

## KINETICS AND TACTILITY FOR A *DANCING* RESEARCH<sup>1</sup>

### CINETICA E TATTILITÀ PER UNA RICERCA *DANZANTE*

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#### Abstract

Art and its sense-motion sphere, that finds a home in the 'embodied education' research group, constitute the environment in which the *pedagogical* takes shape – where *pedagogical* refers to the nature of the transformative processes of the 'living' (Dewey, 1934). Art is mobile space for the 'living' and its generative and situated autopoietic process (Maturana-Varela, 1980), from which knowledge and cognition emerge in the form of action/gesture and work (Arendt, 1956).

Reclaiming the phenomenological perspective and, in particular, Nancy's (2010) notion of *theatre-body* and Berthoz's (1997) motion theory of perception, we present some aspects of a work related to the design of a *Formant-space* called "TheatrumOpera". Two groups – high-school students and kindergarten teachers – are involved in a process experiencing embodied methodology as a performative practice from which to design *intercode spaces* (Carpenzano-D'Ambrosio-Latour, 2016) for education.

The two working groups and their traces of works are presented into a performative research making them part of a discourse that brings onto the shared intercode trajectory of a cognitive/embodied and *transFormative* processes. This trajectory reinterprets body and space outside the category of language and expression as it needs to reclaim the political horizon of body and space from whose mutual generativity the life of a new community form in movement emerges.

L'Arte e la sua sfera senso-motoria che trova casa nel gruppo di ricerca 'embodied education', costituiscono l'ambiente in cui prende corpo il *pedagogico* – dove per *pedagogico* si intende la natura dei processi trasformativi del 'vivente' (Dewey, 1934). L'Arte è spazio mobile: è *danza che crea* (Ceruti, 1989), per il 'vivente' e il suo processo generativo e situato di natura autopoietica (Maturana-Varela, 1980) da cui emerge conoscenza e cognizione in forma di azione/gesto e *opera* (Arendt, 1956).

Recuperando la prospettiva fenomenologica e in particolare la nozione di *corpo teatro* di Nancy (2010) e la *teoria motoria della percezione* di Berthoz (1997), presentiamo alcune tracce di un lavoro relativo alla progettazione/produzione di un'ipotesi di spazioFormante denominato TheatrumOpera.

Due gruppi di lavoro – alunni di un Liceo e maestre della scuola dell'infanzia – sono coinvolti in un percorso per sperimentare la metodologia *embodied*, come pratica performativa da cui far emergere la progettazione di spazi intercodice per la formazione.

I due gruppi sono presentati, attraverso alcune *tracce* del loro lavoro, all'interno di una ricerca performativa attraversata da traiettorie intercodice, che si interseca in un processo trasformativo di natura cognitiva/incarnata. Rileggendo corpo e spazio fuori dalla categoria del linguaggio e dell'espressione, recuperando l'orizzonte politico di corpo e spazio, si genera una nuova forma di vita comunitaria in movimento.

#### Keywords

Sensible space; embodied education; intercode dance  
Spazio sensibile; educazione incarnata; danza intercodice

## 1. Between Art and Science: body in (inter)action as ‘sensible designer’ of educational space



Fig. 1

Matteo Vinti e Noemi Saltalamacchia, *I make space in 120 hours*, 2021:  
a creation from collective work in ‘Giordano Bruno’ Liceum in Arzano and Grumo Nevano

The work of the ‘embodied education’ group, referring specifically to the School-Institution, opens up to research and artistic practices to make explicit a poetic stance of being-in-the-world and legitimise *performance* as a dimension of being and a quality of knowing. The School-Institution, as an *artificium* and set of structures and constructs, is read and experienced through the always new and regenerative gesture of ‘design’: a gesture that denies the possibility of modelling, determining, affirming, or pre-fabricating, being the trace of a presence and a complex and specific system of relationships that guarantee its life and make its biological matrix explicit. Mauro Ceruti (1989) speaks of an *ecological epistemology* that derives from the epistemology of the mind embodied by neuronal networks to trace the neurophysiological foundations of relationships and communication, establishing another approach to design/construction that seeks to escape the evolutionary fascination of abstraction and aestheticised and formalised objectivity, to move in a perspective that looks to the “individual and autonomous character of each creative itinerary” (p. 82) and rejects the predictive force of “single causal chains” (p. 83). There is thus no procedure to describe, but ‘only’ a condition of empty space where it is possible to move and recover a sensitivity (to depth) capable of activating cognition in the form of participation in the process of living and recognising that “a living system builds its own world and is, at the same time, a product of it” (p. 87). Bruner’s (1980) bio-culturalist hypothesis is connected once more to Dewey’s (1934) activism of the *living creature* and nourishes the experiments also carried out in the two School contexts. They can therefore substantiate the pedagogical with the biological and its cognitive aspects. The biological root of the epistemic and methodological framework is the supporting structure for a pedagogical poetics that makes Care coincide with sculpture (of the Self and the world). Working through performance art means moving to incorporate the Muses’ choral and multiform po(i)etical dimension that restores to space its belonging to the productive process, to the *infinite operation* (Nancy, 1994) of setting oneself to work, and to the body that opens up, is exposed, and becomes theatre (Nancy, 2010). The notion of space finds its phenomenological curve as a *theatre-body* and *infinite operation*, and with the name *TheatrumOpera* it is a ‘manifesto’ for research on the process of living as education between art and science.

Over the past year, the work of the Embodied Education research group opened up to the

co-design of Formantspaces concerning two specific ‘realities’: the staff and educational services of the City of Naples<sup>2</sup> and the spaces and educational practices of the *Liceo ‘Giordano Bruno’*, a high school in Arzano and Grumo Nevano<sup>3</sup>. Two contexts, two communities, and two opportunities where research situated between Art Space and Education has created opportunities to give life and body to the tactile, kinetic, and plastic dimension necessary for educational action and, as Hörderlin put it, *dwelling poetically upon this earth*.

The epistemological and methodological structure and stance of critical existential and phenomenological origin that gives substance to ‘embodied education’ research have increasingly and explicitly shifted towards a pedagogical logic of ‘design’ so that the gesture of living/designing<sup>4</sup> can embody the attention to the transformative processes that concern the phenomenon of ‘living’ and become the mobile stance required for being-in-the-world. From this emerges a methodological outline that also constitutes a ‘pedagogical emergency’ for ‘embodied education’ research: to train, to form, to mobilise, and to unite all forms of action to make them a daily practice of connection with the world. Therefore, the trajectory is also traced in the two contexts of research and educational intervention we refer to here and of which we put forward different design proposals referring to the spaces and the possibility that these incorporate the sense-related and the mobile of living. Regarding school and its institutional form, we have sought to recognise the vital consistency that suggests that “caring for the world of which we are a part can only be care of the sense-related” (Coccia, 2011, p. 14), care which seeks to be substantiated in a reciprocal contact between being and world. The care for – and design of – spaces leads back to the perceptive, kinetic, and communicative sphere and therefore to a field of complex and situated activity, calling into play corporeality as a whole in order to reconfigure the category of space and give life to the ‘design’ of Formantspaces so that they may constitute a *sense-related* proposal originating from the new feel/state-of-feeling of the designers/performers involved in a new mapping and pedagogical methodology.

Nevertheless, designing Formantspaces is also a ‘cypher’ of a vitalism to which we have given the meaning of ‘planting schools’ to grasp from its roots the pedagogical and therefore transformative – active – dimension with which the category of space is thought and acted upon. This vitalist choice follows a different line of thought from the forms of determinism and positivism that continue to dominate the culture of education and its search for ‘method’, and it moves within the relationship between life and knowledge, assuming variation and systems of dynamic relationships as constitutive and generative elements of phenomena/systems/organisations of an adaptive and open nature. Beyond any possible reductionism, Architecture and Pedagogy find their common ground and rethink their constructs as a *dance that creates* (Ceruti, 1989) and therefore transform action with its situated and relational origin, its adaptive nature, mobile plastic dance, into the generative principle through which to revitalise space and give life to the bodies that give it shape and meaning. The notion of space assumes the plasticity of bodies, the possibility of becoming living matter because it is sense-related. In a *logic of sense* (Deleuze, 1969) regarding “bodies that act and suffer” (p. 12), our research calls on the Arts to become an organically perturbing environment where one is between acting and suffering and in which *mixtures* are generated. “In bodies, in the depths of bodies, there are mixtures: one body penetrates another and co-exists with it in all its parts, like a drop of wine in the sea, or like fire in iron” (p. 13). Designing, like living, emerges from a process that is living itself.

Working as a team, involving – in this case, in whole or in part – a dancer, a painter and sculptor, a digital and multimedia artist, the performer-actor, a performer and voice trainer, in a single system of education means introducing the vocal-dancing-plastic practice into everyday life to activate and extend the quality of each person’s presence and thus create the conditions for inhabiting/building worlds. The incorporeal manifests itself in the corporeal, and the corporeal penetrates the incorporeal: space incorporates the step that has crossed and de-formed it, and the body embodies the space in which it has been touched-touching<sup>5</sup> and generated its own infinite process of living/existing. Multimedia plastic and performing arts, held together by pedagogical tension and therefore by a gaze upon transformative processes, in the research

and experimentation of ‘embodied education’ serve to connect Architecture and Education with the possibility, opened up by non-Euclidean geometry from Bolyai and Labaceskij onwards, of thinking in terms of the “space of our experience”. Hence, with all its tactile and kinetic quality, the body is a sensitive part of it, a generative device and intelligent interface. Skin and breath are the supporting structures of the tactile and kinetic paradigm used to rethink the categories of space and body. In its plastic spatiality, space and the body find their fusion-reality thanks to a theoretical-practical framework that looks at the need to co-exist and generate organic “structural couplings” (Maturana-Varela, 1971) to be read as weavings between solids and voids, lines and curves, planes and spheres. To design is to inhabit space, to act, to travel through it, to experience it in a non-predetermined way that goes beyond the plane and the straight line of the Euclidean conception to break out upon the generative environments of *live performance* and its post-electric so-called rhizomatic ethics/aesthetics (Deleuze-Guattari, 1980).

The quality of the ‘living’ and its environment becomes an original issue to which we return, with particular attention to restoring pedagogical and political value to space and to what becomes a ‘stage’ because the issues of form and its transformative process concern and nourish the very process of living, which can become operative if tending towards the *Vita Activa* (Arendt, 1956) and therefore driven by the human condition, which unites thought and action as if to map out depth and its meaning, of which the work is a sign (a manifest and tangible sign that escapes the logic of evidence and is linked to that of experience, of the perceptive construct created by the subject regarding the object and vice versa).

Crossing and acting space according to a pathway of relations calls into play the body and its ability to sense and seeks to reconfigure body and space in line with a curving geometry that follows trajectories of the multiverse and maps not only the surface but also multiple stratiform depths. From the start, producing a map means intervening and designing a space in the Husserlian sense *as a world of life*. It means giving form to the experience of form so it becomes an environment for life and possible relationships. To bring a plan related to space into being, the body must be activated as a topological and porous device; therefore mimetic, kinetic and tactile, capable of ‘making body’ and of accessing, detecting, and mapping the world and its multi-form becoming. Phenomenology guides us in an investigation of the topological nature of space that mobilises touch (1964) as a possibility/necessity for travelling through it, knowing that “these experiences never match exactly, [...], if there is always a ‘moving’, a ‘gap’ between them, [...] because [...] I experience, as often as I wish, transition and metamorphosis from one experience to another” (p. 163). Beyond the geometry of Descartes and Euclid, the design of Formantspaces embodies and manifests itself as a curving gesture, as a variation that seeks to correspond with an experience of space as a world of life: an experience different from the conforming codification of language and science. Design becomes the way of inhabiting space; it becomes its performative and perFormative quality and thus the possibility of combining it with life.

For this reason, with Husserl (1968-1983), we have ‘questioned’ teachers (from the Municipality of Naples educational services) and pupils (of two classes at the *Liceo ‘Giordano Bruno’* in Arzano and Grumo Nevano) on the infinite number of variations of perception and constitution/design of space. It is a matter of almost inscribing the body in space and interweaving the passivity of perception with the activity of construction. In this sense, the work of Enrica Spada, Cristina de Miranda, Vincenzo Pennella, Matteo Vinti and Noemi Saltamacchia systematically refers to the tactile paradigm: it is the breath required to put things in motion, to make emptying and emptiness itself the moment and the condition for a continually updated topology of forms – visual, tactile, and sound... because they are returned to the experience of the senses, to the body of space. It is a question of following other geometries according to a kinaesthetic spatiality that can bring breath, life, the word, and all other forms of discourse and thought back into movement, in which feeling can emerge, and everyone can measure up against space can emerge. As in Husserl’s lexicon and geometry (1968-1983), measuring and measuring up sound like *Dehnung* and therefore like extension and deformation. They are a sign

of a stimulus that breaks through linearity and explores the possibilities of being and knowing, of inhabiting the world, of an ‘operating’ and ‘performing’ that incorporates the discontinuous curving and rotating. Action is *live performance*; it is the presence between fullness and emptiness; it is listening (Nancy, 2002), trying to divert the abstraction of figures and axiomatic *a priori* to put the reciprocity of the encounter and the relationship into practice. Emptiness is a condition of encounter, an *auroral* moment, as Zambrano would say (1977), which opens and unites being and life. From emptiness and the dancing bio-mechanics of breath comes design following embodied methodology, tapping into Husserl’s investigation of space and seeking the conditions to establish a new order of things: for bodies and space together. There is therefore nothing creative or expressive to embodied practice. It is not a mere exercise in style or proof of virtuosity in design but pedagogical thought in action that moves, bends, and curves according to a three-dimensional and generative logic referring to the spaces and the institutions they embody, to the communities that guarantee their life and their vital transformation. This is why the work on space as a Formantspace becomes an explicit focus of research and requires us to explore and connect the maps we occasionally produce within educational institutions or other contexts. This is possible thanks to partnership networks that allow us to cover and reconfigure vast landscapes as sense-related and vital bodies to which we have given the name of *TheatrumOpera* and which we feel we must tackle in a generative sense rather than claiming Euclidean continuity.

“What is the relationship between geometric space, or rather geometric spaces,  
with the space of our experience,  
with the space of physics and metaphysical space, i.e. with real space?”  
(Bolyai, J., *La scienza assoluta dello spazio*, R. Pettoello (ed.), Edizioni Melquiades, Milan 2009, p. 59)

## **2. Together: tracing performing space**

The ‘embodied’ approach to education and training draws on the more general field of research investigating the languages of contemporary art as vital and moving instruments through which to operate and develop institutions, practices and contexts. Along this trajectory, we felt it was necessary to set up training courses bringing corporeality into play to generate new sensitivities in order to revitalise educational environments and all the dimensions of the human habitat in both the cultural and natural-environmental sense. This is all the more important because of current discussion in Italy around rethinking education at the 0-6 level in an attempt to return to an integrated and global vision of an education in which the emotional and affective, cognitive, and relational aspects are finally considered equally decisive for the ‘construction’ of the self. What is needed, therefore, is a new and innovative stance regarding the entire epistemological framework on which pedagogy and education currently rest.

Bringing back the slogans of the 1970s, released from their attachment to a structured and complex way of thinking, such as Montessori’s “the child at the centre!” and expanding the range of educational activities to include/add play and artistic activities to the school curriculum, is not enough to meet the challenges that contemporary education requires. The need to provoke and stimulate new sensitivity to the environment, political, social and relational space requires, first of all, a new reflection on ‘motricity’, understood as the movement of bodies in the space of the educational relationship and in relation to the space-time in which life takes place.

The proposal to approach the body’s capacities/possibilities as a starting point for a new awareness of one’s own movement and being, acting, feeling and communicating in the educational relationship, as well as in the performing relationship, is part of a new *embodied* epistemological philosophical-pedagogical perspective.

Starting from the body, in its tactile-kinetic and aesthetic dimension, before any other theoretical thematisation, means restoring vivency, giving *body* to one’s acting and being/exist-

ing. The action research of ‘embodied education’ has given shape to the two interventions and workshop-based processes consisting of plastic and vocal, kinaesthetic, and synaesthetic practices, intending to give the body of each person the ability to relate and build an adequate habitat. In particular, the courses have been an introduction to the dance dimension through the proposal of a series of *somatographic* rather than choreographic activities, Through the activation of kinetic-perceptual everyday time skills, normally distracted by the conscious attention in the economy of everyday time, we have intensified and ‘densified’ the gestures, nourishing them with new meanings. The embodied awareness of gestures and the acts of movement necessary to perform an action, induced by the execution of sequences generated by the deconstruction of simple everyday actions, produces a particular form of ‘empathy’, *Einfühlung*, etymologically understood as the internal sensation of one’s own body acting in space, recreating it. A *kinaesthetic empathy*<sup>6</sup>(Martin, 1933), which, developing from the self, from the sense-related knowledge of one’s own body, becomes an embodied skill, capable of extending and opening up to the other, assuming a communicative and relational value. The kinaesthetic empathy thus experienced and felt in the body in movement becomes a tool/skill that increases, expands and transforms the individual awareness of space and time, or rather of space-time, and makes us aware of how much our actions alter the environment in which we are immersed. The *soma-to-choreographic* activities proposed accompany individuals along a path of self-construction of the self as an *empathic body*, training them to feel/move their own organic-interaction system, *i.e.*, made up of sensitive/thinking parts that dance together (Bateson, 1977). Like a game of inside-out (Nancy, 2017), this dance, through the *touch* of the body, of which the skin is a porous and communicating limit, *moves us towards*, predisposing us for contact with the world. In fact, ‘touching’, following Nancy again, is ‘moving’, *touching* dancing, which determines the approaching, the contact, and the distance. The dancing body as a place of feeling and *touching*, because moving in the time-rhythm of the breath and the sound vibrations it produces (think of the Spanish *tocar*, which means precisely ‘to play an instrument’), modulating its being material and thinking in a plastic way, opening itself to a relationship with the world, it becomes agent and creator of new spatialities and new plastic-kinetic awareness.

The *dynamic arts* (Sini, 2003), as body-poetic practices, of which contemporary dance can be considered the emblem, constitute from this standpoint, the primary vehicle and the point from which to reconstitute and re-form the spaces of sociality. With the plastic languages of art, dance is the art of *mobile touch* that moulds the scene of living, creating, connecting, disintegrating, recomposing and transforming the space *between* bodies.

Its action is one of care *par excellence*.

Indeed, the supporting structure of the ethical-philosophical structure of Care, understood in a phenomenological-existential sense as *Sorge*, is precisely its embodied and somatic dimension (Hamington, 2004). Recognising this dimension is essential to rethinking the spaces of life in a generative and formative sense.

Thinking of ‘care’ as an embodied practice, means practising it in an ethical and aesthetic dimension (comprising elements of ‘caring habitus’, ‘caring knowledge’ and ‘caring imagination’, as Hamington explains), that pedagogically and anthropologically integrates and relates education with the dynamic and plastic performing arts.

Therefore, proposing dance as an art of *performative care* means actualising *care* in daily practice, understood in the existential and phenomenological sense, bringing it back to its original material and corporeal dimension.

In the words of Hamington (2012):

“Ultimately performativity provides a theoretical framework for thinking about how we utilise our touch to care and in turn participate in creating ourselves”.

Dance *moves* to the knowledge and construction of internal space (the self in the conscious and unconscious dimension) and external space (the self in relation to and openness towards the

us and the world), representing a possible way to increase empathic capacity as a real cognitive faculty, as Edith Stein defined it.

Sensorimotor activities, which allow us to develop kinaesthetic and empathic sensitivity and which structure us as thinking-bodies from early childhood, shaping our knowledge and expanding its scope in direct proportion to our capacity for the movement we are allowed to experience, continue their action in dancing movement, which can accompany us throughout our lives.

We are also convinced that these empathic-kinaesthetic faculties extend the *agentivity* of the body, allowing it to think and create new vital spaces, where *performance*, plastic sense of spatiality, education, and pedagogy are integrated into an aesthetic and ethical dimension, potentially generating new ways of cohabitation: new collective forms of ‘inoperative communities’, as Nancy (1983) puts it, which provide the bedrock for a new human, sensitive, creative, ethical and responsible action.

### 3. With Husserl, towards another (sensible) science (of space)

Opening up space to the artistic and performing dimension means working on the pedagogical and therefore transformative quality of the space itself and those who inhabit it. For this reason, the work of the embodied education team embodies Dewey’s (1934) need for art as experience, and therefore for an aesthetic theory that repositions human activity in a system of relations that values the “labour of our bodies and the work of our hands” (Arendt, 1958, p. 58). Working to give life and form to *TheatrumOpera* has the value of an activity that combines thinking and doing and touches the public sphere, manifesting itself in the form of continuous design. Embodied practice and methodology regain the performative necessity of the living and feed the continuous deconstruction of the order of things and language. Specifically referring to the municipal educational services and the high school with which we have recently worked, each participant of the two groups of teachers and the two class groups undertook their work through performative and embodied practices as ‘designers’ of the formative space, using their own devices and their own private space in live mode<sup>7</sup>. Beginning to experience private space as one open to shared work (via camera and microphone) and above all as an object of exploration and continuous and possible reconfiguration has provided the opportunity to deconstruct certain functional schemes and to operate according to non-Euclidean trajectories, even if it is challenging to undermine and graft them into a different geography. *Performance*, and its poetic dimension, gives body to action according to a spatiality that reclaims the point as an ‘original’ element to explore the variation of lines and planes as well as curves and spheres. And we return to the origins of phenomenology and, therefore, to Husserl to say that “This space is not, however, that of representation, nor even what has been extracted from intuition through idealisation but a certain three-dimensional spatial continuum. In this way, geometry itself is transformed into the science of nature, into the abstract science of real space” (Husserl, p. 136). And it is in the name of this science, and in the wake of the ancient *paideia* that drives it, that we invite a reinterpretation of what we have shared here about our research and its stimulus to take and give form (to space).

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