

## Objects, Words, and Bodies in Space: Bringing Materiality into Cultural Analysis

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**Abstract** What can actor-network theory’s approach to analyzing objects offer to cultural sociology? To answer this question we ask a more specific one: How does materiality affect people’s experience of art in a museum exhibition? Research at two museums suggests that non-human agents—object and words—interact with human bodies to choreograph the art encounter. This process works through interactions between two processes of emplacement: physical *position* and cognitive *location*. Position guides location in the process of meaning-making, a relationship mediated by three mechanisms: distance, legibility, and orientation.

**Keywords** Cultural sociology · Actor-network theory · Meaning · Materiality · Art · Museums

When conceptual artists were investigating the experience of the body and its relation to the external world in the late 1960s, Bruce Nauman became interested in placing bodies in conditions that altered sensory experience of that world. His *Green Light Corridor* (1970), a long, narrow passage suffused with fluorescent green light, is one such work (Fig. 1). Commenting on a career retrospective in the early 1990s, an art historian described the physical and psychological effects of Nauman’s piece:

His many constructed corridors and rooms are each designed for a lone occupant, tailored to hug the body, interface with its nervous system, train its eyes. These projects also borrow specs from behaviorism, with its just-the-facts demand that subjectivity be reduced to behavioral traits and their external stimuli. Nauman intends such works to refer to emotional states in the most unmediated way possible—by triggering them. (Relyea 1995, 68–69)

And trigger it did. Critic Peter Schjeldahl described the piece as a “ruthless” and “somber corridor” that induces “claustrophobic discomfort,” an effect caused “both by the narrow width

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**Fig. 1** Green Light Corridor: Bruce Nauman, *Green Light Corridor*, 1970, photograph 2010 © Paul Grover / The Daily Telegraph

and exaggerated length of the corridor, and by the eerie light cast by green fluorescent tubes that ran its length” (Benezra 1994, 26, 28). Moving through it, “one’s eyes become saturated with its intense phosphorescent green color, which causes the skin to appear a faded gray; upon exiting one sees a magenta afterimage” (Simon et al. 1994, 245). *Green Light Corridor*, which made people experience their own bodies as alien, often produced nausea.

*Corridor* directs attention to ways through which the interactions between materiality and bodies shape interpretation. The relationship between the work’s tight spaces and visitors’ body sizes, for example, determines who can experience the piece first hand (slender people who can squeeze between the walls) and who must stand outside the piece and observe (heavier people, who do not fit). Whether viewers can interact directly with a work shapes the kinds of meanings they can draw from it. Those who see *Corridor* only from a position outside the passage will not experience the nausea and cannot understand the piece the same way as those who experience it from within.

Apart from people’s physical capacity to interact with *Corridor* as Nauman intended, materiality also influences their orientation to the interaction itself. Depending on how they enter the gallery space, visitors may first see either the opening between the walls or the wall

itself. Those seeing the opening may interpret it as a hallway, something to be walked through; those who see the wall may view *Corridor* aesthetically, art to be looked at rather than a space to be entered. In this sense, how a visitor orients to the piece—that is, whether audiences approach *Corridor* from the side or the end—affords different sets of interactive practices.

*Green Light Corridor* drives home the fact that how people engage with a work of art shapes how they interpret it. The degree and kind of their engagement, which cannot be reduced to the resonance of symbols, depends upon people's physical relationship to that work. In positioning a viewer, material qualities of an object and its context create distance, invite intimacy, and orient a viewer's access. In what follows, we examine how these interactions among objects, words, and bodies in space impact viewers' physical, emotional, and cognitive responses to art within the museum.

In so doing, this paper asks a more general question: What do cultural sociologists gain by analyzing materiality? By studying materiality, we mean to include in our analyses how the physical characteristics of objects and environments act upon people to influence action and meaning-making. Cultural sociology has rarely attended to the material qualities of objects and settings, instead figuring them as expressions of cognitive categories ordering the social world. To be sure, classic studies have illuminated material goods as expressions of social status (Bourdieu 1984; Bourdieu and Darbel 1990/1969), and there is a vast literature on consumption, whereby material objects serve as the props and resources for performances of class, gender and race (Zukin 2004). Such work centers on material culture (Appadurai 1986; Hebdige 1979; Schor and Holt 2000) rather than materiality per se, however, and therefore neglects the causal power of physical objects and bodies in interaction.

Recently, however, cultural sociologists have brought attention both to the role of non-human actors in interaction (Cerulo 2009) and how materiality constrains and enables the power of cultural objects (McDonnell 2010). The sociology of art has been central in recent efforts to understand how artworks shape social action, calling for “a stronger focus on the *agency and materiality of things*” (de la Fuente 2010, 224, emphasis ours; see also Acord and DeNora 2008; de la Fuente 2007; Witkin and DeNora 1997). In accounting for the analytic power of materiality, many sociologists studying art have drawn on theoretical tools from science and technology studies (STS), with particular attention to actor-network theory (ANT) (for some examples, see Acord 2010; Brain 1994; Gomart and Hennion 1999; Hennion 1989; Prior 2008).<sup>1</sup> Ultimately, these STS frameworks are valuable for their ability to give objects “a voice of their own in the explanation” (Law 1987, 131; see also Mukerji 1994 for how this impacts cultural sociologists). In other words, they suggest these objects do not simply result from or register human action, but can influence it directly.

From this history, we draw two lessons. First, cultural sociology offers significant insight into the cognitive factors that bar or facilitate access to cultural objects, frame experience and inform interpretation within particular social contexts. Second, STS has done much to theorize how objects mediate action, thereby providing useful tools for cultural sociologists to do so as well. Building on work that suggests the purchase in theory-building across these two areas, we suggest that elucidating specific mechanisms through which materiality and cognition interact in particular settings is necessary to understand how people encounter cultural objects and assign meaning to them, long the analytical charge of sociologists of culture. This paper thus draws upon research in

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<sup>1</sup> We conceive of STS as an interdisciplinary field that draws predominantly from sociological, historical and philosophical literature (Pickering 1995, 1, n. 1). Throughout this paper we primarily refer to STS scholarship that has informed sociological studies of science by focusing on the objects, routines and practices constituting the production of scientific knowledge.

cultural sociology and STS to analyze observations of interacting objects, words, and bodies from two art museums and illustrative case studies.

We propose that meaning-making is a function of *position* and *location*. Both are aspects of place, but they refer to different aspects of emplacement. Position is the geometric set of physical relationships between objects and bodies in a particular place. Location is the cognitive process of meaning-making that depends upon this position.<sup>2</sup> While the two are mutually constitutive, most studies have privileged location-based explanations of how people interpret art, from the cognitive associations people have with art museums to the ways social location shapes interpretation. In analyzing the art museum as a distinct “object-setting” (McDonnell 2010), we introduce three mechanisms—distance, legibility, and orientation—through which position can precede and set possibilities for location within the museum.

### Meaning and Materiality: Insights from Cultural Sociology and STS

What can cultural sociology and STS tell us about meaning and materiality? To begin, cultural sociology offers tools for explaining how people interpret those objects. Many of these tools involve cognition: the practice of interpretation is driven by the ways people categorize the world and apply those categories to objects and situations (D’Andrade 1995; DiMaggio 1997; Zerubavel 1997).<sup>3</sup> With respect to interpreting art, three tools seem particularly relevant: presuppositions, conventions, and contexts. Presuppositions are the taken for granted expectations that audiences bring to the interaction with art. As Griswold (1987, 1080) has argued, “When a cultural object engages at least some of the presuppositions of the person encountering it, meaning is fabricated.” Any number of socially structured presuppositions might alter how one interprets an art object: genre expectations (Wagner-Pacific and Schwartz 1991), ethnicity (Shively 1992), nationality (Griswold 1987; Heinich 2000), and race (Milkie 1999). Conventions are embodied rules of the game that coordinate the activities of art worlds (Becker 1982). They facilitate cognition and meaning-making by aligning shared ways of understanding across art producers and receivers. Finally, context can shape how people understand art by structuring and cueing cognitive expectations, like whether a painting belongs in a particular room or sculpture is appropriate for a city square (Babon 2006; Halle 1996; Senie 2002). Such accounts of how presuppositions, conventions, and contexts shape the experience of art put people and their thought processes at the center of explanation.

Rather than reducing the role of objects to what people think of them, research from an STS perspective has examined how what scientists present to the world as “truth” emerges from the interplay of practice (what people do with objects) and materiality (what objects do to people).<sup>4</sup>

<sup>2</sup> For example if a lost walker asks someone she encounters on the road “Where am I?” and the reply is, “You’re a mile south of Bristol,” the answer describes position. If a professor goes off on a tangent during a lecture and then asks, “Where am I?,” and a student responds, “You were talking about Weber’s definition of sociology,” this answer describes location. Sociologists typically regard “place” as space that is meaningful (e.g., Gieryn 2000, 465), and while we agree, we contend that the physical relationships among objects allow for meaning to emerge or fail to emerge.

<sup>3</sup> This paper focuses on the Weberian strand in cultural sociology that emphasizes meaning-making and socially-shaped cognition, notably prominent in sociological analysis of art, and pays less attention to other significant strands such as ritual analysis (Alexander 2004; Collins 2004), production-of-culture (Becker 1982; Crane 1992; Peterson and Anand 2004), or theories of culture-in-action (Swidler 1986; Vaisey 2009).

<sup>4</sup> In an important turn in the late 1970s, laboratory ethnographers studying the routines of scientists in the lab viewed science as work, practice and talk, examining the role objects played in making that work possible (Knorr-Cetina 1981; Latour and Woolgar 1986/1979; Lynch 1985). Ushering in this “practice turn” first broadened the concept of agency to include material agency (Pickering 1995, 9–13).

Perhaps the most radical theorization of objects as independent causal actors emerges from actor-network theory (ANT), which, following other culture-STS bridging work investigating materiality, we take as the primary theoretical focus of this paper. Actor-network theorists argue for a “generalized symmetry” principle (Law 1987) in which action results from the relations of human and non-human agents in a network that reduces neither to a simple consequence of the other. Power is distributed among them, and all can be conceived as “actants,” defined as anything that can be said to act or to shift action (Akrich and Latour 1992, 259). Agency, of people or of objects, is a relational rather than intentional concept, a role that emerges through interaction: “The only thing that counts is the definition of [non-human actors] by the various [other] actors identified” (Callon 1986, 228, n. 24). Thus scallops (Callon 1986), microbes (Latour 1988), electric cars (Callon 1987), 13th-century Portuguese galleys (Law 1986, 1987), lighting kits (Akrich 1992), and doors (Johnson 1988; Latour 1992) become “obligatory passage points” (Latour 1987, 132; Callon 1986) with which human agents must reckon to pursue their projects and realize their interests. These non-human actors create opportunities and problems, and the ways in which other actors in the network address them produce new ways of understanding and organizing the world.<sup>5</sup>

The benefits of ANT for understanding the meaning of cultural objects comes from its commitment to tracing how people and objects work together to stabilize scientific findings and give power to particular ideas. However, the aforementioned insights of cultural sociology into people’s relations to objects are somewhat at odds with this tradition. For Latour (2005) and others, explaining action through cognitive concepts effectively turns these actions into a black box (Whitley 1972) powered by abstract “social forces.” In such a formulation, meaning itself is treated as a stable artifact that gets spit out when actors meet and negotiate a network of relationships amongst themselves and relevant actants, a process Callon (1986) calls “translation.” While more cognitive explanations may be abstract, they open the possibility for multiple and unstable meanings within a given network, and illuminate how these meanings might vary by social group and be contingent on particular settings.<sup>6</sup>

In this paper, we work to find a middle ground between “internal” subjectivities and “external” actants. ANT directs attention to when objects act to produce predictable, singular meanings versus when objects produce unpredictable and multiple meanings (Latour 2005).<sup>7</sup> One way that meanings move from singular to multiple is through materiality, and here the concept of “affordances” is helpful (Gibson 1977). Affordances, as used by sociologists of art and culture, suggest that objects offer a multiplicity of uses and interpretations (Acord and DeNora 2008; DeNora 2000; McDonnell 2010).

<sup>5</sup> Casper and Clarke (1998, 257) have highlighted how the “symmetry” principle in ANT discounts some of its political implications by reducing all human and non-human actors to the same analytic stature in sociological studies of social interaction. We argue both objects and people can potentially shape interpretation and action, while still leaving room for inequalities in how power operates with different configurations of actants, rendering some actants more or less powerful in shaping meaning and action. Relevant to this paper, Hetherington (2000, 2002, 2003) has explored these possibilities in studying the museum experiences of visitors with visual impairments. In an alternative approach that also embraces the agency of objects and the power of materiality, Gell (1998) argues that art objects are “secondary agents” that *distribute* the agency and intentions of the people producing or circulating them.

<sup>6</sup> In noting this we align with scholars who question ANT’s minimization of external forces that might shape action within a given network. Frickel (1996, 31–34) has pointed out that actor-network theorists “typically leave open the questions of when and where external forces may be invoked as useful explanations for the success or failure of scientific or technological projects. Their implicit answer typically is never” (see also Collins and Yearley 1992).

<sup>7</sup> This is Latour’s distinction between when actants are intermediaries versus mediators (Latour 2005, 37–42). Intermediaries are objects that perfectly transport meaning without transforming it. No matter how complex the internal dimensions of a mediator, the meaning is clear, singular, and predictable. Mediators, on the other hand, “transform, translate, distort, and modify the meaning or the elements they are supposed to carry” (Latour 2005, 39).

Of course, this is a two-way street: The material and symbolic qualities of objects interact with the physical and cognitive capacities of people to produce meaning (Gomart and Hennion 1999).

To examine the ostensibly infinite possibilities presented by the varying affordances of people and objects as they encounter one another, we propose studying the interaction of cognition and materiality within the contexts of particular environments. In recent work on the interplay of cognition, materiality, and environment, Cerulo (2009) and McDonnell (2010) emphasize perception (“perceptibility” in McDonnell’s approach) in order to account for the role non-human entities play in the interactions that facilitate meaning-making. Perception is both material and cognitive. It is material in that one must be able to physically engage with an object to make meaning from it; it is cognitive in that one has to notice an object and find it worth the effort to try to understand it. Therefore interpreting an art object involves the cognitive awareness of audiences and “the interaction between materiality of the object and surrounding environmental conditions” (McDonnell 2010, 1820). Everything from the layout of the gallery space to the interactive affordances of a given artwork to people’s familiarity with museum conventions shapes both their perceptions and what is possible in the subject–object encounter. These material arrangements and mechanisms constitute the “epistemic culture” of the museum (Knorr Cetina 1999). In what follows, we demonstrate how the interaction of objects, spaces and visitors’ bodies shape people’s encounters with artworks.

### Observing the Art Encounter

We envision the encounter between human and non-human elements as what Pickering (1995, 21) has called an ongoing “dance of agency.” The metaphor foregrounds interaction and broadens participation as it connotes movement through space and mutual adjustment over time. Cultural sociologists may usefully think of the cultural encounter as a dance of agency with a broad array of actants bringing their particular characteristics to the dance and with specific spatial relationships among them affording the choreographic possibilities.

Our investigation into the capacities of materiality to enhance research in cultural sociology requires that we look at some instances of this dance. Art museums offer an appropriate site for such observations, and for theorizing the relationship of culture and STS. As Fyfe (2006, 37) has noted, until recently, most sociological literature discussing museums focused on art museums singularly from a perspective of institutional critique. This emphasis on competing claims of democracy and elitism within the museum leaves underexplored and potentially fruitful sociological questions unaddressed, including how museums function both as “cultures of space”—shaping people’s interactions and understandings of their world through distinctive arrangements of galleries, installations and exhibitions—and how they *materialize* knowledge across a range of disciplines (Fyfe 2006, 35–37; see also Hooper-Greenhill 1992). As Hetherington (1999, 53) writes, drawing on Law (1987, 114), the museum is ultimately a “heterogeneous” space “that performs a geometry of seeing and ordering, associated with issues of materials, spaces, times and subjects.” One way sociology can investigate this spatial performance is by putting STS and cultural sociology in conversation, given that for each the work of “knowing and creating—the production and consumption of meaning and artifacts” has been a central concern (Epstein 2008, 165–6).<sup>8</sup>

The primary data for this study comes from observations at two art museums over an 8-week period, and our analysis examines shared exhibition design choices and mechanisms of

<sup>8</sup> In offering this, we wish to highlight the small number of studies drawing upon ANT in their study of museums (Acord 2010; Hetherington 1999, 2000). Latour himself (1987, 225) has highlighted how museum staff’s growth, conservation and display of their collections manipulate complex scientific ideas into manageable representations.

interaction between them. One is the Portland Museum of Art, a regional art museum in Maine.<sup>9</sup> The other is the Whitney Museum of American Art, a world-class museum in New York City.<sup>10</sup> We visited each museum approximately six times, focusing observations on the exhibitions introduced in this section. Our visits spanned 1–3 hours, and we concentrated our observations on visitor behavior, mapping patterns of traffic within the museum galleries, and, to a lesser extent, recording conversations. We further drew upon our own in-gallery sketches and photographs, as well as official museum photographs of the installations. Analysis focuses on repeat findings: consistent patterns of visitor behavior observed across visits specific to particular installations and objects. At each museum, we synthesized our notes and photos prior to interviewing the curators of the exhibitions on which we focused our observations, though there were multiple informal conversations with curators over the observation period.<sup>11</sup> Moreover, we extend the findings from the Whitney and the PMA to additional cases of art exhibitions that play on the arrangement of art objects, labels, and audiences to shape meaning-making.

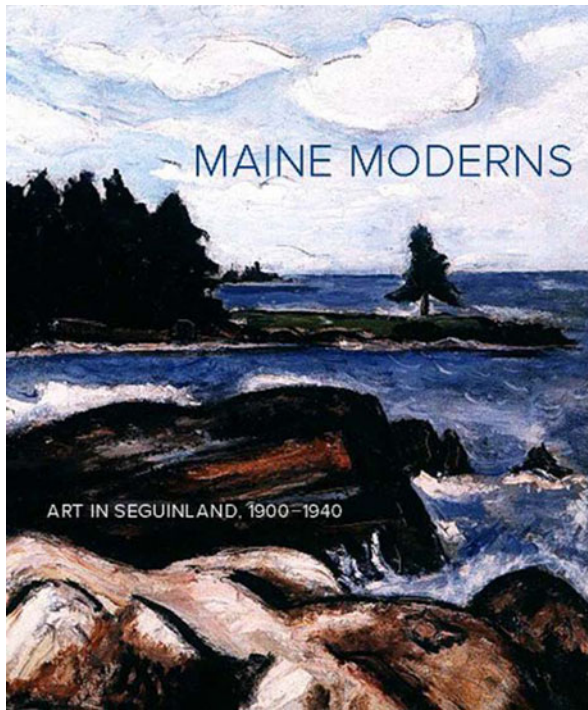
During the summer of 2011 the Portland Museum of Art mounted an exhibition called *Maine Moderns: Art in Seguinland, 1900–1940*. Seguinland was an area on the coast where a number of New York artists, most associated with the New York art impresario Alfred Steiglitz, summered in the early twentieth century. While the group waxed and waned, over the 40 years prominent modernists as such John Marin, Marsden Hartley, Gaston and Isabel Lachaise, and William and Marguerite Zorach bought property and returned annually to this rural retreat. The exhibition (Fig. 2) featured how these artists incorporated their summer sojourns into their emerging conceptualization of modernism (Bischof and Susan 2011).

The Whitney Museum of American Art hosted two exhibitions that we observed that same summer: a permanent collection show, *Singular Visions*, on the fifth floor and a special exhibition, *Pro Tools*, that featured the work of Cory Arcangel, on the third floor. *Singular Visions* consisted of 12 highlights from the museum's permanent collection, each installed in its own space "in order to create intimate and compelling encounters with a single work of art," according to the museum's web site. The curators' interest in facilitating what they described to us as an "uncluttered" experience of the artworks influenced their arrangement of the objects and the position and design of descriptive labels. In contrast to this monastic austerity, *Pro Tools* consisted of Arcangel's latest

<sup>9</sup> Portland, Maine is a small city with big cultural aspirations. The Portland Museum of Art occupies three buildings, ranging from an 1801 federal design house to a 1983 post-modern main building designed by I. M. Pei's firm, in a rather seedy downtown that, typically, urban officials have labeled "the Arts District." Its collection of 17,000 pieces has a particular focus on Maine artists—Winslow Homer, Marsden Hartley, Andrew Wyeth—though it also has extensive American and world holdings (its website boasts that the PMA has the largest collection of European art north of Boston). Each year the museum gets 160,000 visitors, mounts roughly 15 changing exhibitions, and has an annual budget of \$4.6 million.

<sup>10</sup> The Whitney is the world's preeminent repository of American art. Its collection consists of approximately 19,000 works of 20th and 21st century American art, with a particular focus on art from the early 1900s. The museum has a longstanding commitment to showcasing the work of young and emerging artists, and its signature exhibition, the *Biennial*, is the world's leading survey of contemporary American art. On average, the museum serves 350,000 to 400,000 visitors annually and there are nine to 12 major exhibitions on view over the course of any given year.

<sup>11</sup> While counting and mapping is a time-honored technique within museum and visitor studies (see Falk and Dierking 1992; Hooper-Greenhill 2006 for a review), these strategies have typically been used to assess how exhibition traffic varies by social group so as to generalize more broadly. However, recent literature in the vein of "new museology" (Vergo 1989) has called for a move away from behaviorist studies of visitor attributes to more ethnographically informed research focusing on how visitors interact with installations and negotiate their meaning (Fyfe 2006, 43–44). This move further calls for bridging the practical work of museums with more theoretically and empirically informed academic study (Hooper-Greenhill 2006; Macdonald 2006). In offering ANT and cultural sociology as apposite theoretical frameworks for studying how people make meaning in museums, we suggest that in conceiving of visitors as active interpreters, researchers should not lose sight of how material environments act upon people to constrain and enable those interpretations.



**Fig. 2** Reproduced with the permission of the Addison Gallery of American Art, Phillips Academy, Andover, Massachusetts. The catalog's front jacket comes from one of the paintings in the exhibition: Marsden Hartley, *Jotham's Island (now Fox), Off Indian Point, Georgetown, Maine*, 1937. Oil on board, 22 13/16 by 28 13/16 in., Addison Gallery of American Art, Phillips Academy, Andover, Massachusetts, Museum purchase, 1938.41

video- and computer-based work. The artist's interest in various forms of media created a multi-sensory experience that included: blinking lights and shadowed rooms; kinetic sculpture; waves of electronic sound, and of canned laughter from a *Seinfeld* clip on loop; and interactive virtual environments like *Masters* (2011), in which visitors participated in a modified video game by putting a golf ball.

### Position and Location

To answer this question of how materiality shapes the meaning of art within the space of the art museum, we need to take a closer look at position and location. Position is physical. It refers to the characteristics of and relationships among material actants, which we have categorized as objects, words, and bodies. All can move or be moved, and their relationships constitute the positions from which people will make or fail to make objects meaningful. With the idea of position, we want to make explicit how the physical/material relations between actants can facilitate or subvert an audience's capacity to apply the cognitive expectations associated with location.

Location is cognitive. It refers to the schemas and conventions that are triggered by the position of objects, words, and bodies and through which people interpret what they encounter.



Most explanations of meaning-making in art privilege cognition; recently, Martin (2011, 204) has suggested aesthetics is “the closest model to the cognitive components of action that we have,” again emphasizing the ways in which sociologists conceive of cognitive categories as ordering people’s social worlds. Since museums frame objects as “art,” conventions of position (this object is inside a museum devoted to art) trigger conventions of location (therefore this object must be art), which can make legitimate art that might otherwise be undermined by its material qualities (e.g., my kid could do that).<sup>12</sup>

Relationships abound when people go to an exhibition at an art museum, not simply between people and art objects but among physical, spatial, textual, and temporal factors that enhance, obstruct, shape, distort, inflect, and otherwise mediate the human/art encounter. To take a simple example, if an exhibition’s audio-guide features an extensive discussion of a particular work, visitors with the guide congregate around that work as they listen. Their clustered bodies impede other visitors from viewing the work, thereby producing two rings around the art object: a temporarily stable inner ring of people who are experiencing the work in some depth and a shifting outer ring of those who are catching only fleeting glimpses. Neither the characteristics of the visitors (demographic, prior experience with art and/or with museums, motivations for coming to the exhibition) nor the characteristics of the object will predict this; it is a material outcome produced by the relationship of bodies in space, a relationship itself produced by words (the audio-guide) and the object (size, fixed position, importance attributed to it).

Curators and other museum professionals think carefully about these factors and draw on studies of visitors’ patterns of museum behavior as they develop their exhibition plans. They aim to use space effectively, attending to the material constraints of objects that necessitate their distance from viewers while also providing material cues that will shape the visitor’s experience and direct it toward a desired outcome, typically conceived of in terms of learning (though other definitions of whether an exhibition has “worked” are possible, including pleasure, stimulation, and sociability). Ultimately, however, the encounter between people and art remains unpredictable, not least because of unexpected responses to the physical nature of the setting and the material qualities of the exhibition. To say these encounters are unpredictable does not mean these interactions are without pattern. Visitors to museums respond in patterned ways, depending upon the material attributes of the exhibition and the material affordances of the artworks. This happens through three distinct mechanisms mediating the interplay between position and location: 1) *distance*, the distance or intimacy between audiences and art objects, 2) *legibility*, how the legibility of objects interacts with the position of labels and audiences, and 3) *orientation*, how bodies are oriented to experience and move through exhibition spaces. Through these, position guides location, and location guides meaning-making within the space of the art museum.

## Distance

To illustrate the role of “distance” as a mechanism mediating position and location, we draw on two examples of contemporary artworks that broaden the traditional reflective model of encountering art in the museum to encourage interactive engagement. Arcangel’s *Masters* at the Whitney consists of a rectangle of Astroturf spread out on the museum’s granite floor. A television screen about 16 inches wide, programmed with a modified video golf game, sits on the edge of the “green.” Under the watchful eye of a guard, visitors take turns picking up a golf putter, swinging at a dangling golf ball and watching its virtual counterpart fly past or fall short of the hole on the

<sup>12</sup> Babon (2006) has made this point quite clearly by demonstrating how cognitive understandings of place affects meaning-making in the interpretation of public art.

screen (Fig. 3). After a few minutes, visitors realize the pre-programmed impossibility of landing the shot, an experience punctuated along the way by comments such as “This game is out to get me.” The interactive aspect of the piece attracts broad attention, clustering visitors in the center of the gallery. As one golfer after the next fails, another visitor is always willing to step up, convinced, as one teenage boy put it, they “can win this war.” In this way, Arcangel’s interest in highlighting the relationship between simulation and reality in a modern media age is realized in the interactions between the work—the vindictive “soldier”—and determined visitors.

This example raises questions about distance and intimacy. How does materiality encourage or discourage close-up engagement with an artwork? How do the kinds and qualities of interaction change depending on the distance between audience and object? Finally—and most significantly for the task at hand—how does that distance influence meaning-making?

The “location” of an art museum conventionally directs people to “look but don’t touch” the art. For those people who approach Arcangel’s *Masters* as they do most art objects in a gallery space, they would usually keep their distance from the work. To be sure, visitors could interact with *Masters* as sculpture, walking around it, discussing its aesthetic qualities, but never grabbing the putter. However, if everyone keeps their distance, the joys and frustrations of *Masters* could never be realized. What about the work gives people permission to violate the convention of distance?

This is a case of position leading location. *Masters* affords possibilities different from those offered by traditional art objects (DeNora 2000, 2003; Gibson 1979), effectively inviting forms of interaction that fall outside the bounds of typical museum behavior. Just as some public sculptures can afford a use as a jungle gym for kids outside the gallery, *Masters* operates as both sculpture and object of play. That *Masters* bundles both art and video games (Keane 2003) and makes strange the gallery encounter, opening opportunities for visitors to rethink the museum space. Other aspects of position facilitate this rethinking too. The lack of ropes, taped boundaries on the floor, or similar barriers that keep sculpture out of arms reach of visitors cues a freedom of movement and engagement, while ordinarily these devices, in concert, prescribe (or



**Fig. 3** Cory Arcangel. *Masters* (installation view: *Cory Arcangel: Pro Tools*), Whitney Museum of American Art, New York, May 26–September 11, 2011; Photo: Sheldon C. Collins. 2011. Hacked Qmotions Indoor Golf Simulator, PlayStation video game console, Tiger Woods '99 PGA Tour Golf game disk, golf clubs. Commissioned by the Whitney Museum of American Art, New York, for Cory Arcangel: Pro Tools. © Cory Arcangel. Image courtesy of Cory Arcangel and Team Gallery, New York

forbid) such activities within the sacred setting of the museum (Akrich and Latour 1992, 261). Ultimately, interactive works create a different set of physical relationships, or *positions*, among bodies and objects in the galleries, which challenges pre-existing conventional expectations and allow for new understandings of what museums made possible in the encounter of artworks.

Dread Scott's *What is the Proper Way to Display a U.S. Flag?* (1989) provides another example of how material qualities of an object minimize distance to "invite" audiences to engage art more intimately (Fig. 4). The installation includes a photomontage of South Korean students burning American flags. Below that is a shelf holding a blank ledger and pens for visitors to write in, and on the ground directly under the shelf and photo lays an American flag. The position of these objects poses a problem. In order for visitors to respond by writing in the ledger, visitors would have to risk stepping on the flag to reach the book. This places position and location in notable tension. The physical position of the flag on the ground contradicts many Americans' conception of where flags should be located. But to register a complaint in the ledger violates other location-specific conventions: when in proximity to a flag, one does not step on it and, when in a gallery, one should not touch or step on the art. As Cook County Judge Kenneth Gillis argued, "This exhibit is as much an invitation to think about the flag as it is an invitation to step on the flag" (Dubin 1992, 111). Dread Scott's piece makes people complicit in profaning the flag, and the controversies stirred up by *What is the Proper Way* were brought on not just by the possibility of symbolic violation, but perhaps more importantly by the dynamics of distance organizing objects and bodies in the exhibition space.



**Fig. 4** Dread Scott, *What is the Proper Way to Display a US Flag?*, 1988, Silver gelatin print, US flag, book, pen, shelf, audience; 80 × 28 × 60 in. © Dread Scott. Reproduced with permission from Dread Scott

## Legibility

Exhibitions involve a variety of texts, labels being the most prominent but also catalog copy, educational materials, press releases. Labels come in two types: exhibit labels (several paragraphs that introduce an exhibition or section thereof) and object labels (usually short but sometimes longer “extended” labels). Exhibit labels frame what is to come, saying in effect, this is what you will experience and this is what you need to know (in order to experience it *correctly* is the implication). Museumgoers understand the convention—one must not view the objects until having done the homework of reading at least the exhibit labels—and most comply.

In addition to informing people about the art at hand, material qualities of labels like length and position move visitors physically, variously shifting their positions in relation to the label and the artwork. In this regards, labels can function as obligatory passage points, meditating the interaction of bodies and objects to create new spaces for negotiation of interpretive work. We find that lengthy wall labels seem to generally drive more traffic to their associated works than simple object labels (i.e. they “cue” some works as more important). In addition, label position creates patterns of interaction. For instance, labels for sculptures that are not backed up against a wall bring up a curatorial decision: Should the label be in front so that the viewer can take in the object and its label, or should it be on the back so the viewer is encouraged to walk around the piece and see it from all sides? In *Maine Moderns* William Zorach’s *East Wind*, a striking female nude (Fig. 5), had its label in the back, thereby acting on the viewers by forcing them to walk around the pedestal in order to read the label (Fig. 6). We observed that some viewers looked



**Fig. 5** William Zorach. *East Wind*, ca. 1940. Bronze,  $10 \frac{1}{2} \times 22 \times 3 \frac{1}{4}$  in. Portland Museum of Art, Gift of Tessim Zorach and Dahlov Zorach Ipcar, 1971.4. Reproduced by permission of the Portland Museum of Art



**Fig. 6** William Zorach. *East Wind*, ca. 1940. Bronze,  $10 \frac{1}{2} \times 22 \times 3 \frac{1}{4}$  in. Portland Museum of Art, Gift of Tessim Zorach and Dahlov Zorach Ipcar, 1971.4. Reproduced by permission of the Portland Museum of Art

only at the front of the sculpture, thus missing the identifying information, but most made the circuit; once they walked to the back, they invariably completed the circle to the front rather than reversing and repeating the half circle. The position of sculptures (i.e. against the wall or in the middle of the room) interacting with the position of labels (front, back, side, etc.) create patterns of interaction between audiences and objects that constrain and enable what is perceptible.

Most labels are so small that they cannot be taken in at the same time as the work itself; the viewer is forced to move back and forth. The modal practice, as seen in the interactions with *East Wind*, seems to be that the viewer glances at the work, moves in to read the label, and then steps back to gaze at the work for a longer time. Of course, visitors interact with art in ways that deviate from typical patterns. Some ignore labels altogether; others spend a great deal of time reading labels and little or no time with the work. These deviations are responses to how legible the piece is. Legibility is the “capacity for an audience to read the intended meaning of the object” (McDonnell 2010), and it happens when the object’s material and symbolic affordances align with people’s cognitive schema. For example, in those cases when people did not look for *East Wind*’s label, it was because the sculpture’s meaning seemed intelligible on the face of it. Ignoring labels is more likely in encounters with representational art, things like nudes. The more legible, the easier to “locate” cognitively, the less visitors need extra information. In more interactive exhibits like *Masters*, where the materiality of the object “speaks” its uses and visitors can see how others engage the work, encounters do not seem to need labels. *Masters* was more legible as a video game for visitors to play than as a sculpture. On the other hand contemporary art,



**Fig. 7** George Segal (1924–2000). *Walk, Don't Walk*, 1976. (installation view, *Singular Visions* (Dec.16, 2010–July 17, 2011). Plaster, cement, metal, painted wood, and electric light, 109 1/8 × 72 × 74 1/8 in. (277.2 × 182.9 × 188.3 cm) overall. Whitney Museum of American Art, New York; purchase with funds from the Louis and Bessie Adler Foundation Inc., Seymour M. Klein, President, the Gilman Foundation Inc., the Howard and Jean Lipman Foundation Inc. and the National Endowment for the Arts 79.4a-f. Art © The George and Helen Segal Foundation / Licensed by VAGA, New York, NY

particularly non-figurative art, challenges legibility, often pushing people to locate and read the label almost immediately.

When labels function as such, they impact legibility. In the *Singular Visions* show, many of the installations were large, composed of multiple parts, and situated in the gallery's center. Consequently, wall labels required visitors to have their backs to the work (Fig. 7). Curatorial intent played a role as well: The labels were generally not centered on the wall but closer to the corners of the gallery to allow “uncluttered views” of the art. However, we consistently observed viewers proceeding directly to the label, focusing on it and only occasionally glancing at the work.

A sculpture by Maurizio Cattelan titled *HIM* (2001), makes the position/location interplay among viewer, object, and label especially vivid. As viewers approach the sculpture, they see what looks like a small boy kneeling on the ground (Fig. 8). If curators had placed the *HIM* label near the entrance of the room, visitors might never walk around the sculpture and simply interpret it as a sculpture of a boy. Placing the label on the far side of the room draws viewers to the front of the sculpture, allowing the artist's intentions to be fully realized. When seen from the front, this is not a boy at all but a diminutive Adolf Hitler (Fig. 9).<sup>13</sup>

<sup>13</sup> “Cattelan intended that viewers first approach this diminutive figure from the back and then recognize Hitler when encountering *HIM* from the front. The scale of the figure, in relation to the physical stature of viewers, shifts the power relationship, perhaps raising conflicting responses, yet it does not diminish the potency of Hitler's image and the magnitude of his crimes. *HIM* may serve as a reminder that the face of evil is not always easily recognizable and that individuals can cause terrible destruction.” Description from the Museum of Contemporary Art Chicago website, accessed July 25, 2012 <http://www.mcachicago.org/exhibitions/now/2012/6>.



**Fig. 8** Maurizio Cattelan: *HIM*, 2001. Installation view, Museum of Contemporary Art Chicago, 2006 Private Collection. Photo: Joseph Mohan © 2006 by Museum of Contemporary Art Chicago. Reproduced with permission from Christia Blankenship. Image of back

### Orientation

An exhibition is embedded in physical space, with its limitations and possibilities. It is also embedded in people-as-bodies, such as, the physical capacities of those who attend it, which vary by social categories. The visually impaired will experience an exhibition of classical Greek statuary differently than those with no impairments. Given that many of the statues are nudes, 14-year old boys on a fieldtrip will respond to the exhibition differently than a group of mature visitors. Moreover, 14-year olds will be less familiar with, and less observant of, the bodily conventions for art museums: hushed voices, slow and constrained movement, the avoidance of jostling or encroaching upon the personal space of other viewers.

Other bodily conventions that are widely shared by those with museum experience: viewers expect museums to cater to their physical comfort, for example, by offering benches, cafés, water fountains, and clean restrooms, and they commonly regard museum exhibitions as an assault on comfort (long lines, sensory overload, “museum fatigue” [Davey 2005]). Viewers have no division of labor between the physical and the intellectual. Museum staff do, however,



**Fig. 9** Maurizio Cattelan: *HIM*, 2001. Installation view, Museum of Contemporary Art Chicago, 2006 Private Collection. Photo: Joseph Mohan © 2006 by Museum of Contemporary Art Chicago. Reproduced with permission from Christia Blankenship. Image of front

and the curators are professionally inclined to focus on the latter, leaving most of the physical and material side to other departments such as a physical plant department. Interestingly it is the membership department that most clearly recognizes this people-as-physical-bodies, as its lures to membership include avoiding the lines, attending exhibitions in preview or other uncrowded conditions, and sometimes special access to food and drink.

As Macdonald (2006, 221) notes, a “central question” in museum studies regards whether the museum’s “intended address to visitors—the ways in which curators attempt to ‘speak to’ an audience via exhibits—actually works.” An example from our *Maine Moderns* observations shows how the embeddedness of a curatorial idea in physical space interacts differently with different categories of viewers’ bodies, mediating the position—location relationship via an *orienting* mechanism. This further underscores the “mangle” of conceptual, material and social factors at play in any person’s experience of the museum (Pickering 1995). The exhibition focused on a northern New England summer community of artists from New York City. The curators wanted people to enter the exhibition in the way that the city folk entered the rural summer cottage area. So the entrance to the exhibition entailed passing through a set of photographs of the artists’ summer houses on the pine-studded peninsula, with a homemade movie from the 1920s of one rustivating family bringing their suitcases and other paraphernalia into their vacation retreat. Entering the exhibition this way, the viewer would understand that it features artists in a summer colony. This is about creativity in a very different time and place from that in which the artists lived during most of the year. *This is about Summer*.



The main portion of the exhibition was on the second floor, and to enter the exhibition through the photo gallery, the visitor had to make a U-turn by the ticket desk and then go up the elevator that was in the gallery. Because of the film projection, the whole area was rather dark. However if the visitor went straight ahead from the ticket desk through the brightly lit lobby, he would run into broad stairs leading to the second floor, which was right next to the information desk. If he or she asked at the ticket or information desk where the summer colony exhibit was, the volunteer was likely to say “on the second floor.” So many, indeed almost certainly the majority, of visitors encountered the exhibition in what curators would certainly view as the “wrong” way. Walking up to the second floor they would read an introductory wall label, identical to the one in the photo gallery on the first floor, and would then look into the main gallery. At the center from the doorway, and framed by an interior window into the lobby below, was a pedestal with a smooth sculpture of a frog (Fig. 10). To enter the exhibition this way, the viewer would see it in the conventional way: This is about beautiful objects. *This is about Art.*

Not only would the same exhibition be framed in different ways, these frames would affect different types of people differently, and thus would afford them varying interpretive probabilities. Anyone who was elderly or anyone with a physical disability would head for the elevator, entering the exhibition as the curators had intended. This would also be true for anyone who had been steered properly by the museum personnel. On the other hand those younger or stronger, and most large groups, may be more inclined to head for the stairs, as would most people who followed the normal museum convention of moving forward and the normal bodily convention of moving toward the light.

An array of technical objects further participates in bringing together bodies and objects within the space of the museum (Akrich 1992, 206). Lighting acts on people by attracting them, spotlighting certain works as important and highlighting mood. Elevators act on people by moving them through a certain type and sequence of images. All told, these actants work on people’s physical positioning, and their position in turn influences how they locate and then comprehend the



**Fig. 10** William Zorach. *Frog*, 1930s. Granite, h. 10 ½ in. Portland Museum of Art, Frye Island Collection, Lent anonymously, 10.1984.9. Reproduced by permission of the Portland Museum of Art

artworks and of the exhibition as a whole. Different ways of entering the exhibition (the corridor with vacation films vs. the second-floor entrance facing the window-framed frog sculpture on its pedestal) cue different schemas, as what people see is being transposed (Sewell 1992) across different realms of experience. The frog sculpture acts on people by cuing the “Art” schema, while the images of people carrying suitcases into their summer cottage cues the “Summer” schema. The dance of agency among the actants choreographs position and then guides location.

### Materiality in Cultural Analysis

We have argued here that cultural sociologists should place greater emphasis on materiality and consider the mediating role objects and environments play in meaning-making. In so doing, we called for bridging approaches to materiality influential in STS—specifically, that of ANT—with the tools cultural sociology offers to understand cognitive and contextual influences on interpretation. Observations from two art museums and historical case-studies of exhibitions of specific artworks reveal that physical position and cognitive location mutually constitute one another, a relationship mediated by three mechanisms: distance, legibility, and orientation.

Position precedes location in the process of interpretation, in the present case by constraining and enabling possibilities of perception among exhibition visitors. The position of art objects, along with their material properties, when interacting with an audience affords certain kinds of interactions. These interactions differ in that they make some aspects of the art perceptible while obscuring other aspects. These perceptual differences vary by (1) whether an object invites people in for a closer look or pushes them away, (2) how objects, labels, and their relationship structure the experience of the art, and (3) how the material qualities of the gallery space orient people’s attention to an exhibit and structure paths of travel through the gallery space, thus cueing particular cognitive schema. Under these conditions, the formula is: Position guides location, and location guides meaning-making. We offer this as a simple methodological tool for cultural sociologists to use as they hack away to uncover how people make meaning.

Bodies and objects moving through space and exerting influence on one another: This foundational image of actor-network theory is extraordinarily useful for cultural sociologists. Art museums offer a very visible instance of this. Examining the “dance of agency” among human and non-human actors, we see how art objects, labels, and people act upon each other to shape interpretation. How a curator mounts an exhibition and how people move through it *emplace* the art works. This emplacement directs how audiences experience the art. By observing this “choreography” we develop a more robust theory of meaning-making that moves beyond cultural sociology’s exclusive focus on how cognitive presuppositions of audiences inform and constrain people’s interpretation of the cultural objects.

More than just cognitive presuppositions, people are positioned and positioned bodies interact with the material dimensions of art objects to make meaning. These material interactions structure affect just as much as cognition. The discomfort and claustrophobia one feels when inside the *Green Light Corridor* is a pre-cognitive bodily experience. Arcangel’s *Masters* creates a feeling of anxiety in the audience through the conflict of position and location when the material invitation to grab the putter and interact with the art object comes in tension with the cognitive prohibition against touching art. These sensorial affordances make visible emotive paths to meaning beyond purely cognitive approaches that dominate theories of culture, suggesting that materiality offers a fruitful a new path toward analyzing the role of emotions and meaning.<sup>14</sup>

<sup>14</sup> This would contribute to the growing body of work on the sociology of emotions (Collins 2004; Goodwin et al. 2001; Gould 2009; Summers-Effler 2010).

Accounting for material interactions between people’s physicality, the affordances of objects, the position and size of labels, and the arrangement of these actors in space makes visible how interpretive experiences are made possible or precluded. As such, the methods and insights of ANT help to broaden and enrich theories of interpretation from cultural sociology.

Cultural sociologists can use ANT-inspired analytic techniques well beyond museums and laboratories. Position (physical) and location (cognitive) are at play in shopping centers (Zukin 2004) and public toilets (Molotch 2010), as well as in classrooms, urban neighborhoods, and indeed in any number of venues of interest to sociologists. We suggest that sociological analysis in general will benefit from examining the choreography of objects, words, and bodies. Further, while we draw from ANT, we also aim to contribute to it by analyzing a case typically under the purview of cultural sociology—art and museums—thereby moving beyond ANT’s typical interests in laboratory ethnographies and histories of technology. In focusing predominantly on scientific cases, scholars of ANT (and STS) have principally investigated the conditions under which objects stabilize into the “right tools for the job.”<sup>15</sup> However, while there may be an incentive to foreclose the possibility for multiple meanings with scientific objects, the same does not occur for artistic objects. Our data have shown how position can undermine artists and curators’ intentions just as often as it supports them. Art objects often resist stabilization despite the heavy lifting done by curatorial staff to place or “locate” art objects in a comprehensible narrative for audiences. By engaging cases beyond the laboratory, ANT will evolve to better explain resistance to stabilization, the failures of stabilized objects to organize action, or the onset of the destabilization of meaning.

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<sup>15</sup> We borrow this phrase from Clarke and Fujimura 1992; see also Casper and Clarke 1998; Pinch and Bijker 1987. For discussion of differences in interpretation between scientific and artistic objects, see Collins and Evans 2007, 117–119.

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