

Ecocentric languaging: Persons, art and education

From a psychobiological perspective, both evolutionary and developmental, the author explores the kinship languaging belonging to all entities of nature. She argues that this ecocentric language is relationally embodied and embedded, and that it is intrinsically aesthetic in organization. This relational aesthetics has implication for ecocentric education, and counters trends supporting robotics, artificial intelligence and device-culture.

The illustration I am calling *Persons* (see next page) is after a pencil drawing by my son at age six. It is a wonder-filled expression of a child's experience of an animistic world. This experience is not an 'immature' and 'fantastic' one – as might be suggested by the rationalist rules and socialized perceptions of modernity. Rather, it is an expression of embodied immersion in an animistic world alive with intelligences – *persons* – those of the stones, plants, animals, humans and elemental forces such as wind, rain, mountains and lightning (Whitehead, 1988; Abram, 2015). Such persons are communicative by the very nature of who they are; they are relational participants in meaning-making in particular encounters in particular places.

For human beings, this embodied immersed state is one held within our evolutionary past, as well as unfolding developmentally. By the latter is meant not as a childish, passing phase, but as the unfolding *in utero* of the first perceptions through which we know and learn about the world – movement and sound, the foundational perceptions that organize the integration of all of our other senses. In particular, we need to move in order to sense and therefore perceive; movement is first a perception before it is a 'motor-response' (Bainbridge-Cohen, 2012). And our more-than-five senses are the organs through which we language – communicate – with our world, the place where we find ourselves.

The experience of embodiment begins *in*

utero, evoked through the first perceptual system to develop: the ancient fish-invented vestibular of the inner ear, which registers and organizes movement in the gravitational field. This system and its outgrowth, the vestibular-cochlear cranial nerve, registers movement and sound as a single, unified perception – movement makes sound and sound is movement. In this way, the experience of movement is unified with the tone quality of vibration at deep cellular levels – which, in turn, unifies our interactional experience of self with the place where, and with whom, we are embedded.

This embodied-embeddedness is established through our vestibular system, which orients all experience, through movement-sound, to the gravitational pull of the Earth. It does so through the perception of the force of space (proprioception), the force of weight (gravity) and the force of time (velocity). These forces play out within the three-dimensional field – the horizontal, vertical and sagittal (front-back) planes. It is this primary relationship with the domain of gravity that led Jean Ayres (1972), a founding researcher of motor-sensory-perceptual integration and development, to write, "We bond to the Earth first," even before we bond with our mother.

To bond is to communicate with – or, as I prefer to put it, to *language* with. I use this term to emphasise that the meaning-making that arises in present, motor-sensory-perceptual experience is the embodied foundation for all verbal

Rebecca Burrill

About the author

Rebecca is a dancer, artist, movement-based child developmentalist and educator based in Cape Cod, USA.

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language, both spoken and written. And so, in this way, our first languaging is ecocentric – Earth-centred, rather than anthropocentric.

The immediate reciprocations of movement and gesture are our fundamental and first communication, providing the *how* of meaning in their resonant, felt qualities – or what Daniel Stern (2010), a prominent infant developmentalist, names *vitality contours*. These are the qualities of force and direction of the felt sense of experience. Words that name these qualities are mostly adjectives and adverbs, such as *gentle, surging, tightly, haltingly* and so on. It is these dynamic felt qualities – as I, for example, hold an infant tightly, or gently, or surgingly – that carry first communications. They are what foetus and infant are first moved and sounded by, and move and sound in immediate reciprocation – a dance and song partnering of self and other.

These dynamic contours reflect being in the forces and dimensions of our world – our embodied and embedded reality of the *how* of meaning. For example, the *how* of the felt sense of cheerfulness can be *open* spatially, *light* in weight, *quick* in time and *up* in direction. In contrast, the *how* of the felt sense of sadness or depression can be *closed* spatially, *heavy* in weight, *slow* in time and *down* in direction.

These are examples of how the early unities of *in utero* biological body and resonant felt-sense, profoundly pattern and underpin the conceptual, cognitive meanings we later come to make of experience. This is our psycho-biological reality: what happens in our bodies at deep biological levels is accompanied by a *knowing* or psychological sense. This immediate meaning-making is seen clearly in the non-verbal languaging – dance and song – between mother and infant, such as when an infant's high-pitched voicing is matched with her mother's gestures of raised eyebrows, shoulders and upper torso. This is an example of our *primary languaging*, which operates at the perceptual and sub-perceptual levels of knowing (Chapple, 1982; Condon, 1982).

This primary language is what is being expressed in the animistic perception, languaging and art-making of my six-year-old son. Saying this is to extend the deep psycho-biological reciprocity in human primary languaging to the world at large – to place. As the foetus is *in utero*, thus is the human in nature, and thus are all persons – human and more-than-human – in the interactional world (cf. Bird-David, 1999). Throughout our evolution from single-celled organism to fish, to amphibian, to reptile, to mammal, we embodied beings have been in ongoing reciprocal dialogue with the place and persons with whom we have been embedded. That is, we have all been in dialogue with a world replete in a continual motion of gestures, attunements and communications among reciprocating persons of place.

This continual gestural reciprocation is something I experience, for instance, when dancing with the movement-sound scape of sandbar and ocean, wind and sky, sun and shadow, birds and clouds, stones and shells. In the dance, my movements emerge from an immersed motor-sensory-perceptual receptivity. In this, the immediacy of my full-bodied gestural response is a continual flow of languaging – an improvisation of qualities in perpetual call and response, as eternal in this moment as all of creation.

Artful expressions such as this dancing, or my son's drawing, are *markers of encounter*; that is, markers of meaningful relationship among presences in an animate world. The medium of these artful markers is the cross-sensory nature of primary languaging. Myriad internal images of all sensory modalities arise from our embodied-embedded experiences of being in the world.

A core function of the psycho-biological process is that it makes meaning by translating from one sensory modality to another. This can be seen, for example, in the way the scent of a wild rose can evoke a sound tone, or the rise of a mother's eyebrows can elicit a smile and intake of breath in her baby. The core meaning – the *vitality contour* – remains the same, but is translated and expressed through

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a different sensory image. For instance, the felt sound sense of a loon’s wail can be rounded, deep and penetrating, and this same vitality contour can resemble a visual felt sense of the colour tone of indigo. In cases like this, meaning is translated from sound image to visual image through resemblances in contours. This is a primary example of the imaginative process. It also lies at the very heart of perceptual *metaphor* – making meaning through felt resemblances.

These qualities of primary languaging – as a cross-sensory, imaginative and metaphor-making process – are at the very core of aesthetic intelligence, or what we call art-making. That is to say, human perceptual processes are *organized aesthetically*. For this reason, I suggest, original human art-making arose as markers of our encounters with persons, and thus art-making is at the very core of what it means to be ecocentrically situated in an animate world. This is further supported by studies of indigenous languaging and ritual arts (Feld, 1982). And these same communicative and performative processes are also found to be characteristic of the dance and song in infant–mother dialogue. Both are composed of metaphorical–analogical meaning-making, working across multiple sensory modes, including the vocal, visual and kinesic (Dissanayake, 2007). The arts, rather than the sciences, are thus our original language of encounter with the ecological world. Through the arts we forge meaningful relationships among presences in an animate world; through the arts we participate in our individual and mutual stories.

These foundational ways of being in the world have significant implications for an ecocentric education (Burrill, 2018). Ecological science and naturalistic education can recognize, corroborate and take cues from these stories (Mathews, 2016). Examples include:

- teachings in modelling human systems after the intelligence patterned in natural systems (Orr, 2002);
- *animate science*, where the supposedly ‘non-living’ aspects of the world are

considered to have a proto-subjectivity or a ‘minded’ sense of identity and interaction (Harding, 2015);

- teachings in the *theory of living systems*, in which the mutual co-evolution of living organisms with their environments is seen, not as a blind process, but as a form of cognitive intelligence (Capra and Luisi, 2018);
- *biosemiotics*, the study of communication happening through the interpretation of signs found throughout the living world (Wheeler, 2016).

While such scientific approaches offer significant resources for an ecocentric education, art must remain foundational to it. All of the approaches listed above are scientific ways of expressing that which is naturally inherent in a child’s felt sense of meaning and imaging about the interactional nature of the animate world – that felt sense expressed in the drawing with which I began. Art is the avenue for honouring this felt sense, for, as I have argued above, at the deepest level we communicate with the ecological world *aesthetically*. Furthermore, art allows for the child’s own particular meaning-making, from which her own sense of an ecocentric ethics arises.

However, just as important for ecocentric education is the need to understand and counter the ways in which such contemporary phenomena as robotics, artificial intelligence and device-culture can work to *erase* our primary languaging. This erasing is part of a cultural trend to homogenize all entities – both human and more-than-human – and to reduce us to inanimate mechanism (Tallis, 2012; Richardson, 2015). Such enmeshing of boundaries of identity – an accompaniment to the modernist project to disenchant the animistic world of living intelligences – nullifies the possibility of participation in deep interactional sharing. It erases our capacity to participate in a world replete in continual motion and emotion of gestures and feeling sense, attunements, communications and meanings among reciprocating persons of place. It is not

as one machine among others that I can be a genuine participant in the animate world; it is only as a being rightly animate – embodied and immersed – that I can be rightly in reciprocal communication with our world. ■

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