about

IDEA (Interior Design/Interior Architecture Educators' Association) was formed in 1996 for the advancement and advocacy of education by encouraging and supporting excellence in interior design/interior architecture education and research within Australasia.

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The objectives of IDEA are:

1. Objects

3.1 The general object of IDEA is the advancement of education by:

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(b) being an authority on, and advocate for, interior design/interior architecture/spatial design education and research.

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(a) to be an advocate for undergraduate and postgraduate programs at a minimum of AQF7 or equivalent education in interior design/interior architecture/spatial design;

(b) to support the rich diversity of individual programs within the higher education sector;

(c) to create collaboration between programs in the higher education sector;

(d) to foster an attitude of lifelong learning;

(e) to encourage staff and student exchange between programs;

(f) to provide recognition for excellence in the advancement of interior design/interior architecture/spatial design education; and

(g to foster, publish and disseminate peer reviewed interior design/interior architecture/spatial design research.

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Animation by Jo Bailey (2020) of "Giacometti Strata, Bioscleave" (2015). Robert Bowen, Photographer

**co-constructing body-environments:
provocation**

Presenters at *Body of Knowledge: Art and Embodied Cognition Conference* (*BoK2019* hosted by Deakin University, Melbourne, June 2019) are invited to submit contributions to a special issue of idea journal "Co-Constructing Body-Environments" to be published in December 2020. The aim of the special issue is to extend the current discussions of art as a process of social cognition and to address the gap between descriptions of embodied cognition and the co-construction of lived experience.

We ask for papers, developed from the presentations delivered at the conference, that focus on interdisciplinary connections and on findings arising from intersections across research practices that involve art and theories of cognition. In particular, papers should emphasize how spatial art and design research approaches have enabled the articulation of a complex understanding of environments, spaces and experiences. This could involve the spatial distribution of cultural, organisational and conceptual structures and relationships, as well as the surrounding design features.

Contributions may address the questions raised at the conference and explore:

+ How do art and spatial practices increase the potential for knowledge transfer and celebrate diverse forms of embodied expertise?

+ How the examination of cultures of practice, Indigenous knowledges and cultural practices offer perspectives on inclusion, diversity, neurodiversity, disability and social justice issues?

+ How the art and spatial practices may contribute to research perspectives from contemporary cognitive neuroscience and the philosophy of mind?

+ The dynamic between an organism and its surroundings for example: How does art and design shift the way knowledge and thinking processes are acquired, extended and distributed?

+ How art and design practices demonstrate the ways different forms of acquiring and producing knowledge intersect?

These and other initial provocations for the conference can be found on the conference web-site: https://blogs.deakin.edu.au/bok2019/cfp/.

in this issue

introduction: unknowingly, a threshold-crossing movement

Julieanna Preston
Executive Editor
idea journal

It is in this special issue that the editorial board holds true to our promise to expand the horizons and readership of *idea journal* while reaching out to associated and adjacent art, design and performance practices and drawing connections to seemingly distant disciplines. The articles in this issue have provenance in a 2019 conference event, Bodies of Knowledge (BOK), which was guided by a similar interdisciplinary ethos. With an emphasis on cultures of practice and communities of practitioners that offer perspectives on inclusion, diversity/neurodiversity and disability, this conference, and this subsequent journal issue, aim to increase knowledge transfer between diverse forms of embodied expertise, in particular, between neuroscience and enactive theories of cognition.

This brief description suggests that there are shared issues, subjects and activities that have the potential of generating new understanding in cross-, inter- and trans-disciplinary affiliations and collaborations. My experience in these modes of inquiry points to the importance of identifying what is shared and what is not amongst vocabulary, concepts, pedagogies and methods. Holding these confluences and diverges without resorting to strict definition, competition or judgement of right and wrong often affords greater understanding and empathy amongst individuals to shape a collective that is diverse in its outlooks, and hopefully, curious as to what it generates together because of that diversity.

The breadth of the knowledge bases represented within this issue necessitated that the peer reviewer list expanded once again like the previous issue. It was in the process of identifying reviewers with appropriate expertise that the various synapses between scholarly and artistic practices became evident. It is these synapses that shape sturdy bridges between the journal's existing readership, which is predominantly academics and students in interior design, interior architecture, spatial design and architecture, and the wide range of independent scholars and practitioners, academics, and students attracted to BOK's thematic call for papers, performative lectures and exhibitions. At the risk of being reductive to the complexity and nuances in the research to follow, I suggest that the following terms and concerns are central to this issue, aptly inferred by its title, 'Co-Constructing Body-Environments': spatiality; subjectivity; phenomenology; processual and procedural practice; artistic research; critical reflection; body: experience. All of these are frequent to research and practice specific to interiors. In this issue, however, we find how these terms and concerns are situated and employed in other fields, in other ways and for other purposes.

This is healthy exercise. To stretch one's reach, literally and metaphorically is to travel the distance between the me and the you, to be willingly open to what might eventuate. Imagine shaking the hand of a stranger—a somatic experience known to register peaceful intent, respect, courage, warmth, pressure, humour, nervous energy, and so much more. This threshold-crossing movement is embodied and spatial; it draws on a multitude of small yet complex communication sparks well before verbal impulses ensue. This significant bodily gesture sets the tone for what might or could happen. Based on my understanding of the research presented in 'Co-Constructing Body-Environments,' I propose that this is a procedure in the Gins and Arakawa sense that integrates theory and practice as a hypothesis for 'questioning all possible ways to observe the body-environment in order to transform it.'[01] I call this as *unknowingly*—a process that takes the risk of not knowing, not being able to predict or predetermine, something akin to the spectrum of 'throwing caution to the wind' and 'sailing close to

the wind'. My use of the word 'unknowingly' embraces intuition where direct access to unconscious knowledge and pattern-recognition, unconscious cognition, inner sensing and insight have the ability to understand something without any need for conscious reasoning. Instinct. The word *unknowingly* also affords me to invoke the 'unknowing' element of this interaction—to not know, to not be aware of, to not have all the information (as if that was possible)— an acknowledgement of human humility. I borrow and adapt this facet of unknowingly from twentieth-century British writer Alan Watts:

> This I don't know, is the same thing as, I love. I let go. I don't try to force or control. It's the same thing as humility. If you think that you understand Brahman, you do not understand. And you have yet to be instructed further. If you know that you do not understand, then you truly understand.**02**

Unknowingly also allows me to reference 'un' as a tactic of learning that suspends the engrained additive model of learning. Though I could refer to many other scholarly sources to fuel this concept, here I am indebted to Canadian author Scott H. Young's pithy advice on how to un-learn:

> This is the view that what we think we know about the world is a veneer of sense-making atop a much deeper strangeness. The things we think we know, we often don't. The ideas, philosophies and truths that guide our lives may be convenient approximations, but often the more accurate picture is a lot stranger and more interesting.**03**

In his encouragement to unlearn—dive into strangeness, sacrifice certainty, boldly expose oneself to randomness, mental discomfort, instability, to radically rethink that place/ your place/ our place, suspend aversions to mystery—Young's examples from science remind us that:

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Subatomic particles aren't billiard balls, but strange, complex-valued wavefunctions. Bodies aren't vital fluids and animating impulses, but trillions of cells, each more complex than any machine humans have invented. Minds aren't unified loci of consciousness, but the process of countless synapses firing in incredible patterns.[04]

In like manner to the *BOK2019* conference which was staged as a temporally infused knowledge-transfer event across several days, venues, geographies and disciplines, I too, ingested the materials submitted for this issue in this spirit of unknowingly. The process was creative, critical, intuitive, generative and reflective—all those buzz words of contemporary research—yet charged with substantial respect and curiosity for whatever unfolded, even if it went against the grain of what I had learned previously. For artists, designers, architects, musicians, and performers reading this journal issue, especially academics and students, this territory of inquiry may feel familiar to the creative experience and the increasing demands (and desires) to account for how one knows what one knows in the institutional setting. 'Explain yourself,' as the review or assessment criteria often states. If you are faced having to annotate your creative practice or to critically reflect on aspects that are so embedded in your making that you are unaware of them, I encourage you to look amongst the pages of this journal issue for examples of how others have grappled with that task such that the process is a space of coming to unknow and know, unknowingly.

Figure 01:
Meeting the horizon; A still image from Shore Variations, a 2018 film by Claudia Kappenberg that reimagines *Waning*, a 2016 live art performance by Julieanna Preston.
https://vimeo.com/user11308386.

There are a few people I would like to acknowledge before you read further. First, huge gratitude to the generosity of the peer reviewers, for the time and creative energy of guest editors Jondi Keane, Rea Dennis and Meghan Kelly (who have made the process so enjoyable and professional), for the expertise of the journal's copy editor Christina Houen and Graphic Designer Jo Bailey, and to AADR for helping to expand the journal's horizons.

Okay, readers, shake hands, consider yourself introduced, welcome into the *idea journal* house, and let's share a very scrumptious meal.

notes

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how moving is sometimes thinking

Shaun Gallagher

University of Memphis (USA)
University of Wollongong (AU)

0000-0002-3147-9929

abstract

I argue that different types of movement—gesture, marking, blocking, dancing, and whole-body engagements—can contribute to (or scaffold, or enable) thinking or can even constitute thinking in various forms of problem solving, memory, and reasoning ability. But I also argue that not all movement is thinking; specifically, resisting the threat of pan-narrativism, movement does not constitute narrative, although narrative reflects the structure of action.

introduction

In this article, I consider different types of movement that either contribute to thinking or that constitute a form of thinking. Obvious candidates include gesture and sign language, which have been considered instances of extended mind.[01] I'll also argue that in some epistemic situations, whole-body movement (e.g., running and jumping) can scaffold learning and problem solving. There are also different forms of movement connected with the performing arts of dancing and theatrical acting that are clearly forms of thinking. These include the practise of 'marking,' where abbreviated body and/or hand movements used in rehearsals are a form of thinking through a choreographed performance. Also, another kind of movement that goes along with the theatrical conception of 'blocking' in the rehearsal and performance of on-stage acting fits this category. Finally, a number of philosophers have argued that dancing itself can be considered a form of thinking—specifically, a form of exploring a world of affordances.[02]

I conclude, however, by arguing that there are certain limits to this idea, and that not all movement is thinking. Specifically, there is some ambiguity about how narrative is connected with movement. I argue for some subtle distinctions between movement and narrative thinking. Although a subject's movement may allow them to find a new way to think about their life circumstances, that movement per se is not necessarily a form of narrative.

moving that constitutes thinking: some examples

Gestures

Susan Goldin-Meadow et al., in a set of well-known experiments on the role of gestures in math, demonstrate that gesture doesn't simply scaffold cognition or 'lighten the cognitive load' (as Goldin-Meadow herself suggests).[03] Rather, gesture contributes to the constitution of mathematical reasoning. David McNeill argues that gesture is part of language and (as Merleau-Ponty put it), language (speech) accomplishes thought.[04] At the temporal point where gesture couples with utterance, which McNeill calls the 'growth-point,' gesture is shown to anticipate the utterance. The gesture starts just prior to the relevant speech-act. In this respect, gesture, as a form of expressive movement, is not the expression of a pre-formed thought; it is integrated with the movement of speech in a way that initiates extra-verbal (visual and motoric) meaning. It has been experimentally shown that in some cases gesture outruns verbal report, contradicting it, but pre-figuring what the speaker ultimately says. Accordingly, gesture is a form of cognition, not just a means of communication.[05] This is consistent with both Andy Clark's concept of the extended mind and with enactivist conceptions of sense-making.[06]

Full-body enactive engagement

Just as gesture helps to constitute mathematical reasoning, whole-body, situated movement can contribute to the learning of scientific reasoning, as evidenced in experiments using simulated environments. Rob Lindgren led a team of researchers to design a

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simulated space environment where middle-school children could interact with virtual planetary bodies. The children controlled the movements (of a meteor) using their own bodily movements—running and jumping.[07] The project, called MEteor (Metaphor-based Learning of Physics Concepts Through Whole-body Interaction in a Mixed Reality Science Center Program), involved more than a metaphorical identification with the meteor. The MEteor simulation used wall- and floor-projected dynamic imagery to create a realistic and immersive environment of planetary astronomy (including planets with gravitational properties). For example, children interacted with MEteor using their bodily movement to launch a meteor with a certain velocity (Figure 01). They then predicted where it would move based on the presence of planets and other associated forces. Children were able to build their understandings around the movements of their own bodies, supported by external visualisations built into the environment in a way that scaffolded learning.

This simulation was used in controlled studies of 312 middle school students that tested two conditions:[08]

01. Weak embodiment condition: students used a desktop version of MEteor controlled by hand/mouse movements;

02. Strong embodiment condition: students engaged in full-body/full-immersion mode with the simulation—entering into the projected simulation, and moving around in it by running, jumping, etc.

The strong embodiment condition resulted in better understanding of astronomy concepts, demonstrated by the production of more dynamic diagrams, less reliance on surface/background features of the simulation, improved scientific reasoning on tests, and dispositional learning effects.[09]

Figure 01:
A participant enacting an asteroid trajectory in MEteor. From Gallagher and Lindgren, 'Enactive metaphors,' 2015.

Marking

Marking is a form of abbreviated movement or gesturing used in dance rehearsal. In its most abbreviated form, it involves only hand gestures that constitute a kind of imagining of the performance. 'When marking, the dancer often does not leave the floor, and may even substitute hand gestures for movements. One common example is using a finger rotation to represent a turn while not actually turning the whole body.'[10]

Marking improves memory, performance technique and timing, more so than does full-out dance practise, or 'in the head' simulation without explicit movement.[11] Edward Warburton and David Kirsch think of marking as movement in the abstract. But marking is not entirely abstract, since the gestures meet constraints of the physical environment— one imagines the dance, not in thin air, but anchored (staged) in specific contexts that define specific affordances. This is clear if we consider another technique, one that is also used in theatrical acting; namely, blocking.

Blocking

Blocking is a practise started by Sir William Gilbert (of Gilbert and Sullivan) to facilitate planning and rehearsal. He used scale models of the stage and blocks to represent actors. In contemporary practise, blocking includes the design of the performance space, the placing and movement of objects or props, and especially the positioning of actors for a particular scene. Its major function is to ensure that things and actors are positioned properly *from the audience's perspective* so they can see what's going on. *From the director's perspective*, blocking can affect the specific meaning of a scene. *From the actor's perspective*, blocking not only puts the actors in the right place at the right time, it facilitates the acting process, and scaffolds the actor's cognitive and pragmatic performance.[12] Specifically, it facilitates the memorisation of lines. Being put in the right place at the right time means that she is put in front of another person, or next to a significant object, or within reaching distance of a particular prop, etc. This lets her know what needs to be done and what needs to be said then and there.

Blocking also includes normative structure: there are directions/rules, that can be followed or broken in ways that allow improvisation in performance. Thus, blocking is continuous with and supports activities of planning and imaginative rehearsal. It constrains movement, imposing a type of syntax that constitutes meaning on stage. It's an arranging or re-arranging of affordances with a particular goal in mind. In the kind of marking that a dancer might do in rehearsal, the blocking arrangements will be doing some of the work, grounding intelligent movement in a specific situation, and defining the affordances that will guide the motoric and affective processes involved in performance. In the extended mind view, much like gesture, the movement accomplishes thought, and taking up of positions in blocking is just a process of remembering one's lines.

One can generalise these processes of marking and blocking. 'All the world's a stage,' as Shakespeare tells us, and the architectural structures, spatial arrangements,

and normative structures of everyday or specialised practises and institutions operate like blocking to make us move and make us think in certain ways. In everyday life, things are 'staged' to get us to act and to think in a specific way. Consider, for example, the arrangements of museums, classrooms, supermarkets, courtrooms, and so forth.

Dance

Perhaps with the concepts of marking and blocking, it may be easier to see why some dancers and dance theorists claim that dancing itself can be a form of thinking. Maxine Sheets-Johnstone calls it a form of 'exploring the world.'[13] Michelle Merritt argues that the dancer does not think first, and then move, but that 'Movement just is thought, and thought, in the case of improvisational dance, consists in the movement.'[14] Movement in this regard is a form of sense-making.

Numerous studies suggest that 'dance enables ... embodied thinking, playful, imaginative problem solving and aesthetic decision making.'[15] One way to account for this is to think of dance (especially improvised dance) as a form of affordance exploration.[16] Dance allows us to experiment with affordances and bodily possibilities—it offers new possibilities for action by heightening kinaesthetic, proprioceptive, haptic, auditory, and other forms of perception. It trains attention towards the environment, towards the body, and towards others. This may help to explain what it means to claim that improvisational dance is an active exploration of one's own possibilities within the environment.

[Dance movement] is dynamic, ever-shifting, and responsive to context. This dynamism—because it is so intelligent in its responsiveness—seems to require some sort of agent to whom the movement means something. In other words, it would seem wrong to insist that the movement is nonconscious or merely a biological maintaining of the organism below the conscious radar. The movement means something to the persons enacting it.[17]

The dancer actively creates meaning in shape, form, and force, which involves, simultaneously, perceiving and investigating those shapes, forms, and forces. Improvisation requires engagement with affordances offered by the music, the environment, and the ever-changing form of one's own body.

not all movement is thinking

We should not move too quickly. We should not think that all movement is thinking. We can understand narrative to be a reflective form of thinking (Peter Goldie calls it 'narrative thinking'[18])—a thinking about events and actions, and about other people and ourselves, involving a kind of self-reflection. Some theorists have made strong claims that bodily movement is itself a kind of narrative, and therefore a kind of thinking or cognition.

For example, in the area of body psychotherapy, the idea that bodily movement generates narrative leads Christine Caldwell to define such movements as 'nonverbal narratives ... the body telling its stories on its own nonlinear and nonverbal terms.[19]

She explains, 'conscious body movements generate a fluid, nonverbal narration of self and identity no less important than the verbal stories we may tell.'[20] Richard Erskine describes therapy as 'focusing on the body and the unconscious stories requiring resolution.'[21] He understands the body as keeping

> unconscious 'score' of emotional and physiological memories, and as storing experiences of a pre-symbolic, implicit, and relational kind that have never been narrated by conventional means but for which there is, nevertheless, 'an emotionally laden story waiting to be told.'[22]

Likewise, in developmental studies, Delafield-Butt and Trevarthen contend that embodied narratives are part of our lives from very early on and are even implicit in neonatal movement.[23] On this account, embodied activity has its own inherent narrative structure. According to Delafield-Butt and Trevarthen, the origins of narrative are to be found in 'the innate sensorimotor intelligence of a hypermobile human body'—in the intentional movements of the midterm foetus, movement that is continuous with postnatal, structured movement in which we can identify distal goals and social meaning. Such movements are thus shaped further in 'early proto-conversations and collaborative play of infants and talk of children and adults.'[24]

These movements reflect a fourfold and temporal structure, involving introduction, development, climax and resolution, similar to that found in semiotic accounts of narrative (contract, competence, performance, and sanction), which are said to constitute the canonical structure of all narratives in semiotics (Figure 02).[25] Accordingly, the serial 'organisation of single, non-verbal actions into complex projects of expressive and explorative sense-making become conventional meanings and explanations with propositional narrative power.'[26]

Figure 2:
Four phases of narrative. Author created, based on Colwyn Trevarthen and Jonathan Delafield-Butt, 'Biology of Shared Experience and Language Development: Regulations for the Intersubjective Life of Narratives,' in *The Infant Mind: Origins of the Social Brain*, eds. M. Legerstee, D. Haley, and M. Bornstein (New York: Guildford Press, 2013), 167–199.

The problem with conceiving of this very basic movement as a form of narrative thinking, in the contexts of either psychotherapy or development, is that it leads directly to a form of pan-narrativism where everything seems to be narrative. Galen Strawson, for example, worries about the claim that all of our structured actions have a narrative character.[27] If making coffee in the morning, for example, is a narrative because there is a structure or order to it, then narrativity is trivial—an

unhelpful and uninformative stipulation. Goldie contends that it is always the case that 'a narrative is distinct from what it is a narrative of.'[28] To avoid the problem of pan-narrativism, we need to say that narrative may indeed be a form of thinking about one's actions; but those actions are not themselves narrative. It seems right for narrative theorists to safeguard the concept of narrative in this way.

> [We need] a principled account of what makes a text, discourse, film, or other artifact a narrative. Such an account would help clarify what distinguishes a narrative from an exchange of greetings, a recipe for salad dressing, or a railway timetable.[29]

Getting the order of things right is important. The developmentalists are correct to contend that we learn to form linguistic narratives through interactions with others—specifically, when caregivers elicit accounts of just-past actions or events, and when, as young children around two to three years of age, we appropriate the narratives of others for our own stories.[30] The contours of our narratives are shaped by the structures of our actions and by the events themselves. Developmental studies show that narrative starts to emerge in pretend play, typically when engaging with others, where the creation of such narratives is 'accompanied by—rather than [achieved] solely through—language.'[31] In early pretend play, however, we find performative vocalisation rather than narrative. In Gallagher and Hutto,[32] we give the following example: the mother takes the toy car and says 'Zoom, zoom, zoom.' She is not providing a narrative about the car; she is playing with the car. The child then takes a turn. Performative vocalisations may then get integrated in a narrative that captures the pretend action. The mother says, 'The car goes zoom.' She is now on the way to giving a narrative about the car.

The argument, then, is that *narrative derives its structure from action*. Actions take time to unfold; they have a beginning, they develop, they accomplish a goal, and they conclude. That's a structure that narratives must reflect if they are going to capture what Bruner calls the landscape of action.[33] But that does not mean that actions have a narrative structure; rather, the derivation goes the other way. Narrative thinking is anchored in a pre-narratival event or action structure.[34]

It may still be possible that narratives loop around and start to shape our actions.[35] Explicitly, this can happen in mime, in acting, in therapeutic re-enactments, where an agent enacts a narrative through movement. It can also happen implicitly, which is what makes our actions, in some cases, reflective of narrative thinking.

conclusion

I've argued that movement itself may be a mode of thinking. This is meant to challenge overly-intellectualist accounts of cognition. There are clear examples in everyday life where sensory-motor engagement assists in problem solving, and where gesture contributes in a constitutive way to the thinking process. I have also pointed to examples in the performing arts—marking, blocking, dancing—that contribute to,

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or scaffold, or enable thinking, which
is understood in an extended sense as
processes of problem solving, memory and
reasoning. I have also argued, however, that
we should not take this too far and see every
kind of movement, or every kind of complex
action, as equivalent to forms of thinking.
Specifically, I've pointed out the danger—
the threat of pannarrativism—if we try to treat
movement or action as a form of narrative
thinking. Action clearly has a structure, and
although we can think of narrative deriving
its structure from action, we should not
think of the structure of action as an original
narrative structure.

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author biography

Shaun Gallagher is the Lillian and Morrie Moss Professor of Excellence in Philosophy at the University of Memphis, and Professorial Fellow at the Faculty of Law, Humanities and the Arts, University of Wollongong (AU). He was a Humboldt Foundation Anneliese Maier Research Fellow (2012-18). Publications include *Action and Interaction* (2020); *Enactivist Interventions: Rethinking the Mind* (2017); *The Neurophenomenology of Awe and Wonder* (2015); *Phenomenology* (2012); *The Phenomenological Mind* (with Dan Zahavi, 2012); *How the Body Shapes the Mind* (2005). He's also editor-in-chief of the journal *Phenomenology and the Cognitive Sciences.*

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