The Thesis Committee for Madeleine Granville LePere
Certifies that this is the approved version of the following thesis:

**Teaching the Art Museum to Play: Enhancing Early Childhood
Education in Art Museums Through Play Theory**

APPROVED BY

SUPERVISING COMMITTEE:

Supervisor:

Melinda M. Mayer

Christina Bain

Teaching the Art Museum to Play: Enhancing Early Childhood Education in Art Museums Through Play Theory

by

Madeleine Granville LePere, B.A.

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Dedication

To playing: inside and outside the box.

Acknowledgements

Abstract

Teaching the Art Museum to Play: Enhancing Early Childhood Education in Art Museums Through Play Theory

Madeleine Granville LePere, M.A.

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Supervisor: Melinda M. Mayer

This study investigates the impact of implementing play in the art museum to educate and engage children aged 2 to 5, utilizing lessons learned from children's museums. In order to establish themselves as welcoming and educative resources for children, the programing and exhibit design of art museums must support the unique needs of early learners, namely, learning through play. Within the museum field, children's museums offer best examples of how play can be integrated into a museum environment to encourage early learning.

This study was conducted in three stages using the methodology of grounded theory. The first stage investigated the educational practice grounded in play theory of the Boston Children's Museum in Boston, Massachusetts by observing the play of children aged 2 to 5 at an exhibit in the Boston Children's Museum. Based on this data, the second stage developed a play-based workshop for local pre-kindergartners. The third stage implemented this workshop at the Blanton Museum of Art, in Austin, Texas, collecting data through video recording and interview.

Findings from this workshop led to the formation of the following grounded theory: the integration of play in the art museum affords children aged 2 to 5 a context for making meaning about the artworks, encouraging engagement with artworks and providing opportunities for child agency.

Art museums can help children develop an awareness of themselves and the wider world, offering experiences to engage, teach, and empower young learners. But, first, they must learn how to play.

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Chapter 1: *The Playing Field*

> Museums—alongside other cultural organizations—have a key role to play in meeting all children and young people's cultural needs, in inspiring them, in developing their skills and talents, and helping them to develop personally and socially. (Bellamy, Burghes, & Oppenheim, 2009, p. 20)

INTRODUCTION

Play is important. Before young children enter the world of formal education, they are capably and successfully learning through play. Play is a way for children to make sense of the world, affording opportunities to develop physically, cognitively, and socially and providing a setting to collaborate and problem solve (Shaffer, 2015). During the formative years of childhood, play is the most natural and integral method of education. For young children, play is learning. Despite copious research indicating this (Bruner, 2006a; Bruner, 2006b; Christakis, 2016; Froebel, 2005; Singer, 2006; Sutton-Smith, 1997; Vygotsky, 1966), play is still considered a frivolous pastime. Christakis (2016) describes this as the "academic takeover" of early learning in America, and, as a result, children are becoming less inquisitive and less engaged than kids of previous generations. These early education issues are largely symbolic of the trouble adults have understanding children's needs and their inner lives—an unintentional failure to recognize young children as "unique people with their own ideas, their own feelings, their own thoughts, and tastes and experiences" (Christakis, 2016, p. 16). This deficiency merits an increased role for informal institutions, specifically museums, to educate young children in a manner that *does* recognize their particular needs, namely, the need to learn through play.

Museums are an invaluable, original, and thrilling learning resource, providing valuable spaces between school and home in which it is safe, intellectually and physically, for children to learn and where relationships are forged (Bellamy, Burghes, & Oppenheim, 2009). Within the museum field, the most successful and visible examples of supporting young children's learning can be found in children's museums. Children's museums "acknowledge that providing for early learners, ranging from babies as young as three months to five-year-old preschoolers, is an essential aspect of their mission" (Wolf & Wood, 2012, p. 30). Thus, it comes as no surprise that

children's museums focus on play to facilitate learning when designing exhibitions. The Association of Children's Museums (ACM) notes that, "in an increasingly complex world, children's museums provide a place where all children learn through play" (Association of Children's Museum, 2016). Shaffer (2015) states "children's museums are truly experts in designing exhibitions that tap into the natural love of play. There are many exhibitions that honor play and its role in the lives of children" (p. 124). Though more traditional types of museums offer opportunities for play through programming for young children, or entirely separate spaces, it is not as common a strategy, nor is it as fully developed, as within children's museums (Shaffer, 2015). This lack of development is most apparent in art museums.

Current trends in art museum education emphasize the role of visitors in meaning making (Hein, 1998; Silverman, 1995). This is a distinct shift from the historic art museum practice of positioning the museum as the ultimate authority and transmitting art historical information through the passive and less dialogic method of wall labels, lectures, and tours. Emphasizing the role of the visitor is a more democratic manner of approaching art museum education that helps visitors feel comfortable and empowered during their art museum experiences. Though this progress has undoubtedly been one of the driving forces behind an increase in the number and type of programs offered by art museums for preschool age children, this has not resulted in the more commonplace acceptance of play in the art museum. Shaffer (2015) argues that, "museum educators can enrich children's experiences through innovative ideas that encourage play in galleries" (p. 59). The integration of play into programming and exhibition holds enormous potential for supporting the learning needs of early learners through age five, legitimizing art museums as environments for young children to explore, to learn, and to engage.

CENTRAL RESEARCH QUESTION

As such, the main research question guiding this study was: What can be learned from educational practice grounded in play within the Boston Children's Museum (BCM) that can

inform the development and implementation of a workshop in an art museum for preschool children, and what implications might be derived for the use of play in art museum education?

PROBLEM STATEMENT

While there is much research regarding how children learn in children's museums and how adults learn in art museums, there is a noted lack of information bridging these two fields of research. Shaffer (2012) states that, "research in children's museums informs our thinking and provides lessons that at times extend the more traditional museum setting where exhibitions are not designed with the active learning style of young children in mind" (p. 13). Shaffer wrote this in 2012, so there remains a dearth of research concerning how children's museums can provide insight into play being used in environments that are not developed exclusively for young children, specifically, art museums.

The BCM is nationally recognized as a model of excellence, having been awarded the National Medal from the Institute of Museum and Library Services in 2013 and the International Lifetime Achievement Award from the Hands On! International Conference (Boston Children's Museum, 2016). Since 1913, the museum has emphasized hands-on engagement and learning through experience in their exhibits and programming, "employing play as a way to spark the inherent creativity, curiosity, and imagination of children" (Boston Children's Museum, 2016). An investigation into how the BCM encouraged play among children aged 2 to 5 aided in the creation of a workshop I taught to pre-kindergartners at the Blanton Museum of Art in Austin, Texas. The impact of this workshop holds larger implications regarding the use of play to support early learners in art museum education, programming, and exhibition design.

MOTIVATIONS FOR RESEARCH

My background in art education is rooted in my childhood experiences. My mom is an artist and had her studio on the first floor of our house: a huge, open space with oil paints, woodworking tools, rags, palettes, with her sculptures all over the floor and along the wall. When I was younger, the paneled glass doors of her studio allowed a view inside a space deemed

too dangerous for me to enter without adult supervision. It was from this vantage point, sitting outside the door of her studio, that I watched her work. In anticipation of my younger sister's birth, my mother's studio became a bedroom. Though I did not have the same access to watch her work, I did get many opportunities to visit her new studio in the South End of Boston. By that time, I was old enough to be trusted around her work, and I reveled in getting the opportunity to use the cray pas, acrylic paints, and the huge box of colored pencils holding every imaginable color. As I got older, the glue gun was added to my arsenal of accessible tools, and the scrap wood of my mother's sculptures became the basis for my three-dimensional designs. Having such unfettered access to art materials established my comfort level with a variety of art supplies early in my childhood. More importantly, since I was always given the opportunity to play with those materials, I relied on and trusted my own creativity long before I got to school. The freedom to simply play around and learn the limits of each medium through trial and error in a comfortable environment greatly impacted my beliefs about art, art education, and teaching.

My interest in incorporating play in museums started with an experience I had when I was about 8 or 9 while visiting my aunt and uncle in London. We always visited museums whenever we went on vacation as a family. My parents met in art school and spent a lot of their pre-children years traveling, experiencing artistic wonders firsthand. And mamy of our family trips revolved around the desire to share those experiences with us. One morning in London, I was told we were going to the Imperial War Museum. Even though I was interested in history, World War II in particular, this sounded like an alarmingly dull way to spend a day in London. Upon entering the museum, I was given a large booklet containing a scavenger hunt to help me explore the museum. It also featured fill-in-the-blanks, open-ended prompts, word searches, anagrams, and spaces to draw. To this day, I do not think I have ever been so fervently attentive going through a museum; there was a point when I made my parents go back to the cipher machine because I needed to get more information to finish the booklet. Yes, I was extrinsically driven by the thought of receiving a prize if I filled everything in correctly, but it was also more than that. Because the memory of going through the museum remains vivid after 20 years, but

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the memory of the prize does not. This scavenger hunt provided a context for me to walk throughout the museum, a reason to really look at the objects on display, helping me to personally connect with the collection. In so many ways, this experience helped formulate my goals as an art educator. How can I now facilitate these types of personal connections between younger visitors and museums? How can I provide the perfect balance of freedom and structure so that play and learning are not mutually exclusive entities in art museums? How can I help create an environment where children are welcomed and accepted for their different styles of learning? How can I help children and parents interact, playfully, in the art museum so that neither party feels patronized or confused?

My mother's job as a practicing artist allowed me the opportunity, space, and freedom to play around with a variety of art materials. The vast collection of art books I was surrounded by at home and the many cultural institutions I visited growing up gave me access to the history of art, allowing multiple occasions to hone my personal tastes, learn to look, and establish a personal connection with art. These childhood experiences, coupled with familial support of my artistic output and creativity, established a comfort level with art making, looking at art, and learning about art that greatly influenced my motivations and beliefs about art education. In particular, these experiences reinforced the importance of play in order to establish comfort, ultimately allowing for learning to take place. Hein (1998) states, "Being relaxed, comfortable, not preoccupied with other concerns does not assure that people will learn, but it's a necessary condition…[since] the opposite feelings definitely hinder learning" (p. 160). As an art educator, it is increasingly important for me to establish a comfort level with each individual student in order to set an ideal environment for learning to take place. I am motivated by the distinct disconnect between the words "art education" and "play," and seek to help young children establish a comfort level by playing with art and art materials that will lead to a more fun and engaging experience in art museums.

RESEARCH METHODS

　　After solidifying the central research question of this study, I began the process of finding the appropriate manner to answer this question. First and foremost, I needed a method that would grant me the freedom to collect large quantities of experiential data from a variety of sources. Secondly, this method needed to facilitate the applicability of my findings since the research took place in three stages. I would use research culled from the BCM (Stage 1), adapt it to a workshop (Stage 2), and teach that workshop at the Blanton (Stage 3). Central to this applicability was flexibility in data collection and analysis during both stages of research. Thirdly, this method needed to allow for the extensive use of literature to frame my research in an effort to establish that it "goes beyond what has been known" (Stern, 2007, p. 114). The research methodology fitting all three of these qualifications was qualitative research, specifically, the grounded theory method. Grounded theory was the most appropriate approach to answering the research question since there was no existing theory in field concerning how lessons from a children's museums can be adapted to art museums in order to support early learners. Additionally, grounded theory is built upon a reflective practice, through writing memos, facilitating a thoughtful and emergent research process based as much on collecting data as on asking questions (Charmaz, 2015).

　　During the first stage, I collected data through observing (Lincoln & Guba, 1985) children aged 2 to 5 in the *Peep's World* exhibit at the BCM. During the second stage, I created a play-based workshop for children aged 2 to 5 based on emergent themes from the data I collected at the BCM. During the third stage, I taught the play-based workshop at the Blanton to a local pre-kindergarten class. The workshop included a pre-visit to the pre-kindergarten classroom one week before the students visited the museum and a post-visit to the classroom one week after the students visited the museum. I collected data from the pre- and post-visits through personal notes and collected data from the workshop by a video recording (Cohen & Crabtree, 2006) taken while I was teaching. This data was corroborated through interview (Morse, 2001) and a critical friend (Cowell, 2005). I used a rubric of play characteristics (Table 1) as an analytical tool during

observational data collection at the BCM and data collection through video recording at the Blanton. This rubric disciplined my observations and focused my attention on behavior that could be considered play. I then coded these behaviors for themes, looking closely for similarities within the data. From the data, significant themes emerged. These themes were the basis of my grounded theory concerning how the manner in which the BCM facilitated play could be adapted to the Blanton in order to support the learning needs of children aged 2 to 5 and the larger implications for play in art museum education.

DEFINITIONS

Accommodation: A term developed by psychologist Jean Piaget (1962; 2000) to describe what occurs when new information or experiences cause one to modify existing schemas, or, mental frameworks. Instead of making new information fit into this schema, the schema changes to accommodate the new information.

Active engagement: A complex manner of interacting with one's environment. These interactions are sustained and involve constructive behavior that is context bound (McWilliam & Casey, 2008); The joint functioning of motivation, conceptual knowledge, cognitive strategies, and social interactions (Schlecty, 1994). A key component of play and learning that shows activated and extended understanding.

Agency: The capacity of individuals to act independently and make their own free choices (Sen, 1999).

Assimilation: A term developed by psychologist Jean Piaget (1962; 2000) to describe what occurs when new information or experiences fit into ones existing schema, reaffirming existing knowledge or beliefs.

Constructivism: A theory of knowledge, founded by Jean Piaget (2000), that argues humans generate knowledge and meaning from interactions between their experiences and their ideas.

Development: Growth and progress in all aspects of a child's life.

Hands-on: Involving or offering active participation as a way to learn about the environment, the perception and manipulation of objects using the sense of touch. Also referred to as "haptic," "kinesthetic," and "tactile" within this study.

Interactive: Often used in conjunction with exhibitions, this term signifies a first-hand (often hands-on) experience combined with opportunities for reflection and interpretation.

Intrinsic motivation: Intrinsic motivation is reflective of one's own interests; behavior driven by internal rewards. This is in opposition to extrinsic motivation, which is behavior to earn external reward or avoid punishment (Deci & Flaste, 1995).

Learning: The exposure to, interaction with, and accumulation of new ideas and experiences.

Play: An exercise or activity; A way of doing things; A physical, social, and interactive experience influential to children's development (Frost, Wortham, & Reifel, 2001; Gray, 2009; Henderson & Atencio, 2007; Singer, 2006; Sutton-Smith, 1997).

Play-based inquiry: The process of playing around with different materials/actions in order to understand a phenomenon, concept, or thing. A mediator of children's learning as they engage in activities.

LIMITATIONS

My intention in this study was not to recreate the experience of a children's museum in an art museum. This study utilized tools and methods that effectively engaged children in play at a children's museum and authentically integrated them into an art museum through a workshop with pre-kindergartners. The central research question of this study focused on the following three areas: (1) if best practices concerning play can be adopted to an art museum setting, (2) the impact of encouraging play in an art museum among 2 to 5-year-olds, and (3) how best to implement play within art museum education to more thoroughly support early childhood learning needs. This study did not look to develop a foolproof way to integrate play into all art museus. Each museum has its own mission, environment, and bureaucratic limitations, which may not make play an appropriate method of supporting young learners at every institution. My

grounded theory is not generalizable to institutions outside of the BCM and the Blanton. Additionally, I did not get to apply my workshop to 2 to 3-year-olds, further limiting the scope and generalizability of this study.

BENEFITS TO THE FIELD

Perry (2012) argues one of the largest challenges facing museums and museum exhibit developers who hope to integrate play into their museum is "how to design for playfulness in such a way as to facilitate intended learning rather than as separate from it" (p. 172). Museums should be driven by their educational missions, which are firmly rooted in their individual collections. But learning and play are not on opposite ends of a continuum. Perry (2012) continues by stating, "in the best cases, they [play and learning] are intertwined, essential characteristics of rich and meaningful, intrinsically motivating experiences" (p. 171). Art museum educators are reluctant to adopt principles of play in their exhibits and programming due to the fear that their museums will turn into, as Hein (2006) states, "elaborate playgrounds." But there are compelling reasons to think otherwise. Diamond (n.d.) explains that,

> museum exhibits can become play objects with which to investigate fantasy, sensory inputs, and the physical world. Most important, museums offer most visitors a free choice in what they will interact with, allowing the motivation for play to be intrinsic to the individual.

Play can and should be thought of quite broadly, including a variety of experiences that include a sense of playfulness (Frost, 2010).

In 2013, President Barack Obama prioritized early learning as a key issue for America, saying,

> expanding access to high quality early childhood education is among the smartest investments that we can make. Research has shown that the early years in a child's life—when the human brain is forming—represent a critically important window of opportunity to develop a child's full potential and shape key academic, social, and cognitive skills that determine a child's success in school and in life. (White House, 2014)

Museums are essential to this expansion. They are places of excitement that inspire interest and creativity in young people, facilitating an awareness of the wider world and their place in it, in a manner neither parents nor teachers can provide (Bellamy, Burghes, & Oppenheim, 2009). While early childhood education is drawing national attention, museums have been measured in showing how they collectively aid early learning (Bowers, 2012). As such, there is a need for research promoting the support of early learning in object centered museums in order to contribute to the larger field's understanding of *how* to develop the best early childhood programs possible (Bowers, 2012).

CONCLUSION

Museums have the potential to engage children, to teach them, to stimulate their understanding, and to help them take responsibility for their own learning (Gardner, 1983). If art museums hope to achieve and maintain this potential, they must look to play. As Ilona Szekely (2014) states, "For young children, the museum experience should be active, playful, and empowering" (p. 39). The natural learning approaches of young children must be catered to in order to support early learning in art museums. This study investigated best practices of encouraging children's play at the BCM, adapting them to the Blanton in the form of a workshop, discussing the impact of this workshop on pre-kindergartners and determining what implications this impact has on the use of play in art museum education. In order to situate this research within the larger field, I will discuss a review of literature on topics surrounding the research question in Chapter 2. In Chapter 3, I delve deeper into the methodology, reinforcing grounded theory as the most appropriate manner to answer the central research question. With the framework of the research established, Chapter 4 discusses Stage 1 of the research: the process of collecting data through observation at the BCM and the analysis of that data, noting the emergent themes that informed the workshop. The creation of this workshop, Stage 2 of this research, is discussed at length in Chapter 5, deliberating the logistical process of selecting the artworks and establishing the activities, incorporating literature where appropriate. This chapter

also discusses the specific barriers I needed to consider in order for the workshop to work within the unique environment of the Blanton. Chapter 6 focuses on Stage 3 of the research. The first half of Chapter 6 takes the reader through my process of teaching the workshop, recounting the activities, conversations, and behavior of the pre-kindergartners. The second half of Chapter 6 divulges the themes emerging from this data, using pertinent literature, interviews, and a critical friend to triangulate results. At the close of this study, Chapter 7, I summarize the study, relaying emergent themes and discussing overall findings. These findings are the basis of my theory concerning the impact and implications of integrating play in the art museum using lessons learned from the BCM.

As Henderson and Atencio (2007) argue, "in the context of early childhood education, there exists no other physical, social, and interactive experience as influential to children's development as play" (p. 246). The neglect of play in art museums is the neglect of children in art museums. By adapting lessons learned from a children's museum, this research legitimizes play as an integral method of art museum education, contributing to the field's understanding of how to develop the best early childhood programs possible.

Chapter 2: *The Parameters of Play*

> Play in museums, whether children's museums or more traditional galleries, is becoming more accepted as a strategy for learning and is seen not simply as a frivolous activity but the way that children construct meaning about their world. (Shaffer, 2015, p. 141)

INTRODUCTION

In order to situate this study, I thoroughly reviewed the literature concerning topics that encircle the main research question, investigating sources regarding early childhood play, museum education, and current programming in art museums. This chapter establishes a definition for play, introduces key theorists used to inform this study, discusses the importance of children's museums, and presents current art museum programming that utilize play as a way to engage young children. By presenting the literature in this manner, I establish the gaps in current research and reinforce the importance of this study. This chapter concludes with my argument concerning the need for play to support early learning in the art museum.

WHAT IS PLAY?

While most people generally agree on the visual markers of play, and know when they are playing, it is far more difficult to establish a definition of play that takes into account the nuances and subjectivities occurring during such an activity. Play is such an amorphous and fluid concept that it eludes pinning down and containment. In establishing a literature review for this thesis, I came across myriad definitions for play, but there are characteristics that researchers of play and early childhood educators tend to agree. In my study, as I take play from theory to practice, I will define play by these four foundational concepts: active engagement, intrinsic motivation, attention to process, and nonliteral behavior. Active engagement is a complex manner of interacting with one's environment. These interactions are sustained, involving constructive behavior that is context bound (McWilliam & Casey, 2008). Intrinsic motivation is reflective of one's own interests. This is in opposition to extrinsic motivation, which is behavior to earn external reward or avoid punishment (Deci & Flaste, 1995). Attention to process speaks to a focus on being present in one's own actions, as opposed to working towards an externally

established end result. Nonliteral behavior is the use of one object as symbolic of (and with the characteristics of) another object, such as a stick for a wand. These characteristics will be discussed further in this chapter within the context of how play facilitates learning.

Play for a young child assumes many different forms. Power (2011) discusses the multiple iterations of play:

> Play can refer to a plethora of individual actions or cultural activities. It can include game play, festivals, artistic play, gambling, and sports. It can be organized, structured, or rule bound (as in games). Or, it can be spontaneous, unstructured, and playful (as in imaginary or free play). Not all play is playful, and much depends on the attitude and motivation of those involved. (p. 289)

Theorists (Bateson & Martin, 2013; Kilvington & Wood, 2010; Sutton-Smith, 1997) have determined the following categories for types of play: sensorimotor exploration, constructive play, symbolic play, games with rules, and rough and tumble play. The stimulus for play can be spontaneous or guided. Krakowski (2012) defines these two concepts as follows:

> Spontaneous or free play is initiated by the child and exhibits the characteristics [of play]. Guided or facilitated play embodies many of the characteristics of free play, however, it is teacher-directed and is used intentionally for educational purposes. (pp. 52–53)

Lastly, play can be grouped by the social interactions happening between children during play activities. Parten (1932) created non-hierarchical categories of social play as a result of her research with 2 to 5-year-olds. Depending on the circumstances, children may engage in any of the five types of play.

1. **Onlooker behavior:** Playing passively by watching or conversing with other children engaged in play activities.

2. **Solitary independent:** Playing by oneself.

3. **Parallel:** Playing, even in the middle of a group, while remaining engrossed in one's own activity. Children playing parallel to one another sometimes use each other's toys, but always maintain their independence.

4. **Associative:** Playing with shared materials. Children talk to each other, but do not coordinate play objectives or interests.

5. **Cooperative:** Playing in a group setting when children organize themselves into roles with specific goals in mind (such as, to assign the roles of mother, father, and child to play house).

Fein (as cited in Chance, 1979) states, "Within a given culture, people know what play is and have little difficulty pointing it out" (p. 17). Yet, while it may be easy for people to point out in the real world, it is far more difficult for people to pin down in theory. In an effort to quarantine this idea of play, it has been grouped, categorized, and organized in myriad ways. Though Gardner (in Chance, 1979) believes play is too complicated to be defined, within this thesis, play will be defined by setting, characteristic, stimulus, and social interaction.

PEDAGOGY AND PLAY

For the purposes of this study, I will be looking at early education pedagogies espoused by Maria Montessori, Jean Piaget, Lev Vygotsky, and John Dewey, in particular what link they make between play and learning. All of these theorists posit play as an integral and vital part of early childhood learning. A final paragraph will discuss three secondary theorists who supplement these primary theorists: Howard Gardner, Loris Malaguzzi, and Jerome Bruner. In this way, I can position my study in existing and accepted models for teaching young children.

Maria Montessori (1870–1952)

Maria Montessori, the creator of The Montessori Method, was the first female physician in Italy (Montessori, 1966). Her observations of children led her to recognize the unique learning needs and developmental capabilities of children. Her realization that "an adult environment is not a suitable environment for children, but rather an aggregate of obstacles that strengthen their defenses, warp their attitudes, and expose them to adult suggestions" (Montessori, 1966, p. 109) inspired a method of education focused on the successive developmental stages of children, each of which called for a specific material and/or technique necessary to release his/her learning potential. The developmental stages were driven by "human tendencies" and Montessori believed a child's education should respond to and facilitate the expression of these innate

characteristics. Montessori recognized the stage from birth through age 6 as a period when children were more sensitive to learning, which is why she called this the period of the "absorbent mind." During this time, when a child "is given the freedom to explore, examine, experiment, and interact with the multitude of objects and situations in his environment, the child is stimulated and energized, and gains a sense of power in a period of literal self-creation" (Cooney, Cross, & Trunk, 1993, p. 152).

According to Montessori (1966), a child's "natural manifestations can completely disappear in unfavorable environments (p. 136). Conversely, favorable environments can be created that encourage the flowering of a child's natural gifts. As such, the environment is an integral component to the Montessori model. Montessori believed the area where children learn must have a high aesthetic quality in order to facilitate their natural inclinations to learn. Shaffer (2015) states that Montessori believed "an environment that reflects natural beauty entices a child to explore and discover, shaping learning through personal interaction" (p. 73).

During the period of the absorbent mind, Montessori believed children were constantly learning about their environment through touch and generally experiencing the world with their senses. In order to encourage an engagement with the world in a way that reflected a child's natural developmental needs, Montessori created specific materials that secure a child's attention, provoke their interest, and emphasize sensory experiences so that exploration and, ultimately, learning, is the natural outcome (Cooney, Cross & Trunk, 1993). These materials were introduced sequentially with a strict correspondence to developmental level so a child may naturally build upon established skill sets, transitioning from basic to complex concepts.

Though Montessori considered the terms "work" and "play" mutually exclusive, the Montessori materials, especially those utilized during the period of the absorbent mind, are dependent upon playful interactions. For example, the Montessori method features activities such as pink boxes to be stacked from largest to smallest, wooden cylinders of increasing diameter that fit into a base order from smallest to largest, color slides to be organized from darkest to

lightest shade, and many more. Montessori designed these self-corrective materials specifically to encourage independent, active, experiential, and self-directed learning.

Most artworks can only be experienced visually and since Montessori argues that children experience the world through multiple senses, there is a need to incorporate outside materials to facilitate a more developmentally appropriate way for young children to experience works in an art museum. Yet the selection of these materials is critical, as they must assist—and not overtake—the understanding of the artwork. As such, the concept of Montessori's that is most applicable to encouraging early childhood play in an art museum is her focus on specific materials that intrinsically generate children's interest, sustain their attention, and stimulate multiple sensory interactions. These specific materials inherently beckon children to explore them and to play with them so that learning naturally occurs.

Jean Piaget (1896–1980)

Jean Piaget was a Swiss psychologist who studied cognitive development for more than 50 years. By observing his own children, he developed the theory that children actively acquire knowledge by interacting with their physical environment, specifically, through the complementary process of assimilation and accommodation. Zigler and Bishop-Josef (2006) describe the process as follows:

> In assimilation, the child interprets the environment in terms of his or her present way of thinking. For example, a child using a box as if it were a car is assimilating the box to his or her mental concept of a car. Accommodation, in contrast, consists of the child changing and expanding on what he or she already knows. When the child encounters something in the environment that he or she does not understand, the child has to expand, through accommodation, his or her view of the world and thereby restore equilibrium. (p. 23)

Thus, while assimilation refers to the ability to take material from the outside world and fit it into an existing structure, accommodation refers to the adjustment of the structure as a reaction of the new materials. Gruber and Vonèche (1977) argue that, for Piaget, "the growth of the intellect, rather than something that happens to the child from the outside, is a process of self-construction, governed by existing formations of cognitive structures" (p. xxviii). The formalization of this

belief is referred to as "constructivism," as it is based around the idea that humans, particularly children, construct knowledge and meaning from interactions between their experiences and their ideas.

Piaget believed early childhood learning experiences were "most appropriately matched with children's play-based stages of development" (Cutter-Mckenzie, Edwards, Moore, & Boyd, 2014, p. 15). Piaget (1962) states,

> In every act of intelligence is an equilibrium between assimilation and accommodation, while imitation is a continuation of accommodation for its own sake, it may be said conversely that play is essentially assimilation, or the primacy of assimilation over accommodation. (p. 87)

Hughes (1999) argues that while Piaget's "cognitive-developmental view is not identical to learning, since play requires no accommodation of one's intellectual structures to reality….Play facilitates learning in that it exposes a child to new experiences and new possibilities for dealing with the world" (p. 22). Thus, while Piaget did not see play as synonymous to learning, he believed it to be a method children use to gain knowledge and understanding.

As young visitors look at artworks, they are actively trying to make meaning, to fit what they are seeing within the larger, experiential context of their life. According to Piaget, they are assimilating and accommodating. This process is embedded in an ability to entertain a perspective or an idea that is not their own. By referencing past grounded experiences, children can manifest meaning and determine a positionality in relation to the ideas suggested by an artwork. According to Piaget, children between the ages of 2 and 5 are largely egocentric and have a "systematic difficulty…in taking the viewpoint of the other" (Piaget & Inhelder, 2000, p. 121). This active grappling with the idea of constancy—that one can see or interpret an object, concept, or occurrence in more than one way—limits their ability to assimilate information that enhances or differentiates from their initial conceptual understanding. Piaget theorizes that children's play is essentially assimilation, helping the child make the environmental stimuli match his or her own internalized concepts, or schema (Piaget & Inhelder, 2000). Thus, the implementation of play-based activities when looking at artworks with children aged 2 to 5

would facilitate the assimilation of new ideas and experiences. Additionally, these play-based activities would facilitate "an awareness that their own perception or beliefs may not be the same as those of other children or adults" (Singer, 2006, p. 252), without disrupting a child's established schema.

Lev Vygotsky (1896–1934)

Lev Vygotsky was a Russian psychologist and theorist of cognitive development. His theory focuses on the importance of socially mediated learning, namely, that social interactions (with parents, teachers, and peers) are critical to constructing meaning and fostering cognitive development (Zigler & Bishop-Josef, 2006). Vygotsky argued a child's development takes place within a "zone of proximal development." This concept pinpoints levels of ability with regard to social interaction in order to identify the most developmentally appropriate task for each person. Figuring out when an individual can be successful by himself or herself assesses the lower limit. Finding the threshold beyond which an individual can succeed, regardless of support by others, assesses the upper limit. Within these two parameters, learners can be successful with the appropriate scaffolding (support) from a social interaction with an adult or a peer who is more knowledgeable. Shaffer (2015) gives the following example:

> A three-year-old is capable of putting together a 10-piece puzzle without help or supervision (a baseline). With support or clues from a more knowledgeable partner, the child is able to successfully complete a 48-piece puzzle, a task that falls within their ZPD….For this three-year-old, a 500-piece jigsaw puzzle is likely to be beyond his abilities even with a capable partner guiding his efforts. (p. 55–56)

Similar to Piaget, Vygotsky believed each learner has his or her own individual developmental needs, or, ZPD. As such, the amount of scaffolding one should provide as a teacher differs from child to child as it is reflective of that individual's needs and developmental level.

A main component of Vygotsky's theory is his view on the importance of play for learning. Vygotsky (1966) believed, "play also creates the zone of proximal development of the child….Play is the source of development" (p. 16). Through play, a peer or an adult can comfortably assist a child in a task that would otherwise be out of the realm of possibility. In this

manner, play leads development (Christie & Roskos, 2006). Additionally, Vygotsky makes a very interesting link between play and literacy. As peers or adults are scaffolding a child's experiences, they are using words and terms the child has not encountered before. The support a child gains through language is ultimately what leads the child to function at higher cognitive levels.

Vygotsky (1966) argues for the importance of social interactions as a way for children to construct meaning. Yet, the general design and manner of communication in most art museums is not conducive for the specific developmental needs of the individual 2 to 5-year-old visitor. The artworks are hung at the average eye height of a grown adult, informational labels are also generally above a child's eye level and use academic jargon, museum workers and security often see children as a nuisance rather than a legitimate audience, treating them accordingly, and visual learning is prioritized. Play, Vygoysky notes, creates the Zone of Proximal Development, providing the base from which learning takes place. Coupled with the social interactions of a peer or an adult, play is the perfect vehicle to mediate the divide between a young child's experience and the less grounded ideas addressed in most artworks at museums. Play provides the individual scaffolding for each child to cognitively reach an artwork in a guided and comfortable fashion.

John Dewey (1859–1952)

John Dewey was an American educator best known for his belief in experiential learning. His theories are based upon the basic tenets of constructivism and suggest that an individual's interaction with the environment is an important experience, but that interaction is not enough for learning to take place. Dewey argued that a reflection on the experience, coupled with a response to the encounter, is necessary for the production of knowledge (Dewey, 2012). According to Dewey (2012):

> All our experiences have a phase of "cut and try" in them—what psychologists call the method of trial and error. We simply do something, and when it fails, we do something

else, and keep on trying till we hit upon something which works, and then we adopt that method as a rule of thumb measure in subsequent procedure. (p. 194)

This method of trial and error was highly valued by Dewey, viewing it as an opportunity to engage in quality mental processing. Through this problem solving, Dewey believed a child gained important information about the nature and role of objects in his or her environment. As Shaffer (2015) argues, this self-initiated and active discovery "is far more effective as a means of learning than listening to verbal instructions reflecting the same ideas. It is the child's experience that leads to learning" (p. 54).

For Dewey, experience is not an endpoint, but rather a continual process. Specifically, Dewey (1938b) states that,

> Different situations succeed one another. But because of the principle of continuity something is carried over from the earlier to the later ones. As an individual passes from one situation to another, his world, his environment, expands or contracts. He does not find himself living in another world but in a different part or aspect of one and the same world. What he had learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow. The process goes on as long as life and learning continue. (p. 44)

As such, Dewey viewed young children as active learners. For Dewey, play in education was an important component to this active learning, providing a variety of natural learning experiences relevant to children's lives and critical to enhancing their emotional and psychological development (Dewey, 2012). However, he also saw play as integral for independent thinking, outside the bounds of the limited curricular goals children are often taught within at school. Dewey (1910) argues that,

> To be playful and serious at the same time is possible, and it defines the ideal mental condition. Absence of dogmatism and prejudice, presence of intellectual curiosity and flexibility, are manifest in the free play of the mind upon a topic. To give the mind this free play is to encourage toying with a subject, but it is to be interested in the unfolding of the subject on its account, apart from its subservience to a preconceived belief or a habitual aim. (p. 218–219)

Dewey's point about the compatibility of playful behavior and seriousness speaks to just how intrinsically he believed play and learning were linked.

A visit to an art museum is inherently experiential. Everything from the feeling inside the building, to social interactions with other visitors and staff, to the wealth of stimulating visual representations of ideas, to one's mood and mental state helps to populate the multi-faceted memory that is one's museum experience. And, parallel to Dewey's argument, the experience of the art museum visit, coupled with the thoughtful reflection and interpretation of that experience, provides a far richer experience than simply having the experience itself. While children are more than capable of reflecting on an experience that has happened in the past, they are, as Dewey argues, active learners, so the depth and impact of their reflection is directly dependent upon its proximity to the experience being reflected upon. Play enables children to be simultaneously generative and contemplative, providing an ideal environment for, as Dewey argues, quality mental processing. Dewey (2012) believed children's play was an important component to their experiential learning, encouraging independent thinking, curiosity, and a comfortable setting to discover and entertain previously unencountered concepts. Thus, play, with its natural capacity to inspire discovery from creation and problem solving, is an ideal manner for children aged 2 to 5 to actively reflect on their art museum experience and inspire cognitive growth.

Supplemental Theorists

Howard Gardner, Loris Malaguzzi, and Jerome Bruner will be referred to later in this study in order to situate and reinforce findings from both the BCM and the Blanton Museum, but their theories are less foundational to my study than those discussed above and do not directly refer to play. Rather, they are more focused around the nuanced manner in which young children make meaning, understand content, and learn. In order to streamline the introduction of literature, their theories are briefly discussed here.

Howard Gardner (1943–)

Howard Gardner is a developmental psychologist known for his theory of multiple intelligences, a "critique of the notion that there exists but a single human intelligence" and that

human beings have a number of relatively discrete intellectual capacities (Gardner, n.d.). In *Frames of Mind* (1983), Gardner describes the following intelligences:

- **Linguistic:** Involving a sensitivity to spoken and written language and the proclivity to use language to accomplish certain goals.

- **Logical-mathematical:** Consisting of the capability to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. This intelligence concerns the detection of patterns, deductive reasoning, and logical thinking.

- **Musical:** Entailing adeptness in the performance, composition, and appreciation of musical patterns and encompassing the aptitude to recognize and compose musical pitches, tones, and rhythms.

- **Bodily-kinesthetic:** Consisting the facility of using the whole body or parts of the body to solve problems and using mental abilities to coordinate bodily movements.

- **Visual-spatial:** Involving the talent to recognize and use the patterns in wide space and more confined areas.

- **Interpersonal:** Concerning the proficiency to understand the intentions, motivations, and desires of other people.

- **Intrapersonal:** Entailing the capacity to understand oneself, to appreciate one's feelings, fears, and motivations. This capacity relates directly to the idea of self-regulation (Gardner, 1983).

Gardner (2012) described the two principal educational implications from the multiple intelligences theory as individuation and pluralization. Individuation, or personalization, suggests that as people have their own unique configuration of intelligences, this should be taken into account when teaching, mentoring, and nurturing. Pluralization promotes the teaching of materials in several ways in order to reach more students, since "some students learn best from reading, some from building something, some from acting out a story, etc.," which encourages a far deeper understanding (Gardner, 2012, p. 3). The idea of a "learning style" and an "intelligence" are often conflated when discussing Gardner's theory, but this is a misnomer.

Though it is possible to integrate the notion of a "learning style" with the notion of Gardner's "intelligence," the two terms cannot be collapsed. Gardner (2012) describes the difference as being a matter of behavior or thinking:

> Style refers to the customary way in which an individual approaches a range of materials —for example, a playful or a planful style. Intelligence refers to the computational power of a mental system: for example, a person whose linguistic intelligence is strong is able readily to compute information that involves language. (p. 4)

This is explained in order to clarify the terminology used within my study. The reference to the term "intelligence" in the following chapters should be understood as referring to Gardner's definition as a human computational capacity (Gardner, 2012).

In the scope of this study, Gardner's theory of multiple intelligences serves to delineate a set of modalities for children to learn through, while also providing evidence that pluralization of concepts is a more effective way to present information to a group of children. Additionally, Gardner (1983, 1993) is an outspoken proponent of the educative value of both children's museums and more traditional museums, yet critical of institutions that do not provide for multiple intelligences. These accolades and criticisms will be discussed in more depth in the upcoming sections.

Loris Malaguzzi (1920–1994)

Loris Malaguzzi was an Italian educator renowned for the development of a progressive approach to educating young children in Reggio Emilia, Italy. This child-centered approach emphasizes an emergent, project-based curriculum where children's interests are the impetus for areas of study (Shaffer, 2015). Named after the geographic area where Malaguzzi taught, the Reggio Emilia method area is based on a respect for the rights and potential of all children. Reggio Children (2010), a company based on the initiative of Loris Malaguzzi and inspired by the contents and values of the educational experiences in Reggio Emilia, describes the Reggio Emilia method as,

> An experience fostering children's intellectual development through a systematic focus on symbolic representation. Young children are encouraged to explore their environment

and express themselves through all their natural "languages," including the expressive, communicative, symbolic, cognitive, ethical, metaphorical, logical, imaginative, and relational. (p. 4)

Elemental to this method is collaboration: parents and educators closely collaborate both inside and outside the classroom to create a cohesive and holistic environment for education that bridges the school and the community. Classrooms are designed in a manner that supports "a highly collaborative, problem-solving approach to learning" (Edwards, Gandini, & Forman, 2012, p. 7). Rather than being seen as the target of instruction, children are seen as having the active role of an apprentice, they are learning from and with their teachers. Instead of a focus on reaching arbitrary external goals, Reggio teachers emphasize achievement as personal expression and reflection on patterns of thinking as a way of establishing meaningful and emotional relation to the subject matter (Edwards, Gandini, & Forman, 2012).

As Shaffer (2015) succinctly notes, the Reggio Emilia method is grounded in its "child-centered focus, where children make meaning based on their interactions with others and their environment" (p. 76). Children are encouraged to "learn through exploration and investigation in an environment that combines highly educational experiences with the value of play" (Rinaldi & Piccinini, 2012, p. 357). The core concepts pertinent to my study are:

- **Multiplicity:** Multileveled and multimodal forms of learning, encouraging information on "several channels all at once," and representative of the "one hundred languages" of children (Edwards, Gandini, & Forman, 2012, p. 12).

- **Circularity**: The encouragement of repeating key experiences with myriad opportunities to "observe and re-observe, consider and reconsider, and represent and re-represent" (Edwards, Gandini, & Forman, 2012, p. 12).

- **Open-endedness:** The value of incompleteness allows students, ideas, knowledge, teachers, and curriculum a more flexible and fluid quality. Constant transformation, reexamination, and experimentation underline the value of the learning process (Edwards, Gandini, & Forman, 2012).

The Reggio Emilia method is rooted within the knowledge that each child has his/her own educational agenda. It focuses on providing time, space, and materials to encourage children to discover answers to their own questions about the world around them. Additionally, the Reggio Emilia method emphasizes that children direct their own learning and make their own meaning. In turn, this empowers children and validates their preferred learning approach and unique interests. Museums consistently seek to eliminate the natural barriers visitors have to understanding artworks in order to encourage meaning making. The workshop at the Blanton that I developed and implemented during the second stage of research is a direct response to the need for museums to respect children and their preferred method of learning as a way to naturally facilitate meaning making of artworks. This is reinforced by the Reggio Emilian concepts of multiplicity, circularity, and open-endedness. Play-based activities will grant children with multiple and varied intelligences to make meaning at each artwork, highlighting the concept of multiplicity. Play-based activities will provide the opportunity for children to re-observe and reconsider artworks, reinforcing the concept of circularity. Play, by definition, focuses on the process rather than the product, and play-based activities will respect and encourage this, which points to the concept of open-endedness.

Jerome Bruner (1915–)

Jerome Bruner is a psychologist who has made significant contributions in cognitive psychology and cognitive learning theory in educational psychology. While his work often takes a more anthropological approach and concerns the institutional forms (i.e. schools) in which culture is passed on, his foundational beliefs regarding children's development and learning are important to review, particularly those concerning how children make meaning. The process of making meaning is the process of making sense of something, of understanding and comprehending it (Smidt, 2011). Bruner believes that meaning is determined actively and that context and culture directly implicate that meaning and, thus, learning (Smidt, 2011). Smidt interprets Bruner's idea of context as: "where something takes place, where the word 'where'

does not refer only to place, but more widely to include with whom, in what circumstances, in what way, and so on" (p. 10). Bruner regards the process of teaching as a way to provide context, but that this context needs to make sense to children, allowing them to build on previous experiences (Smidt, 2011). The idea of context is critical to Bruner's belief that children have the capacity to learn anything, it just needs to be presented in a manner that children can make sense of. Bruner (2006a) describes this idea as follows:

> If one respects the ways of thought of the growing child, if one is courteous enough to translate materials into his logical forms and challenging enough to tempt him to advance, then it is possible to introduce him at an early age to the ideas and styles that in later life make an educated man. (p. 55)

Similar to Vygotsky's concept of the ZPD, Bruner believed that teachers can start with an activity that is well within the developmental and cognitive reach of a child and then gradually adapt that activity to a higher level as the child's capability to think and reason develop (Smidt, 2011).

Complementing the importance of context is Bruner's belief in the importance of innate curiosity displayed by children. Bruner (2006a) argues that curiosity is an intrinsically motivated behavior that occurs when:

> our attention is attracted to something that is unclear, unfinished, or uncertain. We sustain our attention until the matter in hand becomes clear, finished, or certain. The achievement of clarity, or merely the search for it, is what is satisfied. (p. 116)

Curiosity is a form of meaning making, and, as such, an important way for young children to learn. Through curiosity, a child is sorting the world, selectively storing things that reoccur regularly and require "knowing," differentiating them from the onslaught of random impressions encountered daily (Bruner, 2006a). Yet, the attention children direct towards curiosity is fleeting. Bruner (2006a) believed constraints must be established if attention from curiosity is to be sustained or directed. Specifically, Bruner's research pointed to the "steadying force of the momentum of concrete overt acts that have a way of sustaining the attention required for their completion by shutting off irrelevant impressions" (Bruner, 2006a, p. 116). He believed

educators had a vital role to play in not only providing for these "steadying forces," but also in stimulating the interests of the child as a way to promote discovery, intrinsic motivation, and learning (Bruner, 2006a).

Most integral to the context of this study are Bruner's beliefs in the dual importance of context and curiosity for young children's learning. Bruner believed that children are capable of learning anything, as long as it is within the appropriate *context*. Children can readily understand the abstract ideas presented in the art museum, the ideas just need to be approached and framed in a manner that "respects the ways of thought of the growing child" (Bruner, 2006a, p. 55). In order for children to make meaning within the art museum, the artworks must be framed in an understandable context. Play is that context. Children are bound to be curious within the art museum, given the breadth of visual stimuli and the new environment. The play-based activities within the workshop I created and implemented during the second stage of research are "concrete overt acts" that capitalize upon the children's initial curiosity, sustaining that curiosity to encourage intrinsically motivated meaning making of the artworks. By integrating play within the art museum, art educators *are* respecting and supporting the unique needs of young children, providing a context to make their own individual meaning about the artworks.

LEARNING AND PLAY

Play is an important component of early childhood education, but there are distinct variations in how play contributes to children's learning. Montessori believed children "do not merely play, but are being intelligently active" (Montessori, 1949, p. 121). Thus, the act of play itself helps children to actively explore their environment. Piaget believed play to provide a safe context for children to be exposed to and work through new ideas. Vygotsky and Dewey believed play provided a framework for activities that would normally be outside a child's ability. Play provides a context in which learning naturally occurs. The circumstances and the environment in which it is happening dictate how exactly play leads to learning. Play is an activity helping children to make meaning, an "adaptive, organized means by which children

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learn to make sense of their physical and social environment" (Gopnik, Meltzoff, & Kuhl, 2000, p. 252). Shaffer (2015) elaborates on this idea of play as a framework for learning:

> Children base their play on mental constructs that represent their world and actively test theories in areas that are unclear. As children conceptualize, they reshape constructs and personal understanding based upon new experiences…children imagine what might be based on what is known, using experiences, and integrating the new with the old. Play is a powerful tool for constructing knowledge. (p. 61)

Though learning and development are not synonymous concepts, during the period of 2 to 5-years-old, they are closely interrelated. Development occurs amid, and as a result of, learning. Thus, if play provides a framework for learning, it also does so for development. And this framework is integral for early learners. Pascal (2009) argues that,

> play is serious business for the development of young learners….[It] taps into children's individual interests, draws out their emerging capacities, and responds to their sense of inquiry and exploration of the world around them. It generates highly motivated children enjoying an environment where the learning outcomes of a curriculum are more likely to be achieved. (p. 25)

By looking closer at how characteristics of play overlap with characteristics of early childhood learning, I can definitively establish the importance of children's play as a framework for learning and development to take place.

Active engagement

In play, children are wholly and actively engaged. McWilliam and Bailey (1992) define engagement as "the time a child spends interacting with their environment in manners developmentally and contextually appropriate for the child's age, abilities, and surroundings" (McWilliam & Casey, 2008, p. 4). McWilliam and Casey (2008) add, "when children are actively engaged with their environment, they interact with others more, manipulate materials more, and therefore learn more" (p. 4). Piaget posited that active exploration and engagement is "one of the primary contexts in which cognitive development occurs" (Zigler & Bishop-Josef, 2006, p. 23). Vygostsky (1978) believed with the social assistance of adults or peers, children could actively construct knowledge (p. 102). Dewey stressed the importance of hands-on

experiential learning as a way for children to actively engage with and learn from the environment around them. Hung, Tan, and Koh (2006) state, "There is active engagement in the learning process when the learner is constructing knowledge from experience through their interactions with peers and teachers to make meaning or to interpret information and patterns observed" (p. 30). Active engagement is a defining characteristic of play and a hallmark of learning.

Intrinsic motivation

Research has found that "self-motivation, rather than external motivation, is at the heart of creativity, responsibility, healthy behavior, and lasting change" (Deci & Flaste, 1995, p. 9). Play is, by definition, intrinsically motivating. Children cannot be forced to play. Parents, peers, and educators can "invite, guide, and support their play, but the motivation comes from within the child" (Krakowski, 2012, p. 54). In this way, children are masters of play: only they can determine if and when it is happening. And since play expands upon the interests of the child, by encouraging play, adults are respecting children's interests and reinforcing their identity. Csikszentmihalyi and Hermanson (1999) write that, "when playing, children pay attention because they want to, because they find the information interesting and important in its own right" (p. 147).

Nonliteral (symbolic) behavior

Play helps children develop the capacity of symbolic thinking. Berkowicz and Myers (2014) argue that play in childhood is an essential learning process providing "the space in which to wonder, ponder, imagine, and yes, learn" (para. 6). Imagining, the imagination, is a key factor in symbolic thinking. Vygostky (1966) viewed play as "imagination in action" (p. 8) and argued imaginative play as a powerful learning tool for children to make sense of their world. Krakowski (2012) refers to Vygotsky's link between imagination and play, saying that when children play, they,

move from the reality of the here and now—the world that children experience through their senses—to the imagined world of what might be. They move from the actual to the possible, from the concrete to the abstract, from the "what is" to answering the question "what if," and acting in ways that suggest "as if." (pp. 55–56)

When children use representative objects in their play (using a block as a car, a banana as a phone, etc.), they are establishing an understanding that physical objects can be separated from their meaning. Children can then transition to thinking in the absence of any object. These representational abilities developed through play help children acquire skills they will need later to develop reading and writing (Zigler & Bishop-Josef, 2006). Symbolic play encourages the idea and line of thinking necessary to future language learning. This is grounded in Vygtosky's (1966) argument that play catalyzes, and makes possible, learning about abstract concepts that children may not otherwise be able to grasp. In the same manner, the difficult concept of self and other during a primarily egocentric time can also be accessed through play. Russ (2004) argues, "pretend play will facilitate insightful problem solving, divergent thinking ability, the likelihood of developing alternative coping strategies, richer and more complex emotional expressiveness, and higher levels of empathetic responses or adaptive perspective taking" (p. 32). Through play, children can take on alternative identities and roles, can literally become another person, and, in doing so, can expand their consciousness outside of themselves and establish their own role within the larger world. Nonliteral behavior is a hallmark of play and provides a stepping stool for children to access less grounded concepts, which is necessary for eventual literacy comprehension and empathic response.

PLAY IN CHILDREN'S MUSEUMS

Children's museums are child-centered environments encouraging a variety of exhibition-based learning opportunities based upon children's specific developmental needs. They "provide opportunities for experiential learning, and multi-sensory, object-based exploration" (Boston Children's Museum, 2016). Children's museums are greatly influenced by Montessori and Dewey and their emphasis on learning through manipulation of multi-sensory materials to experiment with, touch, and observe, and by Vygostky and Piaget, who posit the

importance of learning through active involvement and first hand experiences. Gardner (1983) argues that children's museums provide a context where children learn easily from multiple modalities, engage with the content, and take responsibility for their own learning.

While children's museums are based in developmentally appropriate pedagogy, they are also "designed with play in mind" (Shaffer, 2015, p. 59). Puchner, Rapoport, and Gaskins (2001) found that learning occurred in children's museums "while children interacted with the exhibits at the museum" (p. 253). The exhibits provide a variety of new environments for children to discover new ideas and work through challenging concepts but, primarily, they are structured around play-based experiences grounded in "opened-ended unstructured self-directed exploration" (Gurian, 2006, p. 21). Play is universal: play or playful activities are present in every culture around the world. Play is adaptable: it can be tailored to the specific developmental level of the learner. Play is instinctual: children naturally play within and around their environments. Play does not necessitate the types of rules or boundaries children encounter in a more adult environment. Children's museums are grounded in exhibits with appropriate scaffolding and a diversity of methods to interact, encouraging all children to have a playful and educative experience.

PLAY IN ART MUSEUMS

Museums offer unique opportunities for informal learning with audiences of all ages. Where more formal venues for learning, such as schools, or even a work setting, place a premium on meeting externally established goals, museums allow visitors an open environment to learn as much or as little as they want. The focus of a museum generally dictates how this learning takes place: children's museums tend to emphasize hands-on engagement, learning through experience, and play, while art museums emphasize observation of the objects as a way for visitors to gain greater understanding about art and themselves. But, there is growing evidence that this is changing (Frost, 2010; Kerr & Apter, 1991; Patchen, 2006). Play is transitioning from an activity relegated to the purview of children and those institutions

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dedicated to children to an acceptable method for anyone to make sense of larger ideas or experiences they have not before encountered. The following sections will discuss play currently being utilized within art museum exhibitions, spaces, and programming, as both a method of engaging all visitors and, then, as a method to engage young children.

Play for all in art museums

Kerr and Apter (1991) state that despite the differences between adults and children, play is also a suitable and respectable way to describe intense and meaningful adult learning. The willingness to incorporate play, not specifically to engage young children, is currently evident in the exhibition and programming at both the Tate Modern and the Walker Art Center. The Tate Modern in London, England featured Carsten Höller's sculptural installation "Test Site," which consists of five slides of varying design, incline, and length. The artwork extends the idea of the slide beyond "an object that we associate with playgrounds, amusement parks" (Tate Modern, 2015), using the slide as a device for "experiencing an emotional state that is a unique condition somewhere between delight and madness" (Jury, 2015). Of all the artists the Tate Modern could have chosen to highlight in the Turbine Hall (an extension of the old museum entrance, ensuring an engagement with the artwork) they chose "one of the world's most thought-provoking and profoundly playful artists, with a sharp and mischievous intelligence bent on turning our 'normal' view of things upside-down" (Jury, 2015).

In order to celebrate the 25th anniversary of the Minneapolis Sculpture Garden, the Walker Art Center in Minneapolis, Minnesota worked with local area artists, architects, and engineers to create two eight-hole mini golf courses featuring 15 sculptural elements that challenge, delight, and engage visitors (Walker Art Center, 2015). Instead of offering the more common glitzy after hours gala for high level donors to celebrate such an occasion, the Walker offered an immersive and interactive experience for all visitors to re-experience and re-observe a staple of the community through mini golf: an activity "characterized by a unique blend of leisure, art, and populism" (Loftus & Schwartzman, 2013). Their willingness to integrate play

into the art museum was not motivated by a desire to entice and engage early learners, but these playful additions to the museum's exhibition and programming resulted in an influx of younger visitors.

Play spaces for young children in art museums

As acceptance for play grows as a method of engagement in the museum setting, so too do the early childhood visitors. The increase of young visitors to museums supports the fact that young children are a group whose learning "needs to be taken seriously and professionally" (Bjornberg, as cited in Shaffer, 2015, p. 138). Wolf and Wood (2012) state that,

> the increased visitation of family groups, especially those with young children, requires greater attention by museum educators, exhibition developers, and designers to support the learning needs of this audience. Most children's museums place special emphasis on designing environments that support learning for very young children. Lessons learned from the work done in children's museum can provide models for those in other museum settings to meet the needs of early learners. (p. 29)

An explosion of spaces and programming dedicated solely to facilitating early childhood learning through art speaks to this trend. A closer look at these spaces and programs makes clear how integrating play in the art museum can be used to support early childhood learning.

The Telfair Museum in Savannah, Georgia has constructed the *ArtZeum*, an interactive space designed specifically for younger visitors. Twenty-four multimodal activities explore big ideas about art through creative play, challenging viewers of all ages "to rethink their ideas about art" (Telfair Museum, 2015). These activities are centered on helping children make connections to the imagery and ideas within the artworks in the Telfair's permanent collection, but the space itself is physically located outside of the museum. *Creative Corners* at the Denver Art Museum (DAM), in Denver, Colorado, employs a similar concept: a space for creative making and interactive play-based activities to help kids look closer and establish a context for the larger concepts addressed within the artworks (Denver Art Museum, 2015b). These are also based directly on the artworks in the DAM's collection, but the proximity of these activities to the

actual artworks facilitates a heightened engagement as children are responding directly to the original object.

Play programming for young children in art museums

The Eric Carle Museum of Picture Book Art in Amherst, Massachusetts features morning programs specifically for early learners. Their "Toddler and Preschooler Play Series," which takes place in the Art Studio specifically focuses on play as a way to explore materials and art making (Eric Carle Museum, 2016a). Their "Special Storytime" program features illustrated books read aloud in both the galleries and the library as a way to draw connections to existing stories and those illustrations on view (Eric Carle Museum, 2016b). The DAM offers "Create Playdate," a drop-in program for children aged 3 to 5 focused around hands-on art making, reading stories, and playing art games in the galleries (Denver Art Museum, 2015a). The individual programs are focused around different themes, such as "Stack" and "Crush," so as to encourage repeat visitors. The DeCordova Museum in Lincoln, Massachusetts offers "ARTfull Play," a program for children aged 2 to 5 featuring unique opportunities to engage with art, materials, the environment, and to meet new friends (DeCordova Museum, 2016a). Another program, "Play in the Park," provides early learners the opportunity to explore how play informs contemporary art by creating large-scale collaborative structures in response to the surrounding environment (DeCordova Museum, 2016b). The Peabody Essex Museum in Salem, Massachusetts offers "PEM Pals," a fun, interactive program with books, movement, music, art, and hands-on activities designed specifically for preschoolers and their caregivers (Peabody Essex Museum, 2016). This programming for young children is driven "by the understanding that children have the capacity to learn and benefit from their experience in museums (Vergeront, as cited in Shaffer, 2015, p. 136) and that museums provide an environment for children to experience something new (Shaffer, 2015).

Learning to look at and think about the ideas embedded within art is accessible to children at a much younger age than most adults think. Danko-McGhee (2006) states that, "Long before young children can speak, their responses to shapes, colors, and other stimuli around them helps to form their indigenous styles of interacting with their world" (p. 21). By using appropriate scaffolding, this interest and natural response can help introduce young children to art concepts, ideas, and activities. Play-based activities, like games and storytelling, engage children aged 2 to 5 in exploring works of art (Yenawine, 2003). Young children make strong connections to familiar concepts or experiences they encounter at art museums and these are "vital links to children's enculturation and subsequent learning in museums environments" (Anderson, Piscitelli, Weier, Everett, & Taylor, 2002; Piscitelli & Anderson, 2002). The experience of play and the creative process fosters similar skills: discovery, observation, questioning, making connections, experimentation, and divergent thinking (Boston Children's Museum, 2016). Szekely (1983), a pioneer in discussing the importance of play in art, makes the link that playfulness assists both adults and children to tap into their creativity to find new ideas. Children should have the opportunity to engage with artworks in a developmentally appropriate manner and reflect upon their thoughts and feelings (Chang, 2012; Danko-McGhee, 2006). Play facilitates all of these qualifications. The open-ended exploration of art ideas through play leads to the discovery of new ways of looking and thinking. Play encourages children to make meaning of the abstract ideas addressed in artworks through concrete objects (Szekeley, 1983). These play-based activities invite children to play with ideas and materials (Danko-McGhee, 2006) and enhance learning about art by giving the child an active role in their own learning (Chang, 2012).

Museums "inherently foster intrinsic motivation to learn and the desire for sustained engagement with objects and content" (Munley, 2012, p. 6). They are institutions designed as places where people "construct meaning, have genuine choices, encounter challenging tasks, take control over their own learning, collaborate with others, and feel positive about their efforts"

(Paris, Yambor, & Packard, 1998, p. 271). Play facilitates the construction of meaning, is intrinsically motivating, provides an environment in which to work through cognitive conflict, is child centered, and is actively engaging. Museums afford opportunities for learning that do not occur in other settings (Crowley & Jacobs, 2011). Play affords young children the ability to process new concepts, leading cognitive development (Piaget, 1962; Vygotsky, 1966). This connection makes museums a powerful venue for the playful learning that is central to childhood (Henderson & Atencio, 2007). Museums give visitors of all ages the opportunity for meaning making and knowledge by connecting visitors with real and unique objects (Bowers, 2012). Additionally, guided or facilitated play "actively engages children in pleasurable and seemingly spontaneous activities that encourage exploration and learning" (Hirsh-Pasek et al., 2009, p. 27). Shaffer (2015) argues, "Museums are more likely to meet the educational needs of preschoolers and kindergartners when there is a strong correlation between the learning style of young children and the strategies integrated into gallery programs" (p. 97). Play provides a way for young children to connect to the physical environment of the art museum, facilitating an interaction with artworks in an intrinsically motivated and child centered manner, thereby resulting in a learning experience that is engaging and educative.

One of the largest challenges facing museums and museum exhibit developers looking to integrate play into their institutions, is designing for play without separating it from learning (Perry, 2012). The play-based interactions must remain true to the artistic content of the object (Adams, Moreno, Polk, & Buck, 2003). The goal is to provide interactions that are playful and engaging, but not at the expense of learning about the works of art. The art museum is an incredibly generative environment for young children, encouraging important experiences with new ideas, new perspectives, and new forms. Yet, in order for young children to access this wealth of experiential knowledge, art museums must support children's unique learning needs. Current art museum education practice does not lend itself to accommodating these leaning needs. Given the increase of young children visiting the art museum, it is crucial that art museums look to alternative methods of engagement. The thoughtful and deliberate use of play

is a powerful method of facilitating young children's active engagement, creativity, and intrinsically motivated exploration of artworks.

CONCLUSION

The concepts, theories, practices, and programs discussed in this chapter, provide a foundation for play in the art museum and informs my thinking in this thesis. Though play is easily identifiable by sight, defining play as a concept is a difficult undertaking. As discussed earlier in this chapter, play can be organized and classified by specific characteristics of behavior, by level of social interaction, by focus of content, by form, and by motivation. For the purposes of my study, play is defined as a way of doing things characterized by active engagement, intrinsic motivation, attention to process, and nonliteral behavior. Early childhood theorists have varying, often competing, views on how children learn and the value of play. An amalgam of practices espoused by Montessori, Piaget, and Vygotsky provides a pedagogical groundwork for my study, as well as the play-based activities developed for the workshop during the second stage of research. This framework is further informed by the theories of Gardner, Malaguzzi, and Bruner. I established play as a form of learning and development by presenting the overlap of characteristics that define play and learning, in particular, active engagement, intrinsic motivation, and nonliteral (symbolic) thinking. Learning and developing through play is a cornerstone of children's museums. A closer look at the history and current practice of children's museums confirmed their abundance of attention to young learners, which is most visible in their exhibitions since they are specifically designed to facilitate learning through play.

Though play is considered appropriate within the realm of children's museums, it is gaining legitimacy in non-children's museums. A closer look at the exhibitions of the Tate and the Walker, proves that play is already being utilized as a method of engagement, but not specifically for the purposes of making early learners more comfortable in their spaces. An influx of young visitors to art museums motivated both the Telfair Museum and the Denver Art Museum to create separate spaces dedicated specifically to young children. These spaces

incorporate play-based activities as a way to encourage connections to the artworks. Other museums have responded to this increase in visitorship by creating programs that use play as a way to guide early learners and their families in exercises of close-looking, creation, and discovery. These practices verify that art museums have already started adapting their traditional practices to respect the developmental needs of early learners. My study looks to capitalize on this period of time in which play is gaining wider acceptance in non-children's museums, further establishing art museums as engaging and educative places where children are welcome. Children's museums are paradigms of engaging young children in "joyful discovery experiences that instill an appreciation of our world, develop foundational skills, and spark a lifelong love of learning through play-based experiences" (Boston Children's Museum, 2016). As such, they are an inestimable resource to help other museums cater to their youngest visitors. Adapting methods that have been mastered at a children's museum for the art museum setting will expand opportunities for engagement and learning for the youngest visitors at the art museum. Integrating these methods would help to establish the art museum as a place where young children feel welcome to explore and comfortable to learn, through play. In the following chapter, I use pertinent literature to establish grounded theory as the research methodology for my study.

Chapter 3: *A Practice for Play*

> As spaces created with children in mind, [children's museums] have an initial advantage over more traditional museums, but at the same time they provide insight that can be tapped by museum professional for use in environments that are not solely developed for little ones. Thinking about play and its advantages for engaging young children is vital for any museum in the twenty-first century. (Shaffer, 2015, p. 61)

INTRODUCTION

Having presented a review of the literature, both situating this study and highlighting the necessity of my research, I will discuss the qualitative research methodology of grounded theory as the most appropriate manner to answer the central research question. I will also justify the research tools of observation, workshop, a critical friend, and interview. Additionally, this chapter will specifically address how I implemented grounded theory to investigate the integration of play-based learning observed at the Boston Children's Museum to the Blanton Museum of Art, its impact on the behavior of pre-kindergartners, and the implications for art museum education.

The structure of this study is separated into three stages, each focusing on different aspects of the research question. Before I verify grounded theory as the ideal research method for my particular question, however, I will explain the three stages. Within this chapter, my references to "Stage 1," "Stage 2," "workshop," and "Stage 3" will refer back to the information discussed below.

Stage 1

Stage 1 of my research established how the Boston Children's Museum facilitated and encouraged play with visitors aged 2 to 5. As part of my master's program, I needed to complete an internship at a museum of my choosing. A lifelong resident of Boston, some of my fondest memories growing up took place at the BCM. Established in 1913, the BCM is an environment for children to engage in experiences of discovery that foster knowledge, develop foundational skills, and spark a lifelong love of learning (Boston Children's Museum, 2016). Therefore, this museum was ideal for both an internship and a site for the first stage of my research. Working on

the exhibition floor during my internship helped me gain a familiarity with the environment. This familiarity focused the parameters of my research to *Peep's World*, a BCM exhibit frequently visited by children aged 2 to 5, which were the qualifications for the subjects during the first part of my research. By observing children at play in this exhibit, and then analyzing those observations, I established themes based on which elements most commonly facilitated visitor play at the BCM. This first stage of research, including data collection and analysis, will be discussed in Chapter 4.

Stage 2

The second stage of research developed a 30-minute workshop for children aged 2 to 5 for the Blanton, based on the data collected at the BCM, pertinent literature, and the framework of the rubric discussed later in this chapter. This workshop took the form of play-based activities. As part of this workshop, I developed pre- and post-visit lessons to be taught within the classroom a week before and a week after, respectively, the museum visit. The development of the workshop will be discussed in Chapter 5.

Stage 3

The site for the second stage of the research was the Blanton Museum of Art in Austin, Texas. Located on the campus of The University of Texas at Austin (UT), the museum has a permanent collection of almost 18,000 artworks (Blanton Museum of Art, 2015). Since I was finishing the second year of my master's program at UT, and working at the Blanton as a Gallery Teaching Fellow, this museum was both a convenient and logical site for the third stage of research. Working with the San Jacinto branch of the Child Development Center, an early childhood development program for the children of UT students and staff, I secured the All Stars pre-kindergarten class, taught by Jennifer Acebedo, as the subjects for the third stage of the research. I chose this sample as a matter of convenience (Merriam, 2014). This CDC branch was closest to the Blanton, the All Stars could participate during school and museum hours, parental permission was easily obtained, and the teacher was willing and excited to participate.

Additionally, since the majority of the children were 4-years-old, they fell within the age range I established in my research question. A critical friend video recorded the workshop, facilitating my dual roles as both researcher and teacher during the third stage of the research. After the workshop, I interviewed the teacher, Jennifer Acebedo. The need for a critical friend, video recording, and interview will all be discussed in more depth later in this chapter. I will discuss the implementation of the workshop, along with the data collection and analysis associated with the third stage of research, in Chapter 6.

WHY QUALITATIVE RESEARCH?

While quantitative research focuses on quantifying data and generalizing results from a sample of the population, qualitative research looks to understand underlying reasons and motivations of certain people or communities. Qualitative research is "an umbrella term covering an array of interpretive techniques [that] seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world" (Van Maanen, 1979, p. 520). My research question ultimately sought to understand the meaning of integrating play into young children's art museum experiences and the impact of these findings within art museum education.

Patton (1985) describes qualitative research as,

> an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting—what it means for participants to be in that setting, what their lives are like, what's going on for them, what their meanings are, what the world looks like in that particular setting—and in the analysis to be able to communicate faithfully to others who are interested in that setting…striv[ing] for depth of understanding. (p. 1)

Qualitative research allowed me to understand a situation (the lack of adequate methods to support young children's learning) as part of a particular context (the art museum) and the interactions that took place there (the behavior of pre-kindergartners experiences with artworks using play-based activities). Integral to qualitative research is the role of the researcher as the principal means of data collection and analysis. Merriam (2014) states,

> Qualitative inquiry, which focuses on meaning in context, requires a data collection instrument that is sensitive to underlying meaning when gathering and interpreting data. Humans are best suited for this task, especially because interviewing, observing, and analyzing are activities central to qualitative research. (p. 2)

This more responsive and adaptable means of collecting data was particularly important given that I was working with human subjects, all of which were under 5-years-old. Qualitative research is focused around understanding comprehensive and descriptive phenomena from focused, nonrandom samples (Charmaz, 2014). The samples for this research were limited to children aged 2 to 5. Qualitative research encouraged my question to be explored with a nuanced depth and detail that quantitative research does not allow. Since two stages of my research demanded the collection of detailed and complex data in order to thoroughly cover the scope of my research question, qualitative research, a method prioritizing quality over quantity of findings, was ideal.

RESEARCHER POSITIONALITY

The heightened role of the researcher in qualitative research raises two concerns: (1) addressing researcher subjectivity, and (2) prioritizing the participants' perspectives versus the researcher's (Merriam, 2014). Merriam (2014) argues that instead of attempting to eliminate these biases, researchers should "identify them and monitor them as to how they may be shaping the collection and interpretation of data" (p. 15). As I will discuss below, successful grounded theory is dependent upon the researcher being thoughtful and self-reflective throughout all aspects of the research, encouraging an awareness of the influence my subjectivities (internal biases) had on the research. Behaviors and communications, verbal and nonverbal, may be misidentified due to the truly subjective nature of qualitative research. This methodology is focused on the nuances of human behavior and seeks to objectively discuss subjective experiences. Thus, before I began collecting data, I investigated my own personal and philosophical position regarding research, play, and learning. Denzin and Lincoln (2005) discuss the importance of self-investigation before research as follows,

All research is interpretive; it is guided by the researcher's set of beliefs and feelings about the world and how it should be understood and studied. Some beliefs may be taken for granted, invisible, only assumed, whereas others are highly problematic and controversial. (p. 22)

By engaging in a writing activity where I thought about how I defined self, the nature of reality, the researcher and participant relationship, and how one gains knowledge of the world, I more clearly established my own ontological framework. This awareness helped to determine my own bias and subjectivities during data collection, coding, and analysis. The following highlights from this exercise were most germane to this study. My identifying characteristics—Caucasian, American, English-speaking, educated, and female—put me in a unique position. My identity as a Caucasian, American, English-speaking, and educated person puts me in an authoritative power, yet, my identity as a woman often puts me in a secondary position to men in society. Interestingly, the fields this study is based within, art and education, are dominated by women. This puts me in a rather variable position of power as a researcher, forcing me to negotiate my position depending on the field of research, the environment, and the subjects. By virtue of being a citizen of the world, I believe I am afforded certain rights, such as free speech and equal opportunities. I place great stock in the importance of hard work towards achieving success, yet I do not believe success is determined by material assets. I place equal weight on the role of the individual and the role of the group, considering both to be important facets of a high functioning society. I am motivated by a desire to experience, to teach, to create, to belong, and to connect. I abide by a constructivist philosophy of learning, which is founded on the idea that by reflecting on our experiences, we construct our own understanding, we create our own meaning. Thus, learning is the process of adjusting our mental constructions to accommodate new experiences and new knowledge. The arts are an integral part of our society, and engagement in the arts (in every manner of speaking) teaches us about our past and ourselves, encouraging us to experience the world through a richer context and connect to something larger than ourselves. Children are able, intelligent, emotional, and active beings who should be highly valued within our society. And successful teaching involves creating a positive learning environment where the perspective

and interests of students are prioritized, where failure is encouraged, and where curiosity and a love of learning are cultivated.

WHY GROUNDED THEORY?

Within qualitative research, there are a variety of research methods from which to choose. By establishing qualifications for the research strategy I needed, based on my research question, I determined the most appropriate methodology through process of elimination. Since two stages of my research necessitated different processes of data collection, my first qualification for a research method was the ability to collect data through a variety of tools. I collected data from multiple sites, integrating observational data from the BCM into the environment of the Blanton. Additionally, the second stage of my research was directly dependent upon the data collected in the first stage, leaving me unable to determine the most appropriate data collection technique for Stage 3 until I began my research in Stage 1. Thus, I needed an approach supporting a multi-layered and flexible approach to data collection. This established my second qualification for a research method as being a flexible and emergent design encouraging applicability of findings across those institutions. As discussed later in this chapter, I established a rubric (Table 1) with characteristics of play appropriate for 2 to 5-year-olds to focus my observations at the BCM and the Blanton, organize my data, and ensure the developmental appropriateness of the activities in the workshop. This established my third qualification for research as enabling a review of literature at both the beginning and middle of the research process. My research question necessitated multiple locations and subjects, the creation and application of original content based on emerging data, and the ability to seamlessly flip between the roles of researcher and subject, since I both taught the workshop and analyzed the data. Stage 1 and Stage 3 of my research necessitated a different and individual approach to collecting the data integral to answering my research question.

These individual strands of qualifications were each supported by grounded theory, a method consisting of "systematic, yet flexible guidelines for collecting and analyzing qualitative

data to construct theories from the data" (Charmaz, 2014, p. 1), leading the researcher to construct a theory 'grounded' in the data. Charmaz (2014) concludes her definition of grounded theory by specifying that, "Grounded theory begins with inductive data, invokes certain iterative strategies of going back and forth between data and analysis, uses comparative methods, and keeps you interacting and involved with your data and emerging analysis" (p. 1).

A variety of tools

In grounded theory, "all is data" (Glaser, 1998, p. 8). While this statement is rather vague, it reinforces the reality of grounded theory as an approach embracing a mixture of data sources and, thus, a range of data collection methods (Bryant & Charmaz, 2007). Strength and credibility in grounded theory is determined by the relevance, substance, scope, and depth of data (Charmaz, 2014). In order to give my study the range, detail, and depth associated with high quality research, I needed to collect data through a variety of sources. Charmaz (2014) states a basic methodological principal of grounded theory is that "data collection methods flow from the research question…a particular data collection or analytic strategy cannot drive the research question" (p. 27). Grounded theory prioritizes the adaptation of tools for data gathering based on the scope and tone of the data. Grounded theory fulfilled my first qualification of a research method not only by its support of a diversity of sources and strategies for data collection, but also by its prioritization of a variety of approaches to data collection as integral to validating the resulting theory.

A flexible and emergent design

My research question is dependent on a set of interlocking processes and stages. I needed a methodology with a flexible framework, allowing me the opportunity to redesign elements of the study based on information emerging from the data collection process. Adapting and translating data collected from the BCM, mid-research, to create a workshop appropriate for children aged 2 to 5 for the Blanton, highlighted the need for flexibility. In grounded theory, "everything begins with the data" (Wasserman, Clair, & Wilson, 2009, p. 358). This encourages

researchers to adapt components of their study based upon the "fit, relevance, and workability" (Glaser, 2007, p. 104) of the data collected. Two processes specific to grounded theory are central to this fluidity: (1) concurrently collecting, analyzing, and generating data, and (2) memo writing (Charmaz, 2014). In grounded theory, researchers begin analyzing their data from the first moment of collection. The raw data from these initial encounters is coded (important words/groups of words, ideas, or terms are noted) in order to find similar ideas leading to central themes. Coding means "naming segments of data with a label that simultaneously categorizes, summarizes, and accounts for each piece of data" (Charmaz, 2014, p. 111). Charmaz (2014) sees grounded theory coding as a tool enabling the researcher to implicitly conceptualize exactly what is happening in the data. As more data is collected, it is measured against the pre-established codes, assisting the clarity and focus of the research scope. This process is facilitated through the researcher's writing of memos. These memos are "written records of a researcher's thinking during the process of undertaking a grounded theory study" (Birks & Mills, 2015, p.11). Memos are critical to identifying and expounding codes and categories as they enable the researcher to articulate, explore, and question the interpretations raised from engaging with the data (Birks & Mills, 2008). Charmaz (2014) sees memo writing as a crucial step between data collection and writing, prompting analysis of codes and data early in the research process. And since analysis and data collection occur simultaneously in grounded theory, I was not beholden to a strict chronology should an element of my study not occur in the timeline I established. Furthermore, the coding and memo writing process assisted in broadening specific instances of play at the BCM into concepts that held transference to and applicability for the setting of the Blanton. In this way, the reflective process I needed in order to create the workshop was built directly into the structure of the grounded theory methodology. As such, grounded theory accommodated my second qualification of a research method by supporting a developing design based on the variety of data collected.

A question of literature

My research question is focused on encouraging play among children aged 2 to 5 to support the needs of early learners in the art museum and legitimize play as a method of art museum education. Not being as familiar with the developmental needs of this age group, I needed to establish characteristics of what play looked like at those ages. This took the form of a rubric as a way of framing my observations, which necessitated a review of literature around early childhood education and development. The role of the literature review is a point of contention within the grounded theory research community. As Lempert (2007) explains,

> Glaser and Strauss (1967), Glaser (1978, 1994), Strauss (1987), and Strauss and Corbin (1990, 1998) advocated delaying comprehensive use of the literature until after the analytical story emerged and stabilized. They cautioned against the pitfall of selecting data for a category that has been established by another theory, fretting that this singular selection would hinder generation of new categories and theories. Their caution was predicated in an assumption that novice (and some experienced) researchers would abandon the centrality of discovery in Grounded Theory and would instead attempt to force data into pre-existing categories. (p. 254)

While I agree with this concern, by virtue of the structure of the program I was in, the organization of the thesis proposal, and the nature of my study, that was not feasible nor advisable. As Lempert (2007) argues, "In order to participate in the current theoretical conversation, I must understand it…a literature review provides me with the current parameters of the conversation that I hope to enter" (p. 254).

By reviewing literature around early childhood education and development, I established parameters for my observations, focusing the data collected around those instances of behavior that are generally associated with play in 2 to 5-year-olds. Reviewing this literature also facilitated the integration of play-based activities considered developmentally appropriate for this age group within the workshop. As Lempert (2007) continues, "Utilizing comparisons from the literature alerts me to gaps in theorizing, as well as the ways that my data tells a different, more nuanced story. It does not, however, define my research" (p. 254). The use of a literature review at this stage of research also encouraged the transferability of data from one institution to another. According to Charmaz (2006), "A major strength of grounded theory resides in its

applicability across substantive areas" (p. 133). In order to maintain the study's applicability between institutions, I needed to integrate literature specific to the development of children aged 2 to 5 and their learning processes directly into the workshop. As such, grounded theory fulfilled my third qualification for research, recognizing the importance of a literature review to ensure applicability of findings, validation of research, and possible application outside the bounds of this thesis.

IRB AND ETHICAL RESEARCH PRACTICES

In order to ensure safety of subjects during this study, I submitted an application to the Institutional Review Board at The University of Texas at Austin. I only began collecting data once my application was approved. The approval letter is attached as Appendix A. The application included two different sets of forms specific to the stage and subjects of my research. The first set, attached as Appendix B, were site letters. These three documents granted me permission to collect data at the Boston Children's Museum, the Blanton Museum, and the San Jacinto branch of the Child Development Center. The second set, attached as Appendix C, were sample consent forms. These three documents concerned consent to observe children at the BCM from their parent/guardian, consent to participate in the workshop from their parent/guardian, and consent to interview the teacher of the All Stars, Jennifer Acebedo. Reading, signing, and returning the forms implied consent to the conditions of this study. These measures ensured all participants were safe during the study and that all the data I collected was done so ethically.

DATA COLLECTION

As discussed, my research question necessitated a variety of data collection methods. These collection techniques depended on the parameters of the research site, the subjects involved, and the specific format of data looking to be collected. The following sections will justify the use of observation, video recording, workshop, a critical friend, and interview as my primary data collection tools.

Observation

The first and third stages of my research incorporated children under-18, a population considered vulnerable by the IRB. I needed a tool allowing me to record specific and rich examples of children's behaviors without intruding on or negatively influencing the experiences of my participants.

Stage 1 of my research recorded instances of play naturally occurring at the BCM in children aged 2 to 5. The validity of data was dependent upon observing visitors interacting with the exhibit as they normally would, without any prompting from or encounters with outside parties. This impacted how data could be recorded: it could not distract visitors or impact them in any way. Data collected through observation is best gathered through descriptive field notes (Bogdan & Biklen, 2003). By noting observations through the use of handwritten field notes, I recorded participant behavior without intruding on the subject's natural flow through the exhibit. The purpose of observation is to identify those characteristics and elements in the setting that are most relevant to the phenomena being studied, focusing on them in detail (Lincoln & Guba, 1985, p. 304). Direct observation facilitated the collection of high quality data that was grounded in natural behavior and allowed data collection without distracting or engaging directly with participants, promoting a less invasive tool.

Participant observation and video recording

Stage 3 of my research focused around the implementation of the workshop, which used play-based activities to enhance opportunities for informal learning with children aged 2 to 5 at the Blanton. I needed a technique facilitating the collection of rich and detailed descriptions of children's behavior in response to the application of play at the Blanton. As I taught the workshop, this technique also needed to accommodate the researcher as a participant. Participating as a teacher placed me in an insider role, fully part of the setting, yet still observing. As per Gold's Typology of the Participant Observer Roles (Gold, 1958), this situated me as a complete participant. Participant observation "combines participation in the lives of the people

being studied with maintenance of a professional distance that allows adequate observation and recording of data" (Fetterman, 1998, pp. 34–35). Cohen and Crabtree (2006) note the focus of the research question and the analytical approach proposed should dictate how observational data is recorded. As a complete participant, I could not record the intricacies of the behavior exhibited by my subjects, which was critical to the foundation of a grounded theory. Cohen and Crabtree (2006) recommend the use of video to record data in participant research. If the researcher is trying to understand how people behave, she must be able to observe their interactions holistically, since bodily-based behavior plays an important role in our social processes. Without this visual information, I could not fully understand what transpired. When considering how to determine if and when play occurred, it was important to look at multiple aspects of the environment simultaneously. I needed to observe children's body language, how they engaged in activities, their social interactions, and the language they used. A video recording was necessary in order for me to assess what happened within the workshop as a researcher.

Observation fosters an in depth and rich understanding of a phenomenon, situation and setting, and the behavior of the participants in that setting (Cohen & Crabtree, 2006). Participant observation is a data collection technique in which researchers immerse themselves in the world of their participants (Bowers, 1988). Thus, participant observation encouraged the collection and recording of data based on interactions and behavior of children during a workshop where I had the role of a complete participant.

The critical friend

Grounded theory is based upon reflexivity and thoughtfulness as a way to continually grow and adapt methods or activities that hold promise. During Stage 3 of my research, I operated as a teacher (complete participant). I was focused on the wellbeing of the children, my manner of communicating, how the children responded, and the general attitude of the group. In order to collect in-depth and rich data through observation, I needed assistance in the role of

researcher. As such, a critical friend was necessary in order for me to corroborate the behavior of the children. Meyers (as cited in Colwell, 2005), defined a critical friend as:

> A trusted person who asks provocative questions, provides data to be examined through another lens, and offers critiques of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of the work. (p. 76)

A fellow classmate in my program, Marie Petersen, who was familiar with the research, provided observations from a different perspective and video recorded the workshop. The observations of the critical friend allowed me to observe more nuanced details and incorporate alternate interpretations of behavior, giving my analysis the objectivity that may have been compromised through my role as a complete participant in the workshop.

Interview

The final method of data collection occurred through a semi-structured interview (Morse, 2001) with Jennifer Acebedo, the primary teacher for the All Stars. The use of interview as a data collection tool was important, as I sought to situate the behaviors I witnessed during the workshop. By speaking to an adult who had experience with the subject's intelligences and personalities, and knew their behavior in a normal setting, I could contextualize the students' actions during the workshop and establish any impact in behavior due to the workshop. While these interviews revealed information that was decidedly subjective and interpretive, the use of interview facilitated the collection of first-hand data, critical to reducing the effect of researcher subjectivity and maintaining validity of findings (Merriam, 2014). Interviews help frame the data through a different lens, contextualizing the data in a manner more representative of the subjects involved. Interviews also help personalize the data, helping to supplement larger narratives once the basic structure has been identified (Morse, 2001). Using interview as my final technique for data collection framed the observed children's behavior in the workshop. Sample interview questions are attached as Appendix D.

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Workshop

In Stage 1, the collection of high quality data was dependent upon simply observing how the BCM encouraged play among subjects. In Stage 2, I sought to apply those observations in a manner where I could control for certain factors in order to maintain the validity of my findings. There were five factors:

- **Age:** Subjects needed to be between 2 to 5-years-old to stay within the parameters of my research question.

- **Time:** Subjects needed to have a standardized duration of experiences.

- **Content:** Subjects needed to respond to the same artworks.

- **Facilitation:** Subjects needed to be offered the same opportunities and framework for play.

- **Timeline:** Subjects needed to be able to completely participate within the duration of my academic program.

Control of all these factors could be maintained within the bounds of a workshop. This control enhanced the applicability of the observation between two sites of research and helped maintain validity of findings. Additionally, a workshop that was scheduled, contained, and directed could be easily recorded by video, facilitating the collection of data through participant observation.

DATA ANALYSIS

As discussed above, the grounded theory methodology supports a flexible and emergent study design and encourages adaptability dependent upon the data collected. Essential to this accommodation is the emphasis on collecting, analyzing, and generating data concurrently and writing memos. As I considered the logistics of observing at the BCM, I realized I needed an analytical tool to assist my determination of children's behavior as play during both the data collection and data analysis process. This research provision would establish a standard definition of play during my study and facilitate objectivity during the subjective experience of observing the behavior of children at both the BCM and the Blanton.

Rubric

This analytical tool took the form of a rubric listing characteristics of play behavior in children aged 2 to 5-years-old. The rubric disciplined my observations, focusing my attention on behavior that could be considered play. This rubric also ensured play-based activities I created for the workshop, during Stage 2 of my research, were developmentally and cognitively accessible for my subjects. Moreover, this rubric assisted in the creation of a baseline of play at both the BCM and the Blanton, which encouraged adaptability between both institutions. Any one of the behaviors listed in the rubric is not, definitively, play. In isolation, those behaviors could serve multiple purposes. It is the context of the characteristics listed in the rubric that allows me to call my subject's behavior *play*. In the absence of interviewing my subjects, or overhearing them stating, "I'm playing," I needed a method to determine if play was occurring during my observations. This rubric helped to parse elements of the children's behavior, within the play-focused environment of a children's museum, in order to determine when and how play was occurring. By establishing what *elements* of play were present, I could more clearly theorize about the totality of play.

The source of the rubric

During my research, I encountered a table in the early childhood education agenda for Ireland, entitled "Aister," which was written by the National Council for Curriculum Assessment. Aister (National Council for Curriculum, 2006) is a curriculum framework for children from birth to 6-years-old developed for parents and teachers, which describes the types of learning and development that is important for children in their early years. Additionally, Aister offers guidelines describing how adults can support children's learning and development, specifically focusing on children's social interactions and play (National Council for Curriculum, 2006). Aister used the rubric to outline the characteristics of play to more clearly define what play *is*. The original rubric listed the following characteristics of play: active, communicative, involved, symbolic, voluntary, adventurous and risky, enjoyable, meaningful, social and

interactive, and therapeutic. The first five characteristics were most pertinent to the central research question, the parameters of research sites, and the limitations of the study. Due to he data collection methods I used, there was no way for me to determine if children's behavior was enjoyable, meaningful, or therapeutic, since I would only be observing them. Likewise, the characteristics of adventurous and risky and social and interactive, were not elements of play that I was specifically focusing on, given the fact that this play behavior was taking place within the confines of museums.

Characteristic	Description			
Active	Are children using their bodies and their minds?	Are they interacting with the environment?	Are they interacting with materials?	Are they interacting with other people?
Communicative	Are children communicating?	With their adult or other visitors?	Verbal or non-verbal?	Simple or complex?
Involved	Are children deeply absorbed and focused?	Are they concentrating and thinking about what they are doing?		
Symbolic	Are children imagining and pretending?	Are they trying out ideas/feelings/ roles?	Are they making/ using props?	
Voluntary	Are activities child initiated?	Is the play spontaneous?	Is it fluid and flexible in scope and subject matter?	

Table 1. Rubric of play created to facilitate observations at the Boston Children's Museum and Blanton Museum of Art.

The design of the rubric

The rubric (Table 1) is organized into characteristics and descriptions of behavior. Column 1 of the table lists the five characteristics of play. The definitions of these characteristics are as follows:

- **Active:** Children are using their bodies and their minds in play. They interact with the environment, with materials, and with other people.

- **Communication:** Children share information and knowledge through their play. Their communication can be verbal or non-verbal, simple, or complex.

- **Involved:** Children become deeply absorbed and focused in their play, concentrating and thinking about what they are doing.

- **Symbolic:** Children imagine and pretend when they are playing. They try out ideas, feelings, and roles. They reenact the past and rehearse the future. This can involve them 'reading' and 'writing' long before they develop these skills.

- **Voluntary:** Children choose to play. Their play is spontaneous. They shape it as they go, changing the characters, events, objects, and locations.

Subsequent columns list the descriptions of these characteristics, based directly on the definitions of the terms. These descriptions take the form of questions so that I could quickly and easily determine if children's behavior was play while in the field.

The research behind the rubric

The characteristics and descriptions are based on a synthesis of literature concerning early childhood learning and play. This literature was discussed in depth in Chapter 2, but will be briefly reiterated for the purposes of grounding this rubric in accepted research. These characteristics are based broadly around the concept that the needs of each child are distinctive, dependent on her size, age, ability, and intelligences. Children's earliest years are incredibly important in terms of solidifying their foundational knowledge. The characteristic of play being active is based on the fact that children between the ages of 2 and 5 are active learners, heavily using their senses to explore, manipulate, and experiment, developing their fine and gross motor skills. Between 2 and 5, children's physical coordination and strength increases, allowing them to handle new materials, build creatively, and initiate new activities (Munro & Paciorek, 2004). The characteristic of play being communicative is founded upon the fact that the first 3 to 5 years of a child's life are critical in the development of language and social capabilities (Butin & Woolums, 2009). The characteristic of play being involved can be traced back to Montessori and

Bruner (2006a, 2006b), who argued that children are curious and interested in learning about their world. Lastly, children between 2 and 5 have many creative ideas and approaches and are capable of making decisions and selecting materials to implement projects (Exelby & Isbell, 2001), directly relating to the voluntary and symbolic characteristics of play.

Coding and emergent themes

As noted earlier, researchers begin data analysis from the first moment of their data collection. The rubric helped to organize my data from both the BCM and the Blanton, providing a framework that facilitated emergent themes. During both Stage 1 and Stage 3 of the research, I initially coded the raw data by play characteristic. As themes emerged, I wrote memos. I further coded the children's behavior by when and where play occurred, specifically noting duration, scope, and stimulus of behavior. Coding the data in stages led me to notice similar ideas, which ultimately helped me to establish themes emerging directly from the data. These themes assisted my creation of findings concerning the data across all three stages of research. The findings provided the base for my grounded theory concerning the application of play from the children's museum to the art museum to support early learners.

Conclusion

Overall, it is important to recognize that qualitative research and, more specifically, grounded theory, is not simply a method for data collection or analysis—it informs all aspects of the design and implementation of the study. The use of grounded theory was determined by looking at the scope of the research question. Additionally, the research question necessitated the collection of specific, experiential data. I used the data collection tools of observation, video recording, critical friend, workshop, and interview to record a representative and substantial amount of data concerning the children's behavior. Using a rubric as an analytical tool not only encouraged objectivity, but also established a baseline concept of play behavior for this study. The rubric was also used to analyze data, encouraging me to code the data according to play characteristics, helping to establish emergent themes, findings, and, ultimately, my grounded

theory. I delve into the specifics of utilizing these data collection tools, the resulting data, and the process of analyzing this data in Chapter 4 and Chapter 6.

Chapter 4: *The Power of Play*

> With the publication of the American Association of Museums' 1992 landmark report *Excellent and Equity: Education and the Public Dimension of Museums*, the field finally had to acknowledge that they had a social obligation to their communities. The final definitional breakthrough came when, after some years of mulling over what a children's museum might be, it finally came to me that the answer was in our name: in contrast to art and history and science museums, which were *about* something, children's museums were *for* somebody. In that sense we were a client-centered organization. We were *for* children and their parents, teachers, and other caregivers…The breakthrough was more than definitional—it focused all our work. (Spock, 2013, p. 170)

INTRODUCTION

The purpose of this chapter is to establish the Boston Children's Museum as the first site of research, describe data collection, introduce the subjects, explain the process of analysis, and report my subsequent findings in the form of overarching themes. The themes that emerged were: active engagement dependent on haptic manipulation, intrinsic motivation through curiosity, absorption through child agency, and access through a balance of familiarity and novelty. This chapter will focus only on Stage 1 of the research, which concerns data collection and analysis occurring at the BCM. The following chapter, Stage 2 of the research, will discuss how I used these themes as the basis of the workshop.

BOSTON CHILDREN'S MUSEUM

From my house in Belmont, a suburb of Boston, I took the 74 bus to Harvard Square and then rode the Red Line train inbound to get to the Boston Children's Museum, a 40-minute trip. I walked from the South Station T stop, past the hulking glass and metal structures of the financial district and then the horizon opened up. I felt a palpable shift in my disposition. The scent of salt permeated my nostrils. The occasional squawk of seagulls, their shadows crisscrossing my path across the bridge spanning the Fort Point Channel, became permanent background music to my journey. Straight ahead, the enormous brick structure housing the museum conspicuously skirted the waterway. The structure was adapted to the Boston Children's Museum in 1979 from its original use as the Atlas Wool Warehouse in the 1880s. Until 2007, a sign stating "Boston

Children's Museum," a large, wooden replica of a Hood milk bottle, and an elevator set outside the repeating rows of window bays in the looming brick façade were the only real indication of this as a fun and playful place for children. Before 1979, the museum was housed in a converted mansion in Boston's Jamaica Plain neighborhood (Spock, 2013). It began as a teacher's center in 1908 and was founded as a museum in 1913 by a group of teachers committed to the idea that museums have an important role to play in the education of children (Spock, 2013).
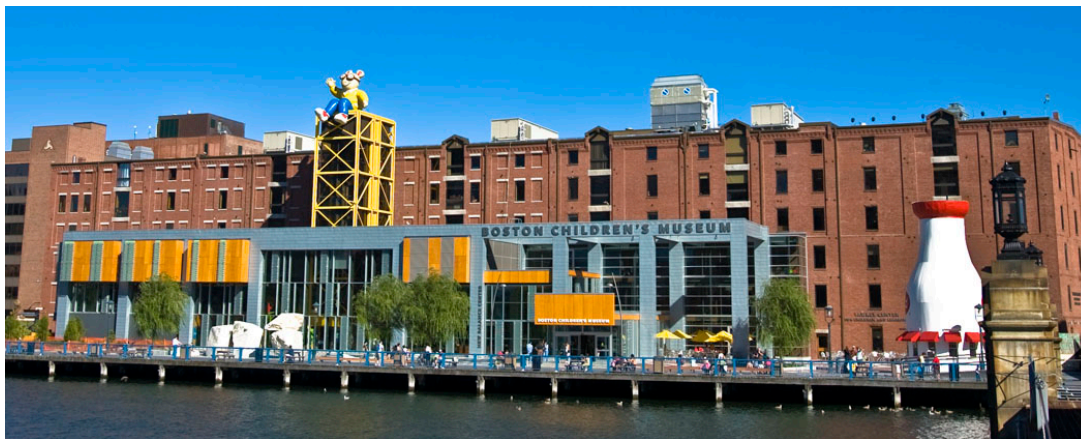
Figure 1. Boston Children's Museum exterior. Photo credit: Les Veilleux.

In 2007, the museum (Figure 1) underwent a $47 million makeover, augmenting the "strong, simple mass of the existing warehouse structure" (Cambridge Seven Associates, Inc., 2016) with a three-story, 23,000-square foot addition that "blends modernism and industrial chic with a playground sensibility" (Bowen, 2008). This blend continues inside: the soaring ceilings and open layout of the addition afford children the space to actively and boisterously play. The original brick remains, but now features bright colors, dynamic shapes, and bold, architectural forms, enticing entry to the 15 exhibit spaces and helping to establish the feeling of individual worlds for children to playfully explore, as seen in Figure 2. The content of the exhibits privilege issues important for children in an accessible and interesting format, helping to transform this space into a world for children. The exhibits focus on science, culture, environmental awareness, health and fitness, and the arts. Within these exhibits, children build skills of scientific inquiry, get messy and create art, practice motor skills and solve design problems, are introduced to a

school experience, and explore the cultural communities of Boston, all in a safe and fun environment.

Figure 2. Boston Children's Museum interior. Photo credit: Google Maps.

The power of play ethos

The mission of the BCM emphasizes hands-on engagement and experiential learning through innovative, meaningful, and fun exhibits. Underlying this mission is the institutional pedagogy of the power of play. Specifically, the BCM believes, "Play is the vital activity that children use to learn about and interact with their world, and gain the mental, physical, and social skills necessary to succeed in their adult lives" (Boston Children's Museum, 2016). As such, regardless of the specific focus or content, a cornerstone of all BCM exhibitions is facilitating hands-on engagement and experiential learning through play. Design of environment, focus of content, and method of engagement vary within the individual exhibition spaces, but play, as a general concept, is at the heart of the BCM.

Accordingly, any and all exhibits at the BCM were viable locations for my research. Given the limited amount of time for this first stage of my research, I could not realistically observe children in all the museum's exhibits. Furthermore, focusing my observations around an exhibition streamlined my research. Prior to starting my data collection, I spent time in various galleries, making initial observations of exhibitions at different times of the day. This led me to a group of three exhibits on the second floor called, collectively, the Carolyn and Peter Lynch

Early Learning Gallery. This space features the exhibits *Countdown to Kindergarten*, *Peep's World*, and *PlaySpace,* all of which are specifically targeted to provide preschool age children and their families with opportunities to play, grow, and mess around with interesting materials and objects. My cursory observations of these spaces made clear that the targeted age group for this study was consistently occupying these spaces, making it much more probable that children entering the exhibit (when I commenced gathering observational data) would fall within the established age range of subjects ages 2 to 5.

The Carolyn and Peter Lynch early learning gallery

Countdown to Kindergarten features the re-creation of a traditional kindergarten classroom, giving children the opportunity to ride the bus to school, put their belongings in a backpack, and choose an activity they may actually find in a kindergarten classroom. The objective of this exhibit is to introduce young children to formal education, providing a space to practice the play-based tasks they will encounter in kindergarten. Though this exhibit certainly facilitated play, it did so under the guise of mimicking the formal environment of a classroom, whereas I was specifically looking to facilitate play in the informal environment of a museum. Though this exhibit was a viable location for observation, the lessons from this exhibit would be difficult to adapt to the art museum setting, since all of the play was grounded in classroom activities. *PlaySpace* is a very informal environment designed around the specific needs of 6 months to 3-year-olds, promoting play in various manifestations to engage young children and encourage developmental growth. This exhibit is the only location in the museum where children over 3-years-old cannot enter. While children 2 to 3-years-old were within my targeted age group, making this an appropriate location for observation, I would be missing out on children aged 3 to 5-years-old, which would definitely impact my data. *Peep's World* transports visitors into the world of the Public Broadcasting System (PBS) TV show "Peep and the Big Wide World," offering children ages three to five a space to experiment and play with ideas related to science and science learning. This environment was both informal and had no strict age

limitations. Though the exhibit was designed specifically for children aged 3 to 5, visitors of any age were free to enter and engage with the area. Though I observed subjects at all three exhibits, I focused my analysis on observations of children in the *Peep's World* exhibit. This choice, along with the logistics of my observations and subject profiles, are discussed later in this chapter. In order to contextualize my analysis, however, I will now introduce the *Peep's World* exhibit in more detail.

Figure 3. *Peep's World* exhibit interior. Photo credit: Google Maps.

Peep's World

This exhibit is designed around the learning objective to offer children ages 3 to 5 a chance to develop important everyday science skills like observing, comparing, and predicting. The exhibit is physically organized into three areas, see Figure 3. Each of these areas offers a distinct environment, providing a different opportunity to practice those science skills through play. Though specifically designed for visitors ages 3 to 5, and based on generally accepted developmental milestones for that age group, there are appropriate entry points to these areas regardless of the child's age or individual development level. The entire design of the exhibit (the plan of the space, the methods of engagement, and the types of tools featured) meets the museum's learning objective for each individual visitor.

Figure 4. Catfish Creek in the *Peep's World* exhibit. Photo credit: Google Maps.

The first area, Catfish Creek, Figure 4 and 5, features two bending basins full of water that weave along the left wall of the exhibit floor. Brightly colored toys and tools bob in the unceasing and undulating currents of the basin. Hard, plastic tubes attached by a hinge lie along the edge of the first basin, as seen in Figure 4. The second basin contains metal blocks to change the direction of the water and latched doors to manipulate the depth and current of the water. The tools within the basins are varied enough in their size, design, and familiarity so the child still working on holding a spoon and the child beginning to write have respectively engaging opportunities to start playing in and with the water.

Figure 5. Catfish Creek in the *Peep's World* exhibit. Photo credit: Google Maps.

The second area, Deep Dark Woods, is enclosed by wooden tree cutouts (seen in the middle of Figure 3) with light projected on to the ceiling, mimicking stars. Spotlights with rotating lenses project shadows in the shape of animals. The third area, Raven's Ravine, see Figure 6, originally housed raised basins full of sand. But, during my observations, the space featured big blue foam blocks. These "loose parts," including cubes, bricks, cogs, curves, and cylinders with holes in them, are part of Imagination Playground: a child-directed and open-ended toy encouraging self-expression through deep, joyful play (Imagination Playground, 2016). Imagination Playground blocks are used in museums, playgrounds, parks, schools, gyms, and childcare facilities to prompt children to transform their environment and create play spaces of their own (Imagination Playground, 2016). In Figure 3, Raven's Ravine is in the back left corner.

Figure 6. Raven's Ravine featuring Imagination Playground parts in the *Peep's World* exhibit.
Photo credit: Madeleine LePere

ESTABLISHING HOW *PEEP'S WORLD* FACILITATES PLAY USING THE RUBRIC

In order to more thoroughly determine how the BCM encourages learning through play, it is helpful to establish how the intentional design of *Peep's World* facilitates play behavior. As such, I noted how the environment of *Peep's World* was designed to nurture play using the types of play characteristics listed in the rubric (Table 1).

Active

The first characteristic of play is active behavior. Specifically, children using their bodies and their minds to interact with the environment, the materials, and other people. *Peep's World* is organized into three smaller areas within a larger, open layout. This facilitated children's active and independent exploration of the space while also providing a variety of physical and cognitive access points. The materials within Catfish Creek and Imagination Playground are visually interesting, transportable, and not site specific, thereby enticing children to interact with them intrinsically and allowing their movement around the environment. Benches within the space provide seating for adults, their strategic placement enabling opportunities for quiet observation or adult assistance, depending on the child's needs.

Communicative

The second characteristic of play focuses on the interactions in play. This communication can occur with adults or other visitors. It can be simple or complex, and verbal or non-verbal. The small plaques around the exhibit offer tips for adults to continue the science learning at home. The layout and open-ended nature of the activities at each section lend themselves to communication between a child and an adult, should they wish to do so, while the communal access and limited materials of both Catfish Creek and Imagination Playground nurture social communication (verbal and nonverbal) with other visitors.

Involved

The third characteristic of play pertains to levels of participation. Involvement is an aspect of play that focuses on the engagement of children in their behavior and the concentration going into their activities. The process driven activities within each area promote deep absorption and thought while children are interacting with the environment. The lack of structure regarding *how* children should interact within the space compels them to think about what they want to do in order to engage with the exhibit elements.

Voluntary

The fourth characteristic of play focuses on motivation of behavior. As a characteristic, the term voluntary concerns the impetus of behavior and the flexible framework by which behavior is framed. The materials featured within the exhibit are intrinsically motivating and the environment is highly accessible (physically and developmentally), encouraging child initiated and spontaneous interactions with the environment. Additionally, the open-ended activities in each area, coupled with the open layout of the environment, facilitate a fluid and flexible scope of play.

Symbolic

The fifth characteristic of play relates to the extent to which children's behavior is make-believe. Symbolic behavior involves imagination, role-play, and the use of props. Within *Peep's World*, the materials and sections are open-ended in nature, simultaneously facilitating both their intended and adaptive use. This promotes a flexible integration of imaginative processes, nurturing children to try out different ideas, feelings, and roles, supporting a more figurative use of materials to embolden the making and using of props.

SUBJECTS

As discussed in the previous chapter, I chose subjects from visitors who were already entering *Peep's World*. I ensured their age and consent by talking with their parent or guardian. In total, I observed nine children in a span of two days. Of these nine children, six became subjects. I dropped the 7th and 9th observations due to the children's ages: the 7th was 1 ½-years-old and the 9th was 6-years-old, both of which fell outside the 2 to 5-years-old parameters of the research question. I dropped the 8th observation in an effort to streamline and standardize my analysis, since it was the only one occurring outside of *Peep's World*. Table 2 details the information associated with each of the subjects I observed.

	1	**2**	**3**	**4**	**5**	**6**
Age	2 1/2	2 1/2	3	2 1/2	4 1/2	3
Gender	Female	Female	Female	Male	Male	Female
Escorted By	Adult Female	Adult Female (Mom)	Adult Male (Dad), Adult Female (Mom)	Adult Female (Mom)	Adult Female (Mom)	Adult Male (Dad)
Day of the Week	Th	Th	Th	Th	Th	Th
Time in Exhibit	9 mins.	6 mins.	13 mins.	6 mins.	6 mins.	54 mins.
Time of Day	12:00-12:10	12:10-12:16	12:22-12:35	2:09-2:15	2:09-2:15	2:26-3:10
Exhibit	Peep's World	Peep's World	Peep's World	Peep's World	Peep's World	Peep's World

Table 2. Total subjects observed at the Boston Children's Museum.

Subject 1

On Thursday, September 17th, I walked into *Peep's World* at 12:00 PM. Upon entering, I saw a young girl playing intently at Catfish Creek and accompanied by an adult female. Though I was only planning on observing children for whom I could record the entirety of their visit (both as a matter of control and to get a more nuanced view of the trajectory of their play), I decided to approach the child's guardian in the hopes of observing the young girl she accompanied. There were two overarching reasons for this decision. This being my first time conducting observational research in such a structured and rigorous manner, it was an opportunity to practice the process of observing a child travelling through the exhibition space. This preliminary observation also helped answer questions regarding the logistics of my observations.

Upon approaching the guardian of Subject 1, she said, "We're about to leave, we've been here for half an hour." When I began observing, Subject 1 was on the far side of the first basin at Catfish Creek, attentively and contentedly filling up one of the tubes along the edge with a small

scoop. She carefully raised the scoop with one hand to the height of the tube and dumped all the water into the tube without spilling, indicating a high level of concentration. Judging from the ease and similarity in the repetitions of scooping and dumping (coupled with her guardian's statement that they had been there half an hour), it seemed clear that the girl had engaged in this particular task far before I started observing. Approximately two minutes into the observation, the guardian looked up from her phone and said, "Ok, let's go" to the young girl. The child looked up, scoop in hand, but then looked back down and continued her task. Midway through her routine, Subject 1 saw a large, black, plastic ladle as it floated by. She dropped the scoop and reached for the ladle, experimenting with how it interacted with the water. Realizing the spoon end was far more helpful in terms of holding water, she continued her established play scenario with this new tool. Subject 1 left the exhibit after a second, more firm verbal coaxing of "Let's go" from her guardian, and clearly not of her own accord. Aside from her guardian determining the end of her play, Subject 1's behavior was completely self-controlled: she chose which tools to use, how to use them, where she went within the exhibit, and the amount of time dedicated to each task within her play. During my observation of Subject 1, she never communicated verbally with her guardian or other visitors, though she was the only child in the exhibit during the recorded time. It should be noted that while I include data from Subject 1 in my analysis, I (presumably) observed only the final third of her experience within the exhibit. As such, I cannot accurately conjecture the behavior and/or play leading up to this moment.

Subject 2

Thirty seconds passed before I caught sight of a young girl careening around the corner from *PlaySpace*. She ran toward me in a bright yellow dress with lemons on it, her mother following behind. The young girl glanced at me as I conversed with her mother, unsure whether she should wait or enter. She settled on hanging on to her mother's hand, craning her neck to look within the exhibit space, an agitated hesitance playing itself out upon her face and through her limbs. After introducing myself, I explained my research, asked the mother her daughter's

age (2 ½), and gained consent. Once this exchange took place, the mother took a step forward. With that step, the young girl let go of her mother's hand and bolted into the space, running along Catfish Creek, looking into the Deep Dark Woods, stopping to look in the basins, picking up a few toys, and then finally situating herself at a bend in the first basin. The speed at which she physically investigated the different sections of the exhibit, and independently chose Catfish Creek, corroborates the strength of the open-layout exhibit to inspire child agency in the form of active exploration and intrinsically motivated play.

Once at Catfish Creek, Subject 2 picked up a scoop with one hand, filled it with water and then emptied it a few times. Actively interacting with both the environment and the materials, she grabbed the scoop with both hands and slowly walked to the other basin. As the water splashed out, Subject 2 observed some pasta tongs floating in the other basin. She spontaneously picked these up, and proceeded to test their capacity for holding water by placing them in and out of the water. Finding these unsuitable for her play purposes, she looked up and around, still holding on to the tongs. The young girl saw a large plastic spoon. With the spoon in her right hand and the tongs in her left, Subject 2, again, tested the capacity of the tool to hold water. Realizing the spoon held more water, she then placed the tongs over the spoon, dipped her fused implement into the basin, and transported the water back to the first basin. Subject 2's behavior showed her actively trying out how these tools work. Her successful operation of the tools facilitated the imaginative combination of the two tools, creating a more appropriate prop for her play scenario, validating the accessible, accommodating, and open-ended nature of these tools. Her mother came up to the basin, picked up a spatula, floated it in front of Subject 2, and said, "What's that?" Instead of answering or immediately including it into (and possibly redirecting) her play, Subject 2 observed its behavior in the current of the water for a few seconds, picked it up, looked at it more closely, and then put it down. During the nine minutes Subject 2 was in *Peep's World*, her mother did this two more times, but with different tools. The young girl reacted the same way each time, preferring to observe the tool rather than respond to her mother, though on one occasion she did incorporate a proffered ladle into her play. The non-

verbal interaction between Subject 2 and her mother made visible the agency this exhibit reinforces, illustrating the connection between curiosity and the intrinsically motivated and deeply focused behavior of play.

At the fourth minute, Subject 2 moved to Imagination Playground. She attempted to balance a block with a hole in it on top of a curved piece, but this structure kept falling down. Experimenting with a variety of techniques for holding the blocks and balancing their placement, she finally got a tiny bit of the curved piece into the hole. Though the part eventually slithered out, her interaction with Imagination Playground was active, experimental, focused, flexible, and instigated by her own desires, all of which are characteristics of play.

Subject 3

Subject 3 and her parents walked in from the back entry of the exhibit. Standing next to the second basin of Catfish Creek, Subject 3 picked up some floating pasta tongs by one arm of the handle. Holding them in this manner, the girl dipped them into the water and back up again. Watching as the water dripped through the tines, Subject 3 tried to float them, but the force of her placement caused them to sink almost immediately. She tried again, this time with a bit less force. As the pasta tongs sank a second time, her mother said, "Would you like some help?" "No," the child said, keeping her attention on the sunken tongs. Subject 3 tried, unsuccessfully, to float them one more time, but became distracted by a small, plastic, red boat floating by. Picking up the boat with one hand, she used the same technique she utilized with the tongs to float the boat. It floated for a second before falling halfway below the surface, bobbing up and down. Picking it up and dumping the small amount of water accumulated in the boat hull, the girl more gingerly placed it on the surface of the water. A smile spread across her face and she said, "Look!" to her parents. Subject 3 then walked the boat over to the first basin and turned it over. When no water came out, she went back to the second basin, submerged the boat and, using both hands, carried it back to the first basin again. Despite her concentration, the small amount of water in the hull of the boat spilled out as the girl walked between the two basins. Visibly vexed

by her unsuccessful attempts, Subject 3's mother again, interjected, "Would you like some help?" "No," the child said. The continuous refusal of her mother's help points to a comfort with the environment and the materials as well as a belief in her own abilities within the space and with the tools available. Though this cannot wholly be attributed to the exhibit design, the manner in which the setting and materials balanced accessibility and challenge through hands-on manipulation encouraged the girl's independence, in turn, heightening the concentration in her self-directed play.

Subject 3 made three trips between the basins and, arriving back from her third trip, her parents pushed a collection of boats and tools toward her. She looked up, mid-boat submersion, observing the materials for approximately 30 seconds before returning to her own task. Her dad then pointed to the tools and asked, "Which hold water?" The girl did not answer. Instead, she tried to collect all the tools now floating past, grabbing and pulling them towards her. Subject 3 looked up from the basin and saw her mother using water to make marks upon a piece of slate along the left wall. Turning away from the basin and walking towards her mother, she drew with her wet finger upon the wall, not the actual piece of slate. She then drew on the piece of slate with her finger, which, now dry, did not make any mark. Her mother said, "I think you do it like this," walking over to the basin, dipping her finger in the water, walking back to the piece of slate, and drawing a flower on it. "No, not like that," Subject 3 said. She then walked to the basin to wet her finger and returned to draw on the wall again. "Ok," her mother said. With this comment, the young girl proceeded to walk toward the front of the exhibit. Though Subject 3 initiated simple verbal interactions, she did not respond to the questions or requests of her parents, due to an intense concentration on play and, possibly, the intensity of belief in her own capabilities. She actively interacted with both the environment and the materials, testing the capabilities of different tools. Her play was flexible and fluid in scope and subject matter, choosing to abandon one tool and persevere through her frustration with another, not staying too long in any one particular task.

Subjects 4 and 5

Two boys (brothers, aged 2 ½ and 4 ½, respectively), accompanied by their mother, made their way into the exhibit. The younger boy, Subject 4, entered Catfish Creek while the older boy, Subject 5, started toward the Deep Dark Woods. Subject 5 took one step into the Deep Dark Woods and turned around, following his brother to Catfish Creek. Subject 4 immediately walked around the first basin, pushing and pulling the tubes along the edge of the basin, spinning them along their hinges. He noticed the tools inside the basin and picked up a few, determining which elements of the exhibit were permanent and which were flexible. Walking up to another tube, he attempted to pick it up with both hands. Given its connection to the side of the basin, his efforts ended up spinning the tube around the hinge. The younger boy looked down, picked up a small tablespoon, walking along the edge of the first basin filling and emptying the scoop. Subject 4 walked back to the tube and carefully dumped the water into it. Subject 4's progression of behavior shows an active interaction with both the environment and the materials as well as a concerted thought in his behavior, experimenting with the tube in order to determine its capabilities and use.

When Subject 5 entered Catfish Creek, he made his way toward the plaques along the wall that provided examples of how parents can integrate science learning at home. He read one of them out loud. Subject 5 looked backed at his mother when he was done, but she was observing Subject 4 in his task of transporting water. Subject 5 walked closer to his mother, looked at the basin and asked, "What do I do?" She said, "I think you need a scoop," and held one out to him. Subject 5 grabbed the scoop and tried to fill it with water. He looked at the tools floating by, turned back to his mother, and said, "How?" His mother grabbed a different scoop and modeled filling it with water and emptying it into the top of a water wheel. Subject 5 watched as the water went through the top and fell on to the wheel, making it spin. He then copied his mother's actions, trying to sustain the turning of the wheel by quickening his pace. Subject 4 walked the tablespoon over to the second basin. Noticing the wealth of tools there, he dropped the tablespoon, picked up the tongs and spatula, walked back to the first basin and

dropped them in. Subject 5 looked up at this slight splash. "No, that has to stay there," Subject 5 said to Subject 4. The older boy took the tools back to the second basin and then walked around the exhibit pointing out and labeling exhibit elements, with Subject 4 following close behind. Subject 5 ran around, peered into the other end of the Deep Dark Woods, and then walked out of the exhibit. Subject 4 followed and then they all left the exhibit together after six minutes.

Subject 6

As Subjects 4 and 5 left through the back entry of *Peep's World*, a young girl accompanied by her father entered through the front. The father looked up at me and listened attentively to my whole presentation before signing the form and sitting down on a bench along the middle of the far left wall. Subject 6, 3 ½-years-old, collected tools while walking along the basin. She ended up with four tools in her hands. She tried stacking them on top of one another on the water, but they tipped over and started floating away. She looked back down to the basin, grabbing two different sized measuring cups, using them to fill the tubes on either side of her at the same time. Only a few drops of water from each cup made its way into the tube since she inadvertently jostled her arms and hands as she tried to simultaneously observe both tubes and sync the precise pouring of both scoops. Her father glanced up from his phone, stood, grabbed a few of the floating tools, and put them in front of her. She stared at these for a moment. Spying a funnel floating amongst them, she grabbed it and placed it upside down on top of the larger cup. Filling the other cup with water, she carefully poured it through the upside down funnel. Almost all of the water slid down the incline of the upturned funnel and back into the basin. She then turned the funnel right side up, placed it back in the larger cup, and tried pouring water through it again. She seemed satisfied by the completion of this task since she looked up, grabbed a whiffle ball floating past, placed it in the funnel, and poured water through her newly made contraption, watching as the water flowed through it. She then picked up her contraption and carefully carried it over to the top of one of the tubes, dumping the water inside into the tube.

After two minutes of filling the tube with water via the whiffle ball and funnel, a boy and a girl, about 11-years-old and 12-years-old, respectively, entered the exhibit with their guardian. They went to Catfish Creek and immediately started talking to one another, establishing an in-depth narrative scenario for their play that involved making potions. Subject 6 looked up, clearly intrigued by these new visitors and their detailed play. The older girl collected boats and placed them in the current, making them quickly float down the basin. Subject 6 observed the boats rushing down the basin and stated, "I need a boat." At this point, the father of Subject 6 grabbed the water wheel, placed it in front of her, filled a scoop with water, and dumped it out through the top of the toy, making the wheel spin. He said, "How does water make it spin?" Subject 6 momentarily looked up, staring at the water wheel, but quickly looked back down, reabsorbed with her own play task. Then her father said, "I'm going to show you something that looks like a shower." He went over to the bucket at the end of the basin and pointed, saying, "Push this." Subject 6 walked over to the bucket with her cup in hand. She got to the bucket and pulled it. "No, push this," he said, pointing to the bucket again. She tried to push the bucket with one hand and fill her cup by dipping it into the basin at the same time. Unable to successfully do either, she handed the cup to her father and pushed the bucket with both hands. Water spilled out, creating a tidal wave within the basin. Taking the cup back from her father, she walked back to the tube, reassembled her measuring cup, funnel, whiffle ball prop, and reengaged in her own play.

After about 10 more minutes of deep concentration in filling and emptying tubes with multiple tools (at one time stating to no one in particular, "I'm making a smoothie!") her father asked, "Are you finished playing?" "No," she said. She placed another funnel on top of a different tube and filled it up for about four minutes using the variety of utensils she collected. The father continued, "Are you ready to go?" "No," she answered again. About three minutes passed. "Are we ready to go?" She more vehemently responded, "No." This back and forth continued for about 15 more minutes, all while she was thoroughly engaged in her play task. This deep engagement resulted in a gradual escalation of complexity as the girl used more tools

to fill the tubes. After 54 minutes at Catfish Creek, she finally acquiesced to leaving and stopped playing.

THE PROCESS OF ANALYSIS

My observations complete, I turned my attention toward analysis. Coding, the process of defining what actually constitutes the data and conceptualizing the data in general (Charmaz, 2014), was a new process for me. The words of Wasserman, Clair, and Wilson (2009) in mind, "everything begins with the data" (p. 358), I spread my field notes and rubric (Table 1) in front of me and immersed myself in the six subjects and their behavior, using the rubric to document which characteristic(s) of play were visible. As discussed in the previous chapter, the rubric established a generally accepted list of characteristics indicating when play was taking place. Breaking my observations down into smaller play units (according to characteristics), allowed me the opportunity to engage deeply with specific play behaviors and closely consider the meanings of the terms within the rubric. When creating my rubric, I defined these terms for myself to better inform my observations, in essence, determining these concepts in more universal terms. While coding for play characteristics, these more abstract definitions were difficult to ascribe to the idiosyncratic interactions of the subjects. Body language and facial expressions played a much larger role in identifying behavior. Coding for specific instances of play, and then accumulating that data from all six subjects, resulted in a list of the most prevalent characteristics of play throughout all observations. Since there were multiple examples of play behavior during each of the subject observations, there were a large amount of characteristics recorded. The aspects of play noted in Table 3 were the most actively engaged elements of play behavior on the day of observations.

The numbers in Table 3 focused my attention toward the types of play with the highest occurrences in *Peep's World*, providing a quantitative base upon which to establish my qualitative themes. As I compared and contrasted observations exhibiting these higher frequency characteristics, wrote and read memos throughout this process, and noted repetitions and isolated

incidents of behavior, certain patterns emerged directly from the data. I noted and compressed these patterns, creating four overarching constructs concerning how the BCM encouraged and sustained play. These themes were: active engagement dependent on haptic manipulation, intrinsic motivation through curiosity, absorption through child agency, and access through a balance of familiarity and novelty.

Play Aspect	Frequency
Children using minds and bodies	109
Children interacting with environments	103
Children trying out ideas/roles/feelings	102
Children making/using props	102
Children interacting with materials	100
Children concentrating and thinking about what they are doing	98
Children deeply absorbed and focused	97
Child initiated	95
Spontaneous	92
Fluid and flexible in scope and subject matter	87
Children imagining and pretending	67

Table 3: Most observed aspects of play present during Boston Children's Museum observations.

Active engagement dependent on haptic manipulation

The top five characteristics of play I observed at *Peep's World* have a critical element in common: they all are focused on hands-on interactions. Looking closer at the individual instances of these characteristics, I noted active engagement in play scenarios when subjects were using their sense of touch. Dewey (1910, 1938a, 1938b, 2012) argued that children gain important information about objects and their environments through multi-sensory experiences, particularly their sense of touch. Children begin their exploration of the world by crawling, physically using their hands to hold them up, taking note of the different feelings they encounter and actively interacting with the world. This is a trusted and finely tuned method of understanding for a child. Touch easily and efficiently provides children with high quality information, helping to inform future interactions with their environment. As defined in the literature review, active engagement is the amount of time children spend involved with the

environment, appropriate for the children's age, abilities, and surroundings (McWilliam & Casey, 2008). Actively engaging play, when children interacted with the environment and materials in a concentrated and intrinsically motivated manner, was initiated and sustained through hands-on interactions with the environment and materials of *Peep's World*.

Subject 1 engaged in a meticulous play scenario by holding a scoop filled with water and emptying water into a tube with a scoop. She activated her play through the incorporation of a ladle and experimented with it through hands-on manipulation. Subject 2 was actively engaged in transporting water between the basins. Manual manipulation led to the creation of a hybrid tool, activating and sustaining her play. While in Imagination Playground, Subject 2 learned the physical characteristics of the blocks by manually handling them and only became actively engaged with the blocks when she tried to connect, balance, and construct through haptic experimentation. Subject 3 was actively engaged during almost all of her time in *Peep's World*, which overlapped with her predominantly haptic interaction with the environment and materials. She used her hands to try and float materials, carefully carried the boat to the other basin, attempted to collect all the tools, splashed, and marked the wall with her finger. Subject 4 began his experience in *Peep's World* trying to determine the difference between the permanent and flexible exhibition elements by pushing and pulling with his hands. Additionally, his longest, most focused, and engaged play scenario was based around holding materials, his play gaining complexity as he manually moved tools from one basin to another. Subject 5 did not engage with the materials and environment of *Peep's World* until his mother introduced the hands-on play task of pouring water through the water wheel with a hand held scoop.

Subject 6 established the parameters of her abilities by attempting to fill two tubes simultaneously with measuring cups full of water in each hand. Her manual experimentation taught her the capabilities of a funnel and a whiffle ball, leading to the creation of a prop from existing materials to integrate into her play. The creation of this prop instigated Subject 6's most actively engaged play. As her haptic comfort with this tool grew, she incorporated a wider variety of tools into her play scenario through hands on manipulation, heightening the

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complexity of the play and sustaining her active engagement. Each of these examples points to a scenario where a subject's active engagement with the materials and environment of *Peep's World* was facilitated and sustained through haptic interaction. Subjects reached a deeper understanding of the properties of specific tools and their own abilities through tactile interaction with the environment, encouraging and sustaining active engagement with the exhibit.

The exhibit design of *Peep's World* greatly encouraged the prevalence of the hands-on behavior I observed since the environment predominantly integrated exhibit elements to be touched, prodded, and tested haptically. Subject behavior made it clear that children ages 2 to 5 are not only receptive to opportunities for tactile involvement, but that these opportunities facilitate children's active and sustained engagement in their play scenarios.

As I looked toward integrating this theme into the workshop, my overarching concern was how I could actively engage my subjects with a specific artwork through hands-on play given the Blanton's vision-centric method of engaging visitors. As a general rule, visitors cannot touch the artworks on display at art museums. They are limited to learning through sight. Without being able to use their most trusted and fined-tuned sense, children are limited in terms of the types of learning and the depth of engagement that can take place in an art museum.

Intrinsic motivation through curiosity

Bruner (2006a, 2006b) posits curiosity is fostered through a stimulating environment full of interesting problems, in turn, leading to intrinsically motivated and sustained learning. As defined in the literature review, intrinsic motivation is behavior reflective of one's own interests versus behavior to earn an external reward. Piaget (1969) described curiosity as the urge to explain the unexpected, while Kagan (1972) believed curiosity as the need to resolve uncertainty. Though these two theorists differ in their emphasis, both are grounded in the idea that children's development is spurred by efforts to understand the unknown (Engel, 2011). *Peep's World* uses visual and haptic stimuli to create interesting problems for children to practice their everyday science skills. These stimuli inspire children's curiosity, motivating them to investigate the

exhibit without the prodding or directional cues from a parent or guardian, i.e. intrinsically. Subjects 2, 3, 4, and 6 were all self-motivated as they made their way through the exhibit. Their independent exploration was based on curiosity about the environment. Their curiosity was visible in the fact that those four subjects walked to Catfish Creek before their parents. This independent curiosity drove their subsequent play within that area, making their play intrinsically motivated *through* curiosity. Subject 2 ran around the exhibit first, ultimately letting her curiosity around a tool floating in the water of Catfish Creek determine where she stopped. Later, she created her own tool out of a spoon and tongs based upon her initial curiosity about the use of the materials and how they interacted with water. Subject 3 engaged with Catfish Creek as soon as she walked up to the second basin, letting her own curiosity with splashing and buoyancy dictate her use of tools and where she went in the exhibit. Subject 4 was drawn to Catfish Creek based upon his curiosity concerning the pliability of the tubes, despite his older brother's (Subject 5's) initial curiosity about the Deep Dark Woods. Subject 4's behavior is notable since he spent the second half of his time in the exhibit following Subject 5 around, more curious in his brother's actions. Most, if not all, of Subject 6's play behavior was intrinsically motivated through curiosity; curiosity about her abilities, the use of materials, and how materials could be incorporated into her play scenario. Subject 6's complete disinterest in the tools and play suggested by her father speaks to the potency of Bruner's connection between curiosity and intrinsic motivation.

Judging from these observations, the variety of stimuli of *Peep's World* inspired immediate curiosity. This curiosity, as per Bruner's argument, intrinsically motivated subjects to play. Specifically, the bright colored toys and setting (visual stimuli), the accessibility to these tools and the presence of water (haptic stimuli), and the open-ended and accommodating nature of these tools facilitated independent curiosity, which, in turn, helped children quickly and comfortably begin playing on their own. Engel (2011) argues that there is a paradox involved with curiosity, as it "involves an attraction to what is unknown, but, at the same time, children are often most curious about things with which they are somewhat familiar and about which they

have some ongoing interest" (p. 627). As I thought about the creation of the workshop, I needed to consider how this theme would operate outside of the BCM. Art museums are grounded in their ability to stimulate visually. Children ages 2 to 5 would surely find the artworks visually stimulating during their visit to the Blanton, motivating curiosity and a desire to explore more, but sustaining this feeling of curiosity during a workshop with 15 children aged 2 to 5 was another matter. There was also the possibility that the artworks would be *too* novel, which would limit children's curiosity and interest. The structure of the workshop did not grant the type of free and open exploration by children that I observed at the BCM, which appeared to be critical to translating initial stimulation to intrinsically motivated exploration and play. Additionally, the individual curiosities of each child could not each be fully accommodated given the time and space constraints of the workshop. Integrating this theme into the workshop was dependent on translating children's initial curiosity through visual stimulation to engaging play.

Absorption through child agency

As children grow, so, too, does their independence. Developmental progression allows children to gradually do things for themselves and explore the world independently. A newborn's dependence gradually shifts to a toddler's awareness of their ability to influence a degree of control over actions and surroundings. As this awareness emerges, it is important to provide children opportunities to autonomously make choices, solve problems, ask questions, express ideas, and try different approaches, helping them to learn from their mistakes. Promoting a child's agency contributes to the positive development of his or her self-esteem, identity, and wellbeing. Agency is not only the ability for children to choose or express something, but also their ability to influence and make decisions so that capabilities can expand (Adair, 2014; Sen, 1999). When children make choices, they pursue their own interests and satisfy their own needs, encouraging thoughtful and highly focused behavior.

The high degree of child agency I observed at the BCM directly corresponded to deep absorption and concentration in the children's play. Subject 1 chose which tools to use in her

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play and how to use them. The methodical and repetitive manner in which she emptied water into the tubes using a variety of tools (I observed at least 9 iterations of this task), coupled with the disregard of her guardian's appeal to leave, relayed a high intensity of focus. Barring the one moment when Subject 2 incorporated a tool proffered by her mother, the nine minutes she spent in the exhibit were entirely self-directed. Half of her time was spent intensely involved in transporting water from one basin to another. Breaks in the act of ferrying water did not result in breaks in her focus. When Subject 2's mother attempted to engage with her daughter's play directly, Subject 2 did not respond to her mother's verbal prompts or get waylaid from the larger scheme of play. Subject 2's time in Imagination Playground was spent intently fixated on fitting two parts together, the depth of her concentration visible through the multiple methods attempted to connect the two pieces. When Subject 3 tried to float the tongs, her mother interjected with a proposal to help. Despite the offer from her mother, who could quickly and ably help, as well as Subject 3's discernable irritation, the young girl's belief in her own capability honed her focus such that she did not even look up when her mother spoke. Her confidence in her ability was reinforced when she finally made the boat float.

Similar to Subject 2, Subject 4 engaged in a totally self-directed unit of play focused around the sustained transportation of water. Despite Subject 5's assertive interaction with the water wheel, the intensity of Subject 4's focus did not waver. Notably, Subject 5, whose play with the water wheel was inspired by his mother and not intrinsically guided, was distracted in his task by his brother's actions, reinforcing the link between concentration in play and child agency. The behavior of Subject 6 provided the most glaring example of child agency in play corresponding to an intensity of concentration. Though her father consistently tried to direct her play by putting toys in front of her or engaging her verbally, the deep absorption in her own play agenda was not redirected. When her father instructed her to push the bucket, she completely ignored his prompt to push, choosing to pull instead. She momentarily gave her father the scoop and completed his task, but quickly grabbed her scoop back, her lack of absorption symptomatic of her complete lack of agency within the task. The approximately six minutes it took for Subject

6 to finally acquiesce to her father's wish to leave, coupled with the emphatic "No" he received from her every time he asked, disclosed a confidence and dedication within her agency. The conflict between Subject 6's agenda and her father's is quite clear, but I cannot be sure if her assertiveness was due to the environment or if she frequently prioritizes her own agenda over an authority figure's protestations. What *is* clear is that this environment facilitated a highly concentrated self-directed play scenario.

When subjects were agentic in their play scenarios, they exhibited an increased focus in their behavior. Looking back to Montessori, who stressed the favorability of the environment as a leading factor in encouraging children's self-creation, I correlate this willingness for children to create, execute, and deeply engage in their own individual play agendas with the open-ended setting of *Peep's World*. At an age when children are consistently told what to do, the freedom to control aspects of their experiences, to be the one in an authority position, reinforced each subject's engagement in play and a belief in their own aptitude to lead that play. Art museums are generally inhospitable environments in terms of their accommodation for young children. Even when art museum educators support young children's learning, they do not encourage children to direct their own experiences within the museum. As such, this question of agency is particularly important when considering how this theme could be adapted for the workshop. Specifically, this consideration implied the workshop must somehow establish a more favorable environment in order to encourage the individual child agency and depth of focus characteristic of the play observed at the BCM.

Access through a balance of familiarity and novelty

As an exhibit designed to accommodate the decidedly broad developmental level of children ages 3 to 5, the materials and environment of *Peep's World* must be accessible to both the youngest and the oldest visitor. In Vygotskyian terminology, the exhibit must function as the Zone of Proximal Development (Vygostky, 1966, 1978) for every visitor within that age range simultaneously: meeting the child at their present developmental level through familiar and

undemanding tools and tasks, yet promoting development with some assistance through novel and challenging tools and tasks. Though parents, teachers, and peers generally scaffold tasks for children, there is no guarantee that those adults accompanying children at the museum are willing or able to step into this role. As such, the environment, itself, must be a scaffold, helping visitors engage and complete tasks that would otherwise be inaccessible.

Exhibit designers established this scaffold though the material components of the exhibit. The basins of Catfish Creek were placed low to the ground, making them physically accessible to all the subjects observed. The basins incorporated a mix of permanent and flexible elements. Tools such as spoons, buckets, and boats provided a cognitive and developmental accessibility, since those items are recognizable to most children. Tools such as whiffle balls, funnels, tongs, and large tubes are less recognizable. By establishing a comfort level with familiar tools, children were far more willing to individually approach the more novel tools. And since each child's recognition of these individual tools is different, the wide variety of materials provided a multitude of access points. Critical to these tools was that they could quickly be learned through trial and error, while still being accommodating enough to be utilized imaginatively, outside of their intended use. By balancing familiarity and novelty, *Peep's World* accommodated for each individual subject's age, development level, preferences, and previous experiences, encouraging play by offering multiple access points for children to engage with the exhibit.

Subjects began their play at Catfish Creek with tools and tasks they were familiar with, such as filling up cups, floating boats, and emptying water. During observations, I determined familiarity with a tool or a task as the subject immediately using a tool with ease for its intended purpose. Subjects introduced novel tools to their play later and their exploration of these tools was generally worked into their play unit as their knowledge about them grew. During observations, I determined novelty with a tool or a task as the subject experimenting with the capabilities and limitations of the tool in water and struggling with their handling of the object.

Subject 1 was content filling up a tube along the edge of the basin with a small scoop, and could do so handily and systematically. Deep into this process, she reached for a ladle and

experimented with it by holding it at either end and mimicking the actions she made with the scoop. Having learned the use of this tool, and realizing it was a more efficient manner to scoop water than the scoop, Subject 1 incorporated it into her play scenario. The ladle was both physically accessible and developmentally accommodating: it was available to use if she wanted it and she was able to understand it after a brief period of experimentation.

Subject 2 moved water from one basin to another with a scoop. Successfully completing this task, the young girl observed the tongs. She learned their use through experimentation, but they did not fit her needs. Subject 2 picked up a large spoon and, demonstrating familiarity with it, placed the novel tongs on top, using the combination of these tools to replace the scoop in her transporting water task. The young girl began by ably using a familiar scoop. After completing a task with this tool, and getting more comfortable in the space, she incorporated a less familiar tool. Her trial and error led her to understand how to use the tool correctly, but she ended up combining it with another more familiar tool in order to fit her play needs. For Subject 2, the tools in *Peep's World* were interesting in their novelty, accessible in their use, and accommodating in their open-ended applicability within her play scenario.

Subject 6 initially tried to float tools on top of one another. When they all toppled down, she only grabbed the cups, filling them easily. Though the young girl was clearly familiar with the tools, the task of emptying them simultaneously into two different tubes was too advanced for her. Since Catfish Creek features more than just those materials and that element, Subject 6 quickly found another, more accessible tool, and established a play scenario with elements more accommodating to her development level. Both the funnel and the whiffle ball were novel enough to inspire experimentation, but accommodating enough for her to learn their capabilities after a few tries. Similar to Subject 2, after learning how to use the novel materials correctly, Subject 6 incorporated them to create an imaginative prop. Thus, for Subjects 2 and 6, a balance between familiarity and novelty not only made the exhibit more accessible and accommodating, but, also, it inspired each child's creativity, leading to more complex and sustained play.

These subjects initially interacted with the exhibit through tools they were familiar with, establishing a comfort in the environment and a preliminary structure for their play. Subjects did not initially utilize novel tools. Experimentation through trial and error with less familiar tools encouraged learning their capabilities and facilitated their integration into the child's play schema, but not necessarily in relation to their original purpose. The integration of novel tools into the subjects' play resulted in heightened complexity and sustained play. Critical to establishing the balance between familiarity and novelty in *Peep's World* was a variety of available tools that overlapped in accessibility within the wide swathe of development levels the BCM needs to accommodate. In order to incorporate this theme into the Blanton workshop, a material or activity with the same broad appeal, accessibility, and accommodation as the environment and materials of *Peep's World* would be necessary. In transitioning this particular theme into the workshop for the Blanton Museum, I was at a distinct disadvantage, due to my lack of knowledge about the students from the CDC. Even though the All Stars were pre-kindergartners, there would still be developmental differences between them. Additionally, each individual child has different concepts of what is familiar and what is novel. The art museum, as an environment, might be novel to these children, thus, it was important to focus on the incorporation of accommodating activities or materials that were more familiar to them as I sought to provide access to that novelty.

CONCLUSION

The Boston Children's Museum is an institution dedicated to play. The overall environment reinforces this ethos visually and physically, impressing upon visitors that this is a place catering to children's needs, encouraging them to explore, move, play, and learn. Exhibit designers facilitate play within the exhibits through specific choices with regards to the environment, materials, and content. In order to determine more clearly how play was being encouraged at the BCM, specifically in the exhibit *Peep's World*, I observed six subjects within the space. These observations provided a wealth of data surrounding the behavior of children

within this exhibit. Coding the data using a play rubric, I organized subjects' behavior by individual play characteristics. In looking closely at the reorganized data, four larger themes became apparent. At the BCM, the subject's active engagement in play was facilitated through haptic manipulation. The children's curiosity surrounding both the environment and the materials stimulated intrinsic motivation, a key facet of play. When subjects self-directed their behavior, it resulted in an intensity of focus, a significant play characteristic. The balance of familiar and novel elements within the setting of the exhibit inclusively accommodated children of varying ages and developmental levels. Familiar materials within the environment encouraged initial engagement with the exhibit, while novel materials were made more accessible by virtue of their unstructured and open-ended integration. As these themes became more prominent, so, too, did the challenging task of adaptation that would be necessary to integrate these themes into the workshop at the Blanton. Looking ahead to this process, I distilled the themes into five overarching questions to direct the structure and content of the workshop:

1. Is it possible to facilitate the same types of behavior observed in an open-ended children's museum setting in an art museum during a workshop?

2. How can I translate spontaneous play to structured play while still providing opportunities for child agency?

3. How can I frame the workshop so that children are intrinsically motivated to interact with artworks through play-based activities?

4. On average, subjects spent 15 minutes at *Peep's World*, yet the workshop was slated to be 30 minutes. Which artworks would inspire curiosity and could that concentration be sustained?

5. What hands-on activity or material could be used to actively engage the students in play that was appropriate for the gallery setting?

Thinking through and answering these questions helped focus the workshop around the four themes established in this chapter. The process of adapting these themes through the creation of the workshop is discussed in the next chapter.

Chapter 5: *A Plan for Play*

There is overwhelming consensus that integrating play or playful learning into museum programs adds a dimension that is worth the investment. (Shaffer, 2015, p. 141)

INTRODUCTION

This chapter is dedicated to the creation and development of the workshop I led at the second site of research, the Blanton Museum of Art. As discussed in the previous chapter, observations at the Boston Children's Museum led to the discovery of four larger themes drawn from the behavior of children aged 2 to 5 in the *Peep's World* exhibit. These were: active engagement dependent on haptic manipulation, intrinsic motivation through curiosity, absorption through child agency, and access through a balance of familiarity and novelty. I used these themes as a starting point with regards to the structure and types of activities to include in the workshop. The rubric (Table 1), an additional review of literature surrounding the play of children aged 2 to 5, the limitations of both the CDC students and the environment of the Blanton, and my own experiences teaching in the museum further impacted the workshop's structure and content. I will begin by introducing the Blanton as a site of research and follow by discussing my thought process going into the creation of the workshop. I will finish this chapter by going through the workshop by section in an effort to further elucidate my process. The workshop lesson plan appears as a whole in Appendix E.

BLANTON MUSEUM

With its hacienda style architecture, the Blanton Museum of Art is an unassuming presence upon Martin Luther King, Jr. Boulevard in Austin, Texas. Walking under the eaves of the portico bordering the entrance, there is the feeling of walking into an updated stately villa in Merida, Mexico. Yet, this understated façade fronts the largest university art museum in the country and the third largest art museum in the state (Blanton Museum of Art, 2015). Turning the corner to enter the museum, passing the obligatory visitor services desk on the left, bathrooms and information desk on the right, one's eyes and feet are drawn forward by something blue. Suddenly, a vast mezzanine area envelops visitors, gradations of blue to white and back again

line the vertical planes. Light streams in from the impossibly high ceilings and there is a palpable feeling that the world outside has been left behind. This immersive piece of artwork, *Stacked Waters* by Teresita Fernández (2009) (Figure 7), is at once overwhelming and comforting, inundating and sheltering. In many ways, this experience sets the tone for the rest of one's experience at the Blanton Museum. The Blanton's collection boasts almost 18,000 works of art (Blanton Museum of Art, 2015), and, at any given moment, there are artworks on view from myriad time periods in a variety of media. Soaring ceilings and towering white walls are a mainstay throughout the two floors of gallery space, but the manner of hanging the paintings and the overall exhibit design grounds the space and focuses one's attention.

Figure 7. *Stacked Waters*, 2009, cast acrylic site-specific installation, Teresita Fernández. Photo credit: Blanton Museum of Art.

As a Gallery Teaching Fellow, I am responsible for creating and teaching tours to school groups within the galleries, incorporating engaging and interactive activities as a way to drive home larger concepts represented through the objects on view. The physical environment of the large galleries offers ample space between the works. The artworks are visually captivating, representative of a diversity of ideas, and large in scale. As such, they lend themselves easily to an active manner of gallery teaching. I initially chose the Blanton Museum as a site for research as a matter of convenience, but the more I thought about the site in terms of its impact on the

workshop, the more I discovered its suitability for my third stage of research. Though the other art museum in Austin, The Contemporary Austin (and its associated sculpture park, Laguna Gloria), also features large scale, visually stimulating works, the Blanton does not limit its collection to a specific time period or style, making it the only museum in Austin featuring such a wide-ranging representation of the history of art. Additionally, while the Blanton definitely boasts an impressive range and number of visitors, particularly for being on a college campus, its annual attendance hovers around 159,000 (Blanton Museum of Art, 2013). This makes the foot traffic on any given day at the Blanton on the lower end of the spectrum, particularly when compared with The Bullock State History Museum of Texas across the street, which has an average annual attendance of around 240,000 (Bullock Texas State History Museum of Texas, 2015). Though a disadvantage for revenue, the Blanton Museum's lesser attendance provided the perfect setting to stage an experimental workshop. As it was, the elements I considered in terms of their inadvertent, yet possibly deleterious, impact on the workshop, were vast, as will be discussed later in this chapter. Staging the workshop at a site that was larger and less controllable than the Blanton would have made it even more difficult to distill children's behavior as a result of the workshop from children's behavior resulting from the increased stimuli of a larger site. Though determining the cause and effect of behavior is a difficulty in all research, regardless of the complexity of the site, in the case of my research, the reduced foot traffic on any given day was an unexpected advantage.

I am very familiar with the art on view at the Blanton, as well as the general layout of the museum, due to my position as a Gallery Teaching Fellow. As such, I could easily think of artworks that would work best within the parameters of my workshop. My positive relationship with members of the education and visitor services staff, and my professional demeanor both in the office and the galleries, emboldened critical members of the museum to sanction the staging of an experimental and unplanned workshop. Furthermore, my rapport with members of the security staff helped convince them that this theoretically demanding workshop could be contained without the need for them to hover over the children. There are many challenges to

teaching within the galleries of an art museum, most of which I have experienced firsthand through my position as a Gallery Teaching Fellow. But these challenges multiply and mutate in the consideration of a play-based workshop for pre-kindergartners. These challenges, and resulting solutions, produced a set of criteria from which I established the structure and focus of the workshop. These specific issues, along with my choice of artworks and activities within the workshop are discussed below.

A THOUGHT-FULL PROCESS

I held no pretense that creating a workshop based upon the translation of concepts from a children's museum to an art museum was going to be easy. Perhaps in the haze of my post-observation euphoria, waist deep in my analysis, I underestimated the considerations and limitations to be assessed before I could even begin thinking about a tangible plan for the workshop. Like a Fibonacci sequence, the more time I spent considering the limitations discussed below, the larger, deeper, and more complex they became. Where should I begin? If the process of writing this thesis has taught me anything, it is that I need to break down larger concepts (or chapters) so as to access them from multiple angles. The site of research was the best place to start since the Blanton, as an institution, would be a critical component to the creation of my eventual grounded theory.

Security: Protection vs. comfort

Art museums are, first and foremost, tasked with protecting the artworks entrusted to them. The Blanton Museum, like any other art museum, has specific and stringent policies in place to maximize the safety of the works in their collection. These policies are integral if a museum hopes to maintain their trust with donors, artists, and the general public. Guards stationed within the galleries administer the safety of the artworks. These men and women are trained to know which artworks are most fragile and which artworks are most susceptible to high numbers of visitor views. The stanchions surrounding certain artworks and the black tape on the ground indicating a safe viewing distance serve to keep viewer's a safe distance from the

artworks. But these policies do not necessarily lend themselves to an environment facilitating playful experiences with young children. These embedded barriers are the main reason parents and educators feel uncomfortable bringing young children to art museums. In my experiences leading groups of children through the galleries, I have had my fair share of experiences where a guard's overbearing presence or verbal warning stymied the flow of an engaging dialogue, interrupted a child's illuminating observation, or, in the worst cases, reinforced the pernicious yet pervasive idea that art museums are not places for children. For many of the subjects in the workshop, this would be their first art museum experience, and the last thing I wanted was for my workshop to be the occasion to establish negative feelings about art museums. A child's ability to learn is dependent not just on the quality of resources and teachers, but also on their feeling of comfort (Sparks, 2013). In order to facilitate that feeling of comfort, which sets the stage for learning, I needed to ensure that the activities in the workshop did not infringe upon the security measures in the environment of the Blanton. The additional precautions I took were: discussing the workshop with the head of security in the weeks leading up to it to ensure the activities were acceptable, communicating with the guards working on the day of the workshop that I would be leading play-based activities in front of the artworks with pre-kindergartners, and ensuring at least three chaperones per group of children. There is no doubt that the protection of art within the museum is critical, but the safety of the art should not come at the expense of the safety to learn. These considerations and precautions were essential to maintaining the balance between the security of the artworks and the children's comfort within the space.

Time: Scheduling and attention

Time was another factor. The students from the CDC would be limited by their schedule in terms of when they could come to the museum and the duration of their visit. The workshop, itself, needed to be worked into the Blanton's larger schedule of tours that were booked in one hour blocks. If I did not communicate with the tour coordinator with sufficient advance notice, I might not be able to choose a time fitting within the CDC class schedule. Additionally, I might

have to select a time where there were a many other tours occurring, and teaching the workshop amid an abundance of other people would be highly distracting for children.

Yet, controlling for a time with less people did not ensure children's focus. The art museum is a distraction heavy environment, featuring a wealth of visual stimuli and opportunities for lapsed attention. I needed to established a balance between too little time (non-engagement, casual attention) and too much time (disengagement, boredom, and acting out) for the entire workshop and the individual activities. Though there are emotional and cognitive factors that greatly influence attention span, it is generally accepted that a 4-year-old can stay interested in a task between 8–15 minutes, the greater amount of time being associated with new and especially interesting activities (Neville, 2007). As such, I decided on 30 minutes, at most, for the entire duration of the workshop. Spending 30 minutes at one artwork would definitely overwhelm young children's attention span, but 10 minutes at three artworks was unrealistic and would result in rushing through activities and running to each artwork. Likewise, I needed to factor travel time up to the galleries from the main entrance and between works into those 30 minutes. Though the Blanton is not an enormous museum, I would still need to choose artworks close enough together so that they would not consume too many precious play minutes. Thus, I decided that a workshop consisting of play-based activities at two artworks, lasting 15 minutes each, that were within a one-minute walk from one another was the most appropriate given the developmental level of pre-kindergartners and institutional scheduling constraints.

A "touchy" subject

Child exploring and playing through touch was one of the main themes from my observations at the BCM. At the Blanton, with one exception, interactions with artworks were limited to the sense of sight. I needed to integrate a haptic component into my workshop in order to encourage play, but it also needed to be grounded in the concepts raised by the artwork. Though I have led activities within the galleries using haptic materials brought into the galleries, I had neither done so with young children, nor with the explicit intent to facilitate play.

Additionally, I would have to carry with me throughout the workshop the material that would engage the children kinesthetically, which necessitated that they be easy to transport.

The art that works

The seminal fulcrum around which these play activities turned was the artworks, themselves. Much of the artwork in the Blanton's collection deals with knotty social issues like racism, colonialism, and sexism. Children develop their sense of empathy between the ages of 4 and 8, and the earlier educators introduce these difficult topics, the less likely a child is to become entrenched in prejudices based on lack of information or misinformation (Holmes, Johnson, & Adair, 2014). As argued by Bruner (2006a), young children have the capacity to understand complex topics. Holmes, Johnson, and Adair (2014) state that an effective method of influencing young children's racial attitudes early on is with picture books that normalize positive images of ethnicities, races, and cultures. Artworks can be used in the same manner. That being said, the purpose of this workshop was not how to address complex social issues through art with 4-year-olds. While this is an important area to pursue through research, this study sought to support the needs of 2 to 5-year-olds within the Blanton using play techniques learned from the BCM. And I wanted to set myself up for "success" in every way possible. Choosing an artwork overtly dealing with a complicated issue would not be the most beneficial for my research purposes. I needed artworks touching upon concepts, processes, and experiences pertinent to, even tangentially, a four-year-old's limited frame of reference. More than anything, this decision focused around the pertinence for the artwork, specifically the content of the artwork, to fall within each child's Zone of Proximal Development, as defined by Vygostky. Though I am using play to mediate the divide between young children and the art on view, the works must still be accessible enough to allow each child to make the proximal leap between their own experiences and the artworks.

Space to learn

The artworks also needed to be physically accessible. Specifically, there needed to be enough space so 15 pre-kindergartners could comfortably cluster around them without endangering themselves, the art, or any neighboring works. Pre-kindergartners are notorious in their resemblance to meandering cats whenever a specific destination is in mind, so a piece with enough space to accommodate this overflow would be ideal. Additionally, if I hoped to integrate any hands-on or active activities, enough space around the artworks was essential. Lastly, the works of art needed to be low enough to the ground to be seen from a seated position on the floor by young children, and also big enough so participants would not be inspired to get any closer than necessary. Ideally, these artworks would represent different forms of media, introducing participants to the breadth of ways art is made. At the end of this process, I chose two works that fit the considerations listed above. These artworks were *Dawn's Presence—Two Columns* by Louise Nevelson and *Espiritu Guardian (Guardian Spirit)* by Matias Duville. The suitability of these two works will be discussed in more depth later in this chapter.

My process to my practice

Taking a moment to reflect on these issues, I was daunted. I entered this creative process as the champion of educating young children in art museums, but the implication of that task was that I would be the one teaching them. Through my position as a Gallery Teaching Fellow, I had a good amount of experience teaching middle school children in a gallery setting. And one summer I taught an after-school gardening club for children aged 6 to 10. Additionally, from my review of literature, I now knew much more about how young children learned, best practices for teaching pre-kindergartners, and how children's developmental goals should impact the manner and process of teaching, but I had never actually led a group of 4-year-olds with the intent of introducing and disseminating a concept.

A lack of subjects

At the outset of this process, I had not solidified the specifics of where these children would come from. During a meeting with my thesis committee, it was suggested I connect with the director of the Child Development Center at The University of Texas at Austin. The specifics of establishing the CDC and the All Stars as subjects of the workshop will be discussed in more detail in Chapter 6, but I raise the topic here to present the fact that at the beginning of developing this workshop, I had not established who my subjects were. My personal teaching philosophy is based in constructivist pedagogy and is strongly impacted by the Reggio Emilia method. How was I supposed to create a workshop focused on the individual child if I did not know who the child was? Additionally, I did not know how many children I would be teaching. This was an issue in terms of preparation, but also because the Blanton caps their tours at 15 people in order to regulate museum capacity, keep the artworks safe, and maintain a more intimate teaching experience. The thought of teaching one workshop was daunting enough, if I did have to teach more than one, I needed to make sure that the multiple iterations did not change the scope of my study.

Adults: Supervision and impact

Whatever group of children I worked with would need supervision beyond me to keep both them and the artworks safe. Beyond the more logistical issues of who these people would be (parents, teachers, peers, Blanton staff), there were other considerations. When I was observing children at the BCM, a parent or guardian accompanied them. Though my research did not look specifically at how adults impact child's play, research has shown that adults have an enormous effect in terms of positively influencing children's play and learning within a children's museum (Anderson, et al., 2002; Wolf & Wood, 2012). Regardless of the structure of the workshop (to specifically engage play in pre-kindergartners), these adults would nonetheless be a part of it. On the one hand, I could not ignore them. On the other hand, planning for their involvement within the activities, or providing opportunities for adult interaction within the activities, strayed from

the intended focus of my research question. Since these children were in a group of their peers, versus alone with a parent or guardian (like the BCM observations), there would be a social component to this workshop that was not present at the BCM. As discussed in Chapter 2, play manifests itself differently based upon the social interactions occurring (Parten, 1932). Would the themes from solitary play at the BCM be applicable to this different social play scenario? Additionally, how could I encourage individual child agency without jeopardizing the possibility for group play?

Adapting play

Intrinsic to my research question is the process of adaptation from the BCM to the Blanton. The impetus for this study was, first and foremost, creating a method to transfer concepts from one institution to another. While my research question was not directed at creating a program for other art museums to use, I still needed to think about how this workshop could influence a more generalized theory for the integration of play at art museums. Simply recreating elements that encouraged play at the BCM within the Blanton Museum would be an incongruous application of my observations and disregard the whole concept of adaptation. Activities undertaken in art museum galleries to facilitate close looking and learning opportunities are most successful when they are grounded in the artwork. I could not force a playful activity onto an artwork simply because it integrated findings from the BCM; it needed to be authentically adapted to the unique parameters of the artworks within the Blanton Museum.

Planning for unpredictability

Surrounding all of these issues was the knowledge that if this workshop was anything like the gallery tours I previously conducted, the variability of human behavior, particularly with 4-year-olds, and unforeseeable day-of interruptions would make my plan anything but certain. The work I invested in this plan would certainly not be futile, but I needed to embrace the unpredictability of life and understand my initial plan might be more of an outline for the workshop as opposed to an exact replica.

Clearly, the process of creating a workshop would be influenced by many more factors than just those main themes determined from my observations at the BCM. Taking the time to thoroughly and deeply consider the nuances of these multifaceted issues helped to establish a critical foundation upon which the workshop could be built upon.

PRE-VISIT

I got the idea to incorporate a pre-visit to the workshop due to its successful implementation within the multi-visit school program known as Art Central that I'm involved with at the Blanton Museum, but such pre-visits have a rich history and are commonly used in art museum school visit programs. Simon (2008) describes the pre-visit as "the ability to successfully set a powerful and useful expectation for museum experiences" (para. 2). In terms of extending the museum experience, the pre-visit is more valuable than the post-visit, as it introduces the visit and frames a visitor's experience (Simon, 2008). In the context of Art Central, the pre-visit introduces the museum, establishes guidelines for behavior, and prepares the students for what they will be doing during their visit, all within the comfort of their classroom. The pre-visit operated similarly in the workshop: I visited the All Stars classroom a week before they came to the museum and implemented a specific lesson plan tailored to 4-year-olds. A pre-visit enabled me to introduce the concept of a museum for those children who were unfamiliar, discuss the logistics of how we would get there, clarify the types of activities we would partake in, and explain the rules (and reasons behind them) when visiting the museum.

A Narrative Framework

To aid in the task of framing the workshop, I decided to read the class the children's book *Dan's Angel: A Detective's Guide to the Language of Painting* by Alexander Sturgis (2003). A young boy, Dan, enters a museum and finds it incredibly unexciting until an angel flies out of a painting and brings him to different artworks within the museum. The angel tasks Dan to become an art detective: to look closely at artworks in order to find visual clues to help him contextualize the artworks and thus understand them. This book introduces the art museum as an interesting

and inviting place, addressing any negative connotations of looking at art that children may already hold. Children inherently work with and through different ideas they encounter in a narrative style, reinforcing storytelling as a natural and important way for young children to learn (Paley, 1998). Presenting this information in the form of a story allowed me to prioritize the support of early learning before we even got to the museum. Additionally, the concept of Dan becoming an art detective could be adapted as a narrative context for the workshop. The imaginative role-play involved in *becoming* a detective within the museum assisted individual child agency within the larger group through an accessible and stimulating task that was open-ended in nature. In the book, Dan uses a magnifying glass to look closer at the artworks and find clues, so this role also came replete with its own hands-on prop. The use of actual magnifying glasses, while authentic to the role of a detective, is not allowed in the museum galleries due to the predilection of those using them to get incredibly close to the artworks, potentially causing damage through contact. My initial disappointment aside, a conversation with my supervisor at the Blanton resulted in the realization that by making circles with their hands around their eyes to mimic glasses, the children could just as easily focus their close looking while keeping the artwork safe.

DAWN'S PRESENCE—TWO COLUMNS BY LOUISE NEVELSON

Louise Nevelson's hulking, all white sculpture, *Dawn's Presence—Two Columns,* Figure 8, greets visitors halfway through an enormous gallery on the second floor of the Blanton. It is the only sculpture in the gallery which, coupled with its monochromatic representation, affords the work with a palpable presence. It is an accumulation of wooden objects arranged in the manner of a vertical jigsaw puzzle, but its reliance on found objects, i.e. those the artist found around her neighborhood, gives an unfinished, totemic impression. An icon within the Abstract Expressionist Movement, Nevelson created work dealing with concepts of identity, representation, conflicting dualities, and place making. Yet her trademark abstract forms can reference a variety of forms, depending on the viewer's experiences and background. The

singular use of white paint offers a blank screen of sorts upon which the visitor can project his/her own impressions.
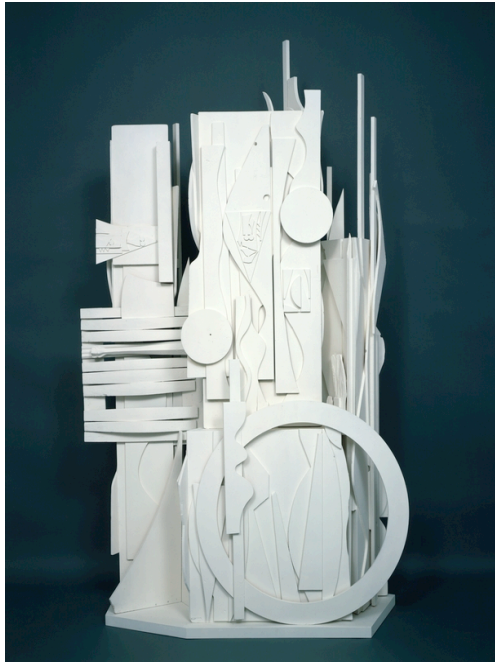
Figure 8. *Dawn's Presence—Two Columns*, 1969–1975, painted wood, Louise Nevelson. Photo credit: Blanton Museum of Art.

In the multitude of times I taught with this work, no one conversation has been the same. Young children are offered so few opportunities to exercise a trust in their own perceptions, making this piece particularly beneficial in terms of encouraging individual child agency. The abstract representation of forms allows an opportunity for open-ended exploration of the artwork. Without the stress of having to find the correct answer, children can be experts of their own observations. This confidence encourages participation, letting each student see the artwork from another perspective and allowing a gradual stacking of interpretations all grounded in the artwork. The piece can be comfortably accessed from 360 degrees and its location in the middle of such a massive gallery affords visitors the space to comfortably roam around the artwork.

The first thing that came to mind when thinking about a play-based activity for 4-year-olds based upon this particular artwork was the use of blocks. There are direct connections between this activity and the artwork. Both feature wood as their primary material, revolve

around the concept of construction, and encourage personal and open-ended interpretations. Children enjoy blocks during much of their childhood, but "peak interest in block building is during the preschool years" (Frost, Wortham, & Reifel, 2012, p. 161). They "provide avenues for cognitive learning, creative expression, and social interaction" and can be used "to demonstrate elements of stories…or to promote language" (Frost, Wortham, & Reifel, 2012, p. 161). Block play encourages concepts of representation and symbolism, an intrinsic element of looking at art. Playing with blocks is a great way for children to practice their fine-motor movements, those movements involving the use of hands and fingers. Additionally, different levels of social play can be observed during block play (Frost, Wortham & Reifel, 2012). By giving one box of blocks per pair of children, I could offer the opportunity for solitary, parallel, and cooperative play, depending on the child's interest, comfort, or development level. Block play areas are staples of preschool classrooms, meaning there is an immediate familiarity and comfort with the materials and the process, even if the prompt would be more specific to the artwork. The use of block sizes and shapes blocks that are not the same as those used within the classroom (including smaller, organic, and curvilinear forms) would help stimulate a curiosity beyond the initial recognition of the material and, in theory, incite a creativity beyond in-class block creations.

Blocks are, first and foremost, hands-on materials, encouraging a haptic element that was safe to use within the galleries and could be easily contained. Beginning the interaction with an open-ended discussion would provide the opportunity to see how children initially responded to the artwork, using questions to help them think through the construction and symbolism of the piece. Following up with the block play activity would nurture the hands-on exploration of these concepts and provide an opportunity to promote child agency, giving a platform for each child to respond to the artwork in his/her own way. This structure would also support the opportunity to compare and contrast children's own sculptures and Nevelson's, thereby providing a bridge between themselves and the artist.

ESPIRITU GUARDIAN (GUARDIAN SPIRIT) BY MATIAS DUVILLE

Matias Duville's painting, *Espiritu Guardian (Guardian Spirit)*, Figure 9, is a dynamic scene where all is not as it seems. Upon first glance, it appears as though the artwork is an abstracted form of spattered paint upon particleboard, but closer inspection reveals there may actually be a narrative hiding underneath this energetic depiction. Though not overt, this piece does feature more figurative or representational elements within the piece, such as recognizable houses, cars, trees, and a pair of shoes and mittens, balancing the more abstracted nature of the Nevelson sculpture. Additionally, the idea of a narrative hiding within the painting provided an opportunity to incorporate the role of art detectives. Using magnifying glasses to initiate children's close looking to find visual clues was an initially stimulating activity, giving direction and focus to the children's looking through an established role, and setting the stage for creating stories. The content of *Espiritu Guardian* has an intrinsically narrative focus, so working an element of storytelling into the activity would be grounded in the artwork.

Figure 9. *Espiritu Guardian (Guardian Spirit)*, 2008, mixed media, Matias Duville. Photo credit: Blanton Museum of Art.

My initial idea was to have each child tell a story based in the landscape of the painting, but the reality of a 4-year-old's story is a meandering endeavor at least 10 minutes in length. Just one student's story could take up the entire time allotted for this artwork, so there was absolutely no way I could give 15 children the freedom to weave their individual tales to a natural conclusion. The key factor in providing a solution to this story conundrum lay in reminding

myself that children's play, and the content therein, is not for the benefit of adults. Play is one of the few activities children can engage in without feeling like they need to perform for adults or do something correctly (Frost, Wortham, & Reifel, 2001; Singer, 2006; Vygotsky, 1966; Wood, 2014). Who was I to take that opportunity away from them when they most needed to have a familiar interaction with a peer? I decided students could turn to the person next to them and orally tell each other their stories, validating each child's imaginative process without sacrificing the depth and breadth of stories 4-year-olds naturally tell while encouraging social interactions. But, I still needed a larger play-based activity to work those stories into.

I often teach in the galleries with an activity called "Tableau Vivant." The activity focuses on acting out the story within the painting by physically recreating the scene with students in the various roles. In so doing, they can tangibly think beyond the static nature of the artwork. For pre-kindergartners, this activity would sustain their attention in a multi-sensory manner past their initial interest in the task of finding the story hiding in the artwork. The activity is also grounded in the artwork through the focus on narrative and storytelling. Additionally, this activity would build upon the block sculpture activity at the Nevelson, offering a different type of play to engage in: physical and pretend.

Leslie (1987) argues that pretend play provides a context for children to understand that others have thoughts, beliefs, and desires. Children acting out a story (based upon a group consensus of the story hiding in the artwork) would help them understand that their peers have perspectives different from their own (Frost, Wortham, & Reifel, 2012). Children also get to take some ownership over individual parts of the artwork. Even though children might be assigned the role of playing a house or a tree, they can make it their own, interpreting that role in any manner they wish, enabling child agency within the larger group activity. During the ages of 2 to 7, children are gaining increased control over their gross-motor movements, those encouraging mobility, allowing them to engage in skills requiring body movement (Frost, Wrotham, Reifel, 2012). Incorporating a more physical element while looking at the artwork would let children try out those burgeoning skills. This type of play also catered to a different intelligence. Whereas the

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block building activity focused around logical and spatial learning, this activity would focus on bodily-kinesthetic learning (Gardner, 1983), presenting a different angle for children to approach the ideas expressed in the artwork in a more active and personal manner.

POST-VISIT

Although a post-visit is not incorporated into the Art Central program, a review of literature in museum education shows that, similar to the pre-visit, this is a widely used and historically successful model of extending and reflecting on the museum experience. Though my research question was not specifically looking to extend the museum experience outside the confines of the museum, I felt obligated in my role as a museum educator to not simply use this workshop as a research tool, but also as an opportunity to apply best practices in art museum education. First and foremost, a post-visit presented a teachable moment and a way to model a reflective practice after the museum visit, transitioning the ideas raised in the workshop into the children's lives outside of the museum. More specifically in terms of answering my research question, a post-visit afforded me the opportunity to observe the impact (if any) of the workshop on the children through observable changes in behavior, vocabulary, and play. The scope of my research was not focused on measuring the impact of the workshop, but making informal observations could determine with greater accuracy the difference between correlation and causality in terms of behavior witnessed during the workshop. This distinction is important and would be another validity measure in terms of curbing the impact of potential personal biases on my results. Additionally, specific examples of behavior from before, during, and after the workshop could be utilized to further ground my theory in the data.

CONCLUSION

The development of this workshop was a far more involved and complex process than I first imagined. The more I contemplated the logistics of such an undertaking, the creation of a viable lesson and the actual teaching of the workshop, the more entangled I became in the myriad convolutions that needed to be addressed before I could actually develop and then teach

the workshop. Themes extracted from the observations at the BCM, research surrounding the learning and play of young children and museum education, and personal experiences teaching at the Blanton were the basis of the structure and activities of the workshop, but these components needed to be finessed and delicately pieced together to create a cohesive plan and a valuable research opportunity. By engaging in the process of thinking through criteria based on the intrinsic locational barriers of the Blanton and the developmental and cognitive capabilities of pre-kindergartners, I was able to choose the artworks *Dawn's Presences—Two Columns* by Louise Nevelson and *Espiritu Guardian (Guardian Spirit)* by Matias Duville to focus the play-based activities of the workshop. Once I finished developing the workshop, I taught it to a pre-kindergarten class from the Child Development Center at the Blanton Museum. In the next chapter, I will present the narrative experience of teaching the workshop, discussing specific behaviors of the children, the collection of data through the tools introduced in Chapter 3, and communicate the process of data analysis and the resulting findings.

Chapter 6: *A Paradigm for Play*

> Play in museums, whether children's museums or more traditional galleries, is becoming more accepted as a strategy for learning and is seen not simply as a frivolous activity, but the way that children construct meaning about their world. (Shaffer, 2015, p. 141)

INTRODUCTION

With the workshop developed, my focus now shifted to its implementation within the Blanton Museum. The purpose of this chapter is to report the outcomes of the workshop in terms of the children's behavior. In order to situate these outcomes, I will describe a narrative of both iterations of the workshop, including my actions as a teacher and the children's actions. I will begin by introducing the Child Development Center (CDC) at The University of Texas at Austin as a site of research for both the pre- and post-visits and establish the All Stars pre-kindergarten class as the subjects for the third stage of research. Next, I will discuss the analysis of the data collected (from the videotape of the workshop and my personal notes) and the manner in which I categorized my findings into larger themes with help from the rubric (Table 1). I defined and established themes using direct evidence from the data, which was then triangulated through discussions with the critical friend, Marie Petersen, and the interview with the teacher of the All Stars, Jennifer Acebedo.

A MODEL PROGRAM FOR THE AUSTIN CHILDCARE COMMUNITY

The University of Texas at Austin Child Development Center (CDC) provides childcare services to university students, faculty, and staff who have children aged six weeks to five-years-old (Child Development Center, 2016). Established in 1991, the center features three locations around The University of Texas at Austin campus, offering a developmentally based early childhood program designed to meet the needs of the whole child in a stimulating and caring learning environment. An amalgam of Reggio Emilia, Montessori, and Deweyan pedagogies (see Chapter 2), the center is grounded in the philosophy that "young children are active learners, involved in a process that uses all their senses as they talk, work, and play with people and materials" (Child Development Center, 2016). The program emphasizes "creativity and a strong

sense of identity and competence, encouraging children to feel good about themselves and their abilities" (Child Development Center, 2016). Daily activities reinforce this idea, balancing experiences in both group and individual settings within units of study that are interesting and meaningful to young children. These activities focus on developing children's linguistic, social, physical, and cognitive skills, helping them to succeed throughout their education. As a program associated with The University of Texas at Austin, university students often use the CDC as a site for education and research, which parents are alerted to during enrollment. Through emails with the director of the CDC, Hara Cootes, I established the San Jacinto location as the ideal site for research due to its proximity to the Blanton Museum. Further discussions about my research with the San Jacinto site director, Paula Barton, led me to Jennifer Acebedo, the head teacher of a pre-kindergarten class called the All Stars with a class of 22 children. Jennifer and I worked together to solidify the logistics of the workshop. By cross-referencing with the tour coordinator at the Blanton, we established November 5, 2015 at 10:00 A.M. as the date for the pre-visit at the CDC, November 12, 2015 at 10:00 A.M. as the date of the workshop at the Blanton, and November 19, 2015 at 10:00 A.M. as the date for the post-visit back at the CDC.

The San Jacinto branch of the CDC is located on The University of Texas at Austin campus in the basement of the School of Social Work at the corner of San Jacinto Boulevard and East 20th Street. This hulking structure is made up of bricks in a variety of whites, beiges, and brown tones and topped with clay roof tiles. The only indication that an early childhood education center lies amid an area generally populated by college students is a small blue awning jutting out from the back of the building. Walking up to the door, one is faced with two doorknobs about one foot apart. A sign taped to door reads: "Adults: Please do not let your child turn this knob." This door opens into a small foyer. On the right is a corkboard full of pinned papers: CDC parent newsletters, the weekly lunch schedule, and news articles relevant to parents and educators alike. On the left is a small bookcase holding illustrated children's books for families to borrow, the corroding spines and curling pages exposing their degree of use. A second glass door lies straight ahead with another small sign next to a doorbell reading "Please

Ring For Entry." Through this door and down a set of stairs lined with children's drawings lie the classrooms for children three to five-years-old. At the bottom of the stairs, the door to a classroom occasionally interrupts a wide hallway lined with small wooden cubbies on either side. The third door on the right features a sign reading "All Stars" in bright red and gold lettering. The classroom is separated into smaller interest areas by low lying shelves. The smaller areas focus on writing, dramatic play, math, reading, art making, and block building. These learning centers "provide practice in making decisions, following directions, working independently, and learning the care and use of materials" (Child Development Center, 2016).

PRE-VISIT: "A MUSEUM BESIDES THE THINKERY"

Walking into the All Stars classroom on the morning of November 12th at 9:45 AM for the pre-visit, I saw each station occupied by at least three children, except the block area, which featured five children: three working on a group project and two working individually. Jennifer worked with two students on some math problems, an assistant teacher set the table for lunch, and a few parents dropped their children off. I gazed around the room, trying to glean any information possible from the way the children interacted with the environment: Were they working well with their peers? Were they engaged in their tasks? What were their gross and fine motor skills? The teacher gave a five-minute warning to clean up their materials, and I walked over to their small library. Two children came up to me, asked me who I was, and if I could read them a story. "I'm actually just about to read a story to the whole class!" I told them. They persisted. We compromised by looking through two books as they told me what was going on. This satisfied their request while also allowing me to get an informal understanding of their visual literacy. Looking through the two books, both children actively created narratives around the visual clues they observed. It was interesting to see which ideas or visual cues they did not pick up on. For instance, neither child was familiar with the inside of a post office or the specifics of that environment. Likewise, an illustration of a female, African-American police officer talking to students in a classroom was confusing: one child was not sure if this woman

was a teacher dressed up as a police officer or if it was a school for police, while the other child thought the students were in trouble. These discrepancies reaffirmed the reality that children's knowledge is rooted in experiences within their socio-economic and environmental geography, and that their individual frames of reference influence their understanding, which, in turn, determines how these experiences impact their future understanding.

Although the crux of the pre-visit was reading *Dan's Angel*, I also wanted to establish a more personal framework for the children's visit to the Blanton. "How many of you have been to a museum before?" About 18 hands shot up. The teacher, sitting in front of me with the children, piped in, "How many of you have been to a museum besides the Thinkery?" Two hands remained. "Since most of you have never been to an art museum," I said, "let's read a book together about a young boy named Dan and his first trip to the art museum!" About a quarter of the way through the book, a young boy named Jackson[1] lost focus and started poking the boy next to him, irritating the other students sitting around him by talking loudly. He resisted the teacher's warnings about paying attention and continued talking over me. The teacher mentioned that he could go to the writing center to write in his journal. With that suggestion, he went from being disruptive to the whole class to actively engaged and focused on an individual activity.

After I finished the book, I said, "When we go to the art museum together, we're going to do the same thing Dan did, we are going to look closely at the artworks to find clues to help us figure out the stories hiding in them. Now, what tool did Dan use to help him look closer?" A number of children called out "A magnifying glass!" I explained that since the museum has certain rules in order to keep the artwork safe, we needed to use the pair of magnifying glasses we had with us all the time. I took my hands, fashioned them into small circles, and put them around my eyes. "Let me see all of your magnifying glasses!" I said. The children made their hands into circles and brought them up to their eyes, gazing at each other and around the room.

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[1] The consent forms each parent or guardian signed (see Appendix C) determined if children could be referred to by name in this study. Since not every parent gave their permission, each child was given a pseudonym. Pseudonyms remain constant throughout this study.

Luckily, the teacher had already addressed museum behavior with them, so, as I brought up the concept of walking and staying in a group, she said, "Let's make sure we bring our walking feet!" When I mentioned how important it was going to be to listen to directions and to each other, she said, "We're going to bring our listening ears!" When I brought up the fact of not touching the artworks, she said, "Remember, how we talked about this? Keeping our hands to ourselves?" At this point in the pre-visit, most of the children were quickly losing focus, so I finished up by telling them that we were going to be doing some fun activities during our time in the art museum. This pre-visit allowed me to introduce myself to the children and to informally observe them. By noting the children's skills and behavior during this visit, the workshop, and the post-visit, I developed a holistic view of the children, facilitating a nuanced analytical process.

THE WORKSHOP

On the morning of November 12th, 2015 I waited with my critical friend in the loggia outside the Blanton. As I stood there with two bags slung over my shoulder, full of colorful plastic boxes holding wooden blocks, I looked over my workshop plan. An influx of chattering brought my attention upward and I saw the teacher leading a group of nine chaperones and twenty children toward me. The children seemed excited: the entire group was animated in conversations, active body movements, laughter, and lots of wide-eyed observations of this new environment. Ms. Acebedo sat everyone down on the bench lining the loggia and split them into two groups. As indicated in the last chapter, museum guidelines limit groups to 15 people, so the twenty students participating in the workshop from the All Stars needed to be split. Therefore, I led the workshop twice with ten children in each group. Jennifer was aware of this limitation before getting to the museum and separated the children into groups based upon her knowledge of their behavioral tendencies. When one group was in the museum, the other stayed outside and played with materials from the Outdoor Odyssey backpacks. These backpacks are a resource provided by the Blanton to engage school groups that cannot all be in the museum all together.

They include paper, pencils, crayons, magnifying glasses, discussion prompts, Frisbees, and games to play while they wait. In the section that follows, I will describe what happened during both iterations of the workshop as organized by the two artworks we focused on: *Dawn's Presence—2 Columns* by Louise Nevelson (Figure 8) and *Espiritu Guardian (Guardian Spirit)* by Matias Duville (Figure 9). I will refer back to specific examples of children's behavior during both iterations of the workshop as I define and explain the themes emerging from my data.

Group 1

I led the first group into the museum with my critical friend following closely behind, video recording what transpired. The children showed immediate interest and excitement as we walked into the lobby and saw *Stacked Waters* (Figure 7). I heard varying volumes of "cool," "whoa," "awesome," and "look," heads whipping around the space in curiosity. I squatted down to their eye level and asked if anyone remembered the book we read in class together about Dan, the art detective. Some children said yes while others nodded their heads in agreement. I mentioned we were going to be art detectives today, just like Dan—did they bring their magnifying glasses? I mimicked the movement I introduced during the pre-visit. Using the terminology the teacher established, I reminded everyone that we needed to use our walking feet, our listening ears, and keep our hands to ourselves while we were in the museum. "But," I said, "There is one work we can touch, and that is the artwork all around us. Let's touch it as we walk up the stairs to get some clues about it." As we walked up the stairs, conversations about the feel of the artwork shifted to other artworks as the increasing height of the stairs gradually revealed the second floor. The following exchange occurred without prompting and while the children were walking up the stairs.

> Leo: Hey, look behind us! [Jane looks behind her] No, to the side. That's the sculpture. Look at the sculpture!
>
> Jane: Cool, it's a sculpture of an airplane.
>
> Leo: Look, there's a sculpture up there!

Jane: [Following direction of Leo's finger] Yeah, there's guys up there, playing…wrestling.

Leo: I hope we see more sculptures up there.

Corralling everyone at the top of the stairs, I faced them, walking backwards toward the first stop of the workshop. We wended through two galleries leading up to the first stop, with the children looking around and pointing at different artworks. We reached the first stop and everyone sat down in front of the artwork.

***Dawn's Presence—Two Columns*: "They don't have the same types of blocks"**

Our experience in front of *Dawn's Presence—Two Columns* by Louise Nevelson, Figure 8, began by engaging in a series of questions to get the children to look closely. I started by posing the question: "What does this look like?" This produced a wide assortment of responses:

Jane: It looks like UT.

Aiden: It looks like a tower.

Neive: It's like a castle.

Leo: It looks like a googly…it looks like a googly eye.

Josh: That looks like a bone.

Aiden: It looks like a googly mouth.

Josh: It looks like a gate. It looks like a face and a nose.

Jane: Kind of, a huge castle.

Cameron: It looks like a face.

Josh: It looks like a white castle.

Leo: I'm looking at those pictures right there [Pointing to other artworks in galleries.]

I followed up with a few questions asking the children to specifically point out what they were looking at, to encourage them to back up their claims, but also to focus the attention of the group. This line of questioning proceeded for about 75 seconds[2], with Jane, Aiden, Leo, and Josh taking

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[2] Since I observed children's behavior in the workshop from a video recording, I could precisely measure the duration of time children engaged in specific behaviors.

turns talking. After this point, the children started displaying more expansive and absent-minded curiosity in the environment: they looked around the gallery, fidgeted, and slid around on the floor.

Taking a cue from their behavior, I introduced the block building activity as a way for them to get a better idea about the artwork by using the same materials as the artist. We made a circle in front of the artwork and I more specifically framed the activity by saying, "Let's use these materials, which are similar to those the artist used, in order to create sculptures of our own, either inspired by this artwork or maybe inspired by something else in your life." Upon receiving the box of wooden blocks, each child quickly opened it up and began to build. While children constructed, I made connections between their sculptures and the Nevelson: "Think about if you want to build your sculptures tall, or vertical, like this sculpture [pointing to Nevelson], or low along the ground, horizontal." And, "This sculpture is different parts put together and you guys are all doing the same thing; you have these different parts and you're putting them together." Two children worked together while the rest created individually. Each child concentrated intently on their creation, thoughtfully choosing which blocks to use, rebuilding and reworking their sculptures when they fell down, respectfully interacting with and manipulating the blocks, and containing and controlling their body movements. Every now and then, a child would look up to the Nevelson, or me, only to focus back on their sculpture. As the children finished, they looked around at the constructions of their peers, with some rebuilding or adding to their sculptures.

I finished up the activity by asking the students to compare their sculptures to the one behind them. Aiden said, "Look at mine! I'm an artist!" Jane added, "I'm an artist, too!" Aiden turned to Molly and commented, "That's a good tower, that's a cool tower!" Ethan said, "They don't have the same type of blocks." Scarlett said, "They both have circles!" As if to corroborate these observations, other children looked between their own sculptures, the Nevelson, and Ethan and Scarlett's sculptures. Once I mentioned it was time to clean up, the children returned the blocks to their boxes. The children's intense concentration during the creation of the sculptures

disappeared once the blocks were away, and most children started to display the markers of disengagement I witnessed earlier. To introduce the next activity, I lowered my voice, making each child lean in to hear what I said: "The next piece of art we are going to look at has a story hiding in it and we have to find it. So, it's going to be super important to use our magnifying glasses." I put my magnifying glasses on and the children followed suit. "Great!" I said, and we stood up and made our way to the next artwork.

Espiritu Guardian (Guardian Spirit): "Once upon a time…there was a car sitting on a tree"

Sitting in front of *Espiritu Guardian (Guardian Spirit)* by Matias Duville, Figure 8, I asked everyone to don his or her magnifying glasses. I followed by asking the open-ended question of "What do we see?" Children started naming things:

Jane: I see some of the words.

Scarlet: I see a house.

Leo: I see a house.

Ethan: And I see a blue diamond.

Aiden: Hey, I found some of the story!

Leo: I see trees.

Aiden: I saw more, and more, and more, and more!

"Wow," I said, "So, we're seeing a lot! I heard someone say they saw a house. How many houses can we find?" Each child began to individually count the houses within the painting. Some used their fingers to count while others pointed with their hands to keep track. "Two," Aiden said, "I see a boot." "No, two boots," he corrected himself. "Two boots!" I say, "Can you all see the two boots?" Jane could not, so I stood up to show everyone directly. "Oh yeah," she stated. Again, only Jane, Leo, and Ethan actively participated in the discussion, and, after about a minute of this, they joined the rest of their classmates in quietly gazing at the Duville, as well as the other works in the gallery. I asked students to turn to the person next to them and tell a story based upon the artwork. When I said this, eight children turned to their neighbor, organizing

themselves into groups of two and three. Fran and Molly did not participate in the activity. As the children told their stories to one another, both the storytellers and listeners pointed wildly around at the painting, their attention still fixated on the artwork, but this time more engaged. Storytellers and listeners established a dialogue of clarifying questions and listeners were respectful to those speaking, letting the stories come to a natural close. After two minutes, I asked if everyone got a chance to tell his or her stories. Receiving nods, I suggested we come back together and combine their stories into one, big, group story.

I initiated the group storytelling activity by asking the children, "How do stories start?" "Once upon a time," Jane stated. "Ok, once upon a time, great," I said, "What happens next?" "There was a house sitting next to a tree," Aiden suggested. "And there was a car sitting on a tree," Josh added. "And there's two boots," Jane chimed in. "And the boots were walking to the pennies," Leo shyly said, referencing the large artwork by Cildo Meireles in another gallery that features a large pool of pennies. "And the car fell off the tree and crashed into a spiky mountain," Ethan added. Up to this point, I repeated the lines of the story after each child said it. After I echoed this last line, Aiden reiterated, "It's spiky." "Yeah," I mentioned, seeing an opening for another line of questioning, "it is spiky. And what are all those flakes making it so spiky? You see those flakes? What do you think those are?" The children guessed:

Cameron: They look like trees.

Ethan: Rain.

Jane: Spikes.

Aiden: Snowflakes?

Scarlett: Leaves?

Josh: Um, water falling down, like, hard water.

Cameron: Um, um…two houses.

Jane: Um, sand…like a sandstorm.

Aiden: Confetti.

"Confetti?" I said, "Whoa, do you think there's a party happening?" "Yeah!" the children responded. Once those children who spoke up got the opportunity to comment, they went back to quietly gazing at the artwork, mimicking the five other children who did not talk during this discussion.

Still wanting to incorporate the physical activity from my plan, I suggested we act out the story in the painting. The initial response was enthusiastic: they excitedly listed the different roles and all ten children actively considered the painting before raising their hands for a role. Interestingly, once the children were cast for a certain part, they continued raising their hands for other parts as well. Seeing some confusion, I went through each role, asking the children to raise their hand when I read their part. Some children did not remember and others changed their parts, but I went forward with the activity. Moving the group away from the painting to create a "stage," I called up each role, asking children where they should put themselves. Initially, they worked together to figure out where they should be in relation to one another. Leo hesitated when I called his role up to the stage, so I reminded him that he should be pretty close to the boot. Aiden, playing the boot, said, "Yeah! Leo! Come over next to me!" Once on stage, children stayed in their respective spots, trying out different poses or looking at their peers. I paused, letting them stay in character for a moment longer. Noting many of the children starting to show the physical signs of disengagement, I said, "Did we just become the painting?" Though only Aiden responded, many of the children smiled and looked around at their peers. I congratulated them on their recreation of the painting and asked how they felt when they were in their characters. Cameron, at this point lying on the ground, said, "Still." "I feel, I feel, I feel…tired," Neive added. I reiterated how great it was that they were able to find the story hiding in the painting, but, at this point, almost every child was looking around the galleries, not focusing on the artwork or me. As such, I thanked them for their great comments and hard work and we walked downstairs as a group.

Group 2

Walking with the second group into the lobby, I noticed that this group (barring Jackson, who was the disruptive young boy during the pre-visit) was more reserved and quiet than the first group, which was quite apparent in their participation and behavior during the workshop. Since the plan for the workshop was the same as the first group, I will focus on the characteristics and behaviors I observed in group 2 that were different from group 1. As we stood in the middle of *Stacked Waters*, their small heads spun back and forth. Jackson blurted out, "I want to go up there," pointing upstairs to the galleries. As we walked up the stairs, Daisy and Carol talked about how smooth and cool the artwork was. Once at the top of the stairs, all the children looked around.

Liam: Look!

Daisy: Airplane! An airplane with butterflies. [Points to a sculpture on the wall]

Carol: [Pointing ahead and talking to the chaperone] It's a sculpture! A sculpture!

Jackson: [Pointing to the galleries ahead] I want to go in there.

Joseph: [After about 30 seconds] I found the artwork!

Helen: [Pointing at walking ahead] I can see more sculptures.

Daisy: I can see a baby.

In response to my query as to what the artwork felt like, the children said it felt like glass, cold, ice, and really hard rock. I underlined how we were able to figure out some interesting things about this artwork simply by touching it and that we were going to keep looking for clues throughout the museum. With that, we walked towards the Nevelson sculpture.

***Dawn's Presence—Two Columns:* "My sculpture's not ready"**

Sitting in front of the Nevelson, I opened up the conversation by asking, "What are we looking at?" Liam stated, "A sculpture." "I love that word," I said, "It *is* a sculpture. Does it look like anything to you guys? Does it remind you of anything?" "A bicycle," Helen stated. I asked what she saw that made her think of a bicycle. "A wheel," she said, and pointed to the large

circle in the artwork. Liam said it reminded him of shapes. Attempting to establish another line of inquiry, I asked what other specific shapes we could see besides a circle. Helen said, "Circle, circle, circle," pointing out all the examples in the artwork. "Um, there's triangle, triangle," Carol said, pointing them out for the group. "What materials may the artist have used?" I inquired. Carol said, "Lots of paint…White!" At this point, Jackson started yelling "Stop it" loudly, in reference to the chaperone keeping him away from the sculpture. "What other materials?" I questioned. No one spoke, so I asked if they thought the materials were the same as those we touched on the way up the stairs. Still no response. "Do you think she used…," I began to say. "Plastic?" Helen said quietly. Liam's arm shot up. "Wood," he proclaimed proudly. Daisy, Tom, Jackson, and Helen started arguing about who got to sit next to whom, so I took this opportunity to introduce the block building activity. Each child instantly began building. As they arranged their blocks, I provided vocal prompts similar to those I used with group 1 to draw their attention to comparisons between the Nevelson and their creations: "How did the artist stack her shapes?" Jackson, now quiet and focused intently on building, looked up to me and said, "Do you like my sculpture?" "I love it!" I exclaimed. I continued drawing connections: "See how the artist stacked her blocks to make her sculpture tall?" Liam spoke to himself, "Mine is gonna be big! I mean, tall." Similar to group 1, there was one pair working together and eight children working by themselves.

There was a palpable and intense focus on building for approximately eight minutes as the children quietly talked amongst each other. During this time, students built their sculptures tall, and then rebuilt them differently when they fell down. Some took breaks to respectfully look at the creations of their peers, using the other sculptures as inspiration. When I mentioned they had about thirty more seconds before we needed to clean up, Jackson looked up from his sculpture and said, "My sculpture's not ready. And, hey, I don't have any more blocks and I'm not done." Raising his voice to a loud whine he continued, "I don't have anymore and I'm not done." I attempted to diffuse the situation by mentioning that sometimes that happened with artists, too, but he was suddenly placated when Daisy offered him the blocks she was not using.

Carol said, "I'm not ready yet." To give them more time, I talked about how this process taught us more about the artist's process. "I'm making a map one," Daisy said to Tom. About thirty seconds passed and then Jackson exclaimed, "I'm done." "I'm done, too," Daisy said. Directly after they cleaned up their blocks and handed me the boxes, the children wandered; some holding on to one another as they walked away, and others lying on the ground, scooting away from the group. Using the same introduction that I used in group 1, I mentioned we had to find the story hiding in the next artwork. With that directive, each child raised their imaginary glasses to their eyes and we walked through the galleries to the next artwork.

Espiritu Guardian (Guardian Spirit): "Once upon a time, someone bumped their knee"

Sitting in front of _Espiritu Guardian (Guardian Spirit)_, we all donned our magnifying glasses. The children saw houses, trees, a story, more trees, feet, a hand, a shoe, and a house. As the children made their observations, they dropped their magnifying glasses from their eyes. Liam, Tom, Helen, Violet, Carol, and Daisy participated. David, Joseph, and Sean stared at the painting intently, listening to the comments of their peers, and Jackson talked to the chaperones. I followed up these observations by asking, "What happened here? What is the story that's hiding in this artwork?" Liam offered that a giant fell down because someone threw a rock in his face. "Oh no!" I said, "That sounds horrible! How else may he have fallen down?" Daisy stated, "A squirrel." "A squirrel," I said, "What about a squirrel? What happened with the squirrel?" Though there is no recognizable squirrel within the artwork, I was interested to hear how her story might fit within the context of the painting. "Um," she said, "there was a big boot and he wanted it because he didn't get hit." "Interesting," I remarked, "that sounds like a great story. Ok, what else…," but before I could finish my next question, Helen said, "A shoe." "Someone lost their shoes and their mittens," Liam quickly added. Daisy said, "I see a book. Right there, that blue book." "What else could it be?" I said. "A car," Liam said. "Ok," I said, "So, how does the car fit into the story? Is there someone in the car?" "I don't think so," Daisy said, "The car is driving by itself."

A lapse in engagement similar to group 1 happened around this time, which was 23 minutes into the workshop. Given the more reserved nature of the group, coupled with the behavioral issues of Jackson, I was reluctant to integrate the more physical tableau vivant activity. Instead, I continued the conversation. Carol got on her knees to look closer and said, "Where's the giant?" "Great question," I said, "So, you see the boots, right? And you see the glove? So, if we only see boots and the gloves, do we think someone is actually there? Where could the rest of him be?" Liam said, "Under the ground! Under the ground! Under the ground!" After Liam said this, Jackson started talking loudly with a chaperone. Distracted, I paraphrased Liam's comment and asked the group, "What do you think?" Daisy and Helen mentioned they saw cats. In an effort to bring the focus back to what we could all see within the artwork, I said, "Do you guys see these speckles? What do you think these speckles are? Do you see these parts…these tiny little parts we see all over the artwork?"

Helen: Leaves.

Liam: Leaves.

Helen: Birds?

Daisy: Paint.

Helen: Shoes?

Daisy said, "Well, I see some big pieces over here," and pointed to the middle of the artwork. I asked, "What do you think those pieces could be?" "Mountains," Liam suggested. "I think they're pieces of the giant," Daisy countered. "Wow," I said, "So, maybe when the giant fell– what do you think happened?" Daisy continued, "He fell into pieces." "Do you think those are pieces of the giant?" I said. "No, I think they're pieces of water," Tom said. At this point, Jackson ran out of the gallery, laughing, and one of the chaperones ran after him. Most of the children shifted their attention out of the painting as they looked over to Jackson and then around the rest of the gallery, starting to squirm.

Trying to hold on to the last bit of attention they had, I asked if any of them had ever jumped into a pile of leaves before. "I did, with that man…when that man was cleaning up the

leaves and I jumped in them," Daisy said. "And what happened?" I said. "I didn't fall," she said. I recreated the effect of leaves flying up into the air with my arms and asked the group, "Do you think that's what happened when the giant fell?" "And then the leaves got stuck in the trees!" Helen said. Liam said, "Someone lost their big shoes." "No!" I said, "Maybe the giant is walking around without any shoes…and, one glove missing." "Two gloves," Liam corrected me. Carol put her fingers together and her thumb out, mimicking the shape of a mitten, saying, "These kinds of gloves." We all made mittens with our hands and I said, "Wait, but would these be the same size as the gloves a giant would wear?" "No!" a few children said, laughing, "They'd be bigger!" This felt like a natural place to stop, so I thanked them for being such great art detectives. But, before I finished, Daisy turned to me and said, "Where's the story?"

Though I knew I was running out of time, I suggested we make up another story as a group. "So," I said, "How do stories start? Once upon a time…" "Once upon a time," Daisy said, "there was a rock, um, once upon a time there was a rock and the rock fell and then the giant…and then the giant went to pieces." "That sounds scary!" I said, "What other stories could be hiding in the artwork?" Joseph, who had not said anything since the very beginning of the workshop, said, "He bumped his knee." "Ok!" I said, "So, once upon a time someone bumped their knee. And then what happened?" "Their shoes came off!" Liam suggested. The chaperones and children laughed. "What next?" I said. "And their mittens flew in their faces," Liam continued. "Then what happened?" I said. Joseph said, "Um, their hair went…over the ground." "The hair flew off his head!" Liam added. "Oh no, this giant is having a tough day, huh? What a great story," I said. At this, Joseph got up and ran toward the chaperones. Most of the other children visibly lost focus on the Duville as they started wiggling around, standing up on their knees, spinning in circles, or laying on the ground. I mentioned that our time at the museum was ending and we had to go back downstairs. "But I still want to be here. Why does it only take a little bit?" Daisy said. This comment made all the time spent thinking through and planning the workshop, all the effort reading and researching, worth it. With this comment, Daisy

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communicated that she not only enjoyed her experience in the art museum, but also that she felt supported and heard. And that, even at the end of this visit, she was curious to keep looking.

THE PLAN VS. REALITY

Discrepancies between the planning and staging of the workshop are interesting to note. In general, my plan featured more linear progressions of questions during the periods of close observation at the start of both artworks. In reality, the conversations were far more circular and far less focused on abstract concepts. For example, questions comparing the children's sculptures to the Nevelson, contrasting the materials of the Fernández and Nevelson sculptures, and deducing the environment in the Duville were less accessible and successful lines of inquiry, as opposed to those more grounded in the artwork or the activity, itself. When acting out the story of the Duville with the first group, I expected children to remember their roles more easily than they did. I also did not anticipate the difficulty the children had in translating the spatial positioning between characters from the artwork to the children themselves. This meant I did not move beyond recreating the painting to the more active and imaginative process that I planned. Most notably, I did not initiate the tableau vivant activity with the second group. In hindsight, despite my concerns regarding the less active demeanor of the group and Jackson's behavior, I wish I had tried the activity. Though the execution may not have been perfect, seeing how the activity worked with another group would have been interesting. Incidentally, my decision to stay with the group story activity led the second group to be much more engaged than the first group in front of the Duville.

POST-VISIT: "SOME OF US DON'T KNOW HOW WE READ A PICTURE"

On November 19th, 2015 at 10:00 A.M, I was back in the All Stars classroom for the post-visit. I started this visit by asking the children, "When we went to the museum, what did we do?"

Jane: We looked at pictures.

Liam: We made sculptures out of wooden blocks…we played with blocks.

Aiden: We acted a picture out.

Josh: We acted out a picture.

Similar to the pre-visit, the post-visit centered on reading the book *Dan's Angel*, but, this time, I framed it differently. I stated that, while reading it together, we should think about how Dan's story was similar to or different from our own visit to the art museum. Right before I started reading, David said, "But there was also an airplane with leaves." And Carol said, "Yeah, and we didn't look at those glowing eyes…we should do that." Leo added, "And I wanted to look at the pennies." Those were not artworks we focused on, but they still made enough of an impact on the children as they passed through the galleries that not only did they remember them, but they wanted to go back to the museum to look at them more closely. When reading the book, I took the time between pages to make connections to our experience in the art museum. In the story, when Dan says, "You can't read paintings like you can read textbooks," I asked the children if they thought that was true. Jane said, "Yeah, but…some you can read." Most of the children agreed with this, except Ethan, who mentioned, "Some of us don't know how we read a picture." On the one hand, Jane was making the connection between "reading" a book and making meaning within artworks, an incredible transfer between the activities at the Blanton Museum and the story, and also not something we had overtly spoken about during the workshop. On the other hand, Ethan was reinforcing the fact that young children do not approach artworks in the manner that older visitors do: Ethan, who is still in the process of learning how to read books, was making it known that he *did not* know how to understand a painting this way, underlining my case that children need different, more supportive, methods to approach artworks in museums.

When we got to the page in the book where Dan encounters a Jackson Pollock painting within the art museum, Aiden, without prompting, said, "We saw one of those." "We did!" I said, "Which artwork did we see that looked kind of like this one?" "The big one," Aiden said. "We know one that's super close to that one," Liam said. "It is a similar style, right? What makes it similar to the one we saw in the art museum?" I said. "That one looked like a really, really,

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really, gigantic forest," Liam said. "There was no pink," Daisy said. "The colors are different, definitely," I said, "Do you think there's a story hiding in this painting?" Everyone paused. Cameron said, "No!" But Jane, Liam, Daisy, and Aiden said, "Yes!" "It's about sand," Ethan said. "It's about trees," Aiden said, "or about a forest." "Or about water," Leo said. At this point, Jackson got up and stood in front of the me and the book, leading to a myriad of protestations from children saying, "I can't see!" The teacher cautioned Jackson by saying, "You're going to need to sit down if you want to listen to the story so other people can see, but if you want to work on your bookmark at the writing center, you can go over there and do that quietly." Again, he walked over to the writing center and quietly worked on his own task. I asked if anyone had any questions and Scarlet wondered out loud about what Gabriel the angel did after Dan left the museum. "Great question," I said, "Maybe he went back in his frame and waited for Dan to come back. Maybe that's what the characters in the artworks at the Blanton are doing, too, they are waiting for you to come back." Once again, Daisy had the last word, inadvertently reinforcing the power of art museum experiences for early learners and the importance of integrating methods that support their unique learning needs: "Are we going back? Are we going to have another trip?" Daisy asked. I said, "We might in the spring, we'll see. Would you like to go back to the art museum?" "Yeah!" they all yelled, "let's go back!"

ANALYSIS

My dual role as both teacher and researcher fundamentally changed my connection to the data and, intrinsically, impacted my reading of the data and my manner of analysis. The choices I, as both a researcher and an educator, purposefully made, impacted the outcome of the workshop. As such, my main concern going into analysis was how to balance those two perspectives when interpreting the data. Using the rubric (Table 1) as a lens to focus the analytic process provided a more objective framework to examine the data and mirrored the analysis from the first stage of research. The rubric also allowed a cohesive manner to organize my four data sources: the video of the workshop, the feedback from the critical friend, the interview with the

teacher, and the pre- and post-visit. Filtering these multiple data sources through the rubric encouraged a streamlined organization of the data, allowing a shared terminology.

As I explain how these themes arose, I will begin by defining them using outside literature. Couching these definitions in overarching examples from the data will guide the reader to understand this literature within the scope of the workshop. I will then reinforce these themes using specific narrative examples of the children's behavior during the workshop, organized by the two artworks discussed: *Dawn's Presence—Two Columns* and *Espiritu Guardian (Guardian Spirit)*. These examples will be more specific accounts of the workshop descriptions relayed earlier. During my analysis, I found instances of behavior that fell into more than one theme. As such, some narratives are repeated, but, generally, I focus on different facets of behavior within those narratives. The interview with the teacher, observations from the critical friend, and notes from the pre- and post-visit reinforce the themes, thereby affording measures of validity.

Active engagement through agency in play

McWilliam (2008) states that engagement is about duration of behavior in context. Engagement can be passive or active, but "active engagement is considered more developmentally advantageous and sophisticated" (McWilliam, 2008, p. 125). Though we cannot determine what is going on within a child's head to determine the *sophistication* of mental behavior, a child's interactions with their environment (adults, peers, and materials), a child's engagement, is an observable and measurable behavior. Increased engagement among children results in improved behavior, social interactions, and learning (McWilliam & Casey, 2008). Sloan (2001) argues that when children are given more opportunities to lead within the museum, they are more empowered, resulting in more opportunities for self-expression. During the workshop, when children were in control of what and how they explored the artworks during the play-based activities, as opposed to simply following my directions, they were more actively engaged. This active engagement took a variety of forms: children were self-expressive (verbally and physically), receptive to the comments of their peers, focused in their tasks, and spent a long

time looking at the artworks. Children were actively engaged during the workshop when offered opportunities to exercise their agency during play-activities: to exert choice and control over their own learning, based on personal interests and motivations. Evidence confirming this theme is presented below and organized by artwork

Dawn's Presence—Two Columns

When I presented the children with the open-ended discussion questions, "What does this look like?" and "What do you see?" in front of the Nevelson, eight children responded vocally through comments focused around the artwork. About half the comments were original observations, with one instance of a child building off of a previous comment. The other half were repeated or reworded comments. Though the 12 other children were not actively engaging with the sculpture through the oral prompt, they appeared to be passively engaged as they gazed quietly at the artwork. About 80 seconds into this discussion, all the children began showing signs of disengagement: looking around the gallery, fidgeting, and sliding around on the floor. The children had a modicum of choice during this discussion, choosing if and how they responded, but there were no true opportunities for agency. I asked specific questions, following up on some while ignoring others, clearly establishing a preferred structure and context for the responses.

When I presented the children the opportunity to explore the artwork through the block building activity, initiated by an open-ended prompt, all 20 children participated instantly; actively engaging in creating whatever they wanted. Though I made verbal connections between the children's sculptures and the Nevelson while they were building, I never directed or structured the manner or context of how they engaged with the blocks. As a result, the children were in full control of their own creations. They chose what to do with the blocks, with whom (if anyone) to work with, the duration and scope of their involvement, and how (if at all) they engaged with the artwork and me. This empowered role resulted in 8 minutes of active engagement. When the children overcame the challenge of their sculptures falling down and

solved the problems of balance construction, they showed a persistence associated with active engagement. As students manipulated the blocks to build their sculptures, creating intentional and spatial forms through constructive behavior, they were exhibiting a sophisticated and active form of engagement. The communications witnessed by the children were context bound (directly pertaining the activity at hand), which also points to active engagement: when Jackson and Carol stated that they were not done with their sculptures, when Jackson stated he needed more materials to finish his sculpture, when Aiden and Jane said they were artists, and when Aiden complemented Molly on her creation. Not only did these comments imply active engagement, they also revealed an intrinsically motivated and personal connection to the activity, along with a confidence in their abilities.

Both the critical friend and the teacher corroborated this active engagement. When discussing this artwork, the critical friend brought my attention to my attempts to ask questions of the children while they were building, noting that these questions were not as successful as those asked during the open-ended discussion period. She defined "success" as children listening, understanding, and responding to the questions posed, in effect, being actively engaged. She attributed the children's non-engagement with my questions to their active engagement in creating their sculptures. She stated, "It was difficult to engage the children [since] they were more engaged in making figurative/symbolic sculptures."

In thinking about the workshop, the teacher noted her apprehension about how her students would behave in the museum. There were two students (Jackson and Josh) who frequently exhibited difficulty focusing and staying engaged during group time, often resisting direction and wandering away from the group setting. In the classroom, she resolves this issue by asking them if they would like to go to the writing center. I witnessed the change in behavior first-hand during both the pre- and post-visits to the classroom. Jackson went from being disruptive and disengaged while reading *Dan's Angel*, a group activity with no opportunities for child agency, to actively engaged and focused on an activity of his choosing at the writing center. Jennifer mentioned how significant it was to witness the boys listening to directions and actively

engaging with the artworks through the activities, particularly when building their block sculptures. She attributed this engagement to the amount of freedom afforded within the parameters of the play activities. The transformation in Jackson's engagement with the artworks was notable. He went from arguing with his classmates, yelling, and fidgeting to quietly focused as he built his sculpture. Notably, his only outburst during the block sculpture activity came as a direct result of placing limitations on his agency: telling him when he should be done and giving him less blocks than he needed.

Espiritu Guardian (Guardian Spirit)

During the activity to act out the Duville, I controlled which character each child played and had a large role in placing the children in relation to one another on the stage. I frequently directed attention back to the painting in an effort to make it a more authentic representation of the artwork. Due to my more controlled directives, the opportunities for child agency were limited. Alternatively, when I asked the children to tell their own stories to a partner, they were far more engaged. Each child had control, choosing the scope, duration, and complexity of their stories. This control promoted a more active engagement with the specific work than the earlier conversation. Likewise, an increase in active engagement was visible during the activity to create a story as a group. Though my prompt of "once upon a time" directed the students in terms of *how* their stories started, it did not impose barriers on the content, length, or style of the story, allowing the children full control. Joseph, who had not spoken since the very beginning of the workshop, offered his own version of a story about a man who bumped his knee and then built upon Liam's continuation of his story. Daisy was actively engaged throughout the entirety of the group story activity, making multiple observations about what she saw, creating three different stories inspired by the artwork, and retelling a personal experience in the context of the painting. Interestingly, Daisy was also the young girl who asked "Where's the story?" when I first attempted to end the activity, thereby prolonging the time in front of the artwork by about 60 seconds. Liam and Daisy's willingness to participate in an activity and their use of context bound

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communications again point to their active engagement. Additionally, Daisy's desire to remain in front of the artwork to extend the story telling activity (and, ultimately, her desire to remain in the museum) demonstrated a personal connection with the artwork, a comfort within the museum, and an active and intrinsically motivated engagement during the play-based activities.

Studies (Coe, 1988; Hein, 1998; Piscitelli & Anderson, 2000, 2002; Wolins, Jensen, & Ulzheimer, 1992) document the potency of children's recollections of their museum visits (Piscitelli, Everett, & Weier, 2003). Young children recall large objects (Kindler & Darras, 1997; Piscitelli & Anderson, 2000), but also information presented in the form of a story and activities involving active engagement (Piscitelli, Everett, & Weier, 2003). During the post-visit (one week after the workshop), children remembered looking at the art, making their own sculptures, acting out the painting, specifics of the color, composition, and content of the artworks, and other pieces of art in the museum that we walked by. When discussing the wider impact of the workshop on the children's daily activities, the teacher said that the children spoke about building towers, "the plane," "the bull with glowing eyes," "seeing big things," and "the giant in the painting." Though we did not focus on them, we passed both the "plane" (titled *Passage* by Paul Villinski) and the "bull" (titled *Progress II* by Luis Jiménez) on our route through the galleries. Both artworks are "large objects," much larger than the Nevelson or the Duville (and *Progress II* features a bull with red, glowing eyes), which may be why the children remembered them so well. Since building their sculptures was neither associated with a "large object" nor presented in the form of the story, I posit that the children's strong recollections of that activity are due to their active engagement with both the activity and the artwork. The activities associated with the Duville were based on information presented in the form of a story, and, as such, the children's recollections of a giant less directly implicates, but certainly makes a compelling case for, active engagement in front of that artwork, as well.

Schlecty (1994) notes that actively engaged students exhibit three characteristics: they are attracted to their work, they persist in their work despite challenges and obstacles, and they take visible delight in accomplishing their work. Behaviors comparable to these during the workshop

were associated with opportunities for children to exercise agency. When the children said they were artists, when they prompted me to look at their sculptures, and when they laughed as they told their own stories in front of the Duville, they were showing an attraction to their work. When the children rebuilt their block sculptures after they fell down, they showed persistence despite challenges or obstacles. And when the children finally finished their block sculptures and when another child finished a story they started, they took visible delight in accomplishing their work. Sykes (1992) corroborates this correlation: when engaging in a task they have defined for themselves, young children feel successful and competent, boosting confidence—characteristics associated with active engagement. In my study, the majority of opportunities for child agency came by means of play-based activities. Causative claims linking these concepts will be discussed more in Chapter 7.

Accommodating intelligences in play

During the workshop, when children were engaged in play-based activities, they exhibited a heightened level of participation. These play-based activities accommodated multiple learning approaches simultaneously, encouraging opportunities to make meaning of the artwork. Young children have their own preferred approach to learning; this preference holds throughout all of their learning experiences and is individual to each child. As discussed in Chapter 2, Gardner (1983) posits in his theory of "multiple intelligences" that individuals possess a blend of all the intelligences, some of which occur in a higher level, which lead to their preference. Davis and Gardner (1993) argue there are different strategies (windows) helping young children to enter art museum experiences at a level that is personally meaningful and developmentally appropriate. Piscitelli, Everett, and Weier (2003) describe these windows as follows:

> The experiential window, or 'hands on' approach, invites children to touch, manipulate, or respond using bodily movements; the narrative window allows children to experience an object through the medium of story; and the aesthetic window focuses on having children describe the visual and aesthetic qualities of the object encountered. (p. 23)

During the workshop, the children's participation and connection to the artworks fluctuated. Periods of heightened participation were more frequent when the children had multiple "windows" to approach the artworks, as per Davis and Gardner's (1993) definition. "Windows" occurred during both open-ended discussion and play-based activities, but the "experiential" windows resulting from the play-based activities accommodated multiple intelligences simultaneously. As such, the play-based activities heightened children's participation during the workshop.

Dawn's Presence—Two Columns

Research (Burnham & Kai-Kee, 2011; Falk & Dierking, 2000; Hein, 1998; McKay & Monteverde, 2003; Yenawine, 2003; Zander, 2004) shows that open-ended dialogue facilitates engagement, understanding, and personal connection to artworks. Those eight children who participated in the open-ended discussions made thoughtful observations about the Nevelson. Observations such as the sculpture looking like a bicycle or a gate, established a frame of reference, allowing a connection with the artwork. Since these observations focused around the visual qualities of the artwork, these children entered through an aesthetic window. Unfortunately, this discussion did not provide access for those learners whose preferences fell outside this visual-spatial and verbal-linguistic focused approach. Though not completely closed off from the ideas raised in the discussion (as evidenced through their quiet gaze on the artwork), they were not participating in the same manner. As such, it was notable that every child readily and actively participated in the block building activity. Unlike the discussion, the block sculpture activity provided entry to the artwork by catering to multiple intelligences simultaneously.

Though, at its core, an "experiential" window to the artwork (manipulation of the blocks through touch being a bodily-kinesthetic style of learning), I also observed six other learning approaches occurring. The children created sculptures cooperatively, balancing responsibilities and sharing suggestions (Social). The children spoke with one another as they co-created their sculptures and afterward as they shared information with their neighbors about what they built

(Verbal-linguistic). As the children built, they actively assessed the sizes and shapes of the blocks, trying to decide which particular blocks would transition their abstract ideas to tangible structures (Visual-spatial). As their buildings fell down, children rebuilt them, logically assessing how to keep their sculptures standing as they learned the principles and properties of the blocks (Logical-mathematic). In addition to the construction directed communications, children exhibited interpersonal learning: when Daisy gave her blocks to Jackson, her understanding of his emotion and recognition that she could alleviate his frustration was empathetic. Likewise, Aiden communicated praise when he turned to Molly and told her "cool tower." Children's behavior, and higher level of participation, indicated that more intelligences were supported during the play-based activity than during the discussion at the Nevelson sculpture.

Espiritu Guardian (Guardian Spirit)

The play-based activities in front of the Duville catered to a similar variety of intelligences. The students began their interactions with this artwork by using their magnifying glasses to look closely to find the story hiding in the artwork (Visual-spatial) while I asked open-ended questions (Verbal-linguistic). Again, this predominantly aesthetic window, while accommodating for the children with a preference for visual-spatial and verbal-linguistic learning, was alienating for others. The opportunity for the children to tell their own stories to their neighbor opened a "narrative window," encouraging them to enter the artwork through the medium of story. Though this activity did not facilitate full participation, it did encourage more engagement with the artwork than just the discussion. The kids naturally got into groups, balanced roles of storyteller and listener, and communicated effectively with one another as they sought to clarify the stories of their peers (Interpersonal). The experiential window opened through the play-based activity of acting out the story accommodated multiple intelligences simultaneously. This resulted in the full participation of the group. The children utilized both gross and fine motor skills as they physically acted out the story in the artwork (Bodily-kinesthetic). When the children stepped on to the stage, they consulted the painting in order to

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establish where they should be in relation to their peers (Visual-spatial). The children chose the role they wanted to play, which required some self-reflection (Interpersonal). Lastly, when the children worked together to figure out where they should be on the "stage," they effectively communicated and cooperated to reach the common goal of recreating the painting (Social).

My observations at the BCM established a key component of encouraging play was the accommodation of multiple ages and developmental levels. During the workshop at the Blanton, play-based activities inspired higher levels of participation by the children, but this participation was not uniform. The children connected with the artworks and the activities based upon their preferred approach, in addition to other outside factors such as attention span and interest. The "experiential window" established through the play-based activities accommodated multiple intelligences concurrently, in the same way that play was encouraged at the BCM by accommodating multiple developmental levels concurrently. As discussed in Chapter 2, Gardner (2012) speaks to the need for educators to individualize and pluralize their teaching. Individualization centers around learning about each student and teaching them in ways they learn most effectively and find most comfortable. Pluralization is concerned with presenting materials in various ways in order to reach students who learn in different ways and to convey concepts in more depth. The play-based activities during the workshop had a pluralizing effect. They allowed children multiple methods to connect with the artwork depending on their preference and comfort level. I witnessed this effect in the higher degree of child participation in multimodal methods during these activities.

Transforming curiosity to meaning making in play

Bruner (2006a, 2006b) theorized that curiosity within a stimulating environment leads to intrinsically motivated and sustained learning. This concept is predicated upon the notion that the stimuli, itself, is what transforms curiosity into voluntary concentration. The tactile stimuli of the play-based activity in front of the Nevelson, coupled with the innate visual stimuli of the Blanton Museum, distinguishes the museum as a stimulating environment, as per Bruner's definition.

Patterson (1997) argues that the high degree of sensory input offered by tactile and kinesthetic experiences hold children's attention, providing a more holistic view of the subject matter and assisting information retention. The behavior I observed during the workshop reaffirms this: opportunities for kinesthetic experiences held children's attention for longer periods of time than those without kinesthetic elements. During the post-visit, when I asked what they remembered from their visit to the Blanton Museum the week before, the highest percentage of the children's comments concerned making block sculptures in front of the Nevelson. The hands-on play-based activities during the workshop held children's attention, in turn, encouraging children's transitions from idle curiosity to intrinsic motivation.

Dawn's Presence—Two Columns

During the period of open-ended questions in front of the Nevelson sculpture, after 30 seconds, I first observed a child lose his attention with the piece. This was exhibited through the turn of his head to look behind him. By 50 seconds, though most students were gazing quietly at the sculpture, passively listening to their peers, almost everyone had looked away from the sculpture twice. Meaning, it took between 30 and 50 seconds for each child to satisfy their initial visually stimulated curiosity. Attention from a few of the children was redirected back to the artwork based on the comment of a peer ("It looks like a googly eye!") or my questions ("What did the artist use to make this?"), but, overall, none of the students were as intrinsically engaged as in those first 40 seconds. In fact, after Leo made the comment about it looking like a "googly eye," he engaged in a whispered conversation with Jane, both of them pointing and looking at the artwork behind us. Simply referencing blocks, in introducing the block sculpture activity, brought each child's attention back. Since the prompt was open-ended, they *had* to be intrinsically motivated to start building in the first place, but the quickness each child exhibited in beginning their sculptures was notable. For the next 8 minutes and 30 seconds, the children voluntarily and intently concentrated on making their sculptures. Though they were no longer building, when Ethan and Scarlett spoke up for the first time during the workshop (in response to

my question comparing their sculptures to the Nevelson), it was clear that their attention was still focused on and around the artwork. This was due to the tactile nature of the block sculpture activity. The speed at which their attention on the artwork and me diminished, once they handed the boxes of blocks back, was notable. Detached from a kinesthetic link to the artwork, they disengaged from the artwork and started roughhousing, flailing their arms, and looking curiously around at the other artworks in the gallery.

Espiritu Guardian (Guardian Spirit)

Asking children to put on their magnifying glasses to better find the story hidden in the Duville provided a manual framework for looking closer, physically and mentally focusing attention and heightening concentration. Leo dropped his glasses 5 seconds into the discussion. As the children responded, they individually dropped their glasses, as well. This tactile element focused their attention on the artwork, but this attention did not last. Children were intrinsically motivated and attentive when I asked them to come up with their own stories and share them with the person sitting next to them, but once each child told their story, there was a distinct change in their attention towards the artwork. The disengagement with the activity and their peers is how I knew, after only two minutes, that everyone had finished telling their stories. Their attention was not sustained in the same manner as the block sculpture activity in front of the Nevelson. Though the activity to develop a group story was sustained for about four minutes, this was largely due to my relentless engagement in a continuous line of inquiry. Though acting out the artwork was physically demanding, there was no distinct tactile experience. The lack of a kinesthetic element, coupled with the fact that we had been in front of the Duville for about 10 minutes, made it difficult to inspire, not to mention sustain, the children's curiosity.

During our interview, the teacher reinforced the connection between kinesthetic experiences, intrinsic motivation, and attention span argued by Bruner (2006a) and Patterson (1997) and observed in the children's behavior during the workshop. "Hands on activities, multi-sensory opportunities," the teacher said, "make a greater impact. They are more relatable to

them." Multisensory experiences promote children's aesthetic awareness through appreciation, perception, and enjoyment of the museum environment and its objects (Abbs, 1989; Dewey, 1938b). This was clearest during the block sculpture activity in front of the Nevelson. When observing children in the workshop, there was a distinct rise in the children's attention spans when I offered play-based activities that emphasized opportunities for tactile engagement. The intense visual stimuli of the Blanton Museum fueled children's innate curiosity, but that curiosity was not transformed into intrinsically motivated and sustained attention until the children had the opportunity to interact with the artwork and its ideas, to make meaning, through a kinesthetic medium provided through play.

CONCLUSION

Ownership of activities grows with increased participation, thereby opening children up to new ideas, innovation, and learning (Mann, 1996). As discussed in Chapter 2, children are masters of play and are afforded a higher degree of ownership in their actions than in other parts of their life. When organized through the rubric (Table 1), the data I collected by watching the video recording of the workshop, through discussions with the critical friend, through the interview with the teacher, and through informal observations during the pre- and post-visit, pointed to the larger concepts of ownership, learning, participation, and engagement. More specifically, the data pointed to the relationship between ownership within play-based activities and active engagement, the accommodation of learning approaches through play-based activities, and the correspondence between kinesthetic experiences, curiosity, and attention in play-based activities. The following chapter will discuss the larger implications of these outcomes with regards to art museum education for children aged 2 to 5. Specifically, Chapter 7 will present my theory regarding how lessons learned form the BCM's educational practice, grounded in play theory, can be integrated to the Blanton Museum through a workshop to support the early learning needs of young children.

Chapter 7: *The Elaborate Playground*

> In the realm of play and sensory experience, children's museums are wonderful models and potentially serve as a catalyst for bringing play into traditional museums. (Shaffer, 2015, p. 124)

INTRODUCTION

I entered this research armed with the knowledge that play is a vital component of childhood. Bronfenbrenner (as cited in Chance, 1979) contends that the process of play lies at the core of human development and behavior. The United Nations Convention on the Rights of the Child is an international treaty listing universally accepted rights for children. Among these rights is the right to play, specifically, that every child has the right to rest and leisure, to engage in play and recreational activities appropriate to the age of the child, and to participate freely in cultural life and the arts (United Nations, 1989). But play is a difficult concept to pin down. Chance (1979) speaks to this difficulty when he states, "Play is like love: everybody knows what it is, but nobody can define it" (p. 1). In essence, play is a way of doings things, but its flexible and subjective nature makes it difficult to define. That being the case, there are generally accepted characteristics associated with play. These characteristics are active engagement, intrinsic motivation, attention to process, and nonliteral behavior. But these four elements of play are not uniform throughout all play activities, so they do not provide a crisp definition. Thus, we are left again with the intangibility of play: we can sense it, but it defies the limitations of language.

THE IMPORTANCE OF PLAY

The depth of play's nebulousness is matched by the potency of its importance to children's development and learning. Before children can walk or speak, they interact with the world through play, learning the nature of the environment around them and the people within that environment. Kirschenblatt-Gimblett argued that there is a reciprocal relationship between play and learning. "It isn't so much that you learn and then play," she argues, "as that there is some sort of a reciprocity between play and learning" (as cited in Chance, 1979, p. 23). This

reciprocal relationship takes the form of a spiral: learning leads to more sophisticated play, and play provides a mastery of sorts that leads to more learning, leading to more sophisticated play and so on (Chance, 1979). Sutton-Smith (Chance, 1979) observed that play may not be where children first learn things, but that these things are certainly nailed down in play. More recent studies point to play as critical for children's cognitive, affective, social, physical, emotional, and linguistic development (Singer, 2006). There is a definite correspondence between play characteristics and the characteristics of young children's behavior, helping to drive children's development in a manner that teacher-directed activities cannot. Play makes learning fun and enjoyable, providing a meaningful context for children to learn concepts and skills, allowing the practice and extension of these skills, and encouraging exploration and discovery (Singer, 2006). In a world heavily favoring the authority and knowledge of adults, play is an arena where children are masters.

PROBLEM STATEMENT

Piscitelli, Everett, and Weier (2003) state that:

Museums present children with opportunities to learn about the world and to explore new ideas. They are places that encourage children to learn in a way that comes naturally to them—offering opportunities to actively construct meaning, respond to stimulating environments, engage in social interaction, make connections, build on what they know, ask questions, follow their interests, and solve problems. (p. 11)

Children's museums are institutions specifically dedicated to children's learning through play. They provide opportunities for children of varying developmental levels and ages to practice and extend their developing skills in an informal and fun environment. Exhibits are designed to naturally facilitate children's learning, providing opportunities for multi-sensory, self-directed exploration. Children are intrinsically motivated to interact with exhibition content because it is framed in such a way to inspire curiosity and encourage participation. Art museums are institutions similarly dedicated to education, but their method of presenting information prioritizes a more hierarchical, less exploratory, and more adult-focused method of learning than children's museums. Generally accepted art museum practices, such as catering to a visual

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intelligence, relying on wall labels to disseminate information, and encouraging a passive and sedentary interaction with the artworks on view, naturally hinders the engagement and support of early learners. Yet, the distinctive nature of the environment, coupled with tangible, visual examples of history, makes art museums an undeniably valuable resource for young children. Art museums spark curiosity in children, encouraging imagination and exploration of new perceptions, feelings, and innovative ideas.

Gardner (1983) believes informal environments like children's museums provide a context where children can learn easily through multiple modalities (intelligences and senses). The informal environment of the art museum offers visitors the opportunity to learn from and about artworks using only the modality of sight. This reliance upon learning through visual methods makes it difficult to engage children with artworks. Yet, art museums afford opportunities for learning that do not occur in other settings, such as encouraging children's observational and interpretative skills, facilitating a heightened awareness of their environment and a confidence in their ability to make meaning. As the number of young children attending art museums with adults continues to grow, it is increasingly important for art museum educators to consider different methods of presenting and contextualizing artworks in an effort to make them more accommodating to the intelligences and developmental needs of young children. I pursued this study to investigate how presenting and contextualizing artwork through play within an art museum setting impacted children aged 2 to 5. The central research question guiding this study was: What can be learned from educational practice grounded in play within the Boston Children's Museum that could inform the development and implementation of a workshop in an art museum for preschool children, and what implications might be derived for the use of play in art museum education?

RESEARCH METHODS

In looking to understand the effect of play on children aged 2 to 5, I used a qualitative research method, specifically the approach of grounded theory (Bryant & Charmaz, 2007;

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Charmaz, 2006, 2014). As a reminder, based upon the literature introduced in Chapter 3, grounded theory is a methodology encouraging data collection through a variety of tools, a flexible and emergent design, and the integration of literature. The first stage of this study, as discussed in Chapter 4, occurred in the *Peep's World* exhibit at the Boston Children's Museum in Boston, Massachusetts. After collecting data through observation, I organized the children's behavior using a rubric outlining characteristics of play. Four themes arose concerning the play behavior of children aged 2 to 5 in the exhibit that were directly reflective of the educational practice grounded in play within the BCM.

The second stage of this study, as described in Chapter 5, used these themes, coupled with literature concerning early childhood education, to develop a play-based workshop at the Blanton Museum of Art in Austin, Texas for children aged 2 to 5. During the third stage of research, I implemented this workshop to a pre-kindergarten class from the Child Development Center at The University of Texas at Austin, visiting their classroom before and after the museum trip. As presented in Chapter 6, analysis of the data collected through the video of the workshop, notes from the pre- and post-visit, and interviews with the critical friend and the classroom teacher led to three themes. These themes concerned the implementation and impact of the workshop.

FINDINGS

By analyzing and reflecting on these themes, I identified three overarching findings concentrated around the predominant ideas occurring in both data sets, namely: engagement, agency, participation, context, and multimodal interactions. These findings concern what happens when you integrate lessons learned from play at the Boston Children's Museum into the Blanton Museum of Art as a way to support young children's learning and help to answer the research question I posited. These three findings were, (1) children's active engagement corresponds with agency during play, (2) children spend more time involved with the artworks

when interacting through hands-on play, (3) children make meaning about artworks through the context of play.

Adaptation of the BCM observations to the Blanton resulted in a striking similarity of the children's behavior. Consistent with the grounded theory method of research, through these findings, which were based in the data collected during this study, I constructed a theory. This theory concerns how the lessons learned from the successful integration of play to engage young children at the Boston Children's Museum, when applied to the Blanton Museum of Art in the form of play-based activities, *also* encourages play, helping to support the needs of 4-year-olds. I will present my theory in the next section, which will be followed by a thorough discussion of the findings and the theory, using examples from the data and literature as reinforcement.

THE CASE FOR PLAY TO SUPPORT EARLY LEARNERS IN THE ART MUSEUM

The grounded theory method of research concludes with a response to the research question in the form of a theory that is *grounded* in the data collected during the research process. As such, my theory is only applicable to the subjects at the Boston Children's Museum and the Blanton Museum of Art. This theory is based on the three findings introduced, described in more detail below, and answers the central research question posed at the beginning of this study.

My theory is that lessons learned from children's play in the *Peep's World* exhibit at the Boston Children's Museum, when adapted to the Blanton Museum of Art through a workshop using play-based activities, will result in three outcomes among children aged 2 to 5-years-old. First, children will be afforded agency. When children direct their own exploration of artworks through play, they are creating their own meanings. When their individual interpretations are encouraged and validated, children feel supported and view the art museum as a place for them. Second, children will be actively engaged. Young children are concrete sensory learners; information taken in through multimodal opportunities helps children understand ideas and phenomena through multiple senses. Play facilitates a variety of approaches for children to

connect with the artworks, grounding the abstract ideas of the artwork in a more relatable context, therefore, encouraging active engagement with the artworks. Third, children will make personal connections to art. Children are naturally curious about the art museum environment because it provides so many new and interesting things at which to look. The familiarity of play provides a bridge to the novelty of the artworks, allowing children to make connections between the artworks and their own experiences.

Children aged 2 to 5-years-old will exhibit these three outcomes through the implementation of play-based activities in the art museum, accommodating children's unique learning needs in a manner that could not be supported as effectively through more traditional methods of art museum education. As such, the use of play enables young children to have a more personal, active, and educational experience in the art museum than they might have without play.

In order for play-based activities to support children aged 2 to 5-years-old during their art museum experience, and produce the three outcomes listed above, specific conditions need to be adhered to:

- Artworks, or the materials/artistic processes, should be stimulating and relatable to the frame of reference of a child aged 2 to 5.
- Artworks should have ample space in front of and around the artwork for activities to take place.
- Group sizes should be limited to 8 to 10 children.

Additionally, the individual play-based activities should:

- Last no longer than 12 minutes.
- Integrate multi-modal and/or multi-sensory elements.
- Directly connect to and prioritize the artwork.
- Enable children to *make* meaning, as opposed to being *told* meaning.
- Encourage opportunities for child agency.
- Engage children to work individually and as a group.

- Include opportunities for storytelling and/or role-play.

The anticipated outcomes imply that play can be used as a tool or method in art museum education to support the engagement of children 2 to 5-years-old, and, coupled with the criteria for developing and implementing play-based activities in the art museum, present an answer to the central research question presented at the beginning of this thesis.

Active engagement through agency during play

My first finding states that children's active engagement corresponds with agency during play. This finding refers specifically to the children I observed at both the BCM and the Blanton. As noted in Chapter 6, active engagement refers to duration of behavior in the context of the activity or task and is characterized by attraction to one's work, persistence despite challenges, and delight in accomplishments (McWilliam, 2008; Schlecty, 1994). As noted in Chapter 4, agency is the ability to influence and make decisions about what and how something is learned in order to expand capabilities (Adair, 2014). Though this finding closely echoes one of the three themes established in Chapter 6, the abundance of examples I observed during both the first and third stages of research convinces me of its significance as an overarching finding of this study, as well.

Exhibits at the BCM are designed to encourage independent exploration of and engagement with the exhibits. They are physically and cognitively accessible to children aged 2 to 5 and children's curiosity surrounding the tools and environments encouraged intrinsically motivated interactions with the environment. During my observations of *Peep's World* at the BCM, the subjects were actively engaged when they were interacting with the exhibit according to their own creative pursuits. For example, Subject 6's active engagement in her self-created play scenario was visible every time she ignored her father's attempts to redirect her play through verbal prompts or by putting tools in front of her. Likewise, Subject 6's lack of engagement was discernable when she participated in the play activity established by her father. Not only did she spend far less time in this task, but she did not show any delight in the

"accomplishment" of successfully dumping the bucket. Though Subject 3 encountered difficulties during her self-created play scenario, her active engagement was visible in a persistence of her actions, twice rejecting her mother's attempts to help her. These examples point to the high degree of independence afforded to children while playing in *Peep's World*, and that the children's agency corresponded with an active engagement with their play task. In looking to encourage children's active engagement with the art museum environment, the workshop incorporated play-based activities that provided opportunities for child agency.

During the workshop, when children took advantage of the opportunities for self-directed learning during the play-based activities, they were more actively engaged with the artworks and the activities than during the non-play-based activities. This active engagement was visible through children's duration of behavior in context, persistence despite challenges, and delight in accomplishments.

When I led a conversation in front of the Nevelson sculpture, 40% of children actively engaged, raising their hands and verbally expressing their comments about the artwork. For instance, the sculpture looked like "UT" according to Jane, "a white castle" according to Josh, and "a bicycle" according to Helen. Though these comments are considered behavior in the context of the activity, their duration only lasted about 80 seconds. I directed this conversation and, as such, children were dependent upon me to facilitate their experience with the artwork. While building block sculptures in front of the Nevelson sculpture, however, 100% of children actively engaged. This active engagement was no doubt stimulated by their prior experience and familiarity using wooden blocks. For about 8 minutes, the children participated in the block sculpture activity. When the children were not actively building, they were still behaving within the context of the activity: looking around at the sculptures of their peers, observing the Nevelson sculpture, or speaking with other students about their sculptures. For example, Aiden complimented Molly on her sculpture and Daisy spoke with Tom about what she was making. During the play-based block building activity, children were "agents of experiences rather than simply undergoers of experiences" (Bandura, 2001), individually determining his or her

experience with the artwork as opposed to relying on me to frame the experience for them. And, this self-determined creation corresponded with a heightened duration of actively engaged behavior.

Children were actively engaged in the block building activity and group storytelling activity through persistence in their self-controlled endeavors. In front of the Nevelson, this persistence was most visible when children were building their sculptures. For example, when Aiden accidentally toppled Jane's sculpture, she voiced distress, but then rebuilt her sculpture even taller than before. Jackson's outburst about his lack of blocks was followed up by his persistence to build his sculpture after Daisy offered him the blocks she was not using. In front of the Duville, this persistence was noticeable when children were creating their own stories. As I was wrapping up the workshop, Daisy was persistent in her desire to continue the activity by asking "Where's the story?" and was the first child to participate when I began the final group story-telling activity, despite the fact that we had created stories as a group for the past 7 minutes. These examples point to the overlap between the persistence children exhibited while participating in the play-based activities and opportunities for children to be agentic. This persistence, absent of any directions from me, also points to the fact that children's behavior was intrinsically motivated during the play-based activities.

The delight children showed in their inventive and independence actions indicates active engagement during both the block building activity and storytelling activity. While engaging in the block-building activity, children were visibly delighted in their individual sculptures. For instance, when Aiden finished his sculpture, he smiled and said to me, "Look at mine! I'm an artist!" leading Jane to add, "I'm an artist, too!" Approximately two minutes into building, Jackson looked up at me and proudly pointed to his unfinished creation, saying, "Do you like my sculpture?" During the play-based activities in front of the Duville, children exhibited a similar delight in their individual contributions to the group story. When Joseph started his version of a story hiding in the artwork, the first time he spoke up while in front of an artwork, he smiled broadly and then squirmed in delight when Liam continued his story. Liam's addition to Joseph's

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line made everybody laugh, causing Liam to beam and empowering him to add another line once the laughter subsided. Children clearly delighted in their individual accomplishments during the play-based activities, even more so when their accomplishments were validated through an audible reaction from their peers. This delight is an indication that children were actively engaged with both the activity and the artwork. This finding proves Sykes' (1992) claim that when young children engage in tasks they have defined for themselves, they feel successful and competent. This makes an interesting link between children's active engagement and competence.

As Montessori (Cooney, Cross, & Trunk, 1993) argued, children are motivated through the experimentation and interaction with objects, becoming empowered through the process of self-creation. Thus, children's agency during play-based activities not only encouraged independent creativity, but also validated their intrinsically motivated creation of meaning, empowering them for future interactions with art. Offering children the chance to self-direct their own explorations with artworks through play substantiates children's interpretations of artworks. This helps make space for children within the art museum by communicating an openness to children's perspectives.

It should be noted that the best manner to answer the critical research question driving this study was to teach the All Stars through a workshop that controlled the works and the activities each child saw. As such, children did not have true agency within a free play experience. The agency the workshop's play-based activities afforded each child is couched within the terms of a guided play experience. As defined by Krakowski (2011), guided play "embodies many of the characteristics of free play, however, it is teacher-directed and is used intentionally for educational purposes" (p. 53).

Though I cannot definitively state that active engagement occurs as a result of children's agency in play in *all* art museums, the data from both stages of research definitely points to this correlation within my study. Additionally, both the critical friend and the teacher validated this active engagement. During the block sculpture activity, by virtue of the fact that children were

not answering my questions while they were building, the critical friend determined that they were actively engaged in constructing. The teacher noted a similar active engagement during the self-directed block sculpture activity. Specifically, she pointed to Jackson's transition from disengagement to active engagement, which corresponded directly with the transition from the discussion to the block building activity. The creative agency afforded to children through play-based activities during the workshop at the Blanton Museum encouraged their active engagement with both the activities and the artworks.

Current art museum education practice focuses on the visitor's "active role in creating meaning of a museum experience through the context he/she brings" (Silverman, 1995, p. 61). This active role empowers visitors to probe the artwork for multiple meanings and fosters a confidence in their observational skills (Rice & Yenawine, 2002). But this agency does not transfer to young children. Art museums traditionally hold an image of children as incompetent and immature (Ahn, 2011; Arthur, Beecher, Death, Dockett, & Farmer, 2008; Woodhead, 2015). Adults are expected to lead children through the galleries, transmit necessary information, and ensure that they do not damage the artworks. As a result, most children encounter very few opportunities for agency during their art museum visits.

My first finding implies that the use of play in art museum education affords children a primary role in creating meaning within the art museum, empowering them to trust their own interpretations, and encouraging active engagement with the artworks. As an example, Daisy posited five different interpretations for the Duville painting and wanted to keep going even after the workshop ended. This example reinforces the implication of my finding: offering opportunities for creative agency through play-based activities facilitates the active engagement of children aged 2 to 5-years-old in the art museum. Museums are capable of creating experiences in which children have meaningful encounters that invite them to make choices, take charge, and engage with artworks (McRainey & Russick, 2010). My finding points to play-based activities adapted from lessons learned in a children's museum as one of those experiences. Adair (2015) argues, "Having agency in their learning makes possible the types of learning

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experiences that expand children's capabilities beyond the acquisition of a narrow range of content" (p. 219). When children created wooden sculptures in front of the Nevelson, they were not only learning about Nevelson's creative process, they were expanding their capabilities to think about the sculpture in terms of balance, weight, and construction. When children created their own stories in front of the Duville, they were not only practicing their observational skills, they were expanding their skills of story telling, listening, deductive reasoning, and analysis. Thus, the integration of play provides opportunities for child agency in the art museum, encouraging active engagement with the environment and supporting early learners by making it possible for children to experience artworks beyond the simple acquisition of art historical knowledge.

Involvement through hands-on interactions during play

My second finding states that children spend more time involved with the artworks when interacting through hands-on play. The National Association for the Education of Young Children (NAEYC) stipulates that preschool, pre-kindergarten, and kindergarten children master the basics of learning through sensory experiences, positing that early childhood learning environments are most successful when they offer a variety of opportunities to connect with their surroundings through sight, touch, and sounds (Blaustein, 2005). The *Peep's World* exhibit at the BCM is an early learning environment, specifically designed to offer children aged 3 to 5 the space to practice science skills through play. The exhibit is split into three different thematic sections, with each section providing opportunities for children to engage with the environment through multi-sensory exhibit elements. According to the specifications of the NAEYC, *Peep's World* is a successful early childhood learning environment, offering a variety of different methods for children to be actively involved in the environment through sight, touch, and sound. My observations of children's play within this exhibit validated this success: subjects intuitively interacted with the exhibit, using exhibit components and materials to explore through play the scientific concepts of observing, comparing, and predicting. Though the NAEYC calls out the

senses of sight, touch, and sound, there is no indication that any one sense is more potent as a method for young children's learning. Subjects interacted with the exhibit through all three of these senses, but their moments of most active involvement came as a result of hands-on interactions.

Children learn best through active involvement with their environment and through first-hand, concrete experiences (Gruber & Vonèche, 1977; Piaget, 1962; Puchner, Rappaport, & Gaskins, 2001). Children's first-hand, concrete experiences through kinesthetic manipulation at *Peep's World* produced the longest involvement with the exhibit during my observations. This involvement took the form of time on task, deep concentration, and complex interactions with the environment and materials. For example, Subject 3 and Subject 6 spent 13 minutes and 53 minutes, respectively, at *Peep's World*, and both of their experiences were predominantly haptic. Both subjects handled a diversity of tools and each tool added a degree of interest and complexity to their play, which resulting in a longer duration of participation within their play task. The BCM prioritizes Montessori's (1966) concept that children experience and learn about the world through experimentation and interactions with objects through multiple senses. The BCM staff designs exhibits offering opportunities for children to experiment and interact with concepts, the environment, and objects through a variety of sensations. My observations at the BCM proved that children spend more time involved when interacting through hands-on experiences. Thus, in order to facilitate children's increased involvement within the art museum, I included play-based activities providing opportunities for hands-on interactions within the workshop.

During the workshop, I observed children were more involved with the artworks when they were engaged in the play-based activities that included tactile experiences, namely, the block building activity at the Nevelson. This finding was focused around two identifying features that defined children's involvement with artworks: heightened concentration as measured through longer time on task and a memorable experience.

The first feature I used to define involvement was that children spent a longer time participating in the activity that facilitated interactions through hands-on play than those that did not offer interactions through hands-on play. When in front of the Nevelson sculpture, I initially engaged children in a discussion focused on making aesthetic connections to the artwork. This held the majority of children's attention for about 80 seconds. After that time, I observed children looking around the gallery, sliding around on the floor, whispering to their peers, and being generally fidgety. This conversation was followed up by the block sculpture activity, offering children the opportunity to create their own sculptures inspired by the Nevelson artwork and get a first-hand experience in a task that mirrored Nevelson's artistic process. This activity held the majority of children's attention for about 8 minutes. Children spent more time focused on the artwork and participating in the play-based activity that was kinesthetically based.

However, more than just being involved in the active process of block building, the hands-on interaction sustained curiosity and interest with the artwork even after the children were done actively manipulating the blocks. Once everyone had finished building, I asked the children to note any differences or similarities between their sculptures and the Nevelson. Ethan and Scarlett, who did not participate during the discussion, each made a verbal connection based on a visual comparison between their own sculpture and the Nevelson. The hands-on interaction made the artwork concrete for them. In turn, this allowed them to consider the artworks in a tangible manner that the discussion did not support. Additionally, although the other students did not involve themselves verbally, their eye movements both during and after Ethan and Scarlett spoke up, made it clear that they were still interested in the artwork as they looked between their own sculptures, the Nevelson, and Ethan and Scarlett's sculptures. Thus, the play-based activity offering hands-on interactions facilitated a more substantial involvement with the artwork, even after that tactile experience had ended.

The second feature I used to define involvement was a memorable experience. During the post-visit, when I asked children to recall what they had done during the visit to the Blanton, the children mentioned a variety of things, but four individual children mentioned the block

sculpture activity. Though this is only 20% (since only 19 children who participated in the workshop were present) of the whole class, these four recollections were the most accurate and thorough of all the things that the children recalled. The children remembered that they, "made sculptures with wooden blocks," and "played with blocks." Their other recollections, during both the post-visit, and as recounted by the teacher, were vague and fragmented: "we looked at pictures," "a giant," and "we acted a picture out."

Cole (1994) argues that play uses tangible objects to find connections between the artwork and the viewer. When I provided the children with tangible objects within the play-based activities during the workshop at the Blanton Museum, they were able to make connections between the artwork and their own sculptures. These tangible objects grounded the artwork in a first-hand experience that mimicked Nevelson's artistic process, encouraging the children to connect the familiar experience of playing with blocks to the experience of making art. During the post-visit, I brought everyone's attention to the fact that we were playing with blocks, but that we were doing so in a very different environment, making a connection between the experience at the Blanton and their classroom experience. 30 second after I made this concrete connection visible, Jane, without prompting, yelled, "But the sculpture was white." Patterson (1997) argues the sensory input offered by tactile and kinesthetic experiences hold children's attention, provide a holistic view of the subject matter, and assists in memory retention. Children were attentive for a longer period of time during activities offering kinesthetic experiences than those offering no kinesthetic experiences. Hands-on interactions aided in a more grounded, and, thus, more holistic view of the artwork, than children achieved through discussion alone. Lastly, the block sculpture activity corresponded with the highest memory retention among the activities involved in the workshop. Children were involved with the artworks—during the activity, after the activity, and after the visit—through the hands-on interactions afforded during a play-based activity.

My second finding implies that the use of play in art museum education provides multimodal opportunities for children to understand the artworks, encouraging a deeper

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involvement with them. Hein (1991) argues that a necessary condition of young children's learning is physical involvement, specifically touch, stipulating that hands-on activities must also be "minds-on," meaning that the activities must serve a higher educational purpose, must scaffold or assist the comprehension of an idea, beyond simply being tactile. My second finding points to a direct connection between hands-on interactions through play-based activities and the children's active involvement with artworks. Bruner (2006b) corroborates this finding, describing the following observation of children on a playground:

> The sequences of play that were the longest and the richest and the most elaborate were produce by materials that had a structure that could be called instrumental—that is to say, episodes that had means that led to an end. Mostly these were activities and materials that made it possible for the child to *construct* something. They were constructions, moreover, whose progress could be appreciated by the child without instructions from or resources to an adult. (p. 96)

When the children engaged in the "hands-on" play-based activity, they were provided a concrete experience to understand the abstract artwork, making the artwork more accessible to the students and establishing this activity as "minds on." This was evidenced when the children made comparisons between their own artwork and the Nevelson sculpture, when they recalled their vivid memories of the activity in the post-visit, and when children referred to their block creations as sculptures. As established earlier, early learning environments are most successful when they offer opportunities for multi-sensory interactions with the environment. Shaffer (2012) argues that museums have a responsibility to ensure that the youngest museum visitors are engaged in quality learning experiences. Success in this capacity, Shaffer (2012) continues, will be determined by the ability to understand the "developmental capacity and learning styles of this audience in the context of the museum spaces" (p. 12). At a time when art museums are looking to establish themselves as suitable places for young learners, providing opportunities for children to have hands-on interactions through play-based activities in the art museum encourages their involvement with the artworks and supports children's natural propensity to learn through tactile interactions.

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A context for meaning making during play

My third finding states that children make meaning about artworks through the context of play. Vygotsky (1966, 1978) argued that play functions as a Zone of Proximal Development (ZPD), providing a framework for activities and ideas that would normally be outside a child's capacity. This scaffolding simplifies ideas or tasks in order to encourage the learner toward a successful experience with that idea or task (Wolf & Wood, 2012). The BCM welcomes visitors of different ages and developmental levels. Even exhibits focused on accommodating a particular audience are designed to provide experiences and learning opportunities across the spectrum of all their visitors' experiences and capabilities. Play facilitates this accommodation. Each of the six subjects observed at *Peep's World* entered the exhibit armed with their own experiences, interests, and abilities. Though their interactions with the environment varied, they were all grounded in play. Play afforded each subject a customized experience, providing access to exhibit content and facilitating meaning making and learning. For example, Subject 6 began her interaction with *Peep's World* using the familiar tool of measuring cups. This familiarity provided a context for her to interact with the environment, assisting her eventual transition to using the unfamiliar tools of a funnel and a whiffle ball. Though experimentation through play facilitated comfort with these tools, leading to a gradual increase in the complexity of her play, Subject 6's initial use of the unfamiliar tools mimicked the use of a measuring cup. Play scaffolded her experience within the exhibit, providing a comfortable context to begin interacting with the environment and a gradual encouragement to move into more challenging terrain. The BCM organizes their exhibits around play, encouraging an accessible context for children to engage with the content of their exhibitions. As I developed the workshop for the Blanton Museum, there was no way to ensure play would provide a context for children's understanding and meaning making of artworks. But, by incorporating play-based activities that would cater to a pre-kindergartner's frame of reference and experience, there would certainly be a higher probability of establishing some sort of context through which the All Stars could connect with the artworks.

Art museums are naturally stimulating environments. The novelty of the space and the works themselves inherently inspire the curiosity of young children. Yet, the physical size of most art museums, the incessant visual stimuli, the preponderance of novelty, and the abstract concepts embedded within artworks, makes the overstimulation of young children in the art museum a real possibility. This overstimulation can be uncomfortable for young children, severely limiting their ability to make meaning about the artworks. The familiarity of play grounds the experience of the art museum for young children, helping to balance the familiar with the unfamiliar, encouraging them to interact with the abstract ideas represented in the artworks in a more accessible format (Piscitelli, McArdle, & Weier, 1999; Piscitelli & Weier, 2002; Weier, 2000).

During the workshop, the play-based activity in front of the Nevelson sculpture encouraged children to perform a real action, creating a learning base to contextualize their experience with the large and abstract artwork. Acting on these blocks gave the children something "real" to work with and think about (Hohmann & Weikert, 2002). Play made the abstract artwork concrete, helping children think about the sculpture in a more tangible way by engaging in a process similar to Nevelson's artistic process, themselves, in a way, translating the intangible idea of the artwork to a more understandable format. When the children were simply identifying elements of the Nevelson sculpture during the discussion, the abstract nature of language, in addition to the largely egocentric perspective of children under five, made it difficult for them to engage with the artwork. The familiarity of playing with wooden blocks, both in their classroom and at home, provided a comfortable and accessible context to understand the artwork, regardless of their previous experiences or unique learning needs. Ethan and Scarlett only felt comfortable commenting on the sculpture once they had anchored the artwork in the first-hand experience of building their own block sculptures. Scarlett's comment noted similarities between her sculpture and the Nevelson: "They both have circles." Contextualizing the artworks through the block building activity encouraged Scarlett to look closely to find these similarities. As the children listen to Scarlett's comment, they looked closer,

comparing Scarlett's sculpture to their own and to the Nevelson, in order to corroborate this observation. Ethan's comment noted differences between his sculpture and the Nevelson: "They use different blocks." The block building activity provided a substantial framework for Ethan, allowing him to notice a difference between the sculptures. The context provided through play gave the children a stepladder to the artworks, helping them to see art in terms of their own experiences.

This context assisted the children's meaning making. When the children told each other what they made with the blocks, they were projecting a meaning on to the abstract form of the block sculpture. This is the same process needed to make meaning of artworks within the museum. By going through this process on a smaller and more familiar scale, the child got to practice the process of making meaning. Though there are other variables that could impact this outcome, the children were far more active in their meaning making, after engaging in this practice, during the next activity at the Duville than they initially were at the Nevelson.

Play provided context through the less tangible, but no less sturdy, structure of a story. The story centered, play-based activities in front of the Duville resulted in an abundance of interpretations by children. During my observations of the activities in front of the artwork, I was struck by the fact that certain aspects of the painting were mentioned once, while other aspects were continuously repeated in multiple iterations of the narrative. This repetition corresponded with recognizable objects in the painting that were most familiar to the children: boots/shoes, mittens/gloves, a car, a mountain, a house, trees, and, to a lesser extent, a giant. These observations anchored the artwork for the children, providing a point of familiarity upon which to base their stories. As children told their stories, and got more comfortable with the format of the activity and with the artwork, they were able to add the more foreign objects that they saw in the painting to their stories, providing complex and abstract interactions between the objects, such as the idea that the car was driving itself, that the giant was under the ground, and that the speckles were pieces of the giant. Finally, the children incorporated objects and interactions that were not represented in the painting, such as a squirrel, that the giant's hair fell off his head, that

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the giant was hit by a rock, and that the car fell off the mountain. Retelling children's stories exactly as they tell them "helps adults come into contact with children's language and inner world and also helps in children's participation by bringing children's ideas forward (Karlsson, 2004). When I echoed the children's lines of their own stories, their individual contributions to the story were validated. But, more than that, this retelling also made their stories tangible by reinforcing the context of the story as a reference point for understanding the artwork.

In addition, the narratives we created as a group offered opportunities for children to make personal connections to the artwork. For example, when Daisy told the group her story about jumping in the leaves, she was able to put herself in the position of the giant when, in one interpretation, he fell into a huge pile of leaves, which led them to fly everywhere. Or when Carol mimicked the shape of mittens with her hands, which we all copied. This recreation of the shape that mittens take helped Carol understand the mittens she saw in the painting and provided a physical context for the children to ably discuss the difference in size between a giant sized mitten and a mitten for a child.

Piaget (1962) viewed play as a form of assimilation, a way of "taking the outside world and manipulating it so the environment (play objects) fits the child's existing way of structuring and viewing the world" (Bjorkland, 1978, p. 35). In the absence of being able to manipulate the artwork itself, there must be an additional element helping children to contextualize the information presented through the artwork. Play provided a concrete and familiar access point for children aged 2 to 5 to engage with the abstract concepts represented through the artworks, facilitating the children's creation of meaning and personal connections.

My final finding implies that the use of play in art museum education provides a context for young children to understand the artwork, encouraging meaning making and an understanding about the artworks. Henderson and Atencio (2007) argue that children learn best when offered opportunities to engage in play-based inquiry in the museum, and that "learning was significantly more likely to occur in the presence of scaffolding than without" (p. 253). My finding indicates that play is scaffolding in that it provides an accommodating context for

children to access the artworks. Therefore, following Henderson and Atencio's (2007) argument: in the museum, children learn *best* when offered opportunities to engage in play-based inquiry and learning is *more likely to occur* through play due to its role as a scaffold. Early childhood experiences in art museums are influenced by social and physical contexts in addition to the motivation and interests of the child (Falk & Dierking, 2000). My finding signifies that these social and physical contexts, as well as children's motivations and interests, can be contextualized through play, facilitating children's meaning making within the art museum. Play meets children at whatever developmental level they are at, promoting a personalized, appropriate, and engaging manner of experiencing artworks. When children view art and talk about it, they are decoding symbols in order to decipher meaning (Eisner, 1976). My finding posits that play is a critical component for young children to be able to decode artworks in order to decipher meaning. Shaffer (2012) argues, "museums have an important role to play in shaping the learning of this young generation" (p. 11). If art museum educators hope to assume that role, they should look to play as integral to their pedagogy. As art museums look to position themselves as institutions for children to "broaden their horizons, introduce new ideas, develop age-appropriate skills, and engage children's imagination and sense of wonder" (Shaffer, 2012, p. 11), play must become an acceptable and serious approach to art museum education.

EXTENDING THIS RESEARCH INTO THE FUTURE

Early learners are just beginning to be recognized as a distinct group of visitors in art museums, no longer lumped into the larger category of "children." As such, a vast amount of information needs to be collected in order to effectively, appropriately, and holistically support the learning needs of young children within the art museum. This study was limited to looking at how the successful model of engaging play at the Boston Children's Museum could be adapted to the Blanton Museum, and the resulting impact on pre-kindergartners. As such, this study could not fully determine the use of play in art museum education. Recommendations for future research are focused around finding more answers to this question.

The type of workshop created in this study should be continued, extended, and studied. The workshop had only two iterations over one day. Thus, any lessons learned during the teaching and subsequent analysis of the workshop could not be implemented and further evaluated. With more data, the causative links I established in this study could be verified. This additional data would strengthen the validity of this study, and could assist its transition from a substantive theory (specific to the group of participants) to a formal theory (comparing this study to others like it). It would be particularly informative to add before and after surveys for children, parents, and teachers, in order to more definitively measure the impact of the workshop. Integral to this survey would be the inclusion of a method to measure the learning that is taking place. If children's play is to be taken seriously as a method of museum education, a body of quantitative data needs to be established that makes clear the educational value of play in the art museum for young children.

The field would benefit from a longitudinal study recording the All Stars, or a similar group, across multiple visits, using an adapted workshop incorporating different types of play-based activities. If researchers could control for the audience, but change what type of play the workshop encouraged, they could more conclusively understand the impact of different types of play on young children's art museum experiences. Additionally, if this workshop could simultaneously be offered to All Stars students with their families, more specific comparisons could be determined between children's play in the art museum among peers and children's play in the art museum among family.

This study looked to facilitate play with pre-kindergartners in an art museum, but did not incorporate roles for parents or guardians to facilitate this play. There has been an increasing amount of research (Bingmann, Grove, & Johnson, 2009; Downey, Krantz, & Skidmore, 2010; Fasoli, 2014; Montagu, Hansen, Gurian, Kamien, & Robinson, 1987; Piscitelli & Anderson, 2002; Puchner, Rapoport, & Gaskins, 2001; Shine & Acosta, 2000; Wolf & Wood; 2012) looking into how adults (parents, guardians, and teachers) scaffold children's play in both children's museums and art museums, and what impact this has on children's learning in both

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locations. But, it would be interesting to adapt the structure of this study to investigate how lessons learned from the BCM concerning their facilitation of guardian-child interactions and relationships can be adapted to the art museum setting, and what impact that may have for the use of play in the art museum.

Lastly, researchers should investigate what a program would look like that seamlessly integrated the experiential and child-centered mission of a children's museum with the interpretive and art-focused mission of an art museum. During my research, I often thought about what this would look like, since I prioritized the structure, environment, and scope of the art museum over the children's museums. A program that is able to hold each institution's educational policy on par could provide a completely new and unique environment for early learners to engage in playful learning about art, without fear of either mission getting co-opted. Three institutions to look to as beginning models are the Children's Museum of Arts in New York; the New Children's Museum in San Diego, California; and the Children's Creativity Museum in San Francisco, California.

RESOLVE: TO PLAY

The museum field is in the midst of a significant paradigm shift concerning play and young children. Breakthroughs in neuroscience point to the importance of the early years on a child's development. A growing body of research points to the importance of children learning mainly through play up until the age of 8. The recognition of and respect for children as highly skilled co-constructors of their own learning and environment has gained significant traction. As formal early childhood education centers become more structured and standardized, there is a growing need for art museums to commit to accepting young children as a significant visitor group. This commitment necessitates a reconsideration of current art museum pedagogy, calling for new and fresh ways to support early childhood learning. As children's museums prioritize the learning needs of children, they offer an incomparable resource for art museums. The success of children's museums lies in their provision of a context where children can engage with the

content, learn easily from multiple modalities, and take responsibility for their own learning (Gardner, 1991, 1993). My theory posited in this study suggests that when play is encouraged in the art museum setting, art museums can be similarly successful for young children. By adapting lessons concerning the engagement of play at the Boston Children's Museum to the Blanton Museum of Art, children will: be afforded agency, be actively engaged, and make personal connections.

Whether visiting with family, guardians, or peers, the art museum stands as a unique environment for children aged 2 to 5 to learn in an informal setting. Positioned outside the bounds of home and school, art museums are one of the few places where children can experience pure wonder through their experience of viewing and making meaning of artworks. Art museums allow children to be enveloped by an abundance of objects grounded in our social history, providing a memorable and immersive space for reflection, experimentation, inspiration, creation, and enjoyment (Piscitelli, Everett, & Weier, 2003). When children are invited to participate in the active co-creation of meaning in the art museum, their thoughts and feelings are valued on equal standing with adults, reinforcing their confidence and emboldening their independent exploration of the world (Gross, 2014).

The provision of opportunities for child agency through play in the art museum is of particular importance. In our adult-centered society, children, and their autonomous thoughts and feelings, are often dismissed. Children's lives are controlled and limited by adults. Childhood is characterized by a continually marginalized power dynamic. The socialized and institutionalized nature of formal education propagates and reinforces these unequal power relations. Through the integration of play, art museums can establish themselves as environments where children are offered the benefit of the doubt and treated with the same degree of respect as adults.

Art museums are institutions imbued with an authority with a high degree of visibility. This responsibility puts art museums in a unique position to use their influence as a platform, pushing the envelope of "best practices" and transforming traditionally accepted social norms. Though cliché, there is truth to the saying that children are the future. At a moment when the

future looks decidedly uncertain, art museums can cultivate a new generation of children who are observant, empathetic, curious, and creative. But, first, art museums must learn how to play.

Appendices

APPENDIX A: IRB APPROVAL LETTER

OFFICE OF RESEARCH SUPPORT

THE UNIVERSITY OF TEXAS AT AUSTIN

_____

P.O. Box 7426, Austin, Texas 78713 · Mail Code A3200
(512) 471-8871 · FAX (512) 471-8873

FWA # 00002030

Date: 09/11/15

PI: Madeleine Lepere

Dept: Art/Art History

Title: Teaching the Art Museum to Play: Enhancing Early
Childhood Learning Art Museums Through Play Theory

Re: IRB Expedited Approval for Protocol Number 2015-05-0065

Dear Madeleine Lepere:

In accordance with the Federal Regulations the Institutional Review Board (IRB) reviewed the above referenced research study and found it met the requirements for approval under the Expedited category noted below for the following period of time: 09/11/2015 to 09/10/2016. *Expires 12 a.m. [midnight] of this date.* If the research will be conducted at more than one site, you may initiate research at any site from which you have a letter granting you permission to conduct the research. You should retain a copy of the letter in your files.

Expedited category of approval:

☐   1) Clinical studies of drugs and medical devices only when condition (a) or (b) is met. (a) Research on drugs for which an investigational new drug application (21 CFR Part 312) is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review). (b) Research on medical devices for which (i) an investigational device exemption application (21 CFR Part 812) is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

☐   2) Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows: (a) from healthy, non-pregnant adults who weigh at least 110 pounds. For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week; or (b) from other adults and children2, considering the age, weight, and health of the subjects, the collection procedure, the amount of blood to be collected, and the frequency with which it will be collected. For these subjects, the amount drawn may not exceed the lesser of 50 ml or 3 ml per kg in an 8 week period and collection may not occur more frequently than 2 times per week.

☐   3) Prospective collection of biological specimens for research purposes by non-invasive means. Examples:
     (a) Hair and nail clippings in a non-disfiguring manner.
     (b) Deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction;
     (c) Permanent teeth if routine patient care indicates a need for extraction.
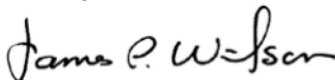
161

(d) Excreta and external secretions (including sweat).
(e) Uncannulated saliva collected either in an un-stimulated fashion or stimulated by chewing gumbase or wax or by applying a dilute citric solution to the tongue.
(f) Placenta removed at delivery.
(g) Amniotic fluid obtained at the time of rupture of the membrane prior to or during labor.
(h) Supra- and subgingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques.
(i) Mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings.
(j) Sputum collected after saline mist nebulization.

☐ 4) Collection of data through non-invasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications).
Examples:
(a) Physical sensors that are applied either to the surface of the body or at a distance and do not involve input of significant amounts of energy into the subject or an invasion of the subject's privacy.
(b) Weighing or testing sensory acuity.
(c) Magnetic resonance imaging.
(d) Electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography.
(e) Moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.

☐ 5) Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for non-research purposes (such as medical treatment or diagnosis).
Note: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(4). This listing refers only to research that is not exempt.

☒ 6) Collection of data from voice, video, digital, or image recordings made for research purposes.

☒ 7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.
Note: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.

☒ Use the attached approved informed consent document(s).

☐ You have been granted a Waiver of Documentation of Consent according to 45 CFR 46.117 and/or 21 CFR 56.109(c)(1).

☐ You have been granted a Waiver of Informed Consent according to 45 CFR 46.116(d).

Responsibilities of the Principal Investigator:

1. Report immediately to the IRB any unanticipated problems.

2. Submit for review and approval by the IRB all modifications to the protocol or consent form(s). Ensure the proposed changes in the approved research are not applied without prior IRB review and approval, except when necessary to eliminate apparent immediate hazards to the subject. Changes in approved research implemented without IRB review and approval initiated to eliminate apparent immediate hazards to the subject must be promptly reported to the IRB, and will be reviewed under the unanticipated problems policy to determine whether the change was consistent with ensuring the subjects continued welfare.

3. Report any significant findings that become known in the course of the research that might affect the willingness of subjects to continue to participate.

4. Ensure that only persons formally approved by the IRB enroll subjects.

5. Use only a currently approved consent form, if applicable.
    Note: Approval periods are for 12 months or less.

6.   Protect the confidentiality of all persons and personally identifiable data, and train your staff and collaborators on policies and procedures for ensuring the privacy and confidentiality of subjects and their information.

7. Submit a Continuing Review Application for continuing review by the IRB. Federal regulations require IRB review of on-going projects no less than once a year a reminder letter will be sent to you two months before your expiration date. If a reminder is not received from Office of Research Support (ORS) about your upcoming continuing review, it is still the primary responsibility of the Principal Investigator not to conduct research activities on or after the expiration date. The Continuing Review Application must be submitted, reviewed and approved, before the expiration date.

8. Upon completion of the research study, a Closure Report must be submitted to the ORS.

9. Include the IRB study number on all future correspondence relating to this protocol.

If you have any questions contact the ORS by phone at (512) 471-8871 or via e-mail at orsc@uts.cc.utexas.edu.

Sincerely,

James P. Wilson

James Wilson, Ph.D.
Institutional Review Board Chair

**BOSTON
CHILDREN'S
MUSEUM**

July 6, 2015

Dr. James Wilson, Ph.D.
Chair, Institutional Review Board
P.O. Box 7426
Austin, TX 78713
irbchair@austin.utexas.edu

Dear Dr. Wilson:

The purpose of this letter is to grant Madeleine LePere, a graduate student researcher at the University of Texas at Austin permission to conduct research at the Boston Children's Museum. The project, "Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums through Play" entails observation of children aged 2-5 in the exhibits of the BCM. Observation will occur 2 times a week for 4 weeks at 2 different exhibits for 45 minutes at a time. A maximum number of 48 subjects will be recorded. The BCM was selected because their exhibits are based on the power of play to enhance informal learning. I am interning at the Art Studio at the BCM over the summer. Results of this research. and the finalized thesis, will be shared with the interested employees at the museum . I, Kacy Hughes do hereby grant permission for Madeleine LePere to conduct observational research for Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums at the Boston Children's Museum.

Sincerely,

Kacy Hughes
Senior Manager of Community Engagement

October 13, 2015

Dr. James Wilson, Ph. D.
Chair, Institutional Review Board
P.O. Box 7426
Austin, TX 78713
irbchair@austin.utexas.edu

Dear Dr. Wilson:

The purpose of this letter is to grant Madeleine LePere, a graduate student researcher at the University of Texas at Austin, permission to conduct research at the Blanton Museum of Art. The project, "Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory" entails teaching a workshop for children aged 3-5 in the galleries of the Blanton Museum. The workshop will occur twice on November 12th, 2015 and will last for 50 minutes. A maximum number of 21 subjects will be involved. The Blanton Museum was selected because of their proximity to the Child Development Center and the success of their past family programming. Madeleine is a Gallery Teaching Fellow at the Blanton Museum for the academic year of 2015-2016 and as such is familiar with the collection and has practice teaching students in the galleries. Results of this research, and the finalized thesis, will be shared with the interested employees of the museum. I, Andrea Seanz-Williams, do hereby grant permission for Madeleine LePere to conduct two workshops as research for her master's thesis entitled "Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory" at the Blanton Museum.

Sincerely,

Andrea Saenz-Williams

Museum Educator, School and Teacher Programs
Blanton Museum

CHILD DEVELOPMENT CENTER
THE UNIVERSITY OF TEXAS AT AUSTIN

1925 San Jacinto Blvd. • D3200 • Austin, TX 78712-1406 • 512-471-7040
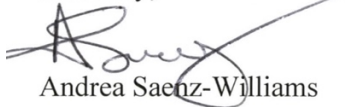*http://www.utexas.edu/childcenter/*

October 13, 2015

Dr. James Wilson, Ph. D.
Chair, Institutional Review Board
P.O. Box 7426
Austin, TX 78713
irbchair@austin.utexas.edu

Dear Dr. Wilson:

The purpose of this letter is to grant Madeleine LePere, a graduate student researcher at the University of Texas at Austin, permission to conduct research with children aged 3-5 from the Child Development Center in Austin, Texas. The project, "Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory" entails teaching a workshop to Jennifer Acebedo's All Stars Pre-K class in the galleries of the Blanton Museum. The workshop will occur twice on November 12th, 2015 and will last for 50 minutes. A maximum number of 21 subjects will be involved. The Child Development Center was selected because of its history as a site of research for the Art Education Department at UT Austin and its proximity to the site of the workshop, the Blanton Museum. Madeleine is a Gallery Teaching Fellow at the Blanton Museum for the academic year of 2015-2016 and as such is familiar with the collection and has practice teaching students in the galleries. Results of this research, and the finalized thesis, will be shared with interested employees of the CDC. I, Paula Barton, do hereby grant permission for Madeleine LePere to conduct two workshops with Jennifer Acebedo's All Stars Pre-K class as research for her master's thesis, entitled "Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory" at the Blanton Museum.

Sincerely,

Paula Barton

Paula Barton

San Jacinto Site Director
Child Development Center

Parental Permission for Children Participation in Research

Title: Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory

Introduction

The purpose of this form is to provide you (as the parent of a prospective research study participant) information that may affect your decision as to whether or not to let your child participate in this research study. The person performing the research will describe the study to you and answer all your questions. Read the information below and ask any questions you might have before deciding whether or not to give your permission for your child to take part. If you decide to let your child be involved in this study, this form will be used to record your permission.

Purpose of the Study

If you agree, your child will be asked to participate in a research study about **play in the museum**. The purpose of this study is **investigate how play can used to enhance engagement and learning opportunities for pre-k children in the art museum**.

What is my child going to be asked to do?

If you allow your child to participate in this study, they will be asked to **simply go through the exhibit as they normally would - engaging or not engaging with certain components as they see fit**. This study will take **at least 1 hour and will occur solely during this museum visit** and there will be approximately **47** other people in this study.

What are the risks involved in this study?

There are no risks beyond those of everyday life.

What are the possible benefits of this study?

Your child will receive no direct benefit from participating in this study; however, **by observing how your child interacts with the exhibits at the Boston Children's Museum, I can create a workshop that uses play as a way to enhance the engagement of pre-k children at art museums.**

Does my child have to participate?

No, your child's participation in this study is voluntary. Your child may decline to

participate or to withdraw from participation at any time. Withdrawal or refusing to participate will not affect their relationship with the Boston Children's Museum or The University of Texas at Austin in anyway. You can agree to allow your child to be in the study now and change your mind later without any penalty.

What if my child does not want to participate?
In addition to your permission, your child must agree to participate in the study. If you child does not want to participate they will not be included in the study and there will be no penalty. If your child initially agrees to be in the study they can change their mind later without any penalty.

Will there be any compensation?
Neither you nor your child will receive any type of payment participating in this study.

How will your child's privacy and confidentiality be protected if s/he participates in this research study?

Your child's privacy and the confidentiality of his/her data will be protected in multiple ways. All data will be collected anonymously via handwritten notes with the exception of noting child age and gender. A unique subject number will be associated with your child's age and gender to order to maintain participant anonymity. Only one researcher (Madeleine LePere) will be involved in this study and thus have access to this data. Hard copies of notes will be scanned and saved on a personal computer in a folder entitled "BCM Observations" which is password protected. Once the research is been finished, all copies (both hard copy and digital) will be destroyed.

If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to your child will be protected to the extent permitted by law. Your child's research records will not be released without your consent unless required by law or a court order. The data resulting from your child's participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with your child, or with your child's participation in any study.

Whom to contact with questions about the study?
Prior, during or after your participation you can contact the researcher **Madeleine LePere** at **617.365.1144** or send an email to **madeleine.lepere@gmail.com** for any questions or if you feel that you have been harmed. This study has been reviewed and approved by The University Institutional Review Board and the study number is **2015-05-0065**.

Whom to contact with questions concerning your rights as a research participant?
For questions about your rights or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Signature

You are making a decision about allowing your child to participate in this study. Your mark below indicates that your child understands the information provided here and has assented to participating in the study. Your signature below indicates that you have read the information provided above and have decided to allow them to participate in the study. If you later decide that you wish to withdraw your permission for your child to participate in the study you may discontinue his or her participation at any time. You will be given a copy of this document.

My child assents to participating in this study   YES ☐   NO ☐

_____
Printed Name of Child

_____   _____
Signature of Parent(s) or Legal Guardian   Date

_____   _____
Signature of Investigator   Date

Parental Permission for Children Participation in Research

Title: Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory

Introduction

The purpose of this form is to provide you (as the parent of a prospective research study participant) information that may affect your decision as to whether or not to let your child participate in this research study. The person performing the research will describe the study to you and answer all your questions. Read the information below and ask any questions you might have before deciding whether or not to give your permission for your child to take part. If you decide to let your child be involved in this study, this form will be used to record your permission.

Purpose of the Study

If you agree, your child will be asked to participate in a research study about **play in the museum**. The purpose of this study is **investigate how play can used to enhance engagement and learning opportunities for pre-k children in the art museum**.

What is my child going to be asked to do?

If you allow your child to participate in this study, they will be asked to **attend a workshop at the Blanton Museum of Art based on exploring artwork through play theory**. This study will take **1 hour** and will **occur once** on **November 12, 2015** and there will be approximately **30** other people in this study.

His/her participation **will** be **video** recorded.

What are the risks involved in this study?

There are no risks beyond those of everyday life.

What are the possible benefits of this study?

Your child will receive no direct benefit from participating in this study; however, **by observing how your child responds within the workshop, I can more clearly deduce *how* play can be used to heighten learning opportunities for pre-k children in the art museum.**

Does my child have to participate?

No, your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusing to participate will not affect their relationship with the Child Development Center or The University of Texas at Austin in any way. You can agree to allow your child to be in the study now and change your mind later without any penalty.

What if my child does not want to participate?
In addition to your permission, your child must agree to participate in the study. If you child does not want to participate they will not be included in the study and there will be no penalty. If your child initially agrees to be in the study they can change their mind later without any penalty.

Will there be any compensation?
Neither you nor your child will receive any type of payment participating in this study.

How will your child's privacy and confidentiality be protected if s/he participates in this research study?

Your child's privacy and the confidentiality of his/her data will be protected in multiple ways.

If you choose for your child to participate in this study, he/she **will** be **video** recorded. Any **video** recordings will be stored securely, the folder will be password protected and labeled "Blanton Workshop" and only the PI will have access to the recording. The video recording will be kept until **Fall, 2016** and then erased.

If you choose for your child to participate in this study, his/her name **may** be used when discussing the information gleaned from the interview. If you are not comfortable with this, a pseudonym will be used in place of his/her name.

If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to your child will be protected to the extent permitted by law. Your child's research records will not be released without your consent unless required by law or a court order. The data resulting from your child's participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with your child, or with your child's participation in any study.

Whom to contact with questions about the study?
Prior, during, or after your participation you can contact the researcher **Madeleine LePere** at **(617) 365-1144** or send an email to **madeleine.lepere@gmail.com** for any questions or if you feel that you have been harmed. This study has been reviewed and approved by The University Institutional Review Board and the study number is **2015-05-0065.**

Whom to contact with questions concerning your rights as a research participant?
For questions about your rights or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Signature

You are making a decision about allowing your child to participate in this study. Your mark below indicates that your child understands the information provided here and has assented to participating in the study. Your signature below indicates that you have read the information provided above and have decided to allow them to participate in the study. If you later decide that you wish to withdraw your permission for your child to participate in the study you may discontinue his or her participation at any time. You will be given a copy of this document.

NOTE:

_____ I agree for my child to be **video** recorded.

_____ I do not want my child to be **video** recorded.

NOTE:

_____ I give permission for my child to be referred to by name.

_____ I do not give permission for my child be referred to by name.

My child assents to participating in this study: YES   NO

_____

Printed Name of Child

_____

Signature of Parent(s) or Legal Guardian   Date

_____

Signature of Investigator

_____ Date

Consent for Participation in Research

Title: Teaching the Art Museum to Play: Enhancing Early Childhood Learning in Art Museums Through Play Theory

Introduction

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. The person performing the research will answer any of your questions. Read the information below and ask any questions you might have before deciding whether or not to take part. If you decide to be involved in this study, this form will be used to record your consent.

Purpose of the Study

You have been asked to participate in a research study about **play in the art museum**. The purpose of this study is **investigate how play can used to enhance engagement and learning opportunities for pre-k children in the art museum**.

What will you be asked to do?

If you agree to participate in this study, you will be asked to **be interviewed by Madeleine LePere, the Principal Investigator**. The questions will revolve around your experience with the children who attended the workshop at an Austin museum. Both your observations of that workshop (if you attended) and your day to day experiences with those children are important for this study so that I can establish a baseline of behavior. This study will take **approximately two hours** and will include approximately **3** study participants.

Your participation **will** be **audio** recorded.

What are the risks involved in this study?

There are no risks beyond those of everyday life.

What are the possible benefits of this study?

You will receive no direct benefit from participating in this study; however, **by learning your personal observations of how children in your class interact on a day to day basis, and, if applicable, your own thoughts on their actions within the workshop, I can more throughly assess how the workshop affected the engagement of pre-k children at an art museums. In turn, this information will allow me to make a more grounded theory on how play can be incorporated within an art museum to enhance early childhood engagement.**

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin (University) in anyway.

If you would like to participate **please return this form directly to Madeleine LePere or via email to Madeleine LePere at the email listed below.** You will receive a copy of this form.

Will there be any compensation?

You will not receive any type of payment participating in this study.

How will your privacy and confidentiality be protected if you participate in this research study?

Your privacy and the confidentiality of your data will be protected by in multiple ways. Only one researcher (Madeleine LePere) will be involved in this study and thus have access to this data. Hard copies of notes will be scanned and saved on a personal computer which is password protected. Once the research is been finished, all copies (both hard copy and digital) will be destroyed. Please see Note below with regards to being audio recorded and using your name.

If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with you, or with your participation in any study.

If you choose to participate in this study, you **may choose to be audio** recorded. There will be no video recording. Any **audio** recordings will be stored securely, the folder will be password protected and labeled "CDC Teacher Interviews" and only the PI will have access to the recordings. Audio recordings will be kept until **Fall, 2016** and then erased. If you choose not to be audio recorded, your interview will be recorded via handwritten notes.

If you choose to participate in this study, your name **may** be used when discussing the information gleaned from the interview. If you are not comfortable with this, a pseudonym will be used in place of your name.

Whom to contact with questions about the study?

Prior, during or after your participation you can contact the researcher **Madeleine LePere** at **617-365-1144** or send an email to **madeleine.lepere@gmail.com** for any questions or if you feel that you have been harmed.

NOTE: This study has been reviewed and approved by The University Institutional Review Board and the study number is **2015-05-0065.**

Whom to contact with questions concerning your rights as a research participant?

For questions about your rights or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Participation

If you agree to participate, **Madeleine LePere will contact you regarding setting up a time and a place for an interview.**

Signature

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

NOTE:

_____ I agree to be **audio** recorded.

_____ I do not want to be **audio** recorded.

NOTE:

_____ I give permission to be referred to by name.

_____ I do not give permission to be referred to by name.

_____

Printed Name

_____   _____

Signature   Date

As a representative of this study, I have explained the purpose, procedures, benefits, and the risks involved in this research study.

_____

Print Name of Person obtaining consent

_____   _____

Signature of Person obtaining consent   Date

APPENDIX D: SAMPLE INTERVIEW QUESTIONS

1. What is your teaching philosophy?

2. Where and how does play fit into your daily school plan?

3. How did the level of engagement you saw during the workshop compare with other lessons/activities/tasks you have directed in the classroom?

4. Where and how is art integrated into your classroom culture?

5. In your eyes, why do you think play is important?

6. Do you have anything else you would like to add?

INTRO:
Welcome
Review museum behavior
       Walking feet
       Listening ears
       Magnifying glasses

Readdress idea of museum detectives (like book read during pre-visit)
       Using senses to find clues to help us understand the artwork

FIRST STOP:
Dawn's Presence—Two Columns by Louise Nevelson
1969–1975
Sculpture (Painted wood)

Pre Activity questions:
       What does this sculpture remind you of?
       What might this be made of?
       How did the artist make this?
       If this sculpture was painted all blue, how would that change how you think about this sculpture?

Activity: Building Block Sculptures (10–15 minutes)

Let's make our own sculptures with materials that are similar to those the artist used.

       Circle up
       Give a box with wooden blocks in it to each pair of children
       Encourage children to make sculptures, they can make their own or make one with a friend
       Once children start finishing up, give them the opportunity to name their sculptures

Post Activity Questions:
       How are your sculptures similar?
       How are they different?
       How does making our own artworks help us learn more about the artwork?

Materials:
       Wooden Blocks

SECOND STOP:
Espiritu Guardian (Guardian Spirit) by Matias Duville
2008
Painting (Acrylic on board)

Pre Activity Questions:
What can we find by looking closely?
Is there a story hiding in this artwork?

Activity: Hidden Stories (15–20 minutes)

Is there a story hiding in this artwork?

Ask students to turn to the person next to you and tell them what story they think
is hiding in this artwork.

What were some of the stories you came up with?
Does anyone feel comfortable telling the rest of the group their story?

*If children do not feel comfortable/additionally, recommend that you come up with a story as a
group:
Ok, so, how might this story start?
What happens in the middle?
How did the giant fall?
How does it end?

Let's act out the story hiding in this artwork!

* Assign roles depending upon the stories related by children and observations made
earlier

* If children struggle with identifying or bring disparate elements together, the
following roles can be assigned:
(1) Giant
*Or (2) Boots and (2) mittens
(3) House
(1) Car
(1) Bird
(5) Trees
(4) Specks of dust/leaves/dots

Be sure to establish before acting it out:
Do they want to act out the whole story or just one part of it?
Establish where the stage is

The teacher or a student can serve as "director" guiding actions or dictating which
character should come into the scene.

Post Activity Questions:
How did acting out the story help us understand this artwork more deeply?

How would you feel if you were this giant?
Where else do stories hide?

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