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Design as Choreography: Information in Action

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“If I could tell you what it meant, there would be no point dancing it.”
— Quote attributed to Isadora Duncan (1877-1927)

Abstract

Museum exhibitions are conventionally understood to be educational, meaning that they convey information to visitors. The content of this information is understood to include visual, auditory, and written media, as well as content from tactile, spatial, and social encounters. This article asserts that visitors also gain knowledge through bodily kinesthetic experiences while in the exhibition setting. Emerging research in other areas has revealed connections between physical posture and cognitive issues like emotion and attitude, but this has not yet been applied to museum practice. This article suggests that exhibition planning could exploit bodily experience more explicitly as a form of information; and that body-aware practices like sports, dance, and yoga offer intellectual content suitable for exploration in a museum setting.

In my career as a museum exhibition designer, I have worked in Canada and abroad creating temporary and permanent galleries for everything from fine arts to natural science. This experience has convinced me that, to some extent, I am able to predict the behavior of visitors in a given space. For example, about three-quarters of museum visitors seem to have a right-turn bias (Melton, 1933; Klein, 1993; Bitgood, 1995); and in my experience the most stubborn of these will turn right even if they have to break through a barricade of potted trees positioned by the designer which attempts (unsuccessfully) to force them to turn left. Once inside, visitors will proceed to step forward, look up, look down, pause, and bend over — all in a reasonably predictable manner, depending on where different features have been positioned. Watching visitors in galleries, I began to understand my job not so much as the planning of showcases and labels, but rather as a form of choreography. In positioning the exhibition elements, I had created a sort of dance to be performed by the visitors which gained at least some of its meaning from their bodily motions alone. Showcases and labels were merely rhetorical tropes: devices used to persuade visitors to assume, in sequence, a series of desired poses and gestures.

Museums have practical goals for the movement of visitors through galleries. To prevent bottlenecks, traffic must be drawn swiftly through portals, perhaps by offering glimpses of the exciting things that lie ahead. Introductory panels need to be surrounded with generous space, so that a guided group may pass behind the person with a stroller who

has stopped to read. If small artifacts invite detailed scrutiny, the observer's body should stand in a niche set slightly apart from the flow of passers-by, as otherwise the dreaded 'butt brush' might dislodge them from reflection (Underhill, 1999).

But body posture carries meanings beyond traffic and bumping. Motions invoke emotions; and architecture invokes motions. A person who walks into a Gothic cathedral finds their eyes drawn upwards into the flood of light and color pouring through the clerestory windows. The head tips back, pulling the mouth open. The shoulders drop, the spine straightens and the arms turn out — the visitor has been choreographed into a posture of awe, wonder, and humility.

In the late 1970s, I came across a work by Canadian hyper-realist sculptor Mark Prent that also generated an eloquent posture. It presented itself as a plain drywall cube, broken on one side by a steel door with a window painted over from the inside and scratched with graffiti. After a short pause, the natural thing to do was lean over, close one eye, and peer through a bare spot in the glass. And when I did so, I discovered that the cube contained a disabled person on a toilet, and at that abject sight I sprang backwards — not just shocked, but also somehow implicated; sullied by my act of voyeurism. Writing about Prent's work in general, one commentator observed, "the viewer is drawn into the environment as a participant" (Greenwood, 1979). In the cube piece, he went beyond the type of participation that might be invited by just pushing a button. Crouching and squinting transformed the level gaze of the connoisseur into something prying and sordid.

In the mid 1980s, working in Milan, I had the opportunity to go to showrooms and sit on the kinds of exclusive designer chairs published as eye-candy in Italian design magazines. It was a revelation. A chair that looked soft and squashy in photographs proved to be prim and proper in person. Its unforgiving form prodded the sitter's body erect, with hands held high, ready to hold a china teacup and saucer. Another chair, not dissimilar in photographs, proved in reality to be enormous and enveloping, sucking the sitter backwards into an expansive low sprawl, arms spread wide to hold cognac and cigar. These were not just chairs; they were dramatized user scenarios. They told a story; they had plot.

In France, the palace of Versailles was explicitly planned as a scenario to frame the glories of the King (Burke, 1992). Its overwhelming architectural symmetry focuses on a single point: the throne. If you were Louis XIV, everything literally centered on you. Anyone who was not him stood off the singular axis. It could be worse: in Moishe Safdie's National Gallery of Canada in Ottawa (1988), no one gets to stand on the axis. Doors and windows come in pairs, thwarting any attempt to march down the center. Photographs of the four-fold-rotated Water Court are all taken from a skewed angle, because there is no place where you can align your body with its overwhelming symmetry. The ultimate focus, in the very middle of the room, is made inaccessible by the pool, rubbing home the point that what matters here is the architecture. The building asserts its own glory.

Sculpture and Experience

Traditional approaches conceive design as “the business of determining the forms of objects” (Lucie-Smith, 1983, 7). Forms vary across different design disciplines; in graphic design they are generally two-dimensional (Lupton and Phillips, 2008); while “in architecture and sculpture they are solids and voids” (Kubler, 1962, vii). When a doorknob is assessed as a form, it resembles a small sculpture mounted to a vertical surface, with positive and negative spaces aligned with the human hand. Less appreciated is how the doorknob and door operate in time. Some doors are fast to open; others are slow. Some are heavy, and some light. If you are carrying two cups of coffee as you approach a door equipped with a crash bar, you can turn on your toes, push the bar with your hip and pirouette through, spinning. If the door has a lever handle, you can twist one elbow down onto it, then push through with the shoulder, still holding the coffee. But if the door has a round knob, with a separate deadbolt needing a second key, and it opens towards you, and you are carrying groceries, and it’s raining, then you will have to stoop, jiggle, hop, reach, stretch and lift to get yourself and the bags through and inside. These are not optional gestures. They must follow the directives of the mechanism. In that sense, it seems that what has really been created by the design of the doorknob is a series of motions triggered by its circumstance. The designer did not just make an object; the designer choreographed a dance to be improvised by the user upon encountering that object.

The explicit aim of exhibitions is to transform visitors. This transformation is usually understood to be an intellectual one, where people depart carrying more knowledge than when they arrived (ROM, 1976; Lord, 2007; Rappolt-Schlichtmann and Daley,

2013). In other words, exhibitions are commonly understood as a communications medium: something that carries a message. As a medium of communication, exhibitions offer unique opportunities. For example, they readily include other media, incorporating writing, illustration, music, video and so forth to create an overarching “total medium” (Côté *et al*, 2006, 43). Clearly, some messages work best in one particular form. McLuhan (1964) may have exaggerated when claiming that “the medium is the message,” but certainly media transform their messages (Mantovich, 2001), and a museum is free to choose which medium best suits a particular message. Furthermore, when visitors gain access to messages in multiple media, they are free to choose those that best cater to their preferred style of intelligence (Gardner, 1983; 1991). A person with verbal intelligence can read written labels, while someone with social intelligence takes a tour, or chats with a friend. The immersive quality of experiences found in museums are well understood, and may be seen as the basis for ‘relational art’ that seeks to create a shared community of experience rather than a single private act (Bourriaud, 2002).

In addition, museums also often offer contact with real artifacts. The interpretation of museum artifacts is certainly affected by their framing inside an institutional ‘white box’ (O’Doherty, 1976). But, as objects, they offer a depth of sensory opportunity rarely found in planned communications. The ‘real’ painting differs from its postcard in the detail of scrutiny it invites; this may reveal texture, stains, or a slight warping of the surface, none of which can be discerned from the half-tone dot printing on the postcard. A fossil was not originally planned to be a mode of communication, but in a museum it conveys information, and that information is different for different viewers (Buckland, 1991).

Perception is not a passive reception of sensation; the physical act of looking engages bodily perceptual systems in an active search for meaning (Gibson, 1966; Noë, 2006). In this sense, even the most staid repository of mineral samples must be understood as ‘interactive’ in the sense that visitors within its tangible space inevitably personalize their experiences.

In talking about the richness of museum experience, we tend to think of the five sensory systems of sight, hearing, taste, smell, and touch. But there are also others as well, such as kinesthesia, which gives bodily feedback about your presence and position in space (Sacks, 1984). Kinesthesia is the sense that informs you, without your having to look, whether your body is erect or crouching; it makes it possible to reach down without looking to adjust the strap on a sandal. If the experiences of the other senses carry meaning, what kinds of meanings are conveyed by bodily kinesthesia?

Exploration

I called upon the services of a family friend, Judith Miller, a former professional dancer with the Danny Grossman Dance Company in Toronto, Ontario. Dancers know their bodies intimately— they are the kind of people who take their x-rays on tour to simplify future discussions with doctors after the inevitable fresh injury. Judy and I went together to visit The Art Shoppe, a high-end Toronto furniture retailer where we could sit on a range of interesting furniture (Overhill, 1995). Judy had a lot to say about how chairs impacted the body. She could identify which ones compressed cervical vertebrae C6 and C7, for example, or collapsed the chest, making lung expansion difficult.

From a dancer's point of view, some of the furniture also expressed body language from former eras. Classical ballet preserves manners of the French royal court, and the ballerina still holds her head erect in the manner once needed to balance a large wig. Marie Antoinette did not recline against the backs of her chairs. In the 1700s, chairs were employed for perching, and the toes of gentlemen pointed outwards in a properly genteel manner— gentlemen of the age walked on tip-toe (Classen, 2007, 895). This is why modern copies of a Louis XIV chair invariably add a fat, loose cushion behind the back; the chair's proportions do not suit the modern habit of reclining.

Attracted by our discussion, a veteran Art Shoppe salesman demonstrated how to sit properly in the "*Fauteuil Grand Confort*," an enduring classic of Modernist furniture design featured in the permanent collections of the Museum of Modern Art. Designed in 1928 by Le Corbusier, Pierre Jeanneret and Charlotte Perriand, it is a true bully of a chair, trapping the hapless sitter immobile, elbows pinned, inside a ruthless cube of flat black leather. It is ideal for a waiting room intended to intimidate salesmen and job applicants. Our salesman, however, showed how to counter-attack the chair. Crossing his legs at the ankle, he flung his arms over top of the hard cushions, and, in the finishing touch, clicked his pen aggressively. We tried this; it worked.

Theory

Scholarly research supports the idea that body positions convey emotional and intellectual meanings. In one case, researchers asked forty-two test participants to assume one-minute 'power poses,' with arms clasped behind the head, or alternatively, crouched positions intended to suggest low-power submission. Participants were misled

about the purpose of the experiment, which they were told was to test the location of electrocardiography sensors. Saliva samples taken before and after found that the high-power pose increased testosterone and decreased stress hormones. The low-power pose did the reverse; decreasing testosterone and increasing stress (Carney, *et al.* 2003). High-power posing is also associated with certainty about decisions and confidence under stress (Fischer *et al.*, 2011; Cuddy *et al.*, 2012). Sitting upright seems to increase feelings of pride (Stepper and Strack, 1993). Randomly-assigned head nodding or shaking affects social attitudes (Wennekers *et al.*, 2012). Pulling motions are associated with positive judgments, and pushing ones with negative opinions (Markman and Brendl, 2005). The facial feedback phenomenon describes how engaging smile muscles in the face makes participants think that jokes are funnier (Strack *et al.*, 1988; Duclos *et al.*, 1989; Niedenthal, 2007; Ping *et al.*, 2009; Davis *et al.*, 2009). Activities that are enacted tend to be remembered better than those described in words (Madan and Singhal, 2012).

The experiential impact of motion is not just limited to what you do with your own body. Twenty years ago, neurological researchers discovered the existence of 'mirror neurons,' which fire in the brain while a primate makes a gesture. But, they also fire almost as strongly when the primate—or person—is watching someone else make the same gesture (Rizzolatti and Craighero, 2004; Uithol *et al.*, 2011; Casile, 2013). This may explain why physical skills like drawing and glass-blowing are typically taught through demonstrations.

Environments also affect the behavior of people in groups. At least one historian has observed ways in which furniture of the past served as a 'social actor' in shaping interactions (Hellman, 1999). Furniture placement can be classified as being either 'sociopetal,' if it draws people together to encourage socializing, or 'sociofugal' if it discourages interaction and throws people apart (Osmond, 1957).

Meaning in the World

Finding meaning in actions of the body should not be unexpected, and yet somehow it is. A lingering Cartesian tradition continues to separate important immaterial thinking from the mere physicality of the unimportant body. In this understanding, perception — our connection to the physical world — is seen primarily as a mental phenomenon. A person perceives things in the world by mentally assembling the raw data provided by sensory data. A visitor looks at museum exhibits, and from them infers meaning. But the classical model of perception is under attack. In the 1960s, psychologist James Gibson defined perception as an active pursuit of meaning, not a passive reception of sensation. He asserted that living creatures perceive only what is meaningful to them, and coined the word 'affordance' to describe the kinds of opportunities that are meaningful (Gibson, 1979). Such opportunities are directly personal; short people perceive shorter stairs to be more climbable than tall people do (Warren, 1984). In Gibson's definition, meaning is located not solely in the world and not just in the mind of the person perceiving the world. It is an emergent phenomenon, arising out of the relationship between the world and the perceiver (Stoffregen, 2003; Chemero, 2003).

Part of the problem may lie in the inappropriate conflation of ‘meaning’ and ‘words’. Many important ideas escape words. As one designer observed, “the meaning of verbal and other signs of communication might turn out to be only a subclass of the meaning carried out by human instruments in general” (Krampen, 1989).

A burgeoning literature in ‘embodied cognition’ describes the ways in which thinking is connected to corporeal engagement with the world (Folgia and Wilson, 2012). When we count on our fingers or use pen-and-paper to solve a math problem, we are using the world to ‘off-load’ cognitive work (Clarke, 2004). When we collect books, we are archiving knowledge externally so we don’t have to remember it. In some senses, then, the human ‘cognitive system’ might be defined as something that includes the mind, body and “certain relevant elements in the immediate physical environment” (Wilson, 2002, 630). This interpretation emphasizes that we have created elements of our world to match our physical and cognitive needs. For example, one author suggests that straight routes in architecture are “cognitively privileged” in way-finding because they align with the straight gait of the symmetrical human body (Davis *et al*, 2012). Many other human artifacts relate to the human body as straightforward ‘extensions’ in the sense that a pair of pliers is an extension of pinching fingers (Emerson, 1870, 151; Hall, 1957, 56; McLuhan and McLuhan, 1988). In this analysis, a computer can be understood as a supplement or prosthesis, which extends the activities of the brain.

If an exhibition can be understood as a type of performance undertaken by the visitor, then the knowledge it conveys can be located neither in the artifacts by themselves, nor solely in the abstract human mind. The active visitor undergoes an experience,

triggered by the very real material substance of the exhibition, which holistically engages both mind and body.

The Body in the Museum

The concept of bodily information offers rich possibilities for museum curating and design. It contributes to the suggestion that the job of museums is both to tell old stories in new ways, and to find new stories that have not yet been told (Yellis, 2009).

In an art gallery, typical curatorial planning might involve selecting a group of works and articulating their relationship in an accompanying essay. In a science museum, curators may prepare a written 'storyline' which describes intended learning outcomes in considerable detail. In both cases, the job of the exhibition designer may be seen as interpretation, taking these ideas out of their verbal expression and into material manifestation. For example, a curator establishes the content of an exhibition on Ancient Mesopotamia, and the designer seeks a color of blue for the walls that will be sufficiently magnificent for Sargon II. If the goals of exhibiting are enlarged to include explicit bodily outcomes, then the curator might ask the designer to find ways to evoke postures for visitors that will suggest Sargon-esque power and status — or feelings of powerlessness and loss as for his conquered peoples — or both, at different points.

If physical behavior is an historical artifact in its own right, then this also suggests opportunities for museums. For example, where an exhibit offers the opportunity to wear historic clothing, prompts could encourage appropriate postures and gestures to accompany the clothes. This would help to emphasize the genuine strangeness of the

authentic past, and demonstrate that “the sensorium is a social construction” (Howes, 2006, 114).

Going further, the topic of bodily motion could become the central purpose for an exhibition. Dance, theatre, or yoga could become the subject of an exhibition. The curator in this case would be a real choreographer, planning a set of meaningful motions to be performed by visitors. Such messages could be expected to carry subtlety far beyond simple power posing. The designer’s role would be to help find physical forms to encourage or evoke gestures defined by the choreographer. Object-savvy curators might well collaborate. Obviously, professional fields like dance and sports already enjoy well-established education and performance infrastructures outside of museums, but a museum setting could offer the chance to approach their unique knowledge from a different direction, and for a different audience.

The museum setting could also offer opportunities for applied research. Researchers are already tracking empirical body reactions to gallery layouts (Tröndle *et. al.*, 2014). Physiological reactions to body-centric design interventions could be quantitatively monitored, using tools common to market research. Such research might begin to approach— if not a theory of museum embodiment, then at least an emerging set of heuristics for rule-of-thumb use.

Any attempt to articulate bodily goals for exhibition learning outcomes must acknowledge that many museums already function well in those terms. Many museum installations include physical experiences, such as Carsten Höller’s “Test Site,” which in

2006 allowed visitors to the Tate Modern in London to slide down water-park style tubes inside the Turbine Hall (Windsor, 2011). Elsewhere, 'virtual' environments permit activities like shooting simulated hockey slap-shots against a computer-rendered goalie (Hockey Hall of Fame, n.d.). And, at the British Museum, the Elgin Marbles are mounted neither at their original height, which would have been high overhead, nor at a convenient eye-level. They are positioned somewhere in between; set just high enough that the viewer's chin must lift in admiration and respect. This bodily stance may not have been explicitly planned, but at least some of the impact of the display may derive from its kinesthetic impact. A first step towards acknowledging design as choreography might do nothing more than try to understand what has already been achieved.

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