

Designing Dance for Museums: Using Diagrammatic Transcripts to Analyze Embodied Interactions in an Informal Learning Environment

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Abstract: This Design Based Research Project positions dance and the body as resources for learning in a contemporary art museum and proposes the use of diagrammatic transcripts as one element of a multimodal analysis of embodied learning. Undergraduates learning to become museum docents participated in one, 90-minute dance workshop in an art gallery designed to promote movement-based reflection tools. Diagrammatic transcripts added depth to video analysis of moving bodies in an informal learning environment.

Introduction

The analysis of human movement in learning and interaction has been the focus of studies in the learning sciences for decades. Methods that support close analysis of small, typical gestures (Goldin-Meadow, 2004) are common, and efforts to understand the impact of larger, more robust sensorimotor experiences (Wright, 2001) on cognition and learning are prevalent. However, research on embodiment that follows both the intricacies of unexpected movement in interaction and attends to how movement may support the development of meaningful learning and experiences, is understudied. In this research, *unexpected* movement is defined as improvised dance movements generated by the participants, as opposed to a more expected or typical movement we may be more used to analyzing as learning scientists including pointing, waving, and other gestures we encounter in typical interactions. This may be due in part to the complexities inherent in learning environments; learning contexts are notoriously challenging to analyze due to the complicated nature of social interaction (Erikson, 2012). When adding creative movement responses to already complex interactions in a museum space, time must be spent to intentionally analyze and understand what actions are taking place, and to what end. This poster proposes that when integrating movement into an institutional space, considering new methodological approaches to support interaction analysis (Jordan & Henderson, 1995) hold potential to better understand the agentic role of movement and the body during learning interactions. In this analysis, diagrammatic transcripts show the placement and movement of two focal participants throughout the gallery and allow for close video analysis of not only location and facing, but of gesture, and dance movements generated in response to verbal prompts and visual artwork on display. This research is motivated by the following question: in what ways can we analytically attend to corporeal bodies in motion in an informal learning environment?

Methods

This Design Based Research Project positions dance and the body as resources for learning in the context of a contemporary art museum. One, 90-minute movement workshop was designed and piloted for 15 University students learning to become museum docents. Participants were between the ages of 19 and 35 and each was a paid employee at the museum, participating in a docent training program. The workshop was designed to position dance and the body as tools for sense-making and meaning-making in the context of a contemporary art gallery. After a physical dance-based warm-up in the space, participants were asked to physically *respond* to artworks in ways that center the body in the sense-making experience; by engaging in a series of creative movement practices that support close-looking (Tishman, 2018). Participants began with individual movements, then moved to mirroring and partner work, before generating movements inspired by the visual art in the gallery. Five kinds of data were collected: interviews with four focal participants, field note observations obtained as focal participants led conversation-based tours at the museum to members of the public, as well as survey data and written reflections from the 15 participants who engaged in the workshop. Four Go-Pro cameras were placed from different perspectives in the gallery, to collect video of the movement intervention.

Findings and analysis

Diagrammatic transcripts (see Figure 1) were useful analytically to trace participants' movements in the gallery space in order to understand physical location in addition to video analysis of dance-based learning interactions. After reviewing the data of the workshop from each of the four video cameras, we marked the location of two

focal participants in 30-second increments on a spreadsheet. If any portion of the focal student was visible (face, back of head, foot, etc.), we marked them as visible. This approach made it challenging to indicate which specific parts of the body were visible within each 30-second increment, as a glimpse of an elbow was reflected just as much as a full view of a person, despite the analytic and phenomenological difference of a full body or a glimpse of a hand. This was an effort to attend to the whole body throughout the workshop, not only the times the participants were fully visible in the camera. It also allowed us to track their movements more accurately. The process allowed us to prioritize camera views in which the whole body, and movements they were doing in relation to artwork and other participants were visible. Another review of the videos helped us to map the location of each focal student, using a symbol adapted from Ann Hutchinson Guest's "Language of Dance" notation (Guest, 1983). This notation is useful in that it shows not just the location of a person, but also their facing. The line points in the direction that person is facing, with the circle representing the human body. See Figure 1. Integrating dance notation into embodiment research provides a new analytic perspective on the role of movement in an informal learning environment.

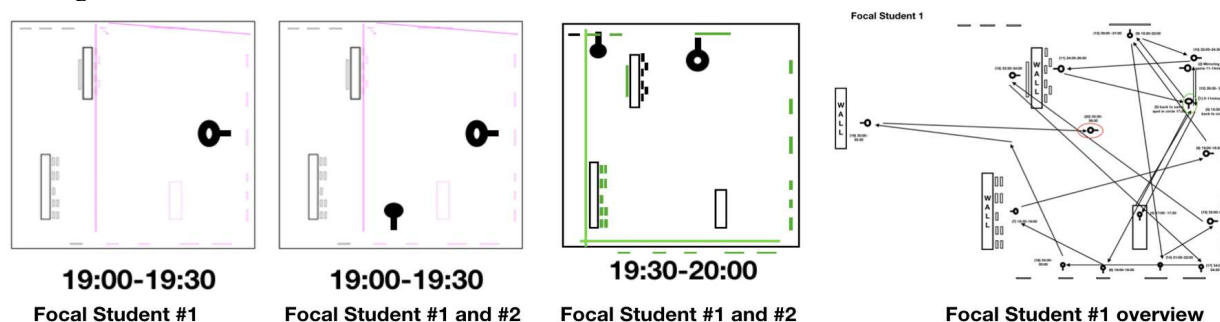


Figure 1. A series of diagrammatic transcripts. Different camera sight lines are seen as the pink and green lines.

After tracking progress and movement of focal students in 30-second increments in each of the four cameras, we progressed to looking at their pathways through the gallery space over the full workshop time. We tracked the 30-second increments from individual moments across the workshop to show the pathways. This was useful in understanding where they traveled and which artifacts they visited. We then added the time and duration at each location, which provided more insight about how long the participants were standing at particular artworks. Using diagrammatic transcripts that represent not only the location of the participants, but their facings, provides an important analytic detail when analyzing the corporeal body in motion.

Implications

This analysis was helpful in identifying research and design practices that attend to bodies' movements in an informal learning space- the diagrammatic transcript. This is a pilot study but suggests important things about how movement can be incorporated into museum and informal learning contexts. This analysis looks closely at movements between people and interactions with artwork, and puts forth diagrammatic transcripts as a rigorous methodological strategy in tracking participation to support embodied research in the learning sciences.

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