Contributing to a somatic dance-technology curriculum: A collaboration

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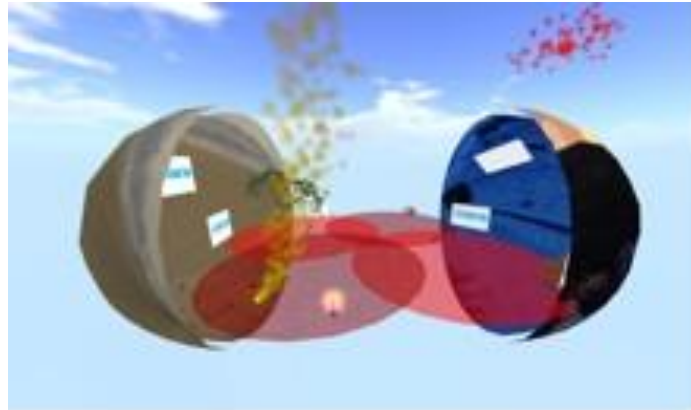email: yukihiko@s6.dion.ne.jp

Image 1: Senses Places' Second Life site at Koru Island (WelTec, NZ). Photographer: I. Valverde.


Image 2: Participant-avatar interaction through Wii mote and Web camera, Senses Places at Fridge Gallery (WelTec, NZ). Photographer: I. Valverde.

Introduction

Senses Places is a collaborative project with a vision for an integrated reality and multi-participant performative environment, with the goal of generating creative inter-subjective dance-technology experiences. Core collaborators Todd Cochrane (New Zealand) and Isabel Valverde (Portugal), working with a Japanese team (Yukihiko Yoshida, Yumi Sagara, Jun Makime, Kae Ishimoto, and Keiji Mitsubuchi), developed the initial hybrid improvisational activity in Second Life® MUVE into physical-virtual body interfacings in multi-site performances. With the facilitation of workshops, *Senses Places* dance-technology research is contributing to the development of cross-cultural and cross-disciplinary curriculum

approaches to offering challenging opportunities for expanding young people's creative potentials.

We take into consideration the dance curricula in place in Portugal and Japan, comparing cultural and socio-political circumstances and needs, particularly the lack of creative dance approaches integrating interactive technologies for teaching-learning in a globalized society. Recognizing the dominance of Web 2.0, our (dancing) experiences are increasingly informed by the access to and participation in multiple mediations. However, the ubiquitous computers and gadgets favoring a logical-rational intellect are shrinking our embodied capacities, replacing the physical with virtual entities. The authors' and collaborators' theory-practice approach to dance-technology research, creation, and teaching is informed by cross-cultural somatic movement and dance practices and related projects,[1] combining digital devices designed for dance and virtually embodied social interaction through choreographic, technological, and pedagogical explorations and applications.[2]
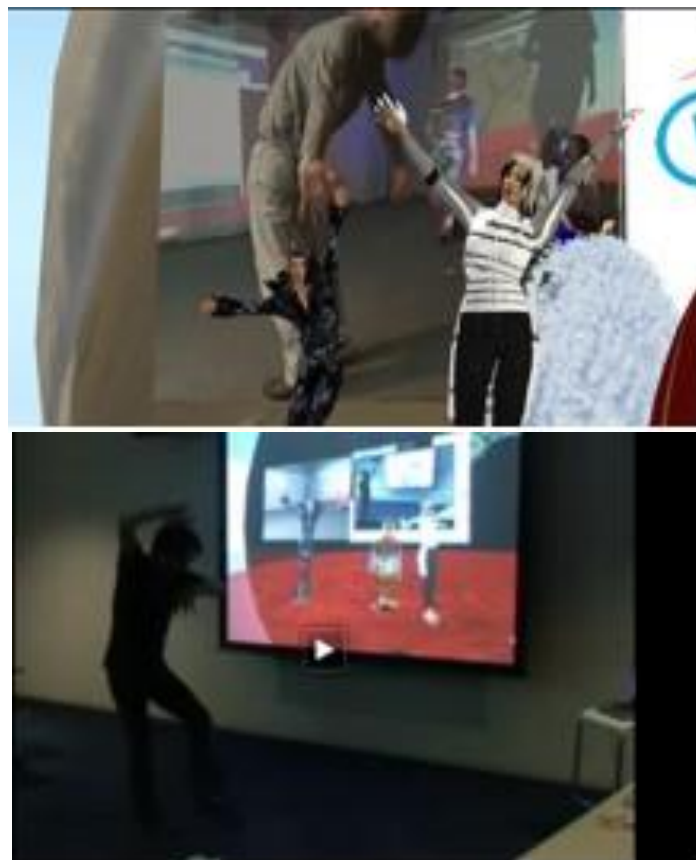
Images 3 & 4: Screen shots (Photographer: I. Valverde) of video streams (K. Yosuke & DHU's Ustream channel), featuring interaction between participants in China (left), Japan (right), and avatars in Second Life, at DRHA 2011 http://ustre.am/:18Bzs.

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[1] Most significantly, #IdentityMashup by Josephine Dorado and Phillip Gulley, in
http://www.culturehub.org/events1/2012/5/14/artalk-with-josephinedorado-may-16th-9pm.html
[2] Examples: Isadora®, DanceForms®, 3D Studio/Max®, Motion Capture, Second Life®, Open Sim.

Towards a somatic dance-technology curriculum development

In order to alter this educational situation, the *Senses Places* team invests in adapting its somatic dance-technology approach to young people's evolving complex embodiment, aimed at new ways of expanding development. The overall goal of designing creative somatic learning experiences for youths is the basis for collaboratively developing a dance-technology curriculum.[3]

Senses Places' development of new modes of choreographing/designing enables us to generate new creative dance-technology experiences that could be implemented in educational settings. Particularly by exploring interfaces, including Second Life®, towards fully embodied mediation rather than restricted to the desktop Graphical User Interface, participants interact creatively through moving and dancing (both physically and virtually) with images and virtual characters in shared mixed-reality experiences. We have conducted several instances of the project actualization as well as workshops; participants have ranged from 8-60 years old, although the average participant was a mid-20s dance, media, and/or information technology student. From these experiences, we are developing curricula for courses and workshops with different age groups and contexts; we are working towards gradual implementation on an international scale, while taking into consideration the particularities of pedagogical approaches already in place and their cultural specificity.

Interestingly, the present dance curricula in both countries is similar in context and content, with creative dance (Laban-based) in elementary schools, and modern and traditional in secondary schools, all integrated into physical education courses. With these curricula, contemporary somatic traditions like new/postmodern dance from USA/Europe, and Butoh from Japan, as well as dance-technology approaches, continue to be mostly inaccessible to students at public schools. Following the Tyler Rationale cited by Craig Cunningham (Cunningham & Billingsley, 1999-2000), our approach proposes ways of linking subject-matter and methodologies to students' own experiences, concentrating on the developmental structure of the subject-matter. The inter-relation of aims, goals, objectives, subject-matter, and learning experiences frames our reflection.
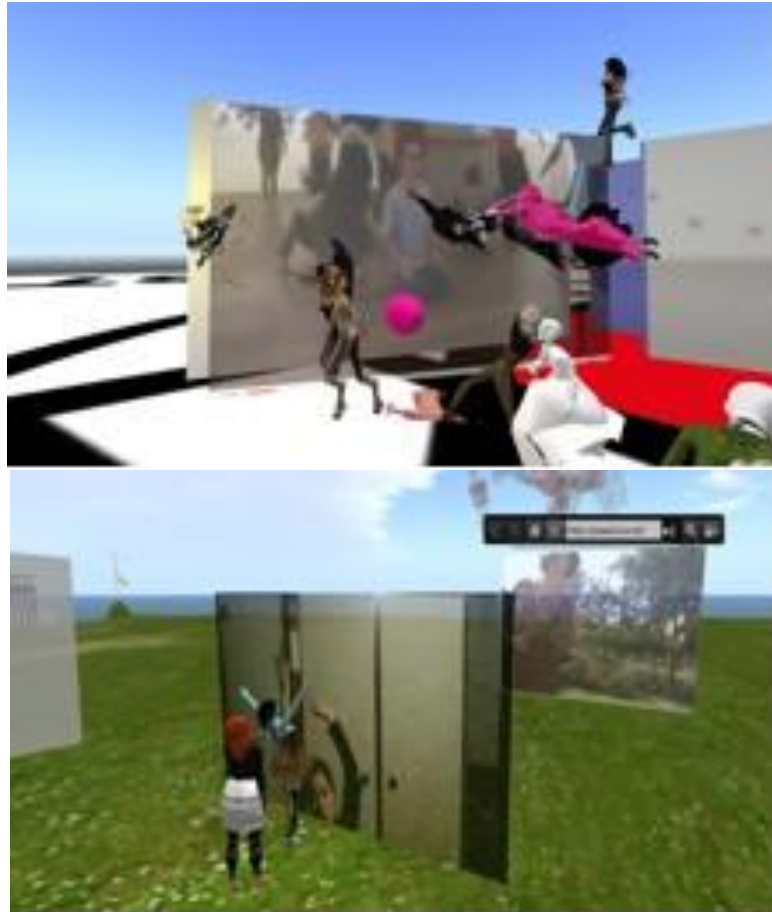
Aims

Senses Places wishes to provide an example for introducing dance-technology into the curriculum for different educational contexts and age groups, with the necessary adaptations. The creative somatic and dance-technology approach takes into consideration the crossover of somatic dance forms/genres, cultures, and technologies in their uniqueness and shared influences.

Goals

- To enable youths and young adults to learn and communicate through dancing, mediated within playful cross-cultural mixed reality experiences.
- To promote fully embodied and integrated development, along with somatic creative-technological skills, knowledge, and understanding how dance-technology can make lives more fulfilling within a globalized society.

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[3] For more information on *Senses Places* project, visit the blog http://sensesplaces.wordpress.com, the Livestream Channel http://livestream.com/beverde, and the Second Life environment at SLURL http://slurl.com/secondlife/Koru/233/233/3005

Images 5 & 6: Screen shots (photographer: I. Valverde) of *Senses Places'* single video stream with CILxJam's participants, 2010 (left), and two streams, K. Ishimoto (Japan) and I. Valverde (Portugal) (right), 2011, Odyssey Contemporary Art and Performance Simulator, in Second Life.

Objectives

- The development of somatic awareness, multi-sensory perception and expression, body image, movement, and voice improvisation.
- The expressive expansion of body movement through creative interfacings between subjects' and others' images, avatars, and the physical and virtual environments.
- The expressive expansion of subject's bio-signals through the dialogue with analog and digital outputs (sound, smoke, lights), learning about the transversality of information, and relationships among different orders and dimensions of elements within the body and the environment.

Subject matter

Departing from a somatic cross-cultural dance approach, we emphasize a hybridization of Western-Eastern traditions within contemporaneity, such as educational, therapeutic, and creative methods, developing from Laban/Bartnieff, Mabel Todd, Body-Mind Centering, Alexander, Release, New Dance, Contact Improvisation, Butoh, Performance Art, and ancient sources such as Tai Chi and Yoga. The different, though related, approaches of these movement and dance somatic activities are key in enabling a connection with the inner body and the environment. This attitude allows subjects to stay grounded while truly expanding

their sensory-perception movement expression, preventing "disembodiment" during mediation.

Teaching methods

The fostered, integrated education through a somatic, cross-cultural technological dance approach is based on teaching methods, such as guided experiences; ideokinesis; hands-on, verbal and bodily feedback; problem solving; and embodied experimentation with interactive interfaces. The tactics regarding choice and approach to the interfaces are:

- accessibility (adapting free existing interfaces for inclusive embodiment interaction);
- the design of combined interfaces;
- the design of creative, interactive experience adapting interfaces of body movement qualities and the characteristics of mediated body-signals.

The interfaces include: the physical body, video streaming, Second Life® avatars (Webcam, Wii mote®, Kinect®), and biometrics.

Image 7: Screen shot (I. Valverde) of Livestream (T. Cochrane) from *Senses Places* participatory performance at SL and SDHS 2010, London. (https://vimeo.com/13239812)

Conclusions

Recognizing the pertinence of integrating dance technology throughout the education process, *Senses Places*' novel approach accesses the need for an accessible and inclusive somatic-technological, cross-cultural, and cross-disciplinary creativity as an alternative to the traditional visual and musical dominance in dance and technology. Particularly geared to the dance classroom and studio context, we believe that our continued efforts towards such curriculum development and design will contribute to the emergence of an integrated dance education, altering standard, universal logical-rational patterns of how children and youth engage with dance, computers, and gadgets in general. *Senses Places*' compelling accessibility, content, and interface experience contrasts with the restricting desktop and overall poor content even of recent whole body interaction game consoles.

Keywords: dance-technology, somatics, curriculum development, interface, experience design

References

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Isabel Valverde is a transdisciplinary performer, choreographer, and scholar. She has developed experimental solo and collaborative work since 1986. She has degrees in Dance Theory and History, Interdisciplinary Arts, New Dance, and Dance. She recently completed postdoctoral research on dance and technology (FCT Fellowship) at the Institute for Human Studies and Intelligent Sciences, including performance practice-theory, collaborating in cross-realities participatory environments from a somatic choreography-technology approach. She is an invited lecturer at the Piaget Institute, and Associate Researcher at GAIPS/INESC-ID, Portugal.

Yukihiko Yoshida is a dance critic and researcher. He has written numerous reviews and articles for dance magazines and newspapers. He studies dance and technology, and has worked for the International Advisory Boards of the Digital Community Division, Prix Ars Electronica (2005-2009) as well as an assistant to Professor Ted Nelson and Project Xanadu, the original Hypertext project. He is a visiting senior researcher at Keio Research Institute at SFC Keio University, and is a Ph.D. candidate in the Graduate School of Media and Governance, Keio University.