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RESEARCH

Soi Moi: The Techno-Soma-Aesthetics of a Dance for the iPhone

Paula Varanda

Instituto de História da Arte – Universidade Nova de Lisboa, PT

paulavaranda.pt@gmail.com

In the course of intensive research a corpus of artworks that instantiate dance performance in cyberspace have been inspected in order to understand how expert-practitioners used new technologies for production as well as the new means of public dissemination that they enabled. This paper is dedicated to *Soi Moi*, which was made for the iPhone in 2009 by n+n corsino using motion capture, synthesized environments and multi-sensorial human-computer interaction. Bringing the perspective of an expert-spectator, I am committed to demonstrate the value of this research-practice to inform creative processes and scholarly debates, and to understand technological developments and aesthetic experiences. This enquiry pursued a constructivist analysis of components and attributes that revealed the 'remediation' of disciplinary traditions. But intersecting close examination of formal elements and user experience with theoretical contextualization generated a productive dialogue that reinforces why securing a place for this artwork in the history of new media art and performance is a relevant contribution to knowledge. Despite solid proof that performance experts have provided computer technology and the information society with pioneering discourse, their practices have a marginal position in the new media art sector and market. Retrieving research results is paramount. Just as ephemeral live dance and performance artworks have succumbed to time, the spectre of redundancy haunts *Soi Moi* because the state-of-the-art technology in use is already outdated.

Keywords: iPhone; Digital Art; Dance Performance; Technoaesthetics; Somaesthetics

When launching the iPhone Steve Jobs acclaimed touch as the new feature that would redefine our mobile phones: “We are all born with the ultimate pointing device – our fingers – and iPhone uses them to create the most revolutionary user interface since the mouse” (Jobs, 2007). Apple’s communication device, with unrivalled interactive and multimedia display, soon became popular as well as a platform for software customization that hosted third party Apps and enabled a “convergence of technologies, cultures, and marketing practices that were previously deemed incommensurable” (Snickars and Vonderau, 2012, p. 2).

For professionals and academics who initiated research with earlier analogue and digital media, the iPhone was a step-stone of an interdisciplinary genealogy where multiple branches intersected in state-of-the-art creative and critical initiatives. While categorizations such as new media art, information art, virtual art, digital art or internet art thrived within media and computer studies (namely with Manovich, 2001; Wilson, 2002; Grau, 2003; Paul, 2003; and Greene, 2004), the performance sector delved in debates about digital dance, screendance, virtual theatre, digital performance or hyperdance (as in Rubidge, 1999; Dodds, 2001; Giannachi, 2004; Dixon, 2007; and Bench, 2006).

Arts and computer technology have connected with different purposes and generated many results; these span from tools that assist creative production (digital photography or music), documentation (databases and archives), information (blogs and cultural guides) or exhibition (online galleries), to what Paul has specified as “digital-born art”, which consists mainly of software based work that “utilizes the digital medium’s inherent characteristics, such as its participatory and generative features” (Paul, 2016, p. 2). The iPhone changed the capturing, monitoring, interactive and connective technologies that were already in use, particularly because they became mobile and could now fit in a pocket (Leibowitz, 2013). These and other features attracted several artists to explore the device’s potential to create art and to engage audiences at a world-wide scale.

This paper regards the field of interactive “digital-born” artworks that were created as Apps and use the iPhone as a primary interface with the audience¹ – a

¹ Or smartphones in general, since other companies followed Apple’s steps and several of these Apps today are developed for IOS and Android operating systems.

framework that comprises different ways of using the device: for example, *Fracture*, by James Alliban, Applies a filter over images and the finger brushing on the screen 'paints' cubist style portraits (USA 2010); in *Moments in Place*, Kirk Woolford, employed Augmented Reality to stage virtual performances over site-specific street art during the Brighton Digital Festival (UK 2011); in *Episodic*, Jody Zellen refashions collage by stimulating the editing of short animations into episodes of a user-customized narrative (USA 2013); and *M.U.R.S.*, by La Fura Dels Baus, uses the iPhone to communicate with the audience, sending information and instructions and receiving votes that determine decisions during the show (Spain, 2014). The professionals that create App artworks have varied disciplinary backgrounds and affiliations: Blast Theory is a UK collective experienced in interactive media, participatory performance, theatre and cinema; they used telecommunication, locative media and game narratives (as *Can you See me now?* 2001, or the *Goody Bullet*, 2010) and created the App *Karen* (2015) for telepresence sessions with a life coach. Scott Snibbe is an American specialist in interactive art that studied film and animation; he developed Apps with the music of Bjork (*Bjork: Biophilia*, 2011) and Phillip Glass (*Rework*, 2012). LIA from Austria in an early software and net art creator, working with code and visuals that expanded later to large scale generative installations; she was curator of the website iPhoneArt, showing her App works together with many other artists.

French collective n+n corsino² are among these pioneers; they engaged in intensive practice-research about motion capture, 3D computer graphics and the multi-sensorial interface, leading to the première of *Soi Moi* as an App for the iPhone in 2009. The press acclaimed the piece as a masterpiece without precedents³ and, to my knowledge, remains unique in its kind.

² n+n corsino Website: www.nncorsino.com.

³ According to Rosita Boisseau *Soi Moi* is a courageous endeavour, anchored in a specialist process, that created a playful and superb work (Boisseau in *Le Monde*, 10-08-2009); Christinne Vernay highlighted the singularity they bring to the virtual world and the intimate dialogue within the user's own reality (Vernay in *Libération*, 26-12-2009), *Paris Art*, finds the work one of the most interesting Apps of the time (Vilodre in *Paris Art*, 7-12-2009). These reviews are accessible in appendix 2 of my thesis available online (see Varanda, 2015).

My interest in *Soi Moi* occurred in the context of a research project largely motivated by the speculation that studying the implications of cyberspace for digital dance promised a rewarding contribution to knowledge (Varanda, 2015). Particularly useful to encourage my endeavour was Auslander's claim that cyberspace can be "a distinctive venue for performance art" (2001, p. 124), suggesting that performance artists should explore this potential like peers in the digital arts sector were doing. However, I found little evidence of an engagement with dance practice in Auslander's writings and, therefore, aimed at finding and demonstrating why discipline-specificity can be important to understand the processes of artistic invention and audience experience.

In the position of an expert-spectator committed to objectify aesthetic judgement, I interviewed one of the choreographers and analysed exhaustively the pre-existing content⁴ as well as the interface and interactive design, in order to reveal the creative process, thematic concern and technological determinations of *Soi Moi*, and explain how the user-spectator is involved. This paper brings out the results of this research, and will underline the "techno-aesthetics" (Popper, 2007) and the "pragmatic somaesthetics" (Shusterman, 2000) with which this "expert-intuitive practice" (Melrose, 2012) contributes to the humanization of technology.

Supporting the work's epistemic and aesthetic values contributes to secure *Soi Moi's* due place in the history of contemporary dance and new media art, therefore increasing its public recognition and visibility as a legitimised subject in arts and humanities research. Dance Studies have always carried the task to preserve the knowledge about an ephemeral expression that relies on the body and movement as primary materials (Carter, 1998); the evanescent and corporeal nature of dance has also significantly affected its recognition and dissemination (Thomas, 1995). The born-digital artworks, although based on code computing and electronic display, are also vulnerable to fast disappearance as Grau points out:

⁴ i.e. finished and latent in the device before the user engages with the work and adds to that content.

Due to the fact that this art depends entirely on digital storage methods, which are in a constant state of change and development, it is severely at risk. Many artworks that are not even ten years old can no longer be shown, and it is no exaggeration to say that half a century of art of our time is threatened to be lost for the next generations (Grau, 2016, p. 31).

Choreographic Navigations in the iPhone venue

Nicole and Norbert Corsino (n+n corsino) stand out as a groundbreaking professional company that explores dance in computer graphic environments (Corin, 1999) and installations (Jaffré, 2007). They have worked extensively with screens, sound and digital technology, pursuing a techno-aesthetic enquiry:

We throw ourselves in spaces that are technological, yes, artistic yes, but are not yet referential, they are fairly unknown, so we are exploring, in the same way as if we were working for a stage production. We do research with our practice; we think of something and we say lets go there because there are not many references for this yet. (Norbert Corsino in interview, 2010).⁵

After a period of creating live performance in the 1980s and a phase dedicated to film projects in the 1990s, the Corsinos found major interest in installation layouts that allowed them to combine screendance with non-linear and proactive spectatorship in exhibition type venues.⁶ In this trajectory, motion capture and 3D graphics were appealing tools for the choreographers because they could place dance straight into architecture, decide the camera movement and change point of view at various stages of the process,⁷ navigate in surreal environments and play with scale and

⁵ All quotes of Norbert Corsino in this paper come from an interview I had with him in Marseille in June 2010. The full transcript is in appendix 2 of my PhD thesis (Varanda, 2015).

⁶ The installation layouts have enabled presenting dance-as-artwork in gallery and museum sites or site specific places and in a durational and public attendance reality that differs substantially from the theatre-cinema time-based exposure, which is normally condensed in session periods, with physically behaviour constrained by seating and immobile viewing and hearing.

⁷ In film the point of view option is only available at the recording phase and in the theatre depends on the seating position, regularly frontal and fixed.

representation. For Norbert Corsino dance is historically “an art without a specific place, hosted in venues from other artistic disciplines” such as opera and theatre; he perceives this ‘homelessness’ as a liberating force for creative experimentation with the digital-virtual and holds that artists should take advantage and explore new sites for dance.

Through their continued research, which transferred dancers to virtual space (as in the film *Captives 2nd Mouvement*, 2000), and to navigable real space (as in the installation *Seule Avec Loup*, 2006), they developed the term “choreographic navigation” to define pieces where ‘virtual’ dancers perform and audience members can move and impact the work’s output. With *Soi Moi* the Corsinos developed a new topology for dance performance: “a portable installation that transfers the work from public space to a space that is in your own hands” (Norbert in interview). The transactions between audience and artwork would now occur in the frame of personal and private life. Therefore it can be argued that *Soi Moi* ‘remediates’ the concept of venue: we use the iPhone as an interface that hosts the performance, thus purchasing the whole artwork from the Apple store for 8€ instead of buying a ticket.⁸

As we touch-open the App, we find the image of a woman calmly walking in a clear space, surrounded by 18 stone-shaped floating icons. This works as a menu area and 12 stones have drawings because they link to sections of the work (averaging 90 seconds each). When a section ends the App returns to the menu area. To apprehend the work’s structural complexity, I have mapped and catalogued the sections, linking each micro-dance to the menu floating stones. After identifying distinctive characteristics of the elements and interactive features in each section, I numbered the stones for the sake of organization, observation and account. They are nonetheless randomly displayed in the menu – we choose where to start, where to go and how to end (**Figure 1**: menu).

Two metaphors help to understand how operating models of physical conventional venues may be transferred. The linearity provided by unifying

⁸ Demonstration video at <http://www.youtube.com/watch?v=mI0Molb5CgE>, (Accessed 3rd January 2019).



Figure 1: Menu.

characteristics supports considering *Soi Moi* as theatrical performance, where we can enjoy the sections as episodes of a whole choreography. But we can also visualize visiting the stones as rooms of an exhibition, this being a model that accommodates well the discreteness and non-linearity of the work. In both cases, the iPhone is the venue and the menu is the portal to access the fragmented artwork.

Performer and Solo Performance

Soi Moi is a solo performance of a woman, who appears in all the sections. She is slim, with black short hair, wearing a grey vest and black shorts. The body representation is realistic; it appears very ‘normal’⁹ in terms of what Roland Barthes has called “reality effects” (1986) in symbolic modes, and resembles the original person.

For Norbert Corsino “choices of appearance are informed by the purpose, the theme, the idea”; because in *Soi Moi* they were not interested in narrative but in “kinetic poetry”, he explained, their approach was similar to that explored in previous projects: “the bodies in our work are dressed pretty much in studio and

⁹ Extraordinary, as opposed to normal, can take many forms in this context: the hand drawn figures of Biped, the hybrid robots of the series Transformers and the standard figures from Character Building software that range between humans, animals and monsters of all sorts.

casual slim dance costumes". The body representation, therefore, was not informed by decoration (a flying dress or long hair for example), that would imply extraordinary post-production, generate heavier files and delay the processing speed, hence affecting the system's responsive capability and choreographic performance. Dixon argues that the virtual bodies created by performance artists maintain coherence with their originals and this facilitates the way we relate to screens because "audiences cognitively and empathetically perceive the performing virtual *human* body" (2007, p. 215 author's emphasis). Indeed, this dance is not made by an awkward puppet but by what appears to me to be a convincingly skilful performer, who reinforces the sense of rightness in the work.

In 11 of the 12 stones of the App, the performer is a miniature in the small screen, dressed in the same way, with imperceptible facial expressions. Stone 11 is an exception because the body, in medium size shot, is semitransparent, covered with pixelated squares, wearing some sort of high-tech full body leotard. This appearance derives from the section's function: juxtaposing the dancer to the real background image, captured with the camera, which results in blending embodied choreography with reality. The movement is fast and the dancer walks into the frame, balances in *retir e*, steps around with triplets, arches back and extends a leg to the front, sliding away; she returns with a *pirouette*, and stretches out jumping to the back (**Figure 2**: stone 11).



Figure 2: Stone 11.

The person remains identified in the main by her specific body movement and costume. Brannigan remarks that in dance “expression, feeling, intensity and affect are not qualities that the face (as image) has an a priori claim over; these qualities are shared by the dancing body and its parts” (2009, p. 131). In *Soi Moi* identification is attuned with the tradition of concert dance; the sense of the personal derives from whole body specifics and movement rather than facial attributes. The performer mirrors the original dancers who are slim and fit, white, good looking and gracious; she is from a culture where being half-naked in public is normal and for her professional community exposing the body is standard practice. This representation, symbolizing elegance, free will and emancipation,¹⁰ also reflects class, race, and gender stereotypes from the European society being relevant triggers to interpretate the cultural values embedded in this production.

The choice for a solo performance work derives from a combination of technological issues, thematic focus and purpose; and Norbert Corsino explained that this was central for the kind of intimate relationship they wanted to establish with the single user. In my reading of the work, considering the extrinsic contextual frame of information society, the solo reflects the paradox of increasing individualism and solitude with the growing access to electronic communication media. Indeed, as Turkle remarked “in the half-light of virtual community, we may feel utterly alone” (2011, p. 12), and in the terms of Popper (2007), who advocates for the practical ways in which artists research with philosophical enquiries, the woman in *Soi Moi* invites the single user to what Appears to be an intimate exchange that eschews isolation and might be argued to humanize the experience of the materials of computerised devices (Varanda, 2013). A one-to-one relationship with a woman in a situation of shared intimacy with strangers is also encouraged in the App *Karen*, from Blast Theory. *Karen* is quite distinct from *Soi Moi* in other aspects, but in both cases, this same option, triggers the sense of loneliness (*Karen*) or aloneness (*Soi Moi*) and

¹⁰ In contrast with the feminine body repressed in Catholicism and Islamism, which is not far away in history or in geography.

ensures a leading role to the feminine performer in the audience affective relation to the work.

Choreography and Sound

In the interview, Norbert reported: “first we define the choreographic sequences, we go to a studio as one does for the theatre, and we capture it”. Unlike Cunningham or Igloo who have composed choreography with data imported with MoCap,¹¹ in the Corsinos’ method “the dance, the performer doing the choreography, stays as it was achieved in the original capturing moment”. For these choreographers, MoCap¹² is interesting because the dance signature can be kept intact: “we associate the movement to one body, the body appears by its kinetic presence, and each body has its own signature”. My reasoning is that the Corsinos test the possibilities of technological innovation with a traditional Approach that secures discipline-specific value to their enquiry.

The movement has stylistic affiliation with Western contemporary dance. The vocabularies, author-assimilated and transformed, articulate with pedestrian motion. I associate the predominance of stylised or pedestrian movement with specific characteristics and intentions of each section; and I perceive that the variations are connected to where the micro-dance takes place. In stone 10 for example, the performer walks, crouches and looks around, waiting for, or watching, the user’s contribution to the scene: inserting a picture of his or her own environment as background. In stone 6 the rotating torso leads the movement and extends swinging to the arms, head and legs, with large steps, *en dehors pliés* and sliding *écartés*. In a fall and recovery pattern, the dancer seems to adapt to the ground that moves when the user touches the screen, creating waves in the scenario and low pitch blowing sounds (**Figure 3**: stone 6).

¹¹ Cunningham transferred the Life Forms cut and paste composition method to real dancers and explored this as well with MoCap data, to compose the movement phrases of the virtual dancers in *Biped* (1999); Ruth Gibson combined different motion capture data sets into one virtual dancer in *SwanQuake:House* (2007).

¹² A MoCap system with LED cameras that track body markers, the character-building software and Maya 3D for the environment design.

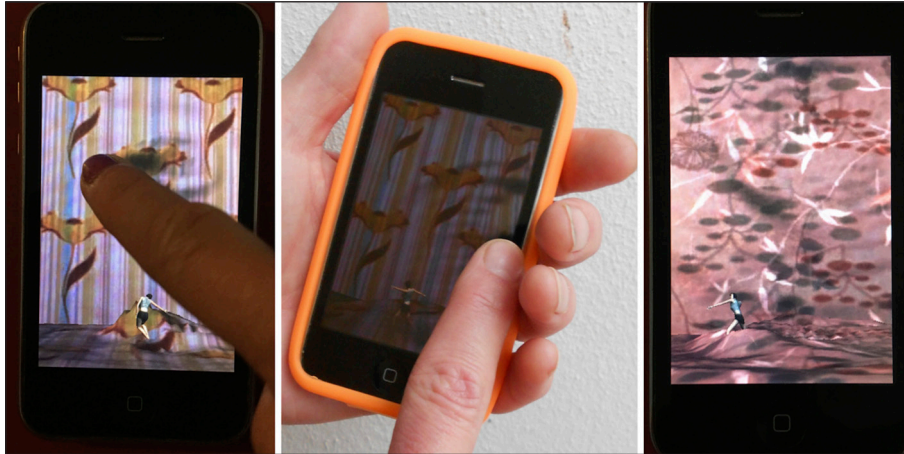


Figure 3: Stone 6.

Each micro-dance has its own movement sequence that defines the duration of the event. Short movement phrases were important to avoid delayed processing of heavy files, and therefore uncanny performance, but principles of condensed time introduced by screen-media are advisable to hold user attention and were also informative.

During the capture phase the choreographers searched for solutions to enable movement progression in depth and in height because the vertical frame significantly narrows the performance area. Thus, with a harness the choreographers developed a spiralling suspending dynamic that typifies stones 1, 2 and 3. Surrounded by two palm trees and elephants walking in the background (in stone 2) the dancer lingers around, pushing her feet against the floor and lifting occasionally, in a circular spatial progression. Hands shaking in stone 1 and *arabesque* stretches in stone 3 are added variations that connect with sound and visual setting characteristics. (**Figure 4:** stones 1, 2, and 3). The use of a second person lifting the captured performer enabled the plunging trait that is common to stones 8 and 9. In stone 8 the dancer falls from top to bottom across a pink canvas that vibrates with the user's vocalizing sounds. In micro-dance 9 when the user tilts the device the dancer shifts direction, drawing a spiralling trace in the screen (**Figure 5:** stones 8 and 9).



Figure 4: Stones 1, 2, and 3.

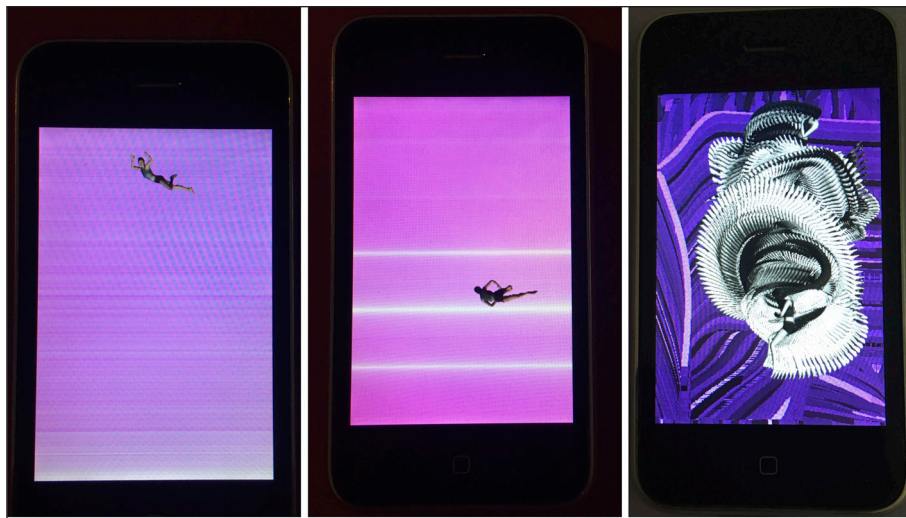


Figure 5: Stones 8 and 9.

Aural elements are present in all sequences of *Soi Moi* and, as in the choreography, the sound score is customized for each section. The compositions include samples of concrete sounds such as birds tweeting, paper or fire cracking, walking, crickets, or an airplane, and electronic and melodic sounds, with strings and piano timbres. The movement was recorded in silence and therefore it is not music-determined. However, the micro-audio scores appear to be, as Norbert remarked, “done for that

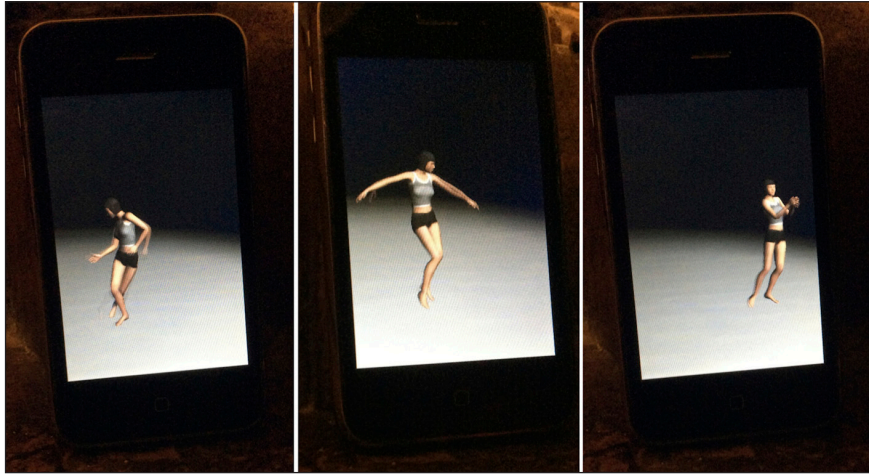


Figure 6: Stone 12.

particular choreography". Sound and movement match by association in a way I judge to be efficient.

The harsh sound strokes of stone 11, for example, remind me of the rattling noise of a phone accidentally connected inside a pocket or a bag. When juxtaposed with the real places, it may strengthen the urban feel of street noise or emphasize the dancer's agitation in contrast with quiet indoor locations.

In stone 12, the potential of association is tested, because we select the soundtrack from the I-tunes music library. The steps, jumps, twists, flickering pirouettes and brief suspensions appear to fit well any choice, from Vivaldi's concertos, Bob Marley singing or the electronic music of Aphex Twin. Different tunes will deliver different perceptions of the dance; either in terms of dynamics, because they accentuate different steps of the choreography, or in terms of meaning, because each music infers a particular mood and because the music may have a particular meaning for the spectator, external to the actual micro-event (**Figure 6:** stone 12).

Space and Place

The performance space is limited to the screen of the device (4.90" height × 2.33" width), defined in 10 micro-dances by the vertical frame, and by the horizontal frame in stones 5 and 7 (**Figure 7:** stone 5). These frame determinations are advanced spatial possibilities of the iPhone 'venue' and the two options are instantly available

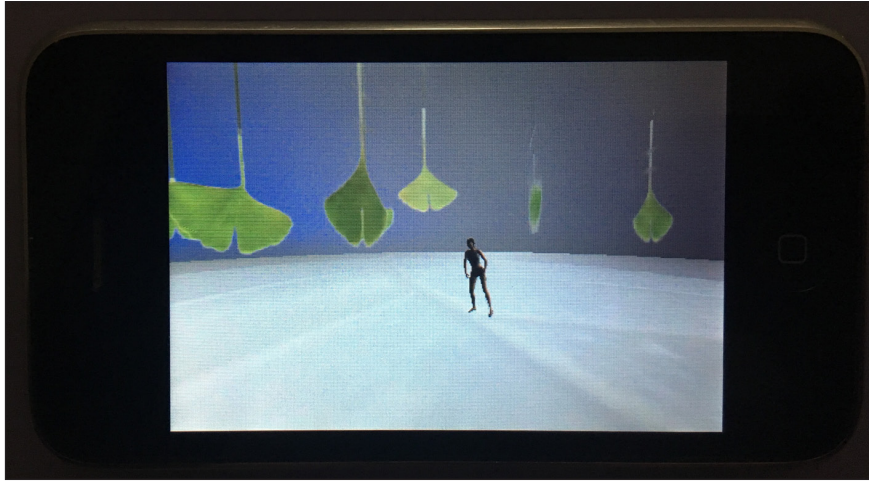


Figure 7: Stone 5.

because of the hand-held device and its tracking of direction: we simply hold the object horizontally or vertically.¹³

When signifying or abstract elements ascribe a specific location to the dance, the space becomes a place. Adshead-Lansdale associates the term space with movement extension and direction: “In moving *through* space the body creates a pattern both over the ground and/or at different times through the air” (1988, p. 23). For Dourish, *space* “concerns how people and artifacts are configured in a setting”, while *place* refers to how “social understandings convey an appropriate behavioural framing for an environment” (2001, pp. 89–90). In *Soi Moi* the dancer moves three dimensionally and ‘constructs’ space in that sense, but the hand-held phone has ‘behavioural framing’ and participants tend to engage on that basis. Furthermore surreal places involve domestic objects, nature-evocative sets host the dance, and abstract backdrops change with interactivity. The visual settings ascribe a site-specific quality to geometric space, naturalistic or surreal, and trigger particular meanings or sensations.

¹³ This is impossible to do in physical building venues and requires technical time to adjust a TV or screen projection. Vertical space progression is a revolutionary technological and aesthetic change for dance, theatre and cinema.

In stone 1 the nail-size dancer performs in a room with several telephones, bigger than her, and in stone 5 the miniature woman dances on top of a leaf; in these fictional and fantasy sets the dancer maintains behaviour coherent to real spatial and gravity parameters. Rather than disrupting the 'perceived realness' or "reality effects" of the place (Barthes, 1986), the human behaviour helps our suspension of disbelief with a credible physical action, despite the extraordinary movement of stylised choreography and dreamlike atmosphere. While space occupation in *Soi Moi* operates with conventions from real physical performance the Corsinos invent new, imaginative, unstable and dynamic places that open up to choreographic navigation and visual or aural modification.

In the work of LIA, for example, the Apps PHILIA 01 (2009) and SUM05 (2012) respond when the user moves the frame or touches the screen; these actions trigger visual effects against a dark background, of twisting, flourishing, dropping or exploding, that create, metaphorically, a virtual dance (beautiful and surprising). But this is an abstract and essentially spatial dance, that does not impact like the woman dancer in creating the sense of place, in which she then performs a choreographic writing of space.

In *Soi Moi* the only empty stage-like dark space and the only section where we cannot intervene visually is stone 12 (the music library dance). In stones 1, 2, 3 and 7 we can sprinkle snowflakes or bubbles in the landscapes; in details 4 and 5 we can navigate in the 'virtual' places: a forest with staircases or a stage of ginkgo tree leaves. In sections 10 and 11, camera capture provides the background to the scene.

In my exploration of section 11, I stared at a window and played the choreography against the street. That juxtaposition of the hectic performer with people walking, cars passing by and trees rustling worked very well. I have also run the sequence in the Underground station, appreciating how it mingled with the architecture and the city routines, the people moving or standing, talking or texting on their mobiles and all sorts of concrete sounds, randomly mixing, while the train, the dancer and the passengers crossed in and out of the frame.

Interactivity, participation and control

To stimulate Human Computer Interaction (HCI), *Soi Moi* integrates several possibilities and different sources: some are of a sensitive order and others involve file use or real-time reality input. As described above, in some cases we touch and the framing angle moves; in others we blow and bubbles appear (**Figure 8**: stone 7); in the menu the icons zoom up and into the scene when loading a section; there's always a fade out in the end. The cause – as the external sound in the pink void fall (stone 8) – always has the same effect: flickering white lines across the screen; but depending on voice inflection, pace, pitch and the kind of sound, the lines will display differently. The iPhone is remarkably versatile, and the artists explored well its capacity to 'see', 'hear', 'feel' and 'fetch'. Their efficiency reveals careful planning to articulate technology and aesthetics. The artwork operates with the logic of hypermediacy (Bolter and Gromala, 2003), because specific physical actions are required to initiate the piece and interact with the dancer; the user has to "look *at* the interface or object of design rather than *through* it" (idem p. 56, authors' emphasis). Manovich calls this trend in technology "aesthetization of information tools" (2012, p. 278), that responds to the growing integration of computers in our personal and leisure life; therefore designers, he says, are treating interaction "as an event rather than a nonevent as in the previous invisible interface paradigm" (idem, p. 280).



Figure 8: Stone 7.

Dixon (2007) distinguishes interactivity models according to the role allowed to the user: *Soi Moi* combines navigation – the spectator chooses a path through the content and pace of the ‘event’ (stones 1 to 7) – with participation – the user’s own data is integrated in the work (stones 8 to 12). In some of the sections participation can be said to turn into the collaboration model because the user’s information is a primary material, which merges with the pre-existing primary materials of the artwork. For Popper, these situations invite the user to be a contributing author and “reciprocal aesthetics” is underway. Rubidge considers this visitor of an installation as co-author of the *work-event* (2002), which in my view is an adequate description of the users’ role in this case.

Soi Moi engages the user in a reciprocal aesthetic transaction with simple tasks that are effective: I only need to select a tune in stone 12, but this is determinant to create familiarity with the work and engage in kinaesthetic experience. When stone 10 loads up, the symbol of a camera appears and I must press the shooting button to capture my real surroundings; my picture becomes the background (or the place) of the dancing space and, again, it influences my perception of the movement and my affective relation with the scene (**Figure 9**: stone 10).

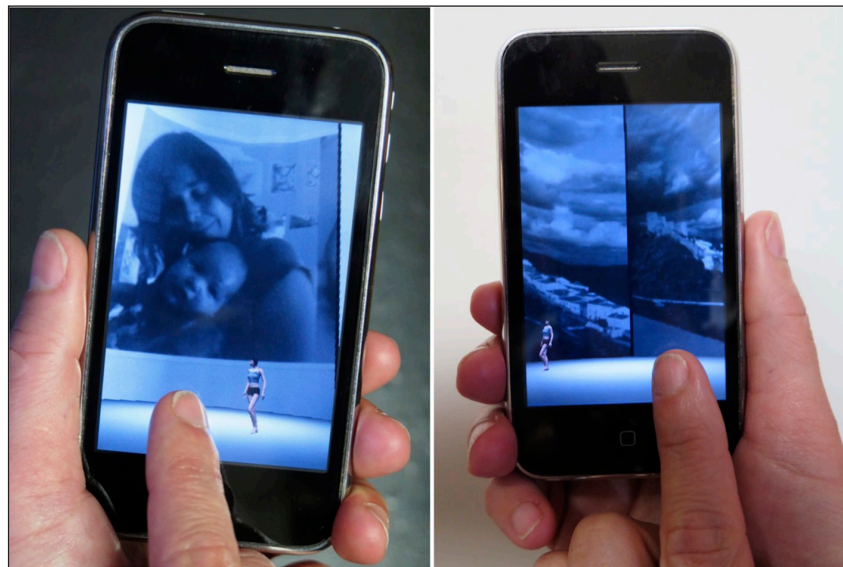


Figure 9: Stone 10.

Because neither the original authors nor the performer are co-present or connected in real-time, this is a closed HCI model (Popat, 2006), where the audience has a central role in bringing the content and the device into play. As I have argued elsewhere (Varanda, 2016), in Bolter and Grusin's terms (1999) and according to Auslander's view below, this is a case where "remediation" of a performance attribute is in place:

The emerging definition of liveness may be built primarily around the audience's affective experience. To the extent that websites and other virtual entities respond to us in real time, they *feel* live to us, and this may be the kind of liveness we now value (Auslander, 2008a, p. 112).

Soi Moi is a highly structured signature-marked result of a whole series of expert practice (Melrose, 2009) that demonstrates discipline-specific constraints and inventions. The distinctive aesthetics of this iPhone artwork 'remediates' at several levels: radical transformations were required in the process of dance making and delivering, since the content is digital new media, the interface is a mobile computerized device and the work can be purchased and privately owned. However *Soi Moi* simultaneously transfers well constitutive elements to the art form and reinstates attributes that are traditionally perceived as belonging to performance.

The Corsinos depend on the actualizing role of the user but offer limited customizing possibilities: the choreography and the performer's agency never change in more than the user's perception of it. Norbert Corsino explains that restricting control is a conceptual choice that reflects an ethical position:

I don't consider necessary to change the dance. Poetry already relies on the environment's change. Once you start changing the dance, trying to make the dancer do something different, you start interfering with the body. This makes no sense for us. (Corsino in interview)

Directing audience participation towards the environment is an extrinsic value of the piece; in my view *Soi Moi* reflects concerns regarding how one should relate to one another and respect individual will. Just because this is a dance work, Norbert

emphasises, “it does not mean that he or she can interact by changing the performer’s body”; in mirroring the boundaries of social interaction *Soi Moi* limits control and protects the person from becoming a puppet (of the other, of the computer).¹⁴

Poetic embodiment and self-awareness

The interactive models and reciprocal aesthetics developed in *Soi Moi* reflect the artists’ declared intention to promote self-awareness.¹⁵ The intimacy of touch contributes to reflectivity and interactive design can stimulate the user to focus “attention to the self, and using this sense of self to connect to and exchange information or experiences with another” (Schiphorst and Nack, 2006, p. 21). Schiphorst upholds that body agency increases self-awareness; “the body matters” (2009a, p. 229) she says, and HCI models must take this into account, following what Dourish defined as “embodied interaction” (2001).

Stone 4 features suspended staircases in a surreal forest. The performer climbs calmly, in a continuum, progressing in the vertical frame space. My finger shifts perspective in any direction and I play with the choreographic effect of intersecting elements: diagonal lines crossover, the staircases and shadows change size, and I follow the character through the performance space that extends beyond the frame. Musical whispers, birds cheeping, violin strings and piano phrases surround the resolute woman looking ahead at where she is going: an undefined end. With this intriguing and uplifting micro-performance I experienced an immersive sense of infinite ascension (**Figure 10**: stone 4).

Disciplinary identity and the body-as-medium, as I argued before (Varanda, 2014), is relevant for the experience as Norbert pointed out: “if it is dance that we want to work with, it will be dance that we show, represented by a human body”. Thus the transaction value relies, among other things, on the kinaesthetic responses to dance, which Reason and Reynolds find to be “a key source of pleasure and motivation for

¹⁴ I realised that playing with the performer, as a puppet, is an idea that many people have about interactive dance although, as far as I know, there are very few artworks that enable such control.

¹⁵ The work’s name in English – Self As Me – is revealing, but we can read this in several statements the artists have made about their own work, available in the website and press material.

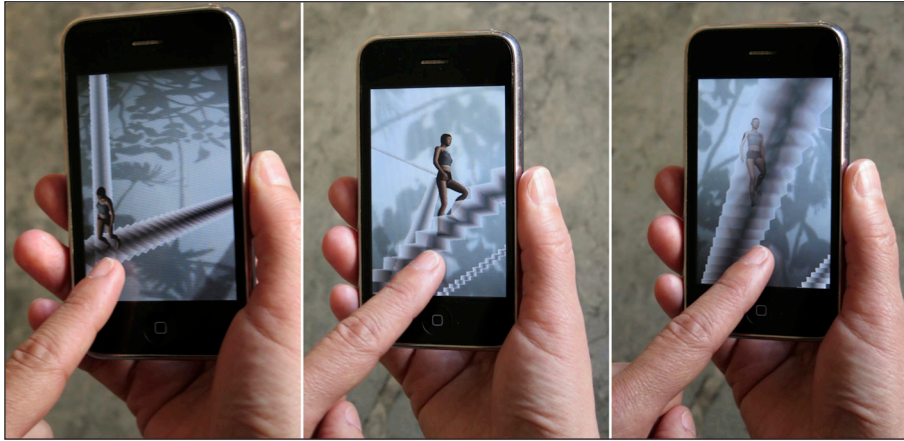


Figure 10: Stone 4.

many dance spectators" (2010, p. 71). The immersive quality of this dance depends on the association of movement with pleasure, which depends, in turn, on the way the elements refer to reality but play with suspension of disbelief. The one-to-one feedback between resident-performer and visitor-performer is also necessary to forge attention to the self. In Woolford's *Moments in Place* (Brighton, 2011), the augmented reality experience of watching dance in street places performed by a virtual humanoid stimulates kinaesthetic empathy with the 'event'; however, this is a case where self-awareness is not in the agenda because we remain in the position of a spectator who sees the outside world by staring at the screen.

Under the theoretical lens of Bolter and Gromala (2003), *Soi Moi* opens a "window" to immerse in the surreal; but in doing so it also presents a "mirror", because it moves from contemplation to tangible action. This analysis demonstrates that the artwork is immersive, user-reflective and able to facilitate self-awareness; somaesthetic experience and kinaesthetic empathy are substantive to the quality of the transaction, which increases the more we explore and understand the artwork.

On another encounter with the semitransparent dancer (stone 11), while spinning my desk chair continuously, I discovered an amusing 360° panoramic view. This camera movement compensated the static room and allowed personal references to feature in this event: a cloth from a journey to India, family pictures,

my red jacket on a chair, the bookshelves, my laptop, my post-its, and a favourite tune on the radio (**Figure 11**: stone 11).

By having a dance piece played in our hands, we are forced to Approach art differently than if we were going out to a public and collective event. As Auslander argued, with the example of home TV ([1998] 2008b), private proximity between subject and object is key to the sense of intimacy. However, to be this close, *Soi Moi* is a product that loses institutional frame and conventions of its discipline (which provide behavioural framing). The dance artwork now shares attention with the fierce competition of other functions of the iPhone, or other Apps, intersecting constantly with entertainment, work, and personal affairs or online services. What then keeps our focus on the work? This is a crucial subject for the digital-born artworks that take shape as Apps. Sommerer and Mignonneau address this problem as “the economy of attention”, remarking that “among the many components that contribute to the determination of the monetary value of an artwork, attention is certainly a key factor” (2017, p. 63). I would argue that in this case, attention is achieved through an *apriori* distinction (it is creative in terms of both dance and

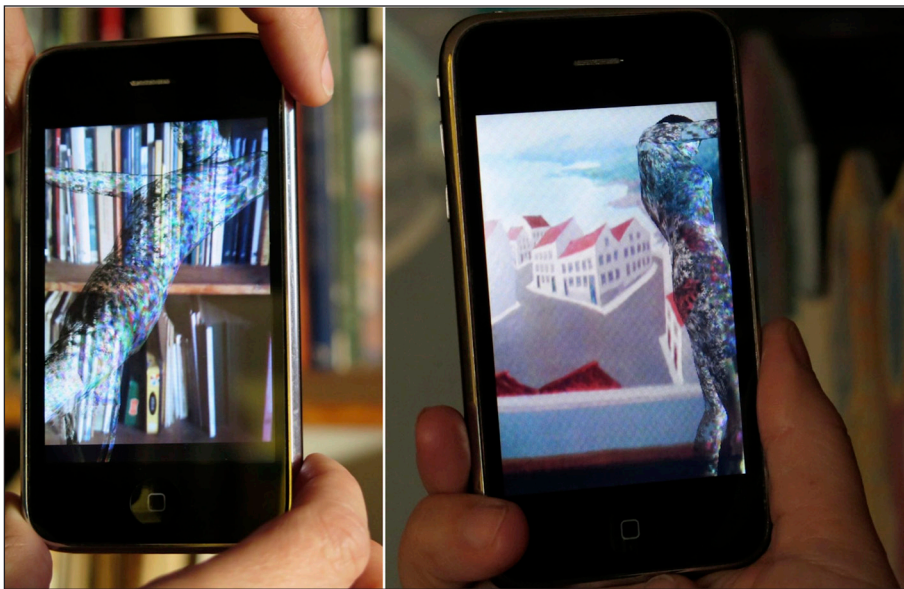


Figure 11: Stone 11.

virtual art), interactive exchange (reflexive and immersive), and the ability to expand the utility.

Popper endorses that virtual art practitioners transform the purpose of ubiquitous ICT that assist everyday life and entertainment; and the Corsinos illustrate this concept by transforming the handling of the iPhone into a poetic transaction. This is a pragmatic approach to somaesthetics that focuses on the quality of experience to increase body awareness; by doing this with a concrete artwork, the choreographers operate in the branch of “*practical* somaesthetics”, which Shusterman describes as “not a matter of producing texts about the body, not even those offering pragmatic programs of somatic care” but instead a dimension “not of saying but of doing” (2000, p. 143).

Schiphorst (2009b) asserts that the convergence of artistic aims and HCI with the enquiry of practical somaesthetics, inspires interface design to pursue goals such as providing multi-sensorial experience, developing the poetics of meaning-making and open interpretation, and connecting touch with care, for the own body, the self, and the other.

Soi Moi is an “epistemic object” (Knorr-Cetina, 2001) that counterweighs associations of the digital with the artificial and the critique of disembodiment in electronic networks. As Dixon remarks, “What possible use is disembodiment to a performer, or the very idea of a mind and body split?” (2007, p. 215). The Corsinos have reinstated the human body’s protagonist role to generate ephemeral encounters with the imaginary and the unspeakable; in their techno-aesthetic practice, body and mind are intensely connected and contaminate the codes and machines with human affectivity.

Redundancy and a gap in knowledge

My undertaking of supporting evaluation has hopefully demonstrated the effectiveness of an interdisciplinary dialogue. *Soi Moi* provides evidence to Kozel’s statement that dance practitioners can offer “radical new directions for materiality within virtuality, as well as the basis for a poetics of virtuality that centres on the dancing body” (Kozel, 2007, p. 103). And, on a larger perspective, this artwork

embodies an important agenda for Posthumanism: supporting approaches that reengage with the flesh in order to avoid the return of the illuminist body/mind split with cybernetic discourse (Hayles, 1999, p. 5).

Dance experts working with computer technology contribute to understand conundrums that trouble cyberculture and social media studies (Dixon, 2007; Kozel, 2010), and their research assists relevant distinctions to judge innovation in visual media arts and body-based arts. While the multisensory and systemic event artwork may seem to be avant-garde for visual artists, these qualities are elementary for performance artists; but reproduction and the remote or asynchronous public exchange, that is genealogical for mediated arts, is groundbreaking for unmediated dance. Bringing together different positions provides comprehensive insight of this artistic legacy.

However, performing and new media arts have shared a common ground that has only received meagre attention. To my understanding, this is critical for the visibility and validation of the performing arts sector theory and practice. Such marginal position has consequences on appraisal and sustainability and feeds a gap in knowledge that is perceptible in websites exhibiting (Lia, no date) or reviewing iPhone art (Brucker Cohen, 2009, 2010, 2012, and 2015; Brooks, 2014) and literature (such as Leibowitz, 2013; and Chierico, 2017).¹⁶ The divide prevails in favour of the practitioners and scholars affiliated with the visual and the sonic arts, which is the case of most research in media, new media and computer studies.

Redundancy looms over the creative endeavours that make use of commercial technologies (Wilson, 2002). In fact, the access-for-life promise advertised with the launch of *Soi Moi* has failed, because it no longer runs in 'modern' iPhones. In only a few years *Soi Moi* became something of the past, despite the outstanding qualities revealed in my findings. What we can access today are the different sources that recorded its 'living' existence: videos, photos, interviews, newspaper articles, promotional material and my research results.

¹⁶ This generally applies to the literature coming from new media, virtual art and HCI cited in this paper.

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Competing Interests

The author has no competing interests to declare.

Author Information

Paula Varanda was awarded a PhD by Middlesex University in January 2016, with a research about dance and new media. Her work has focused in performing arts and cultural projects in Portugal and Europe, and has been presented in conferences or published in books, newspapers and brochures. She was dance critic for Público newspaper (2004–2016); director of an Arts and Community regional project in Portugal (2008–2015); and director of the General Directorate for the Arts in the Ministry of Culture (2016–2018). Since 2019 she is associate researcher of the Institute of Art History at Universidade Nova (IHA/FSCH-UNL) in Lisbon.

References

- Adshead-Lansdale, J** 1988 *Dance Analysis: Theory and Practice*. London: Dance Books.
- Auslander, P** 2001 'Cyberspace as a performance art venue'. *Performance Research*, 6(2): 123–127.
- Auslander, P** 2008a 'Live and technologically mediated performance'. In: Davis, T C (ed.), *The Cambridge Companion to Performance Studies*, 107–119. Cambridge: Cambridge University Press (Cambridge companions to literature). DOI: <https://doi.org/10.1017/CCOL9780521874014.008>
- Auslander, P** 2008b *Liveness: Performance in a Mediatized Culture*. 2nd ed. London: Routledge. DOI: <https://doi.org/10.4324/9780203938133>
- Barthes, R** 1986 *The rustle of language*. Oxford: Basil Blackwell.
- Bench, H** 2006 'Hyperdance: dance onscreen, dance online. Or, what difference does the medium make?' In: *Screendance: The State of the Art Proceedings*.

Screendance Conference. Duke University, Durham, NC: ADF – American Dance Festival. Available at: www.dvpg.net/screendance2006.pdf (Accessed: 24 May 2010).

Bolter, J D and **Gromala, D** 2003 *Windows and Mirrors: Interaction Design, Digital Art, and the Myth of Transparency*. Cambridge, Mass: MIT (Leonardo).

Bolter, J D and **Grusin, R** 1999 *Remediation: Understanding New Media*. Cambridge, Mass; London: MIT Press.

Brannigan, E 2009 'Micro-choreographies: the close-up in dancefilm'. *International Journal of Performance Arts & Digital Media*, 5(2/3): 121–139. DOI: <https://doi.org/10.1386/padm.5.2-3.121/1>

Brooks, K 2014 '18 Apps Every Creative And Artist Type Should Download Right Now'. *Huffington Post*, 9 September. Available at: https://www.huffingtonpost.com/2014/09/09/art-apps_n_5762584.html (Accessed: 19 October 2018).

Brucker Cohen, J 2009 'Art In Your Pocket – iPhone and iPod Touch App Art'. *Rhizome*, 7 July. Available at: <http://rhizome.org/editorial/2009/jul/07/art-in-your-pocket/> (Accessed: 18 September 2018).

Brucker Cohen, J 2010 'Art in Your Pocket 2|Rhizome'. *Rhizome*, 26 May. Available at: <http://rhizome.org/editorial/2010/may/26/art-in-your-pocket-2/> (Accessed: 18 September 2018).

Brucker Cohen, J 2012 'Art In Your Pocket 3: Sensor Driven iPad and iPhone Art Apps'. *Rhizome*, 3 July. Available at: <http://rhizome.org/editorial/2012/jul/03/art-your-pocket-3-sensor-driven-ipad-and-iphone-ar/> (Accessed: 18 September 2018).

Brucker Cohen, J 2015 'Art in Your Pocket 4: Net Art and Abstraction for the Small Screen'. *Rhizome*, 20 August. Available at: <http://rhizome.org/editorial/2015/aug/20/art-your-pocket-4/> (Accessed: 9 February 2019).

Carter, A (ed.) 1998 *The Routledge Dance Studies Reader*. London: Routledge.

Chierico, A (ed.) 2017 *Investigations on the Cultural Economy of Media Art*. DigiCult Editions. Milano.

Corin, F (ed.) 1999 *Danse et nouvelles technologies*. Contredanse (Nouvelles de danse).

- Dixon, S** 2007 *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*. Cambridge, Mass: MIT (Leonardo).
- Dodds, S** 2001 *Dance on Screen: Genres and Media from Hollywood to Experimental Art*. Basingstoke: Palgrave.
- Dourish, P** 2001 *Where the action is: the foundations of embodied interaction*. Cambridge, Mass; London: MIT Press (A Bradford book).
- Giannachi, G** 2004 *Virtual Theatres: An Introduction*. London: Routledge. DOI: <https://doi.org/10.4324/9780203500033>
- Grau, O** 2003 *Virtual Art: From Illusion to Immersion*. Cambridge, Mass; London: MIT (Leonardo).
- Grau, O** 2016 'The Complex and Multifarious Expressions of Digital Art and Its Impact on Archives and Humanities'. In: Paul, C (ed.), *A Companion to Digital Art*, 23–45. John Wiley & Sons. DOI: <https://doi.org/10.1002/9781118475249.ch1>
- Greene, R** 2004 *Internet Art*. London: Thames & Hudson (World of art).
- Hayles, N K** 1999 *How we became posthuman: virtual bodies in cybernetics, literature, and informatics*. Chicago, Ill; London: University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226321394.001.0001>
- Jaffré, O** 2007 *Danse et nouvelles technologies*. L'Harmattan.
- Jobbs, S** 2007 'Press Release: Apple Reinvents the Phone with iPhone'. Apple. Available at: <https://www.apple.com/newsroom/2007/01/09Apple-Reinvents-the-Phone-with-iPhone/> (Accessed: 18 October 2018).
- Knorr-Cetina, K D** 2001 'Objectual practice'. In: Schatzki, T R, von Savigny, E and Knorr-Cetina, K D (eds.), *The practice turn in contemporary theory*, 175–188. London: Routledge.
- Kozel, S** 2007 *Closer: Performance, Technologies, Phenomenology*. Cambridge, Mass: MIT Press.
- Kozel, S** 2010 'Mobile social choreographies: Choreographic insight as a basis for artistic research into mobile technologies.' *International Journal of Performance Arts & Digital Media*, 6(2): 137–148. DOI: https://doi.org/10.1386/padm.6.2.137_1

- Leibowitz, D S** (ed.) 2013 *Mobile Digital Art: Using the iPad and iPhone as Creative Tools*. Taylor & Francis. DOI: <https://doi.org/10.4324/9780240825045>
- Lia** (no date) *iPhoneArt|Software Art for the iPhone*. Available at: <http://www.iphoneart.org/> (Accessed: 18 September 2018).
- Manovich, L** 2001 *The Language of New Media*. Cambridge, Mass: MIT Press (Leonardo).
- Manovich, L** 2012 'The Back of Our Devices Looks Better Than the Front of Anyone Else's'. In: Snickers, P and Vonderau, P (eds.), *Moving Data: The iPhone and the Future of Media*, 278–286. New York: Columbia University Press.
- Melrose, S** 2009 'Expert-intuitive processing and the logics of production'. In: Butterworth, J and Wildschut, L (eds.), *Contemporary Choreography: A Critical Reader*, 24–35. London; New York: Routledge.
- Melrose, S** 2012 'Expert-performance-practitioner-centred modes of knowledge and models of intelligibility: disciplinary specificity and the digital submission'. In: Andrews, R, et al. (eds.), *The Sage handbook of digital dissertations and theses*, 298–314. London: SAGE Publications. DOI: <https://doi.org/10.4135/9781446201039.n18>
- Paul, C** 2003 *Digital Art*. 1st edn. London: Thames & Hudson (World of art).
- Paul, C** (ed.) 2016 *A Companion to Digital Art*. John Wiley & Sons. DOI: <https://doi.org/10.1002/9781118475249>
- Popat, S** 2006 *Invisible Connections: Dance, Choreography and Internet Communities*. Abingdon: Routledge (Innovations in art and design).
- Popper, F** 2007 *From Technological to Virtual Art*. Cambridge, Mass: MIT Press (Leonardo).
- Reason, M** and **Reynolds, D** 2010 'Kinesthesia, Empathy, and Related Pleasures: An Inquiry into Audience Experiences of Watching Dance'. *Dance Research Journal*, 42(2): 49–75. DOI: <https://doi.org/10.1017/S0149767700001030>
- Rubidge, S** 1999 'Defining Digital Dance'. *Dance Theatre Journal*, 4(14): 41–45.
- Rubidge, S** 2002 'Identity in flux: a practice-based interrogation of the ontology of the open dance work'. In: *Dance and the Performative: A Choreological Perspective: Laban and Beyond*. London: Verve.

- Schiphorst, T** 2009a 'Body Matters: The Palpability of Invisible Computing'. *Leonardo*, 42(3): 225–230. DOI: <https://doi.org/10.1162/leon.2009.42.3.225>
- Schiphorst, T** 2009b 'Soft(n): toward a somaesthetics of touch'. In: *CHI '09 Extended Abstracts on Human Factors in Computing Systems*, 2427–2438. New York, NY, USA: ACM (CHI EA '09). DOI: <https://doi.org/10.1145/1520340.1520345>
- Schiphorst, T** and **Nack, F** 2006 'Affectionate computing: can we fall in love with a machine?' *MultiMedia, IEEE*, 13(1): 20–23. DOI: <https://doi.org/10.1109/MMUL.2006.2>
- Shusterman, R** 2000 *Performing live: aesthetic alternatives for the ends of art*. Ithaca, N.Y: Cornell University Press.
- Snickers, P** and **Vonderau, P** (eds.) 2012 *Moving Data: The iPhone and the Future of Media*. New York: Columbia University Press.
- Sommerer, C** and **Mignonneau, L** 2017 'The economy of attention transforming user attention into monetary value'. In: Chierico, A (ed.), *Investigations on the Cultural Economy of Media Art*, 60–69. Milano: DigiCult Editions.
- Thomas, H** 1995 *Dance, Modernity and Culture: Explorations in the Sociology of Dance*. London: Routledge. DOI: https://doi.org/10.4324/9780203359730_chapter_6
- Turkle, S** 2011 *Alone together: why we expect more from technology and less from each other*. New York: Basic Books.
- Varanda, P** 2013 'Body and movement visualisations in new media dance'. In: Bowen, J, Kia, N and McDaid, S (eds.), *Proceedings of EVA London 2013: Electronic Visualisation and the Arts. EVA London*, 223–230. London, U.K: BCS, Learning and Development Ltd.
- Varanda, P** 2014 'Migrations: dancing bodies across media'. In: Carvalhais, M and Verdicchio, M (eds.), *xCoAx 2014 Proceedings of the Second conference on Computation, Communication, Aesthetics and X. xCoAx Conference on Computation, Communication, Aesthetics and X*, 75–87. Porto: Universidade do Porto.
- Varanda, P** 2015 *Dance performance in cyberspace – transfer and transformation*. PHD. Middlesex University. Available at: <http://eprints.mdx.ac.uk/18820/> (Accessed: 8 February 2019).

Varanda, P 2016 'New Media Dance: Where is the Performance?' In: Fernandes, C (ed.), *Multimodality and Performance*, 187–202. Newcastle upon Tyne: Cambridge Scholars Publishing. Available at: <https://www.cambridgescholars.com/download/sample/63345> (Accessed: 26 September 2018).

Wilson, S 2002 *Information arts: intersections of art, science, and technology*. Cambridge, Mass; London: MIT Press (Leonardo).

Works cited

Alliban, J 2010 *Fracture*. Available at: <http://www.jamesalliban.com/fracture> (Accessed: 30 December 2018).

Blast Theory 2001 *Can You See Me Now?* Available at: <https://www.blasttheory.co.uk/projects/can-you-see-me-now/> (Accessed: 9 February 2019).

Blast Theory 2010 *The Goody Bullet*. Available at: <https://www.blasttheory.co.uk/projects/the-goody-bullet/> (Accessed: 9 February 2019).

Blast Theory 2015 *Karen*. Available at: <https://www.blasttheory.co.uk/projects/karen/> (Accessed: 3 January 2019).

Corsino, n+n 2000 *Captives (2nd movement)*. Available at: <http://www.nncorsino.com/en/creations/captives-2nd-movement/14> (Accessed: 9 February 2019).

Corsino, n+n 2006 *Seule avec loup (Alone with wolf)*. Available at: <http://www.nncorsino.com/en/creations/seule-avec-loup/7> (Accessed: 9 February 2019).

Corsino, n+n 2009 *Soi Moi (self as me)*. Available at: <http://www.nncorsino.com/en/creations/moi/8> (Accessed: 9 February 2019).

Cunningham, M 1999 *Biped*. Available at: <http://openendedgroup.com/index.php/artworks/biped/> (Accessed: 25 April 2015).

Gibson, R and **Martelli, B** 2007 *SwanQuake: House*. Available at: <http://gibsonmartelli.com/portfolio/swanquake> (Accessed: 12 January 2019).

La fura Dels Baus 2014 *M.U.R.S.* Available at: <https://www.lafura.com/en/works/m-u-r-s/> (Accessed: 29 December 2018).

LIA 2009 *PHILIA 01*. Available at: <http://www.liaworks.com/apps/philia01/> (Accessed: 8 January 2019).

- LIA** 2012 *Sum05*. Available at: <http://www.liaworks.com/apps/sum05-iphoneipad-app/> (Accessed: 8 January 2019).
- Snibbe, S** 2011 *Bjork: Biophilia*. Available at: <https://www.snibbe.com/apps/#/biophilia/> (Accessed: 9 February 2019).
- Snibbe, S** 2012 *Rework*. Available at: <https://www.snibbe.com/apps/#/rework/> (Accessed: 9 February 2019).
- Woolford, K** 2011 *Moments in Place AR*. Available at: <http://www.bhaptic.net/moments/index.html> (Accessed: 7 January 2019).
- Zellen, J** 2013 *Episodic*. Available at: <http://www.jodyzellen.com/apps/episodic.html> (Accessed: 7 January 2019).

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