and Y. Kriskovets, "The Aesthetics of Smelly Art" in: *The Journal of Aesthetics and Art Criticism*, vol. 65, no. 3 (2007) pp. 273-286.

Simon, N., *The Participatory Museum*, Santa Cruz: Museum 2.0, 2010.

Skramstad, H., “An Agenda for Museums in the Twenty-first Century” in: *Reinventing the Museum*, G. Anderson (ed.) Walnut Creek: Altamira Press (2004) pp. 118-132.

Sobchack, V., “The Dream Olfactory: On Making Scents of Cinema” in: *Carnal Aesthetics: Transgressive Imagery and Feminist Politics*, B. Papenburg and M. Zarzycka, London/New York: I.B. Tauris (2013) pp. 79-89.

Solay, L., *Scent in Contemporary Art: an Investigation into Challenges & Exhibition Strategies*, master thesis, LASALLE College of the Arts and Goldsmiths, 2012.

Stevenson, R.J., “The Forgotten Sense: Using Olfaction in a Museum Context: A Neuroscience Perspective” in: *The Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space*, N. Levent and A. Pascual-Leone (eds.) Lanham/Plymouth: Rowman & Littlefield (2014) pp. 151-166.

Süskind, P., *Das Parfum*, Groningen: Wolters-Noordhoff, 2007.

Süskind, P., *Perfume. The Story of a Murderer*, J.E. Woods (transl.) New York: Vintage International, 1986.

Tate, *IK Prize: Information for Entrants and IK Prize rules*, 2015a. Retrieved April 12, 2016, from www.tate.org.uk/about/projects/ik-prize/ik-prize-information-entrants-and-ik-prize-rules.

Tate, *IK Prize 2015: Tate Sensorium*, 2015b. Retrieved October 21, 2016, from www.tate.org.uk/whats-on/tate-britain/display/ik-prize-2015-tate-sensorium.

The Courtauld Institute of Art, *What sense is there in art? Tate Sensorium Review*, 2015. Retrieved October 19, 2016, from www.courtauld.ac.uk/research/research-forum/research-groups-and-projects/what-sense-is-there-in-art/tate-sensorium-review.

Van Abbemuseum, *Programme. The Collection Now*, 2016a. Retrieved April 13, 2016, from www.vanabbemuseum.nl/en/programme/programme/the-collection-now.

Van Abbemuseum, *Programme. Toolshop*, 2016b. Retrieved May 9, 2016, from www.vanabbe museum.nl/en/programme/programme/toolshop.

Verbeek, C., *Olfactory language – how cross-modality and synaesthesia can help us to describe smells*, 2013. Retrieved May 18, 2016, from www.olfactoryart.net/news/90-olfactory-language-%E2%80%93-how-cross-modality-and-synaesthesia-can-help-us-to-describe-smells.

Verbeek, C., personal interview, April 20, 2015.

Wakefield, C.E., J. Homewood and A.J. Taylor, “Cognitive Compensations for Blindness in Children: An Investigation Using Odour Naming” in: *Perception*, vol. 33, no. 4 (2004) pp. 429-442.

Wierzbicka, A., *Experience, Evidence, and Sense: The Hidden Cultural Legacy of English*, New York: Oxford University Press, 2010.

Wright, S., *Toward a Lexicon of Usership*, Eindhoven: Van Abbemuseum, 2013.

Wyatt, T., *The Smelly Mystery of the Human Pheromone*, 2013. Retrieved April 26, 2016, from www.ted.com/talks/tristram_wyatt_the_smelly_mystery_of_the_human_pheromone.