BODY of KNOWLEDGE

Multisensorial experiences and embodied knowledge of professional dancers in ballet practices

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Synopsis This paper aims to understand how the dancer's senses are connected to the acquisition of embodied knowledge in the daily practices in a professional ballet institution (company/private studio). The professional ballet class and rehearsal were thus investigated as a complex practice where embodied learning is socially, politically and culturally framed. The daily ballet technique class is an everyday practice central which helps the dancer prepare for rehearsals and performances and improves the physical and artistic proficiency of the body.

Dancers engage in ballet practices through their senses, for example in ballet class: they hear the teacher's tasks and the music, see themselves in the mirror, sweat, feel the body temperature, heartbeat, feel the pressure of body weight against gravity and sense the presence of other dancers in the studio. The professional ballet class transforms and reshapes the dancers' body through experience and affects their sensorial apparatus and the way knowledge is incorporated.

The methodology included ethnographic descriptions, my active participation in ballet class and rehearsals, interviews with dancers, archives (video and photos) and performance analysis. I argue that a person's learning processes result from a dynamic interplay of interwoven bodily senses of each dancer depending on the social context.

Key-words: Senses, Embodiment, Knowledge, Experience, Ballet.

Senses and Embodied Knowledge

This study focuses on investigating which types of senses are important in the acquisition of embodied knowledge in the daily professional class and rehearsal. Therefore it is important to consider how the environment in an institution, such as company/dance studio, forms a particular cultural setting that enables the feeling of interconnected senses within the dancer's embodied knowledge.

The professional ballet class consists of sequences of bodily movements taught by a ballet

master/mistress to a group of dancers in a studio or theatre to enhance coordination, strength, flexibility and agility. It is divided into two parts of approximately fifty minutes each: first 'the barre' and later 'the centre'.

The ability to understand and dance a sequence of movements comes from previous bodily knowledge of executing technical sequences [enchaînements], ballet vocabulary and technique acquired at a ballet school. Each institution promotes environments where embodiment occurs by its participants in diverse ways, influencing the way knowledge is literally incorporated, explains organisational scholar Karen Dale (2001). The combined elements of values, objectives and aims set by the overall culture of the ballet company are internalised by dancers through the structure of the working day, the influence of the choreography or hierarchies of the company, says dance scholar Tomic-Vajagic (2012). The dancing body is site of a negotiation between multiple influences from teachers, choreographers, audience, company directors and dance peers.

Human knowledge is constituted by different ways of sensing, feeling, thinking and apprehending the world. Senses are faculties which perceive stimuli originating from outside or inside the body. Sensations are function of the senses, the perception or awareness or accumulation of bodily memory experience of stimuli through the senses (Vannini, Waskul, Gottschalk, 2010). For anthropologist David Howes and cultural historian Constance Classen (1991) sensing and making sense of people's cultures presents itself differently either in terms of using the sensory apparatus and understanding its symbolic meanings within their culture.

Most theories that guide our sensory perceptions are grounded in a European and American cultural world view, privileging the five senses of vision, audition, touch, smell and taste. Depending on the human being’s culture, the same sensoria can be used differently (Howes; Classen, 1981; Eccleston, 2016).

Embodiment in this research means the perception of the sense of identity coming into existence through the person's engagement in the world through their sensorial body and perception tied to a social, cultural spatial-temporal context, as defined by medical anthropologist Thomas Csordas (1993). The present, living experience is a multi-layered individual, carnal and intersubjective domain, situated in a place, connected to a rich background of memories from previous similar experiences, as philosopher Maurice Merleau-Ponty (1945) suggests.

Anthropologist Greg Downey (2010, p.35) studies of athletes and capoeira practitioners perceives ‘embodied knowledge’ as an organic entity modified by behaviour, training, and experience, deeply enculturated. Focusing on contemporary modern dance, rather than ballet, cognitive scientist David Kirsh (2011, p.1) defined ‘embodied cognition’ as “the mechanisms by which creative subjects think non-propositionally, using parts of their own sensory systems as simulation systems, and in the case of dancers, using their own (and others') bodies as active tools for physical sketching”.

Method

The ethnographic setting was daily ballet classes, pas de deux classes and rehearsals at a private ballet company/studio in Porto Alegre/Brazil with twenty-one professional ballet dancers, during the period of July, August and September of 2016. Data collection involved:

a) participant experience (Potter, 2007; Kringelbrach; Skinner, 2014) and participant observation (Spradley, 1979, 1980) registered in thick descriptions (Malinowski, 1932; Geertz, 1988);

b) semi structured interviews (Skinner, 2012; Salosaari, 2001; Pickard, 2015; Potter, 2007;

Roses Thema, 2007; Dornelles de Almeida; Flores-Pereira, 2013; Ravn; Hansen, 2013) with three female and five male dancers;

c) analysis of video recordings and photos.

The ethnographic method allowed; the ethnographer's experience to go beyond a cognitive, behavioural and representational apprehension of the research field (Grau, 2011). To investigate how a group of people make sense of the world (Ingold, 2011) I was inspired by Pink (2009) considering multiple ways that smell, taste, touch and vision can be interconnected and interrelated with the research.

Whilst my personal experience as professional dancer for the past twenty-four years in Brazil, Germany, United States and England was cognate to that of the dancers in this research, it is not the same. Psychologist Sonya Dwyer's (2009) ideas helped me bridge perspectives of an insider (as a dancer) and outsider (as researcher) in a complex space in between positions.

Discussion: "Dancers have to think with the whole body!"

During the learning process of ballet technique dancers experience a range of multisensory, overlapping senses and embodiment of knowledge through actions of focused attention, memory, repetition, inner conversation, projection, imagination and imitation.

The **focus of attention** of dancers in a ballet class and rehearsal can vary depending on the person and on the situation. Dancers in this research emphasized attention as the need to be present and constantly be aware of the moment through their bodies. One of the dancers compared focused attention in dance similar to an 'active meditation' (Thomaz, Interview).

Professional dancers are expected to have an expert level of conscious direct attention and

awareness of musicality, dynamics, agility and strength of movement in the dance. Even when focused, dancers can be distracted by interoceptive feelings - such as cramps or sleepy toes from the pointe shoes, or exteroceptive body sensations – such as fear of falling from a slippery floor. These sensations affect the dancer's confidence in performance.

Each teacher approach helps the dancer to internalise specific ways of moving in ballet. In order to retain information of the order of movements, dancers memorise a sequence in blocks of information and try to remember which block comes after what, by attending to movement phrases either rhythmically, spatially, weight shifts, creating imagery, or creating an inner monologue.

The dancer's work can **literally become automatic by their** shared experience. These ways of moving in ballet are learned through repetition of the technique and stay engrained in the body becoming almost **automatic movement**. Dancers also do unconscious movements apart from their will, such as face expressions, even when they try to control it. When dancers retain movements not conformed to the desired technique they try to correct it by modifying internalised ways of doing a step. This process occurs through thinking and experimenting modes of sensing the body, either through a change in the movement's path, dynamic, weight and use of imagination to help improve its sensation.

Dancers try continuously to think in ways to do a movement and to be able to repeat it. Practice though, teaches experts dancers that in the process of trying to feel the same movement sensation, failure or surprise from unexpected movements happens. The process of trial-and-error is reinforced through the ballet practices along with confrontation of the dancer's body limits and expectations of movement achievement. The purpose of movement repetition is to enhance dancer's awareness of the body about the movement sequences and allow emotions to flow in a conscious way, instead of Solway’s (2007) proposition of dancers

to create a muscle memory in order not to think upon movement execution and let the emotions to flow.

Dancers reported that repeating a movement separate from its actual choreographic sequence presents itself differently than doing it in its conjuncture, requiring different energy flows from the dancer. Energy here means the energetic availability and fluid responsiveness following work by Chianic (2007).

In order to encourage dancers to think with the whole body, the teacher stimulated reflections upon the dancer's own movements through trial-and-error. This process of thinking can happen through an inner conversation with oneself, silently in the dancer's minds, to stimulate movement. The concept of inner speech was first created by Piaget study of pre-schoolers language and later experimentally researched by Vygotsky. For Piaget knowledge arises from actions and the agent's reflections upon them. In addition to that, Vygotsky proposed that 'egocentric speech', as he called, was the beginning of inner speech that would be later used as a tool of thinking (Fosnot, 2005, p. 13).

Repetition and pace of movement enables the dancer to feel the retention of movement. When the music tempo is slower dancers have more time to think on how to do the movement. Expert dancers are expected to think on the music count, technique and artistic skills at the same time.

Regarding the process of thinking on how to execute a movement, dancers usually do a mental representation and projection. Works by Kirsh (2011) and Salosaari (2001) explain the way the dancer's mental projection can assist its full out performance. An example of this process taking place is a mode of thinking that involves deciding on the movement's intention, or shape, or dynamic in the music or energy, or its connection to other steps:

> I believe it is necessary to do a mental projection of the movement and think about forces, oppositions, tensions of the body operating for the movement to be executed.

> [...] the more you get used to ballet, this process starts becoming automatic, organic, because it is a language […] each dancer has a singular level of energy and dynamic placed in different ways of dancing […] this happens within an expressive and emotional regimen, and it is translated into movement, even when we try to control it. The mode how our body moves in class or on stage say things that are far away from being controlled and it is also retained in the transmission that needs an interlocutor, a spectator to happen. (Thomaz Interview)

In this matter, Bläsing *et al* (2012) adds that dance training has been found to increase the amount of imagery kinaesthetic sensations (Sheets-Johnstone, 2000), making images more vivid. Imagination was another dimension to exercise thinking and to enhance **precision of technique and musicality of the dancer's** performance.

Imitation is other important part of the learning process of dancers. Seeing other dancers dancing enables them to think about their own movement execution. Study of expert ballet dancers from neuroscientists Calvo-Merino, Glaser, Gre`zes, Passingham and Haggard (2005) look for an explanation on how one integrates observed actions of others with an individual's personal motor repertoire through the theory of mirror system neurons. This work indicated differences in expert ballet dancer's brain activity between watching an action modulated by the expertise - of an action they learned how to do and it is in the body - motor repertoire - of the observer. The self-critic of dancers is connected to their search for movement perfection.

The dimensions briefly described in this section suggests modes of how the dancer learns with the whole body in ballet class and rehearsal in a specific cultural, historical and social setting of an institution-ballet school and company through multisensorial experiences and its relation to the embodiment of knowledge.

Acknowledgements

To discuss further how dancers must think with the whole body, I would like to mention Antonio Damasio's concept of 'feelings' in which the cells' schema contribute to the whole

system of the body, and not just the conceptualisation of a brain-body system. The theory that bodily skill, embodied movement and intellectual skill experiences occurs as a unit is supported by interdisciplinary scholars. Biologist Francisco Varela (2005 [2000]) says the present experience is a cognitive act, where affect-emotions have a central role and are inextricable from every mental act. The body is an experience of the person as a unit (Pakes, 2006) with overlapping sensory experiences. A person's experience of one sensory modality can be influenced by another sensory modality constituting a multisensory experience (Calvert; Spence; Stein 2004). I suggest that the process of embodied knowledge is better understood through the linking of studies within interdisciplinary fields.

It is a hope that dance professionals from the broader world of ballet and other professional art dance training can benefit from these insights on modes of attending to bodily senses in ballet practices, enabling an enhancement of methodologies of teaching and learning. For future research, I suggest deepen investigation in this thematic with a variation of institutional settings.

Notes

1. The group of participant's age range from eighteen to forty-four, with exception of one guest senior ballerina age seventy years old. Daily practices consisted of classes alternating exercises for man and pointe work for woman, followed by pas de deux classes and rehearsals.

2. I began ballet classes at age three, later I learned jazz and contemporary. My professional dance career started at the age of fifteen in Brazil at ballet and contemporary companies simultaneously. I undertook professional dance training at Folkwang Hochschule Essen -Pina Baush in Germany and have been dancing internationally in companies within Canada, U.S.A, Germany and Brazil for twenty-four years. With age thirty-six I started teaching as academic teacher the modules of ballet and music at the University - Undergraduate level.

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