

Chapter 12

Connecting with Art: How Families Talk About Art in a Museum Setting

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In this chapter we explore the question of what families learn about art during visits to an art museum. Museums are informal learning environments that can be designed to provide experiences that reflect disciplinary thinking and support explanatory engagement (National Academy of Sciences, 2009). Conversation is a natural part of a museum visit, and researchers have discovered that analyzing these conversations provides access to the processes of learning that take place in informal settings (Leinhardt, Crowley, & Knutson, 2002; Crowley & Jacobs 2002; Ash, 2002). Studying conversations allows researchers to explore the ways in which prior knowledge, motivation, and the specifics of a particular moment create a context in which a learning experience transpires. Science museums in particular have looked closely at the ways in which mediation helps to shape more fruitful learning experiences, and they have designed environments to support the learning of particular concepts or learning behaviors (Borun, Dritsas et al., 1998; Humphrey, Gutwill et al., 2005).

But, historically, the issue of learning in art museums has been a more complex undertaking. This is because, at its core, there is a dual purpose for the art museum. On the one hand, art museums are meant to preserve and protect a culture's riches and to promote an aesthetic experience of these treasures. On the other hand, museums profess an educational mission that is based in the belief that art is a discipline that connects us to the human condition and to the world's history and cultures. While these two purposes need not be mutually exclusive, traditionally there have been two camps: those who believe the object should speak for itself and those who believe that the museum should provide additional interpretive support (Zeller, 1989). Some believe that an aesthetic experience is best served by the display of artworks with minimal or no interpretive signage. And those who favor a more educational approach feel that interpretive signage is essential to help the average visitor understand the meaning and importance of the work.

Of course, this dichotomy need not be so starkly expressed. Art museums vary widely in how they perceive and value their educational role. Many art museums

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have a long history of creating innovative ways of mediating visitor experience in the galleries. From handheld devices to extended labels, computer kiosks and family guides, there is no shortage of effort directed at engaging visitors in the museum experience. But, for those museums that have decided to provide mediation for visitors, they must make hard choices about the information that is to be provided. Each artwork might be used to explain issues of culture history, patronage, geography, techniques, artist intention, or theories of beauty, among other things.

Theoretical developments within the discipline of art history and museology have also complicated the role of interpretation in museums. The advent of postmodernism questioned the possibility of having a single, authoritative interpretation, and several high-profile museum controversies around issues of interpretation resulted in the culture wars and the re-examination of authority and whose interpretation is privileged in museum settings. For example, an interpretation of the *Enola Gay* that recognized the immediate impact of dropping the bomb was heavily criticized by American World War II veterans (Wallace, 1996), the display of Serrano's *Piss Christ* marked the beginning caused a major public debate about the funding of controversial artworks by the NEA (Bolton, 1992). During this period minority cultures and groups also began to clamor for representation in museum displays (e.g., Karp & Levine, 1991).

At the same time that museum curators were worrying about their authoritative voice, there was a growing interest in constructivism within museum education circles. Art museum educators were focusing on making museums more welcoming to visitors, and found the constructivist emphasis on individual meaning making a powerful idea. Among the most influential of these theories have been Gardner's (1993) concept of multiple intelligences and the entry point approach (Davis, 1996); Hein's (1998) constructivist focus on the role of prior experience on personal knowledge; and Housen's stage model for aesthetic development, and the visual thinking strategies approach (Housen, 2007). These educational theories also conveniently took the postmodern pressure off of the museum – if good learning principles dictated that visitors should make their own interpretations, there was no need to decide what the museum needed to say about the art.

Meszaros (2006) labels the resulting trend in museums as the “evil of the ‘whatever’ interpretation.” She argues that too many art museums have allowed their galleries to become an interpretive free-for-all. Art insiders may still know the value and meaning of artworks in the galleries. But what of average visitors? They are often left on their own without much in the way of explicit mediation.

In this chapter, we start with an assumption. While there are complex issues at play in art museum practice, learning about art is a desirable outcome for art museum visitors. We believe that art museums are places where disciplinary practices in art history are enacted and promoted. But to what extent does that inform and enrich the visitor experience? Are visitors talking about and learning about art and art history during typical art museum visits?

Compared to the extensive literature on learning in science or children's museums, there have been relatively few studies of learning in art museums. When research has been conducted in art museums it has tended to focus on the

evaluation of school-based or adult programs (e.g., Luke, Stein et al., 2007), or on marketing research that captures the demographics and habits of visitors (e.g., Sterry & Beaumont, 2006). We still know relatively little about the learning experiences of average visitors who visit exhibitions in an art museum.

The Study

The visitors we focus on in this study are families with children. We focus on families for the practical reason that many art museums are interested in cultivating and supporting family audiences. Art museums have traditionally been challenging museum environments for families, as they have often been designed by default to support adults who want to contemplate beautiful objects in a quiet environment. But families typically come to museums with learning as a primary motivation (Swartz & Crowley, 2004). In response, art museums have begun to develop creative ways to engage family audiences, such as providing family guides and programs. One of the more recent developments has been the inclusion of specially-designed rooms that contain materials and experiences directed at helping families with young children have a meaningful (and fun) learning experience at the museum. These areas typically provide a series of hands-on activities, combined with visual representations (usually not originals) of artworks in the museum's collection.

To explore the question, "What does family learning look like in an art museum?" we analyzed family conversations at two art objects and at two related discovery room stations. One object was an 18th century bed from France. The huge canopy bed dominates its gallery. It is ostentatious and very detailed – complete with ostrich feather plumes, swags and tassels, and elaborately carved details. The bed's sheer size and the stunning level of craftsmanship involved attract visitors. The other object was a large-scale narrative painting of a crowd scene with caricature-like figures, some of whom wear masks. The painting was done in a highly expressive style with lots of details to notice.

The study involved 50 pairs, consisting of a parent and a child (8–11 years old), viewing artworks in a large survey museum with works from many historical periods. Participants were pre-recruited and screened in order to include families who had visited an art museum together at least once, but who were not frequent museum-goers, or art experts. When families came to the museum, researchers explained the study and obtained signed informed consent to participate. Both parent and child were asked to wear cordless microphones. All families began by testing their equipment while looking at an artwork that was not included in analysis. After ensuring that families were comfortable, researchers led the family to the gallery in which the first target object was located, and pointing to the object said, "Please take a look at that and talk about it together as you normally would. Let me know when you're finished and we'll go to the next stop." Parents also completed an interview and survey about art museum habits at the conclusion of the study.

In the remainder of the chapter we first present an example of what family conversations sound like in art museums. We then develop and apply a framework for

considering the disciplinary content of art talk. Finally, we examine whether one common mediation strategy – interactive discovery rooms – impacts family learning in the galleries.

An Example

This is an example of a parent and child in our study talking about the large-scale narrative painting. It is a good example that illustrates the breadth of conversational topics and tactics that we saw across our data set. This colorful expressionistic painting depicts a crowded street scene where many of the figures are caricatures or wearing masks and costumes. A figure of Jesus riding a donkey is at the middle of a parade coming down the street. Amidst the onlookers, there is a large banner that reads “Vive la sociale.” There are many details to be noticed and discussed, and a bench in front of the painting allows visitors to stay and sit awhile to take it all in. A text panel (on the adjacent wall) provides some detail of the political and personal context of the work. The family walks up to the painting, pauses to take in the view, and the parent turns to the child and says:

- P: Wow, so what do you think that says?
 C: Viva la sociale.
 C: Viva Jesus. . .1880. (Humming to self)
 P: It's a very interesting style because it's not as realistic as a lot of the French painters were.
 C: And it looks like its. . .
 P: Hang on, let me look at the tag. Oh, so this painting is called Christ's Entry into Brussels in 19- in 1880 something.
 C: 1889.
 P: Yeah, well where's Christ?
 C: Well, it says Vive Jesus.
 P: Yeah? Which means what?
 C: Oh, see him in that sombrero back there?
 P: Yeah. Do you think that's a sombrero or do you think that's like a halo of light around him?
 C: Probably a halo.
 P: Is he walking?
 C: Yeah.
 P: No look. Look closer.
 C: It looks like he's floating. No, he's riding a donkey.
 P: Yeah.
 P: Paintings like this, you know, they're really deceiving because what happens is when you first look at them, you see certain things and if you look longer then you can see more things, and more things, and more things.
 P: Oh yeah, he used that same technique to make things look like they're farther off in the distance by making them smaller. The same thing your teacher taught you.
 C: (inaudible sentence)
 C: Hey look, there's a skeleton. Green and blue.
 P: You know what I find really interesting about this painting is the colors.
 C: Yeah. It looks Mexican.
 P: They're all light, bright colors. Do you know what I mean? Bright primary colors.
 C: Except for the dark blue.
 P: Do you like this painting?

- C: It's funny.
- P: What makes it interesting?
- C: What- who- how all this stuff is going on and then the marching band is like walking through the middle and everybody's crazy like, shoving into the streets to get out and get away and then in the background you can see two clowns fighting.
- P: I don't see the clowns fighting, where do you see that?
- C: See the red and blue? Yeah, right there and there.
- C: Then there's a girl holding like a giant zebra.
- P: Wow.
- C: And there's a skeleton.
- C: Right in the middle of all the marching band there's like a soldier and he has all these badges that look like they're from a war.
- P: Hmm. . .and all the flags in the background there. It looks like some people are wearing masks. . .and some people. . . you know, like there's this skeleton looking one, and that one with the, I don't know what you call him, beside the needle or the. . .it's probably a marching baton the guy is carrying. Do you know how they do that. . .?
- C: No that girl. Not the guy, the girl, in the very front? That blue thing? That dark blue thing?
- P: What do you think that guy is over there?
- C: An Indian.
- P: Because he's got a tall pointed hat?
- C: Uh, he looks Indian or something.
- P: Do you know where Brussels is?
- C: Nope.
- P: Brussels is in a country called Belgium. Belgium is on the coast, you know how England is here and then you go across to France, you work your way up, there's Belgium, it's very small. Do you know what language they speak there? You can read it in the painting. Well, French. They just have a different- they speak French with a slightly different accent than in France.
- C: Ok.
- P: Belgium is known for- they have really good Belgian chocolate and beer and other things. (Family 34, Painting)

What is there to notice about this conversation? First, they are actively involved in discussing the object. They notice a lot of details in the composition. What is that guy doing? What does that say? Where is the painting from? But all of that noticing does not lead to a great deal of interpretive art talk. At one point the parent comments about the use of perspective and connects this experience to an art class the child apparently had in school. But the talk steers quickly back to listing details, as the child notices a character wearing a skeleton mask in the foreground. As the interaction winds down, the parent looks for another avenue of discussion and comes up with some facts about the artist's homeland. It was the third time the parent tried to offer a more interpretive or contextual comment – first noting the style relative to French painters, second perspective, and finally the language, beer, and chocolate of Belgium. But the offer is not taken up by the child and the adult did not have either the tools or the interest in using these attempts to inform their analysis of the painting. It was as if the adult knew that you were supposed to talk about some bigger ideas, but was not quite sure where to start or how to make it work.

This is a fairly typical example of how visitors talk about art in a museum. In prior work, researchers have focused in on structural aspects of such talk and paid less attention to understanding the disciplinary content. For example, Silverman

(1990) grouped visitor talk into categories that included establishing joint attention, expressing a preference or judgment, describing object features, connecting with relevant personal experience, and relating “special knowledge” about the object. Similarly, in our own prior work (Leinhardt & Knutson, 2004), we proposed a hierarchy that broke talk into listing features, comparing across features, connecting objects to prior knowledge, making personal connections, and, finally, constructing explanations around the object. A second level of coding looked at thematic knowledge. In both of these cases, the content categories “special knowledge” and “thematic” were general – a black box with little differentiation of the kinds of disciplinary knowledge, skills, and concepts that might lie within. This work on the structure of visitor talk has been important, but, as we have worked with museums to put this descriptive research into designed experience, we are discovering that the black box of content needs to be unpacked, debated, and explicitly scaffolded for the visitor. Simply encouraging visitors to talk about objects does not result in richer learning if they do not have sufficient disciplinary knowledge to produce good explanations (Kim, 2009). In order to design mediation for learning, art museums need help deciding *what* it is that visitors should be talking about, not just *how* they should be talking about it.

A Framework for Coding the Disciplinary Content of Art Talk

The field of art education has grappled with a similar dichotomy to the one occurring in art museums as described in the introduction to this chapter. Creative expression has been the backbone of art education since the 1960s, but historically the pendulum has swung back and forth between art education being an outlet for creative individual expression and art education that serves cultural and humanistic education goals (Burton, 2004). Recently, arts educators have been returning to a more contextual position, looking for ways to support the teaching of art using a more rigorous academic framework that supports the humanistic goals of art education as well as the individualistic expressive and technical skills studio side.

Discipline-Based Art Education (DBAE), a curriculum model that focuses on four disciplines in art education (studio, art criticism, aesthetics, and art history), has had a large impact on the development of curriculum standards across the United States and Canada, including a set of National Standards developed in 1994 (Eisner & Day, 2004). These standards for art education hope to ensure that students develop a foundation in understanding not only the studio-based processes of making art but also the means for understanding how to talk about, assess, and appreciate art, and understand its role across time and culture. The DBAE framework was based on the idea that there are four main professional lines of work in the visual arts that could be aligned with a field of study (studio, art criticism, aesthetics, art history). While the standards have worked to identify potential academically rigorous strands upon which a curriculum might be built, there is still much disagreement about how to proceed. First, research that documents the specifics of what should be taught has focused primarily on studio components and not on the contextual components

of the curriculum (Burton, 2004). Second, researchers have noted that one of the challenges of including these non-studio disciplines in the classroom is a lack of models for curriculum and instruction (Hagaman, 1988).

Third we believe there is a great deal of crossover between skills and concepts across each of the proposed strands. For example, take the idea of aesthetics. There is typically confusion around the use of the term. Sometimes it is used as an adjective that relates to a kind of art criticism, while other times it is used as a noun to mean the philosophy of art. Aesthetics, as the “why” of art, relates to art history because the understanding of why something was celebrated and preserved in a particular time is a contextual discussion.

In terms of art history, Addiss and Erikson (1993) propose that there might be four possible orientations to the study of art history in the formal system – studying the work (formal analysis), the artist (biographical), the audience (patronage), and the culture. This model suggests that art history relies heavily on aspects of art criticism, and indeed, the discipline of art history has been built on the concept of connoisseurship. But it importantly brings to bear aspects of the time in which the art was produced, the context in which the piece is seen or has been judged. It connects the visual with the historical and cultural to understand and explain the human condition. Museum curators – developing exhibitions and researching collections – are active disciplinary experts producing new knowledge for the field.

Finally, there is art criticism. Art criticism is the analysis and evaluation of works of art. The use of art criticism can stand alone as its own pursuit, but it is also an essential part of the other art disciplines of studio, art history, and aesthetics. Art criticism is typically taught via a variation of Edmund Feldman’s model – Describe, Analyze, Interpret, Judge (Feldman, 1967; Barrett, 1994). In the describe stage the viewer looks at the piece and notices details (shapes, colors, subject matter, media, etc.). The next stage involves analysis, which considers the ways in which the various elements of the work fit together. Analysis involves thinking more carefully about the artist’s choices in creating the composition. How do colors work together? How does the artist create a sense of balance, proportion, rhythm, etc? These first two stages of art criticism come directly from observation of the work. The next two stages, interpret and judge, can involve some kind of external reference. Both interpretations and judgments can be made from a personal point of view, but they are stronger and defensible when they draw upon knowledge, criteria, opinions, or references beyond the viewer and the work itself.

In art criticism, being able to distinguish the nuances of a brushstroke, a line, or a stylistic anomaly form the basis of connoisseurship. The ability to distinguish and compare, to describe and notice are important visual skills to be developed. Yet criticism as it appears across the art disciplines is not considered within a vacuum. Context is required – understanding how the visual has been shaped by the creator, how the work fit into its time, why we should care about it. Art criticism is interpretive and theoretically based, and it makes an effort to understand the significance of a work of art in the history of art.

Much of the recent work on art talk in museums has focused primarily on formal criticism (what do you see?) and interpretation (what does it mean?) to the exclusion

of other core conceptual aspects that surround the display and interpretation of artworks in museums (i.e., how was it made, why is it here?). Additionally, while interpretation is actually a very complex area of academic interest, and an important disciplinary practice, much recent museum work might be characterized as leaning too heavily on “What does it mean, *to you?*”

In fact, if you ask families about it, they are much more interested in turning that question around to the museum. At the end of this study we interviewed parents about why they bring their children to art museums and what museums could do to support their visiting agendas. A clear finding emerged: Parents told us that they go to art museums to help their children learn about art and that they feel ill-equipped to help with this learning without explicit support from the museum. For example, when asked to rate a number of different reasons why they visit art museums on a 5-point scale, parents rated “learning about art” as being “very important” ($M=4.2$ of 5). Parents generally rated their art knowledge as being just below average ($M=2.8$ of 5) and told us that they did not know enough about art to answer all of their children’s questions in art museums. It is not surprising, then, that when we asked parents what art museums could do to improve the family visiting experience, they asked for more interpretive information specific to the artwork, including “what the art means” ($M=4.32$), “how the art was created” ($M=4.44$), and “the life of the artist” ($M=4.6$). Parents strongly agreed that museums should provide such information in ways that help them talk about the art while viewing it in the galleries ($M=4.54$).

A Disciplinary Lens for Art Museum Conversation

Drawing from these broader discussions about the nature of disciplinary knowledge, we developed a coding scheme to distinguish between four categories of visitor art talk. We describe each below, followed by examples drawn from our data.

1. *Personal Connections*. The role of prior knowledge and experience has emerged as a key indicator for learning in informal settings (e.g., Leinhardt et al., 2002; Falk & Dierking, 2000).

How would you like to sleep in a bed like that?

I think it would be cool. (Family 22, Bed)

Remember when we went to the field trip and they had all those paintings of people of that – oh, not paintings but um – what do they call them? Prints! Of, of skeleton people? (Family 5, Painting)

Do you remember- have you seen any artwork on the Beatles uh not the Beatles- The Yellow Submarine and Beatles animated movie? Did we rent that yet? That guy right in the center with the big round eyes- see the mayor and the mayor’s hat- his yellow hat?

Yeah.

And it’s pointing right up to the guy wearing the green shirt? He looks like one of the Blue Meanies. Except he’s not blue. But the style- I’ll show you. We’ll rent it. It’s a cool movie. (Family 2, Painting).

Sharing personal connections is a common museum activity (Leinhardt et al., 2002). While these conversations do not necessarily align with the disciplinary agenda of the informal learning environment, these conversations are important in the context of a family's everyday learning experience. Museum visits are often about reinforcing group identities, and an effective way to do that might be, for example, talking about a past family trip.

2. *Criticism*. This is talk about what can be directly observed in the artwork. Visitors might describe or direct their partner to attend to specific details. Visitors might offer a local analysis or interpretation that attempts to develop or connect their observations in more detail. The key piece of evidence in assigning a criticism code was that visitors were using only the information directly at hand in the object and that they were talking about the object without considering how or why it was created.

Oh, look at this. Did you – I didn't see this at all. It's like, it looks like a cornucopia of, with different fruits and things coming out of it. (Family 14, Bed)

Oh, there's a decorated man in there too. Army guy, military. So that's a band, like a military band? (Family 43, Painting)

These examples show common segments in this category, where families are describing visual aspects of a work. Whereas art criticism is a broad disciplinary practice, in this coding scheme we use it very simply to mark the direct observations of visitors. When families begin to connect visual components – to analyze the composition and choices of the artist – we place that talk into the creation category.

3. *Creation*. These were comments that attended to the object as an artwork. These conversations included attention to the artist in some way, whether directly referencing who made the artwork or through an observation of skill or technique. This talk could sound similar at times to *criticism*, but we created this category to distinguish conversations where visitors were noting or interpreting artistic process vs. treating the artwork as an object on its own terms. The inclusion of this category allowed us to make more fine-grained distinctions between conversations that noted a formal element and those that noted a formal element and referenced it as such. We were able then to code those meta-level comments about the art-ness of the artwork, alluding to the creative forces behind the creation of the artwork or using vocabulary that indicated some sense of awareness of the artist's process.¹ While this category includes conversations that would be considered a part of normal art criticism practices, we differentiate it to emphasize the importance of visitors' considering the decisions, motivations, and techniques of the artist.

¹Callaghan (1997) found that it is uncommon for average adult art viewers to refer to either the artist or the viewer when asked to justify a classification of an artwork. Most focused on the qualities of marks made (50%), one-third focused on the subject matter and only 2% made an explicit reference to artist or viewer. This suggests that visitors need more help to think about the intention and the interpretive process.

Come on this side. Look at how intricate this is, how it's all carved out. Can you imagine carving that out of wood? (Family 29, Bed)

This one has a lot of paint.

Yeah, it almost seems like he spent more time doing that. (Family 23, Painting)

These, the big people up here? See how it gets smaller, smaller, smaller, smaller, smaller, all the way to the back? (Family 23, Painting)

Yeah, do you see where- see where the two lines of that- going back to the perspective, going back to your focal point in the back corner right up there?

Want to hear something I noticed? Look back on that street between the pink building and the white building. It looks like the road is curving that way. (Family 9, Painting)

These examples show talk coded as creation. The first two examples show families directly referencing the artist, while the other examples are more indirect references to the artist and the choices he/she made in the creation of the artwork. Creation talk includes specific vocabulary about how the work was put together (i.e., perspective, texture, medium, composition, etc.). Creation talk indicates some evidence that the family is thinking about the artwork as an intentionally designed object, where choices were made to create a specific effect. This distinction separates criticism from creation codes. Criticism codes show perceptual attention to visual aspects but do not reference the creative process. By attending specifically to the process of creation, creation codes provide a way to move art conversations from strictly personal observations to conversations based in specific art content.

4. *Context*. This category was created to capture talk about the historical, geographic, or cultural context of an object. Although the surface content of this talk could sometimes sound similar to *criticism* or *creation*, it was coded as *context* if there was evidence that visitors were learning about details or interpretations that make the object meaningful as part of a museum collection. This is a large part of the work of curators and represents the vast knowledge bank housed within a museum in its staff. This is the way in which we can understand the value of art for humanity. This is an area of conversation that is not accessible through visual thinking strategies alone. Accordingly, visitors, without bringing prior knowledge to the museum, have a very difficult time with this kind of talk:

That's immediately what I thought of as soon as I walked in here and saw this bed. I thought of Marie Antoinette. (Family 22, Bed)

Yeah. It looks like a hat.

{laughs} Yeah, it does look like a hat. But it's actually supposed to be kind of a – you see it in a lot of paintings as this holy symbol. You know, they'll have it on angels and Christ and the Madonna or Mary. Right? (Family 2, Painting)

Look at that little animal that the person with the sombrero is wearing.

That's Jesus.

I know.

My poor religiously uneducated child.

I know. I forgot for a minute. (Family 5, Painting)

The way to think about the relation of the art codes is that *criticism* refers to the object by itself, *create* refers to the object and its creator, and *context* refers to the object and the creator in the context of who they were, where and when they were created, or why it is meaningful in the history of art and culture. All three of these are core disciplinary practices forming the cornerstones of collecting and interpreting art in museums. By thinking about visitor conversations in these three discipline-specific categories we might begin to think about ways in which conversations could be prompted, supported, or moved toward more concrete art learning goals by museum educators.

Family talk at the Painting and the Bed was transcribed and then segmented by idea unit, defined as a new topic being raised by either the adult or child in the ongoing conversation. Within each idea unit there could be multiple turns by both parents and children. Each idea unit was then assigned one of the four codes or, if the unit did not focus on the art object (e.g., navigation or social management talk), it did not receive a code. Each unit was assigned only one code. It occasionally happened that criticism might overlap with the create and context codes, for example if visitors noticed a detail in the object and wondered about how the artists created it. In these cases, create and context codes, which establish interpretations of the object itself, were used.

Observing Family Conversations

We analyzed the conversations of the 50 families in our study, and, as shown in Fig. 12.1, the most common kind of talk we coded was criticism, both at the Bed and at the Painting. This should not be surprising, as visitors coming upon an object

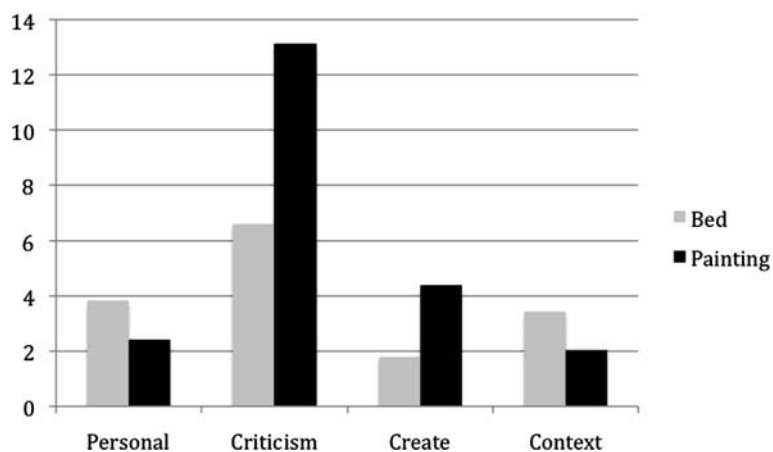


Fig. 12.1 Mean number of exchanges per family coded in each category of art talk

might naturally begin their conversations by noting details within the object and making sense of them with respect to the overall object. It is common in museums to see groups establishing a common understanding of objects as part of building shared interpretations (Leinhardt et al., 2002).

What was more interesting to us was that we also regularly observed families engaging in talk that we coded as being about the creation and context of the object. This talk was significantly less common than criticism, but its existence suggested that families were at least attempting to connect their interpretations to disciplinary constructs beyond criticism. And these attempts were widespread: Every family in the study was coded as having at least one create or context exchange and 93% of families were coded as having done both at least once.

Were there differences in the relative frequency of the kinds of interpretations families constructed at each object? Comparing the raw code counts between the Bed and Painting reveals differences for each of the four categories of talk. However, it is apparent from the figure that there was also an overall difference in how much talk we observed at each object. Combining across the four categories of talk, families were coded as having an average of 22 comments at the Painting compared to 16 at the Bed. This may partially reflect a belief that narrative paintings are easier to talk about (Yenawine, 2003) and it may also be simply due to the simple fact that the painting was just a lot bigger and had more details to notice than the Bed:

A more precise comparison, between-object comparison, requires that we convert the talk codes from counts into proportion of coded talk that fell into each category. Paired *t*-tests comparing the proportional scores across the bed and painting revealed significant differences for each category of talk (all *p*'s < 0.001). While viewing the painting, families were significantly more likely to engage in criticism talk (60% of coded talk) and create talk (20% of coded talk) than when they were viewing the bed (42 and 11%, respectively). At the bed, families were more often observed using context (22% of coded talk) and personal connections (24% of coded talk) than when they were viewing the painting (9 and 11% of coded talk, respectively). Prior studies of talk in art museums have not distinguished between types of objects and the kinds of talk that is easily supported. The findings here suggest that there are important differences to note. It may be easier to think about the artist while looking at a painting and it may be easier to think about context when faced with a decorative object like the Bed.

It is a promising finding that families used, on average, all of the categories of talk. But the low numbers of creation and context talk bear out what our examples suggested: families need help to interpret art in the galleries. These families tried to get beyond a visual experience, but they did not have the tools to do so.

This finding parallels what has been documented in school-based research, that interpretation is the aspect of art criticism that needs the most help (Barrett, 1994). Criticism has rightly been the focus of museum education work, and in the past few years, common approaches involve getting the viewer to engage with the work, without additional input or evidence beyond what is seen in the work. This may be a useful approach in the development of observation skills, but it leaves the interpretation and judgment aspect of art criticism underdeveloped. There is no way to

develop expertise in art without additional information of some kind, as without this supplementary information it is impossible to make a reasoned judgment. One can only make a personal judgment. While postmodernism might have launched a period of anything goes, in fact, some interpretations are better than others. In order to support meaningful conversations about art, we need to be more specific about interpretation and content.

A Common Mediation Strategy: The Discovery Gallery

The museum where we conducted this study had a very popular discovery room that was intended, among other things, to help families learn about the art that was in the permanent collection on the gallery floor. Family room experiences were designed to explicitly refer to objects that the family might encounter in the galleries. The objects we described earlier, the Painting and the French Bed, were the focus of two different interpretive stations in the family room. The Painting-related station allowed visitors to create a mask using paper mask cutouts and crayons, working in front of a large reproduction of the painting. The mask making activity is connected to the Painting because there are characters wearing masks in the painting. The Bed station allowed visitors to sit in a small bed similar in look and feel to the French Bed. Books related to beds are available for families to read together as they sit on the reproduction bed. In two books produced by museum staff, families could read about the materials and processes used to produce the 18th century bed and about different kinds of beds produced around the world.²

To test whether using the discovery room changed how families talked about the objects, we asked a subset of the families in our study to visit the discovery room station before they viewed the corresponding object in the gallery. To maximize our chances of observing impact of the discovery room on subsequent gallery talk, we made sure families intended as in understood the intended activity. At the Bed station we said, “Please take a look at this area, and these two books (pointing towards the two museum-created books – one on beds around the world, and one about the French bed). Spend time and talk as you normally would and let me know when you’re finished.” At the Painting-related station we said, “Please take a look at this area. Make a mask together and while you’re working could you talk about

²Although most families use the family room as a learning environment, some use it as a playground. The reality is that children sometimes need to take a break from the museum to blow off steam and touch something without getting yelled at by guards. And parents sometimes need a break too. There are always a few who sit off to the side, talk on their cell phones, chat with each other, or glance through pamphlets while their children bounce from activity to activity. It is important for museums to provide this kind of place for families, and these activities serve the outcomes of making the day a pleasant outing, of valuing families’ needs, and even perhaps ensuring, with fun, that children might become lifelong users of museums. However, these goals do not advance the museum’s art-specific learning objectives.

the ways in which artists give their figures a sense of personality. Spend time and talk as you normally would and let me know when you're finished."

When we compared the gallery conversations of families who visited the discovery room before they saw an object with the conversations of families who had not visited the discovery room first, we detected no significant differences in personal connections, criticism, creation, or context talk. We had observed and recorded families as they used the discovery room, so we know that they followed our instructions and completed the activities as designed. The lack of transfer was disappointing to us, but we recognized that it is in general very difficult to get transfer to occur across contexts.

While we didn't find transfer in the disciplinary kinds of talk, we were able to find evidence that the discovery room experience was referenced while families were in the gallery. In looking through the transcripts of family talk, we located 215 instances where families explicitly mentioned prior discovery room experience while looking at an object (an average of a little more than 6 per family). Here are some examples of what these references sound like:

C: Oh mommy this is the stuff we saw that was hand-made, remember?

P: That's right.

C: Oh, look at this. That- this is pretty.

P: So do you remember what this is? What did they call this kind of wood?

C: The- what was it? The. . .

P: Gilded, remember?

C: Gilded, yeah. [Family 8, Bed]

P: Same thing. Remember like that one in the, um, second binder we were looking at where it's-

C: It's holding-

P: Yeah. The canopy is suspended because see you have the four posts right?

C: Yeah.

P: They call it a four-poster bed but um the posts are not supporting the canopy. They'd have to suspend it from the ceiling. [Family 2, Bed]

P: I have to say, you, I think you can see the person- look at the personalities more here.

C: Yeah.

P: I don't know why. Why do you think?

C: Maybe 'cause it's bigger.

P: It's bigger. You can also sort of see the brushstrokes, and it seems more vibrant somehow. The other one was a print. Just a copy. [Family 26, Painting]

P: Don't touch!

C: I can't? I could touch the other one.

P: You didn't touch the other painting.

C: Yes I did.

P: That wasn't a real painting.

C: Oh.

P: That was a reproduction of this painting.

C: You mean this is the real painting?

P: This is the real painting. That was a reproduction of the painting.

C: Oh.

P: You didn't – you don't know the difference that that was a poster of this painting?

C: No.

P: And this is the real painting.

C: No, I didn't know that. I didn't. [Family 15, Painting]

As shown in the examples, most families recognized that they were looking at the authentic object that had been reproduced in the discovery room. But beyond that, we noticed families using two specific approaches to connecting the authentic and reproduced object. The first kind of talk we coded was *Content*, where families explicitly discussed content that they had learned in the discovery room. The second kind of talk was *Compare*, where families compared features of the authentic gallery and reproduced discovery room objects.

There were significant differences in the use of content and compare talk between the two objects, $p < 0.001$. At the Bed, families were much more likely to talk about content ($M = 4.8$ exchanges) than to compare the authentic object to the discovery room reproduction ($M = 0.6$). At the Painting, the pattern was reversed (M 's = 1.7 and 4.0, respectively). The difference between how families referred to the Bed and Painting coves mapped directly onto differences in the learning opportunities that the coves presented. The primary activity in the Bed cove involved the museum-prepared books, and families were able to recall and connect some of the book content as they viewed the Bed. The Painting-related activity was making a mask, and the main content feature was to think about how artists convey a sense of personality in their work. Content codes for the Painting included conversations that discussed how the artist gave his figures a sense of personality or questions about why someone might wear a mask.

The findings at the Bed illustrate the simple concept that interpretive information provided by the museum is used by families. Families recalled what they had read and were interested to relate the information to the real bed, confirming their newly acquired knowledge. Although seemingly straightforward, it is worth pausing to note that this finding confirms what we heard from parents in the surveys and interviews – parents welcome and will use interpretive information in the museum to help their children learn about art.

The prevalence of comparison talk at the Painting is also interesting. Families referred to the reproduction frequently while making their masks in the discovery room. When they went to the gallery to see the real painting, they had their “aha” moment noting that they were seeing the “real thing.” But their conversations continued and they spent a great deal of time making comparisons between the real painting and the reproduction in the discovery room. They noticed things like, “the paint is more textured here,” or “I didn't see that character in the reproduction,” or “the color looks different.” Families made very fine-grained comparisons that

revealed that they had indeed looked very carefully at both the reproduction and the painting.

There was so much comparison talk that we wonder how a museum might rethink its use of reproductions in the discovery room. It is certainly a goal of museums (and art education, more generally) to help people understand the difference between a reproduction and the real object, yet we wonder if there might be a more productive goal for the use of a reproduction in a museum. Perhaps the museum might show a reproduction of a detail of a work, or similar work by the artist, or related school to explicitly target the desire to compare the original to what was created in the discovery room. In this case, the discovery room seemed mostly to serve as a place for families to encounter the image, and to do so first in the weaker form of the reproduction.

Conclusions

In general, this study suggests that families are quite comfortable looking at and talking about art during museum visits. Families had active conversations that touched upon criticism, creation, context, and personal connections. The problem was not that they couldn't talk about art, the problem appeared to be that they didn't have the knowledge or tools to make their talk richer with respect to the disciplines of art and art history.

At the most specific level, our findings can be used to design mediation strategies to help families learn in art museums, particularly discovery rooms. While we did not see differences in the disciplinary talk in the gallery and the discovery room, it is significant that families did make other connections between the two contexts. It is important to remember that the discovery room we studied was not designed specifically to increase the disciplinary kinds of talk we are interested in. But the appearance of references to the family room experience, both in the visual observations and comparisons and in the transfer of content learned in the family room, suggests that families do pick up and use the mediation strategies offered by the museum. One next step in designing family rooms might be to experiment with the kinds of experiences and conversations that move best across the boundary of discovery room and the gallery floor.³

At a more general level, our findings are meant to catalyze debate about what visitors could learn in an art museum and what the appropriate role of the museum is in supporting that learning. There has been a tremendous amount of excitement and experimentation around the idea of helping visitors weave core scientific practices and knowledge into visits to science museums, children's museums, zoos, and

³The family room has a lot of advantages as a learning environment, but as a separate space that is not filled with authentic art objects, it will always be encumbered with the transfer problem. Perhaps new technologies (such as PDAs or cell phones) will make it possible to do more "just-in-time" mediation directly on the gallery floors when families are standing in front of the objects.

aquaria (National Academy of Sciences, 2009). We hope our work can be useful in sparking a similar discipline-specific learning movement among art museums. This effort is still very new, and we begin it without a clear agreement around what the core disciplinary practices might be and even disagreement about whether art museums ought to introduce a learning agenda for their visitors. The four outcomes we suggest in this chapter are just one approach to what might be learned in an art museum. We hope that the field will engage with the question and work on the problem of determining what the appropriate kind of art talk should be and to think about what a trajectory for learning in art might look like, across environments and through time.

Art education is still in the early stages of grappling with the effects of the change to a broader curriculum framework. One recent study showed that art teachers have trouble utilizing higher level disciplinary strategies (Erickson & Villeneuve, 2009). It is not obvious, even to experienced teachers, how one might best teach, for example, cultural context in art. Interestingly enough, art museum educators have been at the forefront of trying to assist school teachers in developing experiences that support a standards-based art curriculum. Museums across the country have taken up the challenges set out by the new arts-standards as well as NCLB legislation and have redesigned educational experience to connect directly with school standards. With their longstanding concern for object-based learning, and developing strategies for art appreciation, museums have the expertise to help define the future of art education. We are hoping that our work will help the conversation move from instrumental or structural approaches to engage with a more discipline-specific approach to learning in art museums.

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