Francesca Magnini

Seigradi: dancing in a real-virtual environment.
Affects and movement in Santasangre's work[1]

> I am inclined to believe that because we are bodies and possess perceptive mechanisms we also have time
>
> William Forsythe[2]

We are used to conceive *performance* as a culturally and socially organized event, a close encounter between performers and audience, a both real and ideal place where artists and spectators can voluntarily share a specific time and space: the time and space of a desire, an inspiration, an idea of the world. Live *performances* have the basic characteristics of «practices as flux», which means practices that have characteristics of «*permeability* or rather non-rigidity of the boundaries»[3] between staging and reception. But what happens when human and technology meet on stage? What happens when the movements of human dancers and the actions executed by the technology work in a close and authentic correlation? *Performance* – we could say - becomes a stronger *act*, a more powerful way to display certain technical skills and aesthetic capacities but also theoretical, philosophical and conceptual messages to an audience. Assumed this, can the actions and effects created by technology be considered as *performance* on their own or is *performance* the result of an interaction between two kinds of "presences"? It is no coincidence that the expression "digital performance", widely used in both fields of Performance and Dance Studies, as noticed by Dixon, is still «problematic»:

> "Digital" has become a loose and generic term applied to any and all applications that incorporate a silicon chip; and the term "performance" has acquired wide-ranging applications and different nuances both within and outside the performance arts. Indeed, over the past forty years understanding of the word "perfor-

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[1] This essay is adapted from a speech held by the author at International Conference "*Dancing with Fire: technology, performance, objects and environments*", Arts Technology Research Lab, Trinity College, Dublin, 23 May 2012.

[2] Forsythe, William, *Suspense*, Zurich, JRP | Ringier Kunstverlag AG, 2008, p. 49.

[3] Deriu, Fabrizio, *Opere e flussi. Osservazioni sullo spettacolo come oggetto di studio*, Roma, Aracne, 2004, p. 113.

mance" have been so stretched and reconfigured that it has be-
come a paleonymic term: one that has retained its name but has
transformed its fundamental signification and terms of reference.[4]

How can we exhaust then the contemporary "digital dance"[5] scene through
the notion of *performance* so outlined? Zeynep Gündüz has addressed this
challenging issue suggesting to examine the relationship between human
dancers and technological devices through the term *interperformance*, where the
inter-relation between two agents is immediately evident, embedded in the
word itself:

> Interperformance, is not a homogenizing term; it respects on-
> tological differences between human and non-human perfor-
> mance. On the one hand, interperformance schematically reduces
> differences between human and technology by resort to the analy-
> sis of technical skills and capacities, but it should be underlined
> that human and technological performance are not the same. In-
> deed, no physical dancer can project light, turn into particles, or
> create digital colorful patterns by means of their physical capaci-
> ties. No technological system possesses the physical texture and
> qualities of a breathing and sweating human body. In other re-
> spects, the staging of these different qualities offered by human
> and technological performance and the assembly of various per-
> formance qualities within staged digital dance can be perceived as
> an enrichment for this art form resulting from the leveled incor-
> poration of non-human performances in dance. In this sense, the
> drawing of parallels between human and technological perfor-
> mance through the framework of interperformance is beneficial
> because it problematizes the human-centered understanding of
> the performer concept, and acknowledges the presence of non-
> human performers in dance.[6]

Understanding dance and staging out of the historically established
conventions, our perception of dance changes, allowing us to «deconstruct the

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[4] Dixon, Steve, *Preface to Digital Performance. A history of new media in theater, dance, performance art, and installation*, Cambridge-London, Massachusetts Institute of Technology (MIT Press), 2007, p. X.
[5] Sarah Rubidge argues that «many forms of digital dance have emerged over the last ten years as individual dance artists pursue their own artistic concerns. Some focus on the creation of live performances which incorporate the use of digital media, which are designed to be viewed on a stage. [...] Some create live performances permeated by electronically generated images and sound which take place in non-conventional environments» (Rubidge, Sarah, *Dance Criticism in the Light of Digital Dance*, Keynote paper at Seminar on Dance Criticism and Interdsici-plinary Practice, Taipei National University of the Arts, 2004, p. 3, pdf on-line www.sensedigi-tal.co.uk/writing/CritIntDiscTaiw.pdf). "Digital dance", we could say, is a non-univocal term used by theorists and practitioners to designate various forms of dance practices that involve many types of digital media and technologies with regard to the creation and presentation of peculiar aesthetics, qualities and contents expressed by different artistic projects.
[6] Gündüz, Zeynep, *Digital Dance: (dis)Entangling Human and Technology*, Ph.D Thesis, University of Amsterdam, 2012, pp. 166-167.

hierarchy of perceptual importance between human and technology» and to «destabilize the human-centered perspective in dance, opening this art form to the domain of the *posthuman*»[7]. A new paradigm for a new way of reflecting on dance and choreography through a theoretical and critical approach which does not ignore the structural understanding of the complex object that wants to judge, not to underestimate it, nor to deform it.

Santasangre is an artistic research project, which commenced in Rome (Italy) in late 2001 on the initiative of Diana Arbib, Luca Brinchi, Maria Carmela Milano and Pasquale Tricoci. In 2004 the group was joined by Dario Salvagnini and Roberta Zanardo. Bringing together artists from a wide range of backgrounds whose collective expression reflects their very different artistic abilities and personalities, the Santasangre project fuses body art, video language, installations and mechanical sound in such a way as to respond to the call of an almost "vacuum-like" silence. Having initially focused on the theatrical environment in order to draft their artistic communications plans, the members of the Santasangre project now embrace many branches of artistic language by placing segmentation, syncretism and contamination on a horizontal axis in such a way as to explore some vertical planes like video, music, body movement and other aesthetics. Their work tends to investigate the infinite declinations of "corporeal matter" resulting from interference with digital technologies. Here I will focus my attention on a performance entitled *Seigradi: concerto per voce e musiche sintetiche [Sixdegrees: concert for voice and synthetic music]*[8], a creation for Romaeuropa Festival 2008. According to the artists involved, «many theories predict a terrible environmental disaster in the near future and it is widely believed that the high level of CO2 gases emitted into the atmosphere will eventually lead to an increase in the greenhouse effect and the absorption of sunlight by the soil»[9]. The threat of global warming, a threat which requires an increase in temperature of just six degrees centigrade, and the consequent risk of flooding and desertification led the group to consider

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[7] *Ivi*, p. 157.

[8] *Santasangre Seigradi*, on-line, sito internet, 2009, www.youtube.com/watch?v=FTePcj60ONY&feature=related (u.v. 27/08/2014).

[9] The following quotes, until otherwise noted, refer to *SEIGRADI, concerto per voce e musiche sinfoniche*, on-line, sito internet, 2010, www.santasangre.net/Seigradi.html (u.v. 27/08/2014).

water to be «the absolute protagonist of the process which is disrupting our ecosystem». The result of this reflection was the creation of a path of water and a path without water: «a personal reflection on the extraordinary beauty and strength of this element through music, images, vocal techniques and body movement». A rediscovery of the «synthesis between body, voice, sounds and virtual environments» that naturally creates a system full of existential methaphors without a traditional plot, as Santasangre explained:

> We wanted to observe matter as in a microscope, take the in-finitesimal particles to light, to the public's sight and perception. The effect we wanted to reach was a rarefied environment, con-taining body and video image together. It is kind of a choreogra-phy-sound experiment, where light sources, holographic images, sampled sounds and natural elements let the stage become a very large "magical lantern".[10]

Seigradi – described by the same artists as «an emotional, but not sensationalist performance»[11] – is part of a trilogy of performances entitled *Studi per un teatro apocalittico [Studies for an apocalyptic theatre]* and is a unique experiment in which the art of technology and of the dancing body merge in real time. The reality of reference is an audible and visual self-productive environment, which proliferates and generates sound-vision-action from internal resources. From the dramaturgic point of view the piece is structurally divided into four movements or "stages of change" (c.f. Aristotle's "four causes") by the development of 3D videos and gestures, which interact with the sounds of concrete elements to generate the harmonic structure of speech. The first part simply corresponds to the creation of matter, of *Air*: no voice nor body is yet there. Afterwards, *Water* appears and then comes the body, inside an impalpable sphere (picture 01). In progression there is absence of voice, then a phoneme, then a word, then voice and singing. At the end, the destruction of *Earth* with *Fire* (picture 02), and again a process of rebuilding (picture 03): in other words, the Eternal Cycle. *Seigradi* uses a universal, emotional language of holographic images to fuse artificial elements - which are nevertheless extensions of the performer's movements - with the dancer's

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[10] Monteverdi, Annamaria, *Awesome Santasangre*, in «DIGICULT», n. 44, 2009, rivista online consultabile all'indirizzo www.digicult.it/digimag/issue-044/awesome-santasangre/ (u.v. 28/08/2014).

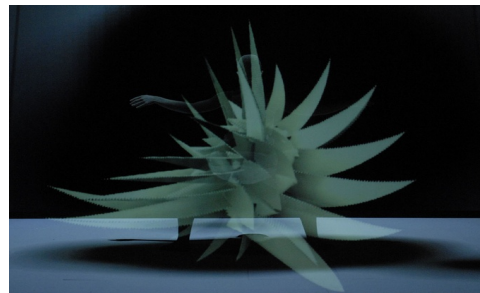[11] The following quotes, until otherwise noted, refer to *ibidem*.
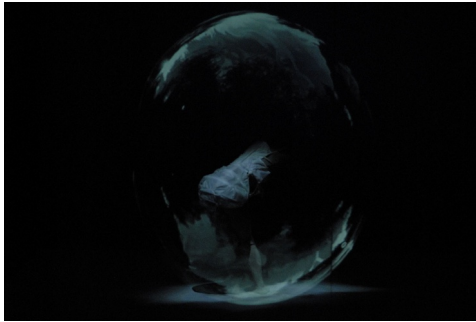
Picture 1

Picture 3

Picture 2

Picture 4

Picture 5

body (picture 04) until they eventually supplant the natural image (picture 05). This use of very basic technology, but with considerable effect on the eye of the viewer, creates a life-cycle of extreme simplicity: sound, body and images melt in a climax of irreversible destruction. A similar path has already been explored in *84.06*, a performance in which sound automatisms and oral indications invited the body of the performer to dance together with holographic reflections and video images, and *Spettacolo sintetico per la stabilità sociale*, where real and proper representations of the social system were generated by visual manipulations and the voice was only manifested in recorded form. *Seigradi* veers towards total abstraction by abandoning words on stage, although – I would say – there is never any room for silence, the acoustic space being filled by the human emission of phonemes and guttural noises. In

all the work of the Santasangre project, the purpose of the live element is to «exist and resist», to attest the need for human choice: music and video are always managed in real time by skillful human directors, a factor which inevitably contributes a strong sense of precariousness to each and every performance. Obviously, the spectator is not expected to understand the work of live-manipulation behind every performance but rather to focus on the fine line between real and virtual, the element which endows the performer with a highly meaningful liminality. It seems particularly interesting then, to question the significance of the "dance" element in this work, that is to say – along with Sophia Lycouris – try to understand «when and how the use of new technologies informs traditional techniques for the development of movement material and structures, and ultimately transforms traditional approaches to choreography»[12]. All the work of the Santasangre collective, in fact, sees the audience and the theatre as a physical, emotional and intellectual meeting place in which video is not only incidental and the use of technology is the result of a cognitive and visceral logic. Indeed, all the members – dancer, video and sound artists – use the language of a generation that lives and works naturally with contemporary media: an expressive way of communication in which text and image have the same potential and the manipulation of video, images and light are used to suggest critical-political thought, an unavoidable element of each and every performance. Although it is not easy to codify the wide range of strategies used by the members of the Santasangre project into a "method" – as each and every work exploits a variety of approaches – the essence of the collective is undoubtedly its unique ability to find a new logical criterion in each of its projects.

What I want to highlight here are some topics related to the challenging position of the contemporary dancing body into the digital environment. In the contemporary "project", in fact, there is the discovery of a body that hides a gesture's strategy of symbolization unique for each artist, different from any other pre-formed techniques, since the gesture itself reflects strongly and unequivocally thoughts, intentions, ideas and feelings of those who create it.

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[12] Lycouris, Sophia, *Choreographic environments. New technologies and movement-related artistic work*, in Butterworth, Jo, Wildschut, Liesbeth (ed. by), *Contemporary Choreography*, London, Routledge, 2009, pp. 346-361: p. 346.

Dancers, in the complex process of assimilation of dance, use a special type of muscular memory, which precedes the thought intentionally designed to store information and which is virtually invisible to the eyes of those who can see the "product" at the end, therefore difficult to be "captured" in its deep and intimate properties. Reflecting on how to capture the different qualities of dance gesture and investigating into the nature of them can help us to understand how to relate these qualities with observable and "tangible" parameters[13]. Starting from the notions of *tactile-kinesthetic body* (M. Sheets-Johnstone) and *kinetic melody* (A. R. Luria), from which emerges the idea of an intimate relationship between affects and movement, and between what is kinetic and emotional, I will particularly focus my attention on the concept of *temporality of movement*, that goes very beyond the simple idea of space. An analysis of the moving body made from the point of view of visual points of reference generated from it – so basically the position pictured in space – is still quite frequented, but may be insufficient today since these "points" do not tell us the dynamics of movement and the performance itself, not even its affectivity: they describe a fundamentally static space interrupted by changes in body position. However, emotions and feelings are generated by an abstract process that occurs over time and includes a thinking process as well, never static by nature and today frequently extended because of digital technologies involved during the elaboration of a dance performance so basically unable to generate "blocked" forms or static poses. I intend, therefore, to support the hypothesis that the global phenomenon of movement is essentially characterized by elements inscribed in muscle tone, yet visible and analyzable, which are related to the repertoire of techniques that the dancers embody through repetition of daily exercises but that can also transfigure in something else thanks to the use of other elements like video and sound, deeply increasing their communicative potential. The notion of *kinesthesia (*or *kinaesthesia)*, in this sense, has shown new research perspectives on the idea of incorporation of subjectivity and has been a significant turning key for the study of movement in space and time by resizing the concepts of image and

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[13] Concerning this issue see in particular deLahunta, Scott (ed. by), *Capturing Intention, Documentation, analysis and notation based on the work of Emio Greco | PC*, Amsterdam, Amsterdam School of the Arts, 2007.

body language or representation of it, in favour of a discourse on the process and the dynamic connections between action and reflection, material and virtual, considering that:

> Movement has its own cognitive potential which allows "understanding" in the sense of individual approaches which stimulate both sensual awareness and intellectual reflection and interpretation. These processes do not make the phenomenon any easier to describe in writing; they integrate information of a non-representative character and, at least initially, defy any fixed definition.[14]

The starting point for the whole trilogy *Studi per un teatro apocalittico*, since the first experiments in 2005 – as the group explained – was a recovery of the word "Apocalypse" in its symbolic and contenent possibilities, from a laic point of view, so basically without any religious echoes. Apocalypse intended as «revelation, disclosure» and as «a metamorphosis process from an order to another», including «a destructive aspect (of death) and a constructive aspect (of birth, going to a new order)»[15]. Santasangre's main focus is on the meaning of a contemporary Apocalypse: a lens through which to read the world as «a productive laboratory» and theatre as «revealer of a next future (intended as an arrival point of a process)»[16] in political, social and educational terms. A chance to reveal possibilities of choice for human beings in a constructive perspective: this means that technology can be used on stage as a thinking tool, useful in a constant search for a meaningful way of learning by using the body in the digital environment. *Seigradi*, the last part of the trilogy, can be read in this sense as a reflection on the word "transformation". Transformation and transition as structural properties of nature that always modify their forces in a never-ending process, producing a huge potential energy. Sensation and

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[14] Jeschke, Claudia, *Re-Constructions: Figures of Thought and Figure of Dance: Nijinsky's Faune. Experiences with Dancing Competence*, in Gehm, Sabine – Husemann, – Von Wilcke, Katharina (eds.), *Knowledge in Motion. Perspectives of Artistic and Scientific Research in Dance*, Bielefeld, Transcript Verlag, 2007, pp. 173-183, p. 178. Kinesthesia (in performance) – Clauda Jeschke explains – is a word that «refers both to the physical process of perceiving one's own movements and to 'empathy' for the perceived movements of others» (*ivi*, p. 180); it calls into question not only the process of learning and rehearsing, but also the process of watching because «the physicality of the memory reduces the gap between producers and recipients» (*ivi*, p. 181). Among the more recent studies taking over in particular the discourse on spectatorship related to dance, see Foster, Susan Leigh, *Choreographic Empathy. Kinesthesia in performance*, London, Taylor & Francis Ltd, 2010.
[15] Santasangre's Presentation Folder, Romaeuropa Festival, 2008, (not published), pp. 4-6.
[16] *Ibidem.*

suggestion on stage – Annamaria Monteverdi clearly explains – are carried by a technological mediation (the live-processed video, images in 3D graphics, projections with holographic effects) and by «body pulsing with light, absorbed in the natural elements like in Videodrome by Cronenberg»[17]:

> Bubbles containing images, binding themselves to the human in order to give life to shapes apparently real, tri-dimensional, but whose consistency is instead impalpable and abstract. We are in a possible-future universe where, due to the high temperature of the Earth, what is produced by sight is more and more an optical illusion, a mirage. The brilliant study on light allows Santasangre to dematerialize on the scene the dancer's body as if it was literally swallowed by the Earth, only to have her reappear as the product of a dream.
> The theatrical form is that of the evanescent, ghostly, unnerving and scary apparition of a body, between transforming lights and objects which have the same consistency as air, thanks to the projection of reflections. Materic evolution, chromatic evolution which corresponds also to aural evolution, through the four stages of Air-Water-Fire and Earth with their respective corresponding colors going from white and black, to blue, to white, to red (corresponding to Earth).[18]

In this delicate balance – according to Monteverdi – technology has become new "flesh" and it is this very potential, this inexhaustible possibility of "being" or "being something different" that orientates Santasangre's reflection on new poetic strategies for using technology in dance performances. When asked "how were the video and concept of the device developed?", the project members explain it is kind of handmade light/body/glass system of projections and reflections (cfr. technical file nr1 and nr2) which shapes the dramaturgical form of the piece, going beyond the traditional pure idea of scenography. When asked about another very important element, the "music", they say it represents a «dramaturgical cycle» of life too: «it sets the pace for the timing of the performer» as it is «a real score»[19]. Science, Nature and Art linked together in an explosion of languages that literally looks like an "experiment", as Santasangre call it: an empirical operation used to validate or refuse theoretical hypotesis or simply to observe them working naturally, even technologically, on a laboratory-stage where accelerations and reductions of
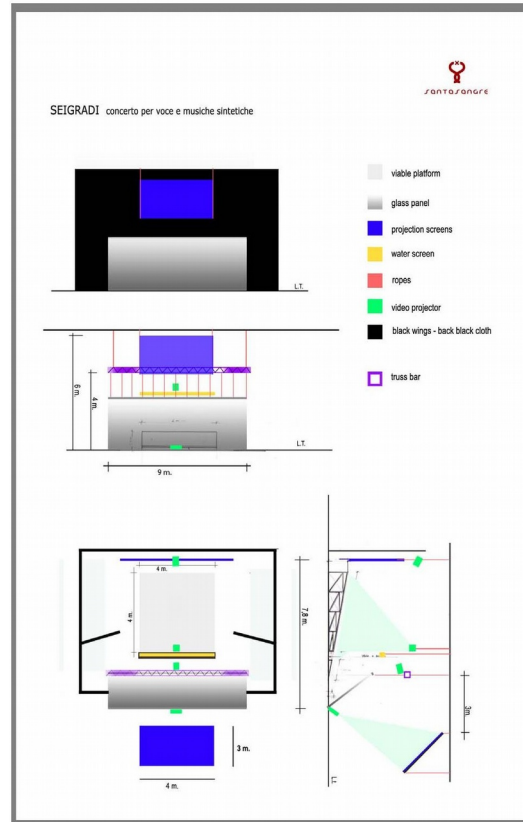
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[17] Monteverdi, Annamaria, *Awesome Santasangre*, cit.
[18] *Ibidem.*
[19] *Ibidem.*

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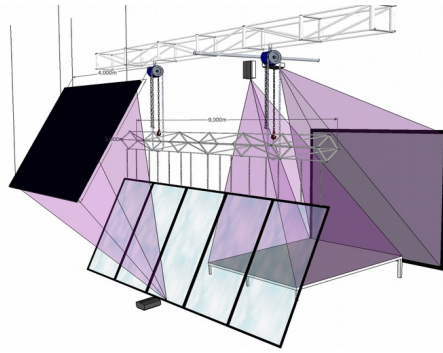
Technical file 1

Technical file 2

time recreate and equally subvert a strictly scientific approach. Roberta
Zanardo – the only performer we can in fact see in *Seigradi* – argues that if
throughout the eighties and nineties hybridization of languages on stage was
proposed as sign of failure, now is not: «the work of destruction of languages
and has already been completed in the past, someone has done it for us. It
would be stupid to do it again. But this work now allows us to start from a
zero point in building a vision. We can be aware of this heritage for present
and make it live»[20]. During the 50 minutes performance she herself becomes
light, sound and digital matter at the same time, in a crescendo of de-
materializations and births that brings the theatrical form to expand and
sublimate its boundaries. Today, she suggests, «we should rather think about
how much and how we bring on stage other three problematic issues related to
contamination of languages: integration, simultaneity and precariousness»[21].
These three words – as Roberta suggested – outline three fundamental,

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[20] Zedda, Maria Paola, *Simultaneità, integrazione, precarietà. Ibridazione come eredità*, in «Istantanee
Performing Fest blog», on-line, 26 April 2011,
www.istantaneedotorg.wordpress.com/2011/04/26/simultaneita-integrazione-precarieta-ibri-
dazione-come-eredita/ (u.v. 28/08/2014).
[21] Monteverdi, Annamaria, *Awesome Santasangre*, cit.

transversal and democratic concepts of contemporary performance; concepts that belong to our society as well and that here I want to question – trying also to take a step back in time – in order to discuss how they strongly affect the idea of choreography.

> Although we can find «a characteristic use of body parts with their symbolic associations»[22] also in modern dance technique, in contemporary practice, teaching methods are in a constant state of change, always considering that choreography – as Susan Leigh Foster suggested towards the end of the eighties – tends to build some messages for the audience just by emphasizing «the use of body parts in combination with specific movement qualities»[23]: not by chance she already referred to contemporary ballet of that period as something «crisp and precise»[24], meaning something effective despite its seemingly ever-changing nature. Even today, since there are lot of individual or hybrid strategies to create choreography, each of which is closely related to different poetics and personalities, any attempt to encode an appropriate structure valid for each and every dynamic approach seems doomed to fail.[25]

I strongly believe – in agreement with what Maxine Sheets-Johnstone states in a meticulous empirical-phenomenological analysis of the nature of human action – that there is an intimate relationship between emotion and movement, and between what is kinetic and emotional: this implies that the dynamic character of movement is able to generate *kinetic qualities* because emotions and feelings are generated by an abstract process that occurs over time and that includes thinking, never static in nature, therefore, unlikely to lead to a form of "frozen" or static poses in space:

> The spatial dimension of movement is thematic […]. But spatiality is only one dimension of movement; temporality, intensity, and the projectional character of movement are basic dimensions as well. The global phenomenon of movement is compounded of dynamically interrelated elements that together constitute the fundamental dynamic congruency of emotion and motion. Indeed, emotions are from this perspective *possible kinetic forms of the tactile-kinesthetic body*[26].

The notion of *kinesthesia*, introduced by Henry Charlton Bastian in the 1880 as is well known[27] – from the Greek *kinesis*, motion and *aisthesis*, sensation – is

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[22] Foster, Susan Leigh, *Reading Dancing: Bodies and Subjects in Contemporary American Dance*, Berkeley-Los Angeles-London, University of California Press, 1986, pp. 78-79.
[23] *Ivi*, p. 83.
[24] *Ibidem.*
[25] Concerning this issue see in particular Dihel, Ingo – Lampert, Friederike (ed. by), *Dance Techniques 2010. Tanzplan Germany*, Leipzig, Henschel Verlag, 2011.
[26] Sheets-Johnstone, Maxine, *Emotion and Movement. A beginning Empirical-Phenomenological Analysis of their Relationships*, in Id., *The Corporeal Turn. An Interdisciplinary Reader*, Exeter (UK) – Charlottesville (USA), Imprint Academic, 2009, pp. 195-218: p. 205.
[27] The Position-Movement sensation was originally described in 1557 by Julius Caesar Scaliger

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especially recognized as a certain body's ability to identify its position in space and to perceive its motion through joint movement or muscle tension, not far from the idea of *proprioception* when this means – of course not in a strictly clinical but mainly performative sense – that the body is able to «create an internal image or sense of itself where it does not exist», that is to say that dancers develop the ability «both to sense and to imagine their bodies with a high degree of exactitude»[28]. Erick Hawkins, American artist who since the Fifties has tirelessly investigated the fundamental laws of movement, has defined *kinesthesia* as that «indistinct complex of organic sensations that constitute the essence of our bodily feeling and of our corporeal condition»[29]. For our purposes we can perhaps better understand this statement trying to think about the fact that while classical dancers constantly study their movement in "visual" terms, meaning that they analyze their dance as it "appears" – thanks also to the constant use of mirror, useful to control if movements are executed in a "correct" way, where "correct" means in accordance with all the technical rules traditionally established for ballet technique – contemporary dancers "feel" the emotional and affective feelings of their muscles, their joints and are guided by them in the delicate act of building the *texture* of their personal movements: in this case «the ideal is not about creating *perfect visual lines* and *forms* in movement […], but rather about *how* a flow of movement is generated and continued from the *way* the dancer's specific body functions»[30].

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as a "sense of locomotion". Much later, in 1826, Charles Bell expounded the idea of a "muscle sense" and this is credited with being one of the first physiologic feedback mechanisms. Bell's idea was that commands were being carried from the brain to the muscles, and that reports on the muscle's condition would be sent in the reverse direction. Later, in 1880, Henry Charlton Bastian suggested "kinaesthesia" instead of "muscle sense" on the basis that some of the afferent information (back to the brain) was coming from other structures, including tendon, joints, skin, and muscle. In 1889, Alfred Goldscheider suggested a classification of kinaesthesia into three types: muscle, tendon, and articular sensitivity. (*Proprioception (History)*, New World Encyclopedia, online: www.newworldencyclopedia.org/entry/Proprioception (u.v. 28/08/2014).

[28] Caspersen, Dana, *Decreation. Fragmentation and continuity*, in Spier, Steven (ed. by), *William Forsythe and the Practice of Choreography*, London, Routledge, 2011, pp. 93-100: p. 96.

[29] Hawkins, Erik, *The Body is a Clear Place and Other Statements on dance*, Pennington, Princeton Book Company, 1992, p. 28.

[30] Legrand, Dorotée – Ravn, Susanne, *Perceiving subjectivity in bodily movement: The case of dancers*, in «Phenomenology and the Cognitive Science», n. 8, 2009, pp. 389-408: p. 398 (Emphasis added).

Behind these considerations resonates the idea of "corporeal schema", formulated Merleau-Ponty in *Phenomenology of Perception* and taken into account also by Michel Bernard[31], French philosopher passionately devoted to Theatre and Dance Studies. Through this definition, in fact, Merleau-Ponty has primarily intended to replace the idea of a dynamic and procedural "*spatiality of situation*", to that of a fixed and absolute "*spatiality of position*"[32]: this valuable insight has irrevocably marked the end of the traditional conception of the body as a mere biological object, namely as an «aggregate of organs juxtaposed in space»[33]. According to the French philosopher, in fact, the "corporeal schema" was instead:

> a less conventional way to indicate the human body, a first attempt to go beyond its medical imaging – objective and alienated – and replaced it with a topography of organs to reflect the network of concrete relation-ships – what the philosopher calls "meat" – between the subject and the world[34].

The greatest contribution by Merleau-Ponty – the Italian dance scholar Vito di Bernardi explains – was to «have transferred the concept of *body schema* from the specific field of medical studies, where it was used to better understand a number of serious perception diseases and disorders, to the much larger field of a general theory of knowledge»[35]. If we also consider what Michel Bernard has inferred from the above – in a post-phenomenological perspective that absorbs, digests and exceeds Merleau-Ponty – namely, that there is not just one corporeal identity, but «instead there are hybrid, variable, unstable and contingent experiences»[36] which determine many unique and unrepeatable corporealities that in turn «trace a kind of *sensory-motor and affective* pulse network»[37], we could reasonably say that today the experience of the dancing

[31] Cfr. Bernard, Michel, *Le corps* (Parigi, Seuil, 1995 [1975]). In 1989 Michel Bernard founded the Dance Department at Paris VIII, where for several years he held the chair of Theatre and Choreography Aesthetics. Bernard is also author of *De la création chorégraphique* (Paris, Centre National de la Danse, 2011) text in which the philosopher once again gives to Merleau-Ponty a key role in redefining the concept of "body" from an object of knowledge, observable under-standable only from outside, to an autonomous thinking subject (subjective corporeality).

[32] Merleau-Ponty, Maurice, *Fenomenologia della percezione*, Milano, Il Saggiatore, 1980 [1965], p. 153.

[33] *Ibidem.*

[34] Di Bernardi, Vito, *Cosa può la danza. Saggio sul corpo*, Roma, Bulzoni, 2012, p. 51.

[35] *Ivi*, p. 50.

[36] Bernard, Michel, *De la création chorégraphique*, Paris, Centre National de la Danse, 2001, p. 12.

[37] *Ibidem.*

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body, trained to develop motor skills with a high receptivity to the "feelings" and "internal states" of movement, has gradually induced new production strategies for choreography, putting in crisis the supremacy of "vision" in the aesthetics of dance. It should be always borne in mind that the quality of gesture in dance implies an affective gradation which is the basis of the communication process with the viewer and can be isolated and studied only through an analytical process that separates it from physical experience. However, this abstraction should never subtract conventional attention to the global phenomenon of movement, and for this reason it is always important to identify its source and nature to understand that the notions of time and dynamics are strongly related to the concept of quality; as Sheets-Johnstone recalls «form is the result of the qualities of movement and of the way in which they modulate and play out dynamically»[38]. The word "form" in this case does not indicate a static shape of the body, but is what let the movement become visible and in some way exposed. To take position on stage, in this sense, means searching for a "location *status*" choosing the most appropriate and effective options and moving from a state of indeterminacy to a more well-defined one. This is evident in *Seigradi* where Roberta is the only, never replaced, "real" body in movement on stage: she can shape her choreography according to her own personality and ideas, but of course, always in a close and necessary relationship with all the other members of the group that work in real time with lights, sound and 3D projections.

In this context, I suggest to consider what Sheets-Johnstone calls "motion" not only as the movement of the corporeal body into the environment, but as the whole "emotional" motion of video, holographic images and sound at the same time. This leads to the assumption that «kinesthetic relations set up between human and technological dancing agents can also send theory in the other direction»[39], the apparently less-humanist, less-bodily – and for many dance historians less-tolerated – direction of technics. Or rather, we might say that both considering how the *choreographic act* organizes specific energies of the dancing body in time and space, and reflecting on several effects that technology produces on the dancing body itself means in a very similar sense

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[38] Sheets-Johnstone, Maxine, *Emotion and Movement.* cit., p. 206.
[39] Gündüz, Zeynep, *Digital Dance: (dis)Entangling Human and Technology*, cit., p. 79.

to investigate the kinesthetic qualities of dance movement, an ever changing movement that can always influence the dramaturgical structure of the dance piece and the reactions of the spectators.

Contemporary dance, says Laurence Louppe, never produces fixed forms, but «creates acts»[40], so we can assume with her that the analysis and transmission of *acts* in "digital dance" performances is somehow different from the analysis and transmission of *signs*. The first process, in fact, concerns more a contamination of "states" in which movement is conceived as an ability to produce energy and tonalities of gesture, not shapes. Movement, in fact, manifests itself not only in its linear and spatial aspects, but especially in those temporal, which are «a complex of projectional and tensional qualities»[41]. To omit these qualities and the emotional discourse related to dance experience means in a sense, «to reduce the dynamics of emotion», that is to say «to de-temporalize what is by nature temporal or processual»[42]. Reflections of this kind lead also to assume that the word "embodiment", today frequently used in Performance and Dance Studies, may to some extent vanish its sense according to Sheets-Johnstone, because the idea of "in-corporation" itself evokes the possibility for actions and physical relationships to be in some way "disembodied"; it may then constitute a sort of tautology in frequent expressions like "embodied actions" or "embodied mind". As this suggests the need to return often, for a theoretical treatment on dance, to an empirical observation of the body that moves in specific situations – to determine its dynamics rather than its mechanical operations of incorporation – we should rather speak of qualitative parameters regarding dance's floating elements. The qualitative nature of movement, in many ways conditioned by technical training, always suggests that the choreographic structure and syntax are influenced by the dancing body, socially and culturally understood. This is an affirmation of identity, expressed through a certain inclination towards the world and through specific preferences that – Louppe argue – «clearly show themselves in the inner attitudes well before any movement is undertaken: in

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[40] Louppe, Laurence, *Danses Tracées*, Paris, Dis voir, 1994, p. 10.
[41] Sheets-Johnstone, Maxine, *Emotion and Movement*. cit., p. 207.
[42] *Ivi*, p. 212.

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an inner movement which carries all the marks of my being»[43].

   The *internal impulse to movement* which Bartnieff[44] spoke of during the eighties
– linked up with other elements such as *intention towards a goal*, *urgency of deciding*,
flow of movement, that is to say fluctuations between freedom and control –
clearly brings with it an incredible amount of information and dispositions;
also in the Labanian parameters of *space*, *flow*, *time* and *weight*[45], by now
canonical, we can still recognise a large amount of nuances and possible
combinations. In these two experiences, we can undoubtedly find the historical
roots that gradually have led us to understand that the movement has
properties which need to be "qualified" well before being described. Susan
Foster describes the *quality of movement* as «the texture or effort found in
movement as it is performed» and argues that this is «is most easily observable
in a comparison of two dancers' executions of the same choreography»[46]; of
course she refers to ballet where the narrative element has big part, but I would
like to recall this statement also to contemporary performance, where different
interpretations are indeed an important part of the responsibility of those who
create the dance and those who "absorb" it. This transfer of complex
movement ideas in fact produce high qualitative parameters of gesture that
reflect the inner life of choreographers and dancers, especially when these two
roles clearly overlap so that the performer makes choices in total autonomy, as
in the case of *Seigradi*. Consequently, Foster continues, reflecting upon the
choreographic style[47] of each and every performance can also help the viewer to
identify – or at least to try to identify – some kind of intent in the dance. But
how can we recognize the intentions of the artists and what this could be
useful for? And up to that point: is it really legitimate to use information about

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[43] Louppe, Laurence, *Poetics of Contemporary Dance*, London, Dance Books, 2010, p. 90 (or. ed.
Poétique de la danse contemporaine, Bruxelles, éditions Contredanse, 1997).

[44] Cfr. Bartenieff, Irmgard – Lewis, Dori, *Body movement: coping with the environment*, New York,
Gordon and Breach Science Publishers Inc., 1980.

[45] Cfr. Laban, Rudolf Von, *The Mastery of Movement on the stage*, London, Macdonald & Evans
Ltd, 1950 and Laban, Rudolf Von, *The Mastery of Movement*, 4th ed. revised by Lisa Ullmann,
London, Princeton Book Co Pub, 1988.

[46] Foster, Susan Leigh, *Reading Dancing: Bodies and Subjects in Contemporary American Dance*, cit., p.
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[47] Concerning this issue see also Whatley, Sarah, *Issues of style in dance analysis: choreographic style or
performance style?*, in Duerden, Rachel – Fisher, Nail, *Dancing off the page: integrating performance,
choreography, analysis and notation/documentation,* London, Dance Books, 2007, pp. 118-127.

who created the dance movement, such as biographical information, to understand and appreciate his work? It must be reminded here that quite often it is asked what the author meant when he/she composed a piece, as if knowing that could allow us to understand and appreciate better what we're looking at. But what is interesting for me in this context is to validate the hypothesis that to make a work of art in general – a performance that comes from a mix of dance and digital technologies as in the case of Santasangre – means just to do it and basically that the body and every kind of machine involved are never neutral in response to this because they reflect and embody specific human affections and poetics.

To take just a brief digression, I would like to remind that two are the most recurrent positions concerning the issue of intention: the *intentionalist* argument supports the idea that the artist always knows what he is doing and «is an authority on his own activities»[48]. In this way, making extensive use of explanations concerning the choreographer's creative processes that led to a specific result of interpretation, together with a careful analysis of his/her personal biography, may be useful to clarify the source of the work itself, avoiding the risk to perceive it in a "wrong" way, even if we do not know what artistic "category" it belongs to. The *anti-intentionalist* argument, on the other side – most developed in literature but also not new in the dance field – refuses the idea that the intention should always be explained by the artist, because otherwise many works «would not be open to criticism, understanding or appreciation», remarking i.e. that «if the artist creator is dead, or unknown, or uncommunicative, one would not be able to find out the intention»[49]. According to this interpretation, therefore, what is important is what is done, no matter if this differs from what the artist precisely intended to do. We should just judge what we can see on stage and not look into the ideas of the creator, nor at his/her intentions as an extrinsic antecedent of the "work itself". In both two just mentioned arguments, however, there is either a constant reference to *intention* – unless relevant or not to the adequacy of

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[48] McFee, Graham, *Intentions and Understanding*, in Id., *Understanding Dance*, London-New York, Routledge, 1992, pp. 226-241: p. 227.
[49] *Ivi*, p. 228.

interpretation – intended as a causal antecedent of the work of art, something that comes before it or even connected to it in a causal relationship. Graham McFee, on the other hand, goes in a third direction, by stating that intention and action are logically interrelated: there is no action without intention and, most important, there is no duality between these two notions, so «the action is more than just a sign of an intention»[50]. David Carr, he reminded, made this point applied to dance by arguing that «the purposes and intentions whereby the physical performance is invested with meaning are related not causally or productively to the movement, but *logically or internally*: the purposes are *inherent* in the movement rather than *antecedent* to it»[51]. The choreographic intention then, according to McFee, is what we see and what we see directly into the dance of course is not just movement, but a significant independent action. Following this last hypothesis, we should consider the intention as a factor that concerns the internal state and not the work of art itself, which means that the attribution of intentions is a matter of interpretation that cannot be disconnected from the context of particular actions, rooted in an "always becoming" (*in-progress*) situation: a pre-requisite to fully understand a dance piece, in fact, are of course the traditions and conventions related to that form of art, but in turn this has to be analyzed taking into account also all the technical and expressive resources adopted on stage.

Now that contemporary performance continually reaches peaks of extreme complexity, not so much in the juxtaposition of dance phrases or sequences, but in the whole production and organization of the choreographic strategies, seems of little use if not totally inconvenient, to identify – for a simple analysis of works or for other notational reasons – only the visible movement, that is to say the form, so the action of the body in space: it is preferable to take into account qualitative mechanisms related to time, and hence to the internal sensations which gradually turn into what I suggest to call *affective properties of movement*. Let me clarify this concept with a simple but clear example. In the technique known as *Minding Motion*, taught internationally by choreographer

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[50] *Ivi*, p. 230.
[51] Carr, David, *Thought and action in the art of dance*, in «British Journal of Aesthetics», vol. XXVII, n. 4, 1987, pp. 345-357: p. 352 (author emphasis).

Gill Clarke[52], she discusses the spatial aspects of movement as closely interrelated and time-dependent ones, in a peculiar way. The space – she claims – is conceived as "internal" (or experiential) on one side, and as "external" (or kinetic) on the other side: the relationship between the two, along with visual and perceptive, can create a real "volume" and thus avoiding the possibility for dancers to focus only on conventional "points" positioned on the surface of their body:

Whereas movement focused on line and shape is seen as activating external space, the movement flow created by the volumetric approach creates a different quality. This quality can be identified as "sensed"[53].

Roberta's experience on stage is significant in this sense when she explains that in order to synchronize her movement with the other digital elements every time she performs *Seigradi*, she usually takes as a reference, above all, a *temporal* input that is the sound, not a *visual* one like the invasive holographic images projected on her body, as one might argue. That is to say that the dancing body, working in close connection with other products of technologies is not anymore the only protagonist, but breaths and "navigate" with them, activating "inner volumes" and expanding its own boundaries as well as the boundaries of the overall performance. The body looks for scattered grips located in the environment around, that despite this arrangement in the outside space are not even foreign to the body itself. The human element in movement then becomes an extension of the sound, we might say, and the video becomes an extension of the dancing body as well.

With this idea in mind, let me return to the notion of *temporality of movement*, which inspired the Russian neuropsychologist Aleksandr Romanovich Luria for his research about movement diseases – through the inspiring idea of "*kinetic melody*" – recently taken into account in Maxine Sheets-Johnstone's

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[52] Gill Clarke was one of the founders of the Siobhan Davies Dance Company and works with various choreographers such as Rosemary Butcher or Rosemary Lee. From 2000 to 2006 she was head of the Performance Studies Institute of the Laban Center. Gill Clarke taught students, professional dancers and companies and was also active as an external consultant for many new projects, but also for longstanding international training and education projects, working mainly in Great Britain.
[53] Clarke, Gill – Cramer, Franz Anton – Müller, Gisela, *Concept and Ideology*, in Dihel, Ingo – Lampert, Friederike (ed. by), *Dance Techniques 2010. Tanzplan Germany*, Leipzig, Henschel Verlag, 2011, pp. 212-215: p. 213.

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phenomenological analysis. Luria argues that «the movement is always a process with a time course» which «requires a chain of interchangeable impulses»[54] organized to constantly regulate muscle tone and to perform at first simple movements, then more complex ones. Those which the Russian neuropsychologist called "*kinesthetic integrated structures*" are considered by Sheets-Johnstone structures that do not occur properly in the brain, but "in the flesh": *kinetic melodies* would be, in this sense, literally «inscribed in the body»[55] and capable of generating different dynamics moving through a technical, affective and systematic process of creation. The "chain of interchangeable impulses" that Luria speaks about, here could be considered as composed by bodily and technological affections linked together. Another fundamental concept introduced by Luria, Sheets-Johnstone explains, is the ability of a single impulse to activate automatically the so-called *kinesthetic melodies*: the dynamics of movement flow effortlessly because the human being is capable of feeling and remember this flow in a totally bodily manner. In other words «what is automatic is, in effect, kinesthetic memory»[56] itself, then the human - the dancer, but in this context I suggest also the video and sound makers - can regulate the dynamics of power, speed and direction, which are easily measurable, thus determining the quality of space, time, and energy of action. The "melodies" in this kinesthetic sense, although capable of automatic decisions, are not something static and unchanging, but always act in a regime of "vigilance" and awareness of body and mind.

The work in real time that all members of Santasangre project activate in *Seigradi* is meaningful in this context, because their use of this kind of automatization brings into play the problem of *skills* which usually in the dance context is connected to the practice of ballet virtuosity or sometimes refers to modern techniques codes, such as Cunningham or Graham. Here, on the contrary, the skill is undoubtedly the ability to find an ever changing – however well built in its delicate structure – synchronization. This suggest that the experience of dance, today more and more complex and dangerously 'con-

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[54] Luria, Aleksandr Romanovich, *The Working Brain*, Harmondsworth, Middlesex UK, Penguin Books, 1973, p. 176.
[55] Sheets-Johnstone, Maxine, *Kinesthetic Memory*, in Id. *The Corporeal Turn. An Interdisciplinary Reader*, Exeter (UK)-Charlottesville (USA), Imprint Academic, 2009, pp. 253-277: p. 255.
[56] *Ivi*, p. 260.

fused', is not something that can be reduced only to the identification of positions in space, but is a dynamic harmony immersed in time, which occurs in muscles but also in the choreographic use of technologies interfaced with the body in movement. If on one side the body memory is based not only on the sensations, but on the perception of the internal flow of movement and as such should be studied as «the memory is not a memory of positions», according to Sheets-Johnstone, «but of a whole body dynamic, which is based not on bodily sensations – localized, positional happenings – but on the perception of movement»[57]. The use of sound and video projection on stage must be also considered as a live intervention, choreographic as well, that brings to consider the entire performance (not only the dance element) as a «kinesthetically crystallized whole»[58].

Finally I would say that the deep individual investigation into the kinesthetic sense of movement concerns the work of many choreographers, performers and companies who, especially in these last years, are reflecting – with or without the assistance of digital technologies – on how the movement is produced, performed and perceived. A careful and independent reflection on the various forms of these processes, avoiding any kind of hierarchical classification, can help in my opinion both scholars in the dance/theater field, and even those related to the field of neurosciences to understand the creative processes and the sense of dance over time in its physiological changes rather than in its historical determinations "a-priori". Furthermore, rethinking human-technology relationships by adopting a *posthuman* perspective means in this very sense to subvert the ordinary hierarchies and to analyze performance practices in their ontological contemporary complexity, exceeding the traditional notions of embodiment and presence. This, in a problematic and – for many – 'apocalyptic' way, implies «the end of a certain conception of dance as an art form, which situates the human at the centre and non-humans at the periphery of attention»[59], with all the implications for dance history and theory that come from this perspective.

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[57] *Ivi*, p. 274.
[58] *Ivi*, p. 275.
[59] Gündüz, Zeynep, *Digital Dance: (dis)Entangling Human and Technology*, cit., p. 186.

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