Expressing technological metaphors in urban dance

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Technology is changing the way we dance
From prosthetics to mobile devices to full body interfaces, technologies are changing the way we use our bodies. Technology is even changing the way we move, as can be seen in, for instance, the new kinds of gestural behavior that arise from cellphone use. But technologies are also changing the way we dance. For instance, technological metaphors underlie conceptual representations of the body, space, and movement in three related styles of urban dance: liquid, digitz, and finger tutting, which are known by their practitioners as “illusion styles”.

Using exploratory & ethnography-inspired methods
We conducted an exploratory, “netnographic” study of these (very) understudied communities who dance illusion styles. We collected qualitative accounts of dancer practices, attitudes, and behaviors from a variety of primary sources including archival video footage, informant interviews, surveys; discussion forum posts and other digital cultural archives; and first-person, phenomenal experiences from learning and rehearsing illusion style techniques.

Types of illusioning techniques

1. Spatial tangibilization
Creating impression that objects exist in the performance environment through the use of movement. Builds on mime, relies on rhythm and repetition, and can be used to create impression of objects with complex structures.

   Example: Contours and rails are liquid techniques that use spatial tangibilization, similar to contemporary choreographer William Forsythe’s “volume avoidance”.

   Figure 4. Liquid dancer performing a contour. Image courtesy of the Dark Matter Squad.
   http://www.youtu.be/XX01Py3r8n0

2. Spatial quantization
Creating the impression of directions and points in space that delimit bodily movement.

   Example: The tutting grid is a three-dimensional lattice of imaginary points which dancers use as guides for aligning their arms, hands, fingers, and phalanges. The concept of a tutting grid structures space in a way that evokes Cartesian coordinate geometry in Euclidean space.

   Figure 5. A complex shape mimed in a “fold”. Image courtesy of Dark Matter Squad
   Figure 6. Visual representations of the tutting grid. Images courtesy of Kai.
   http://youtu.be/6CtLTiXnJeg

3. Rejoining
Conveying the impression that dancers’ bodies have joints where there are none and suggests their absence where they are in fact present.

   Example: Figure 7 illustrates a ‘box’ in tutting. The result creates the impression that a joint exists between the fingertips of one arm and the elbow of another, and that the interphalangeal joints are (at least momentarily) absent.

   Figure 7. The author performing (or trying to perform) a ‘box’

Technological metaphors in illusion styles

Mathematical representations of space and time (Cartesian grids; fractal structures; sine waves; Newtonian mechanics)

Geometric operations (rotations, translations, scaling, reflections)

Other metaphors include mechanical and machine operations (latching, locking, unlocking, shifting along a conveyor belt; digital interactions (clicking and dragging, resizing, drilling down, card-based interactions such as click and flip, alert messaging); computer graphics (collision detection and avoidance, gravity simulation); and animation (pixel-perfect fluidity... the “idea of fluidity” as opposed to real-world, messy instances of fluidity).

A prediction

New technologies will inspire new movement vocabularies. Technological metaphors that support more variation, complexity, and detail result in movement with greater expressiveness, articulation, and phrasing.

References