



## **Is Pilates a Somatic Education Method?**

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**ABSTRACT – Is Pilates a Somatic Education Method?** – This paper renews the discussion about the relevance of the Pilates method to the field of Somatic Education. The impact of marketing – which sells the method as a fitness activity – and the academic research on the application of the method in the treatment of various medical disorders, as well as its role in the construction of contemporary dance aesthetics, are put into perspective. Keywords: **Pilates Method. Somatic Education. Dance. Fitness. Rehabilitation.**

**RÉSUMÉ – Le Pilates: appartient-il au champ de l'Éducation Somatique?** – Cet article renouvelle le débat sur la pertinence de la méthode Pilates dans le champ de l'éducation somatique. Il met en perspective l'impact du marketing – qui vend la méthode comme une activité de fitness – et les recherches académiques sur l'application de la méthode dans le traitement de différents dysfonctionnements, ainsi que son rôle dans la construction de l'esthétique de la danse contemporaine.

Mots-clés: **Méthode Pilates. Éducation Somatique. Danse. Fitness. Réhabilitation.**

**RESUMO – Pilates é um Método de Educação Somática?** – Neste artigo, renova-se o debate sobre a pertinência do método Pilates ao campo da Educação Somática. Coloca-se em perspectiva o impacto do marketing – que vende o método como uma atividade de *fitness* – e as pesquisas acadêmicas realizadas sobre a aplicação do método no tratamento de diferentes disfunções, bem como seu papel na construção da estética da dança contemporânea.

Palavras-chave: **Método Pilates. Educação Somática. Dança. Fitness. Reabilitação.**

## Introduction

The love story between the Pilates method and dance started in the 1930s, when Martha Graham used to send her pupils to Uncle Joe's<sup>1</sup> studio in New York. Since then, dancers of different styles have adopted the method, aiming to improve their performance in scene. Several of the names from the first generation of Pilates instructors, trained by Joseph Pilates, were dance professionals, like Eve Gentry, Ron Fletcher, Carola Trier, Kathy Grant, Lolita San Miguel, Jay Grimes, and Romana Kryzanowska. This fact leads to the conclusion that the method, since its origins, contributes positively to the performance of the dance professional, either as a way to prevent injuries or as a way to maintain health or to promote therehabilitation.

However, even though history evidences the relevance of Pilates for the dance professional, on the other hand the identity of the method still is a subject of debate. To which family does Pilates belong: to physiotherapy? To physical education? This paper is aimed at reflecting on the identity of the Pilates method, renewing the debate on the relevance or not of the method to the Somatic Education field. Next, it indicates pedagogical strategies that would make it possible for Pilates to enrich creation in dance.

Which characteristic does Pilates have that would allow its inclusion into the Somatic Education field? Or would Pilates be a physical fitness activity and, therefore, incompatible with Somatic Education vision of the body?

The *Regroupement pour l'Éducation Somatique*<sup>2</sup> website defines the Somatic Education field as:

According to Somatic Education, the person is approached in her wholeness. Starting from the principle that the different dimensions of the human being - body, mind, and emotion - are interdependent, the Somatic Education proposes, through the movement, experimentations that request the totality of the person's aspects: the sensory-motor, the cognitive, and the affective, placing them in relation with the environment<sup>3</sup> (Regroupement pour l'Éducation Somatique, 2014, n.p., our translation).

Amongst the methods that convey this understanding of the body, we know that several of them were created by people involved with dance: Irmgard Bartenieff (*Bartenieff Fundamentals*),

Bonnie Bainbridge Cohen (*Body-Mind Centering*), Juliu Horvath (*Gyrokinesis*®), Mabel Todd (*Ideokinesis*), Emilie Conrad (*Continuum*), Gerda Alexander (*Eutonia*), Elaine Summers (*Kinetic Awareness*®), Joan Skinner (*Skinner Releasing*), Nancy Topf (*Topf Technique*), Ivaldo Bertazzo (Ivaldo Bertazzo Method), Angel Vianna etc.

Even though the Pilates method was not created by a dancer, its history indicates that its evolution relies on a close collaboration among Joseph Pilates' disciples, dance professionals, and somatic educators. In this paper, some influences received by the method will be mentioned, what could bring it closer to the other methods that are part of the somatic family. Da Silva (2010) compares the characteristics of Pilates and the Somatic Education methods, and concludes that Pilates aims at physical fitness, while the Somatic Education methods invest in a deconditioning of the gesture (Bolsanello, 2010).

But is it true that all Pilates instructors teach it as gymnastics, approaching the body by parts and in a mechanic way? Referring to the dance professional, does the practice of a mere physical fitness guarantees the improvement of his dance technique and expressiveness?

In an interdisciplinary paper, North-American researchers present Pilates as it is mentioned in Caldwell et al.: “[...] the Pilates method is a form of somatic education with the potential to cultivate mindfulness – a mental quality associated with overall well-being” (Caldwell et al., 2013, p. 142).

This definition contrasts with the one established by researchers from the Uludag Medical University Faculty, in Turkey, who think the Pilates method as a *training*, without evoking the notions of attention, conscience, neither the focus of the one who practices it: “[...] the main goal of Pilates training is to increase core (truncal) strength and flexibility” (Küçükçakir; Altan; Korkmaz, 2013, p. 204, our translation).

Caldwell et al. (2013) claim that Pilates is situated among the Somatic Education methods, since it shares common criteria with the other methods, being a physical activity that requires a certain state of presence of the practitioner, being characterized by cultivating the self-reflection, the recognition of different sensations, the focus on breathing and on the present moment, the attention to the alignment, and the perception of the movement and the space.

The debate on the Pilates identity is not recent. In its early days, this method was adopted almost exclusively by boxers, gymnasts, and dancers. However, in the 1990's, Pilates started to be interesting to a general public looking for a physical activity alternative to gymnastics and aerobic classes. The physical limitations and the pathologies that this new clientele presented led the instructors of the method to look for theories and pedagogical resources in order to make it accessible and beneficial to this new category of pupils.

Latey (2002) claims that, already under the influence of Clara – Joseph Pilates' wife – and of the second and third generation of instructors, the repertoire of exercises of the method was enriched, adding preparatory movements to the classic exercises. It was also developed a pedagogy less characterized by training and repetition and more directed towards reeducation and rehabilitation, aiming to the sensory autonomy of the practitioner, that is, that he does not depend exclusively on the instructor's model to perform the exercises.

### **Between Fitness and Rehabilitation**

The emphasis provided by Pilates to the stretching and the muscle tonus seems to answer to the needs of an increasingly sedentary urban population, in which the computer use extrapolates the work environment. Since the contemporary urban society values and rewards the strong, slim body, which muscles are defined, the Pilates method seems convenient to the elaboration of this model of beauty. The focus that the method provides to the *core* – quite often mistakenly interpreted as addominal tonus workout – favors its entrance in sports and health clubs.

It is also worthwhile considering that the success of Pilates is not due to the method effectiveness only, but also to the great investment of marketing made by means of tutorial videos, specialized magazines, sales of products related to the practice of the method etc. Among the books published every year on the Pilates method, the image of the good shape – through its headings and covers – is highlighted, generally represented by slim and strong male and female bodies, with definition of the abdominal muscles and the use of sporting clothes. The message is clear: Pilates is for those who want to work out.

The content of the North-American magazine *Pilates Style* makes the character of social network and life style clear, through which the marketing agents sell the method. In *Pilates Style*, tips on nutrition, sales of sporting clothes, adds of Pilates studios and courses, hints on classic Pilates exercises, and the launching of innovations in the method and new props, are intertwined, that is, new objects that help and color the performing of the exercises. This imponent self-representation of the Pilates method assigns to it a community character and identifies it as a jovial, healthy life style of those who are successful. The power of the Pilates marketing is located exactly in the creation of this fitness identity and the community that adheres to this identity, also endorsed by the celebrities who practice it, from Martha Graham and George Balanchine to Cameron Diaz, Sandra Bullock, Hugh Grant, Oprah Winfrey, Madonna, Julia Roberts, Brad Pitt, Lady Gaga, Sharon Stone, Gisele Bündchen, Luiza Brunet, Angélica, Camila Pitanga, Débora Secco, Marcos Palmeira, Patricia Pillar etc. The discourse is clear: if I practice Pilates, I am also part of the community of those considered, in the society, as successful people.

In its fitness aspect, Pilates evidences a pedagogy that is almost exclusively aimed to the development of the muscle strength, especially the definition of the abdominal muscles. This version of the Pilates method is conveyed over all by physical educators and sportsmen. In an intelligent way, the Pilates marketing machine bets on a supposed diferencial, representing it as a politically correct fitness, that promises to join body and mind, making it closer to yoga and directing it towards a refined consumer. This Pilates fitness mindset has acquired, recently, a new female clientele, during pre- and post-labour.

On the other hand, Pilates has been associated to pain therapy and rehabilitation, incorporating the language of the physiotherapists. Nowadays, the Pilates method is recommended by physicians and used by physiotherapists in clinical context as postural reeducation, injury rehabilitation or post-surgery. In general, in the therapeutic Pilates, the session is private or in duos or threesome, and the use of the aparelhos is consistent. Currently, there are several scientific papers on the Pilates method accessible in international databases. In 2012, in English only, over 110 academic papers on the Pilates method

had been indexed (Wells; Kolt; Bialocerkowski, 2012). A large range of research has been accomplished in the health field in different countries, about the impact of the Pilates method on rehabilitation in general (Anderson, 2010), in orthopedics (Bryan; Hawson, 2003), and in different pathologies: osteoporosis (Küçükçakır; Altan; Korkmaz, 2013), chronic pain in the cervical column (Mallin, 2013) and in the low back (Gladwell et al., 2006), insomnia (Leopoldino et al., 2013), fibromialgia (Altan et al., 2009), scoliosis (Blum, 2002), motor coordination problems during childhood (Kane; Bell, 2009), knee osteoarthritis (Yakut et al., 2004) etc.

All these studies indicate that the principles of the Pilates method can have a positive impact on the management of pain and the improvement of the quality of life, in case it is adapted to the needs of each group, considering its specific physical and cognitive limitations. The principles established by Joseph Pilates have been transformed to adapt to the needs of those who practice it currently. McNeill (2013b), quoting Latey (2001), reveals that Joseph Pilates had a quite doubtful ideal of posture in relation to the concepts of posture that we have nowadays, as mentioned in Latey: “Joseph Pilates idealised the flat spine of a normal child and wanted adults to have the same spinal shape” (Latey, 2001, p. 278).

Joseph Pilates named his method as Contrology and used it, over all, for the development of the muscle strength, endurance, and increase of the respiratory capacity. In face of an urban contemporary body – tending to sedentarism, overweight, and impoverishment of its sensory-motor faculties –, Pilates presently assumes a therapeutical identity thanks to the body conscience development techniques and to the pedagogical strategies that have been incorporated to it: massotherapy, Rolfing, osteopathy, and techniques of other Somatic Education methods. On the other hand, the influence that Pilates has exerted in “The Pilates Method has itself influenced many forms of dance, movement education and therapy as well as rehabilitation methods and different types of body work. It has given physiotherapy a new direction” (Latey, 2002, p. 99) must be acknowledged.

Calais-Germain, a kinesiotherapist who applies the Mézières, dance instructor, and author of the book *Anatomy of Movement*, published in 2010 the book *Pilates sans Risque: huit risques du Pilates et comment les éviter*. Research like this lead to the understanding

that, since a few decades ago, it is possible to notice an identity construction of the Pilates method.

In a historical perspective, it cannot be left unnoticed that Joseph Pilates lived in Germany at the same time as some of the landmarks of the Somatic Education field, like Bess Mensendieck (1866-1959), Elsa Gindler (1885-1961), and Rudolf Laban (1879-1958).

Mesendieck, a German physician, developed motion techniques of educational and therapeutical scope. As a gymnastics instructor, Gindler suffered with a serious tuberculosis, leading her to research on breathing in search of its cure, having created the method called *Sensory Awareness*, and had, amongst her pupils, Elsa Langenfeld (Wilhelm Reich's wife) and Laura Perls (Fritz Perls' wife). The list of those who were inspired by Gindler's proposals is long: Moshe Feldenkrais (*Feldenkrais Method*), Heinrich Jacoby, Lily Ehrenfried (*Holistic Gymnastics*), Marion Rosen (*Rosen Method*), Elaine Summers (*Kinetic Awareness*®), Carola Speads (*Physical Re-Education*), Charlotte Selver, Bonnie Bainbridge Cohen (*Body-Mind Centering*), Fritz and Laura Perls (*Gestalt Therapy*), among others.

A friend of Joseph Pilates and Carl Jung, Rudolf Laban is a landmark in the history of the Somatic Education. Dancer, choreographer, and researcher of the human movement, Laban establishes in 1910 a school in Munich, Germany, and will receive Mary Wigman as a pupil. Although there is no official record of a collaboration between Pilates and Laban, Rouhiainen (2010) claims that, during the years when both lived in Hamburg, Laban observed Pilates' sessions, took notes, and integrated some of the Pilates exercises to his own classes.

Latey (2001) believes that Joseph Pilates knew François Delsarte's (1811-1871) work. Delsarte was a French singer, pedagogue, and a pioneer in the research of the human motion, whose work was studied by Rudolf Laban and Frederick Matthias Alexander before they created their own methods.

Born at a time when the Greek aesthetics, the gymnastics, and the cult of the strong body as a national symbol imposed themselves in Germany in the beginning of the 20<sup>th</sup> century, it is known that the Pilates method differs from the other Somatic Education methods for alining itself with this ideology, acting on the body through

preestablished forms. However, it cannot be ignored that Joseph Pilates was exposed both to the *Gymnastik* and to the libertarian thought on the body, which starts to be manifested in Germany in the beginning of the 20<sup>th</sup> century, by means of persons like Laban, Gindler, and Mesendieck. Summarizing the *Gymnastik* movement: in the context of the pre-Nazi Germany, this expression comprised educational, dance, and bodily training practices, characterizing a movement of cult to the heroic, strong, and olympic body in reaction to the bourgeois values of complacency and intellectual pleasure. In this sense, when the attention to the feeling and the motor coordination become essential to the execution of the exercises proposed by Pilates, the method moves away from the atmosphere of fitness and comes closer to the Somatic Education methods.

### **Automatic Pilot *versus* Creativity**

From the traditional way of dance teaching, in which the copy of the teacher's model is emphasized, personalities like Isadora Duncan, Martha Graham, Doris Humphrey, Jacques Dalcroze, François Delsarte, Rudolf Laban, Merce Cunningham, Ann Halprin, and Steve Paxton started to invest in the materiality of the body itself as aesthetics and language. While, in the traditional forms of dance learning, the objectivity of the choreographic form and the virtuosity of the motion mechanics take precedence, in the modern and contemporary dance the dancers turn their eyes towards the qualitative aspect of the motion. This new generation of artists denies the reproduced motion and welcomes the felt motion!

Domenici (2010) highlights, by means of the expression *semiotic liberation*, the historical moment when dancing assumes the material reality of the body as language. The *semioticliberation* of the dance means that the body is not a narrative support anymore. Likewise, the impressionist painters, in face of the capacity that the photography has to reproduce the image, had to turn their eyes towards the materiality of the painting itself (brush, ink, bidimensionality of the canvas support). Modern dance, from the turn of 19<sup>th</sup> century, changes its point of view, becoming interested on the natural motion of the body, instead of expressing the result of a body training dedicated to an aesthetic fixed aesthetic choreographic form, learned from outside to inside. The contemporary dance, thus, develops



this process of semiotic liberation, structuring its language in the physiological processes of the body. When reencountering the body, the dancer reencounters the common, the quotidian, the universal. The semiotic liberation of the dance is also due to the practical and theoretical support that the dancers begin to have through the Somatic Education methods.

Within of the dance context, what kind of Pilates teaching could be more useful nowadays to the reality of the dance professional? On what extent this work around the *core* has a long term impact on the health of the practitioner? What is being searched? To tighten muscles or reorganize bone structures and harmonize the global tonus of the body? Is the toning addressed like a muscle dressage or like a reeducation of the gesture? Does this reeducation aim at the normalization of the body or to the liberation of the expressivity?

Throughout its course as a somatic educator, the professional of this area can be challenged by the fact that the difficulties of the pupils when performing the Pilates movements are not only connected to the lack of muscle strength, but, over all, to the gaps of proprioception and motor coordination. Thus, it would be useless to increase the load and the difficulty of the exercises to make them work in a more intense way. This way, some questions must guide the construction of his Pilates sessions. What can be done to lead the pupil to: a) liberate his breath even before introducing him to Pilates thoracic breathing?; b) feel the mobility of the ribs?; c) feel the abdominal muscles?; d) distinguish the action of each layer of the abdominal muscles (transverse, rectus abdominis, oblique)?; e) differentiate the movements of the hip: the pelvis retroversion and anteversion, being able, from this distinction, to feel the pelvis neutral position?; f) to locate the bones and to feel the bone volumes (vertebrae of the column, head, thorax, pelvis, knees, feet, elbows, hands) and to use the shape and the weight of the bones to direct the movements?; g) organize the scapular and pelvic girdle?; h) isolate and dissociate movements?; and, finally, j) perceive the coordinated action between the pelvic floor, the hip adductors, the abdominal muscles, the multifidus muscles, and the diaphragm?

As a Pilates pupil, it was perceived that, in the teaching of the method, the instructor, when neglecting the development of the body conscience, leaves marks in the pupil in the biomechanic, cognitive,

and affective levels. Amongst these marks, it can be mentioned: a) the pupil, when ignoring his own limits, becomes used to move without conscience of what he is doing, not knowing how to find his own connections and solutions to perform a movement, blunting his kinaesthetic intelligence; b) the pupil, using muscle compensations to fulfill what is being requested by the instructor, impoverishes his gestual vocabulary; c) the pupil, when depending exclusively on the model of the instructor and the rhythm imposed by him to perform the exercises, does not recognize his own progress.

Besides the sensory-motor anesthesia presented by a great number of the pupils, leading them to spend more effort than the necessary and to use the mechanism of muscle substitution<sup>4</sup>, the old conception of body-machine and the mistaken understanding that the sensation of pain is a kind of prize, a sign that the willpower won over the *stupidity* of the body still remains. To these gaps and misunderstandings, as well to the guidance of an instructor who aims only at the results, without being worried about the means to reach them, it is added the lack of adaptation of the exercises to the physical condition of the pupils, the lack of preparatory motion to relax, to warm up, to connect and to engage, and the lack of commands enriched of images which help the pupil to make nervous connections that support the performing of the movements.

Where to situate the Pilates teaching within the tension between the maturation of the dancer and the attainment of results? Long and Buck observe that there is a belief, within the dance world, that prioritizing classes of dance technique is the only way to improve the performance in scene. Thus, quite often:

[...] the dancers discredit those practices that do not require physical effort, forgetting that the improvement of their technique in dance is closely connected not necessarily to the repetition and the perfecting of forms, but to the variation of movements that improve both its performance in dance and the performing of daily tasks<sup>5</sup> (Long; Buck, 2008, p. 151, our translation).

On the other hand, it can be observed a gradual shift of paradigm, since, in accordance with Caldwell et al., “[...] somatic approaches that value sensorial experience, intuitive ways of knowing and developing habits of consciousness are subtly shifting the curriculum in dance training” (Caldwell et al., 2010, p. 149).

Several Brazilian public universities have added courses related to the Somatic Education in the undergraduate curricula in dance, and the dance department of the *Université du Québec à Montreal* (Canada) offers post-graduation in Somatic Education.

In the following topic, concepts and pedagogical strategies which made of Pilates a Somatic Education method able to give support both to the career of the dance professional and to the maintenance of the quality of life of people in general are described.

### The Somatic Pilates

One of the biggest difficulties of the pupils is breathing. It is known that the breathing proposed by the Pilates method is quite specific – the so-called costal or thoracic – and that,

[...] the abdominal muscles are a group formed of myofascial layers that form the anterolateral abdominal wall, and that they do not function isolatedly, but work in a sinergic way with the breathing muscles and the ones that control the posture (Key, 2013, p. 542).

The professionals of this field are aware that the intra-abdominal pressure helps to stabilize the pelvis. But what to do in case the pupil has a respiratory pattern that prioritizes the upper thorax, fixed in the inspiration, and having difficulties in expelling air from the body? What to propose to the pupil who is captured in an expiratory respiratory pattern, presenting restrictions in the breathing auxiliary muscles that hinder his thoracic cage to expand? And how to act if another pupil does not feel the ribs moving sideways? How can he engage, in an efficient way, the oblique and the rectus abdominis muscles, respecting his anatomical structure and his physiology?

Being aware of the complexity of the subject of the postural typology<sup>6</sup>, the following example illustrates, in a very simplified way, the possible problems originated from an application of Pilates that neglects the particularities of each typology. In the case of the postural typologies that are characterized by a trend to the flexion of the column, to the internal rotation of the upper and lower limbs, to a collapse of the sternum and a closing of the lower ribs (AM-AL), the Pilates exercises that request flexion of the column strengthen the postural pattern of the person. Referring to the postural typologies characterized by the advance of the thorax in relation to the pelvis, by the external rotation of the upper and lower limbs,

and by the horizontalization of the sacrum (PM-PL), the exercises that request the extension of the column tend to be accomplished in an exaggerated way, due to the easiness that the pupil has when performing them, disaligning even more the thorax from the pelvis. The problem does not rely on the accomplishment of the exercises, but in their repetition and the insistence on the motion pattern that is excessive already.

Varying the exercises means to take the pupil – yet momentarily – from his comfort zone to try postural tipologies that are completely unknown to him, thus balancing the possible excesses of his postural tipology. The variation of exercises is important not only for the motion repatterning – the recovery of motion patterns that are absent in the body scheme of the person – as for the integration of the Pilates principles made by the pupil. It is essential, so that the Pilates learning is efficient and has long term outcomes, that the pupil learns to recognize a principle and its application in different movements, with different levels of difficulty and in different situations. This way, it will be guaranteed that the pupil integrates and creates knowledge from inside to outside, that is, from his own sensory experience, not limiting himself to repeat information coming from the instructor.

Key (2013) suggests that, even among Pilates instructors, the lack of distinction between deep and superficial abdominal muscles is current. Instead of focusing on the muscle synergy that allows the stabilization, the support of the verticality, the control and the endurance, much of what is called *core training* is taught as merely a toning of superficial abdominal muscles, causing the previsible intervertebral disk problems.

Key also mentions Ida Rolf, who, at her time already, made this distinction, classifying the myofascial system as *intrinsic* and *extrinsic*. The creator of the Rolfing understood the muscle substitution as a sign of what she called *somatic immaturity or disfunction*: when the person uses extrinsic muscles, but should be using the intrinsic ones in the accomplishment of a certain movement.

It should be believed more in a pedagogy that values the quality of accomplishment of the exercise than the amount, the amplitude, the speed, and the intensity of repetitions. According to McNeill (2013a), Joseph Pilates used to prescribe only three to six repetitions of each exercise. With the fatigue, muscle compensations result: one

does not recruit the muscles that he wants, and the exercise increases in amount, but loses in quality. Few repetitions give a chance to the body and to the mind to act jointly and with precision. A good outcome is not measured by the amplitude of the movement or the amount of repetitions, but by the presence of connections. Just like the language teacher who leads her pupil to integrate a certain grammar structure, making him practice it in different ways, either listening to a song, speaking, writing, reading or watching a video where the characters use this same grammar structure, the variety of motion using one same principle is a smart strategy in the teaching of Somatic Pilates.

The instructor plans his sessions in such a way that all the muscle chains are involved, all the planes of the body are used (frontal, sagittal, horizontal), and all the motor patterns can be experienced and repatterned, when necessary. The *motorn pattern* refers to the concept developed by Bonnie Bainbridge Cohen. According to Velloso, Cohen considers the balance reflexes, reactions, and answers as the alphabet of the human motion, constituting the basic neurological patterns proceeding from the motion of the prevertebrates and the vertebrates.

In relation to the subject of this paper, the importance of the motor patterns of the vertebrates must be highlighted: spinal (head-coccyx connection), homologous (symmetrical movement of the two upper and/or lower limbs), homolateral (conjugated movement of a lower limb and an upper limb from the same side), and contralateral (conjugated movement of a lower limb and an upper limb from opposite sides).

The refinement of the motor control helps the person to distinguish the locomotor functions from the stabilizing functions through the awareness of the shape of the bones and the alignment of the joints. Latey (2002) claims that the development of the body conscience helps the person to modulate her tonus in order to reduce unnecessary efforts. This refinement of the proprioception also implies the ability to distinguish, to know how to associate and to dissociate parts of the body, to feel the abdominal muscles in their different layers, and the direction of their muscle fibres. In Somatic Pilates, it is not a matter of learning exercises only, but to learn a little more about his own body: lines, volumes, bone alignment, direction of the movement, and the transformation of its functioning in a more natural one, freer from useless tension, more expressive.

## A Somatic Pedagogy in the Practice of Pilates

In this topic, the three elements of the Somatic Pilates pedagogy are listed, offering hints for creation in dance: the use of images; the *ambitato* concept; and the circuit concept.

### *The Use of Images*

The demonstration of the exercise made by the instructor and the tactile indications are important for a better understanding by the pupil, but the impact that the type of verbal command can have on the accomplishment of the exercises must not be neglected.

Several books have been published on the method since the 1990s, and Latey (2002) claims that some authors have reinterpreted Pilates six original principles (breathing, center, focus, control, precision, and fluidity), adding the concepts of *relaxing*, *alignment*, *coordination*, and *endurance*.

Luder (2007) mentions the research of Sweigard (1974), concluding that the nervous system does not make mistakes when opting for acting in reply to a movement that was visualized. Thus, the voluntary use of mental images is current among high level athletes. Jacobson (1932) claims that the brain triggers little nervous impulses that activate the respective motor units when a person imagines any action. In this way, when a movement is figured out, the nervous system recruits muscles in a subtle way. However, we must take care in the use of images. In our view, the intention is to evoke tactile sensations and not visual sensations that can take the pupil to figure out the body. Images that give support to the *feeling* must be used: volume, temperature, texture etc. To create images that highlight the direction of the touch. It is a matter of guiding the attention of the pupil to his own real tactile sensations and not to make him *to figure out* the body.

### *The Concept of Ambitato*

Through the *ambitato* concept (Bolsanello, 2012), it can be achieved an improvement of the proprioception of the pupils, so that they know to locate the bones and the bone structures to which the instructors often refer to: sacrum, sternum, ribs, scapula, hip bone, ischium etc.

*Ambi*, in Latin, means *duplicity, of both sides*. The touch is the first sense that emerges in the fetus, being the basic sensation on which the other senses are developed.

There are several auxiliary objects used by Pilates instructors, such as the Swiss ball, bosu, rubber bands, foam roller, circle, among others; however, when considering the Somatic Education point of view, the use that is made of the object in Pilates can be widened. The object does not serve only to increase the level of effort and complexity of an exercise, nor to add load only; it is the entrance door to a sensory distinction between skin, fascia, tendon, aponeurosis, muscle, bone, organ, and organic liquids.

The *ambitato* concept understands that, through the touch, the pupil can feel that his body is equal or different from the texture of a ball, for example. According to the *ambitato*, qualities that are present in the object but absent in the body can be brought to a region of the body. For instance, if it is difficult for the pupil to feel the thoracic breathing because his ribs are rigid, the contact with a ball can awaken the sensation of resilience of the bone and flexibility and tridimensionality of his thoracic cage (Image 1).

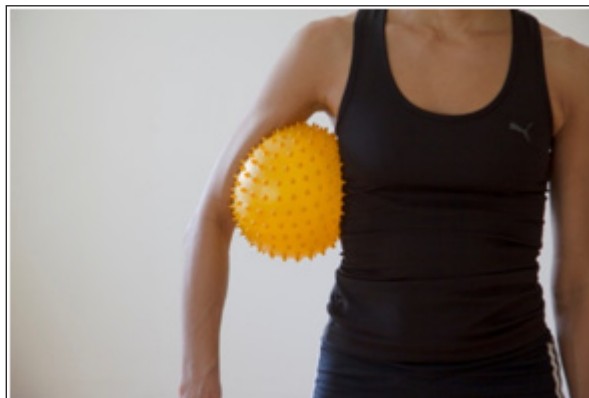


Image 1 – The ball is used to awaken the sensation of the sideways motion of the ribs and the thoracic breathing. Photo: Sébastien Ventura.

Each object can have several functions, such as to reactivate the proprioception because it places the focus of attention of the person on a part of her body and points to the relationship between the parts of the body. At the same time, the proprioception clarifies the localization of the parts of the body in the space. The proprioception guarantees a higher stability and effectiveness in the accomplishment of the Pilates exercises because the pupil performs the exercise based on his own sensory experience, not in the image that he sees of the instructor's body showing the exercise.

It is clear that the construction of this relationship with the object is part of the growth of the pupil. In a 50 to 60 minute-long Pilates session, not always there is time to invite the pupil to a complete somatic exploration of the object. However, in each lesson, little somatic grains can be introduced. As an example of the *ambitato* concept, the weights that will be used for muscletoning can be used in the beginning of the session, in an exercise aiming to awaken in the pupil the precise organization of the scapular girdle, inviting him to allow the object (weight in the shape of a ball, a sand bag or a small metal dumbbell) to hang from the hand to promote the decoaptation of the glenoumeral joint and to reorganize the scapular girdle, to make internal and external mini rotations with this joint, and to indicate the elbow to direct itself to the side, aiming at the scapula stabilization (Image 2).

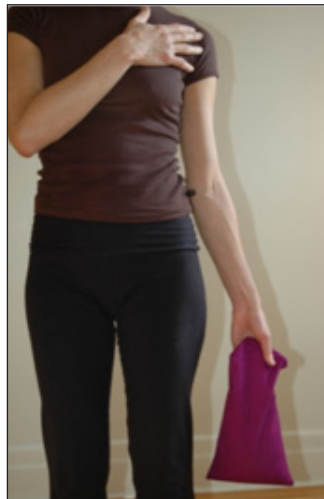


Image 2 – The use of the sand bag is aimed at accenting the sensation of the position of the humerus head in the glenoumeral joint. Photo: de Sylvia A.

### *The Concept of Circuit*

According to Latey:

[...] up until recently, the 'centre' referred to the area from the hips to the lower ribs but the modern centre has been refined. Today, working from the centre means connecting all the muscles that travel from and are enclosed between the pelvic floor to the thoracic diaphragm, not just sucking in and holding the stomach and overusing (Latey, 2002, p. 95).

The circuit concept is useful in the Pilates teaching when, for example, it is requested to the pupil to pressure the feet on the floor, to feel that to load the weight of the feet on the floor develops



when pressing against the floor. This pressing is transferred from the floor to the feet bones, from the feet to the ankles and to the fibulae and tibias, to the patelas, to the femurs, to the hip joints etc. In the Pilates exercise on the floor known as *bridge*, the movement is directed counting on the feet bone structure and supporting the position, indicating the knees to be projected forward, in order to prevent an overload of the psoas muscle (Image 3).



Image 3 – Example of the *ambitato* and circuit concepts. The bridge exercise, where foam rollers are used to relax the excessive muscle tension and to stimulate the sensation of the column vertebrae. The indication to pressure the floor, feeling the feet bones projecting the knees, can be added to the abdominal activation command, preventing an overload of the psoas muscle. Photo: Sébastien Ventura.

The circuit concept invites to change the point of view in the accomplishment of a motion. The circuit used to carry through the simple movement of raising the arm is not the same if the instructor invites the pupil to fly with his wing or asks him to paint as if his arm were a brush. The circuit also changes if it is proposed to the pupil to enrooten the arm in the scapula when raising the arm.

Including the circuit concept in Pilates sessions means to give to the pupil the possibility of making a fair effort. The pupil learns to select the most appropriate way for the accomplishment of a certain motion. For instance, if the intention is to activate the pelvic floor, a ball between the heels can be used as a tool for this intention; this ball will work as an anchor to activate the circuit between the lower portion of the rectus abdominis muscle, the pelvic floor, the hip adductors, and the basis of the metatarsal of the first toes.

When applied to the Pilates teaching, the circuit concept reveals that the accomplishment of demanding and complex movements is not only a matter of strength, but also of motor coordination. Referring to this, Latey claims that one of the advances of the Pilates method is the attention that has been assigned to the exercises

implying diagonal and spirals (Image 4), resulting in the repatterning of the contralateral motor pattern, which “[...] is extremely important for the engagement of the oblique muscles and for the coordination between the ribs and the iliac crest” (2012, p. 35-36). This is what Müller and Schleip (2011, p. 72) also suggest:

[...] multidirectional movements, with slight changes in angle are utilized; this might include sideways or diagonal movement variations as well as spiraling rotations. With this method, large areas of fascial network are simultaneously involved.

There is a close relationship between the restrict gestual vocabulary and the wear of the osteoarticular structures, that is, the person uses only one circuit in the accomplishment of daily tasks. This person can detour or minimize the wear of the structures and the loss of function as she learns to perform one same task in different ways. Busquet (2005) suggests that the fascial network would have, among others, a static function, what leads us to reflect on the importance that Pilates must give to the multidirectional exercises, implying connections of different regions of the body at the same time (Image 4).

It is the circuit that leads us to feel which the motion motor is. Which part of the body initiates the movement? The circuit also allows us to observe that movement is continuity, is flow; a movement is transformed into another one, passing from one muscle chain to another one and regulating the tonus of the set of the myofascial chains, guaranteeing the functionality, the maintenance of the homeostasis, and the vitality of the organism.

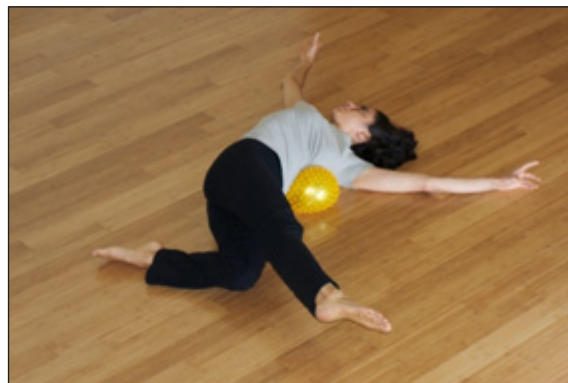


Image 4 – Example of the *ambitato* concept and multidirectional movement, activating the fascia. By means of the *ambitato*, it is provided support to the repatterning of the contralateral motor pattern and to the development of the proprioception of the oblique abdominal muscles.  
Photo: Dioni Pereira.

## Conclusion

Since its creation by Joseph Pilates in the initial decades of the 20<sup>th</sup> century, the method shifted from Contrology to Pilates Method and did not stop to evolve. In face of a varied clientele, from dancers to overweight housewives, from bureaucrats to massotherapists, from athletes to musicians, the Pilates instructor faces, in his daily activities, the challenge to adapt the exercises of the method to the needs presented by the different groups in each session.

Amongst the contemporary body approaches that aim at the maintenance and/or the recovery of the health, Pilates is one of the most known. Pilates became fashionable and comprised a large number of practitioners for the range of its application; on one hand, it is sold as a physical conditioning method, and, on the other, it is recommended by physicians and used by physiotherapists as a way of rehabilitation.

However, like any bestseller, the Pilates method is controversial and it is not exempt of the risk of being misrepresented, misunderstood, used according to purely commercial interests. In our society, it is the unsatisfied desire of the consumer that keeps the market functioning. We are constantly requested by ads and pressured to buy what we desire, however our desires do not have really to be fulfilled. It is the desire that stimulates us to consume: without desire, there is no consumption. In relation to Pilates, its fitness version seems to dominate the market. Many of the pupils see it as physical fitness, which only goals are the reduction of the body mass and the muscle definition. From this point of view, the method is taught to a great part of the pupils as a range of exercises to be performed, without spending any pedagogical effort to teach them how their body functions.

Would this ambiguity of Pilates hinder it of being part of the Somatic Education field? Would this fitness Pilates be useful to the career of the dance professional?

It is important to be aware of the values that will be conveyed to the pupils through the type of Pilates that is taught to them. Does that pupil practice Pilates to have tight abbs? Or is it his goal to have a better body organization and, from this, to increase his strength and his performance? The body vision that the instructor has guides

his pedagogy and defines whether the Pilates taught by him is a method of Somatic Education that passes through the awareness and repatterning or not.

A German born in the end of the 20<sup>th</sup> century, Joseph Pilates lived in a sociocultural context that valued the gymnastics, the training, and the improvement of the body as a national symbol. On the other hand, it was observed that Joseph Pilates was exposed to the conceptions of body and movement aimed at the deconditioning, the creativity, and the subjectivity of the human being, as they were researched by his contemporaries Laban, Gindler, and Mensendieck, seeds of what is today called Somatic Education. The strong influence that yoga had on *Uncle Joe* cannot be forgotten. The Pilates method is a summary of apparently contradictory visions of the body, which can turn the method into a bridge between the world of fitness and the world of the Somatic Education; this bridge, however, will depend on the somatic maturity of the instructor, who can take his pupils to discover others aspects of their body, way beyond the tight abbs.

Nowadays, the daily professional practice of a Somatic Education teacher and a Pilates instructor takes him to understand the Pilates as a method of Somatic Education. Inserting itself in the perspective of the Somatic Education field, it is believed that the Pilates instructor can widen his vision of body and to focus his intervention less on isolated muscle groups and more on the fascial network<sup>7</sup>, as evoked by Busquet and Schleip. The Pilates instructor will also be able to include in his sessions the concepts of *ambitato* and circuit through a language that aims at narrowing the relationship between the sensory-motor and cognitive functions of the pupil. When integrated into the field of the Somatic Education, Pilates invests in its own evolution, influenced by the dance professionals, physical educators, and physiotherapists who approach the body not as a machine, but as an organism that is live, intelligent, plastic, and endowed with an elastic homeostatic capacity. In fascial fitness, there is a hint to be investigated in a following paper. Although the expression fascial fitness does not please to all, it must be recognized that the research of Dr. Robert Schleip, its creator, is extremely valuable for the evolution of Pilates: *Fascia Research Group*, of which the researcher is part, is linked to the department of Neurophysiology of the Ulm University (Germany) and rethinks, among others, the sport training and even

the practice of dance and Pilates through an optics of mobilization of the fascia and not only of the musculoskeletal system.

Concerning the dance professional, Pilates can contribute in his education, not only as a tool for injury prevention, but also as a material for the choreographic creation. This professional must invest in a wakening of the body conscience and in a refinement of the motor coordination, planning his lesson so that all the muscle chains are implied (AM, PM, PL, AL, PAAP), all the planes of the body are used (frontal, sagittal, horizontal), as well as all the motor patterns are activated (spinal, homologous, homolateral, and contralateral). Inserted in the Somatic Education field, Pilates can nurture from pedagogical strategies from other methods and approach the body of the dance professional by means of exercises intended to go beyond the working the musculoskeletal system: the body of the Somatic Pilates is sensitive and qualified to answer to the stimuli from the environment. In this case, the goal of the body preparation of the dance professional is not limited anymore to a training, a pure repetition of sequences or *warming up*, *stretching* or *tonus*, but rather to connect body structures, levels, and systems, thus contributing for the gestual deconditioning that supports the semiotic liberation that is so unique to the contemporary dance language. It is concluded that, when matured by a somatic point of view, Pilates can make the body of the dance professional more available dance to the contemporary research in dance without making a pledge of his quality of life.

### Notes

<sup>1</sup> Joseph Pilates, creator of the Pilates method, is affectionately called Uncle Joe by his oldest pupils.

<sup>2</sup> The *Regroupement Pour l'Éducation Somatique* is a non-profit organization located in Montreal, Canada, aiming at gathering teachers of distinct Somatic Education methods and promoting this field by means of an exposure in the media, seminars etc.

<sup>3</sup> In the original in French: “[...] en éducation somatique, la personne est abordée dans sa globalité. Partant du principe que les diverses dimensions de l'être humain, corporelle, mentale et émotive, sont interdépendantes, l'éducation somatique propose, par le mouvement, des expérimentations qui sollicitent ensemble les aspects sensoriel, moteur, cognitif et affectif de la personne tout en la mettant en relation avec son environnement” (Regroupement pour l'Éducation Somatique, 2014, n.p.).

<sup>4</sup> A muscle substitution happens, for example, when the person makes a motion using muscles of the dynamics, however, in reality, the motion requires the activation of muscles which function is static.

<sup>5</sup> In the original in French: “[...] une pédagogie centrée sur l'autorité somatique mise sur l'habileté de l'étudiant à faire des distinctions dans son apprentissage. [...] D'un point de vue somatique, l'apprentissage de l'étudiant évolue grâce à sa capacité de distinguer les changements proprioceptifs basés sur son sens kinesthésique, plutôt que par le biais des corrections de positions corporelles fondées sur un idéal esthétique extérieur” (Long; Buck, 2008, p. 151).

<sup>6</sup> There are different classifications of muscle chains and distinct schools of analysis of the postural typology. In this paper, we chose to mention the vision of the school established by the Belgian physiotherapist and osteopath Godelieve Denys Struyf, creator, in the 1960's and the 1970's, of a global method of physiotherapy that became known as GDS or Muscular and Articular Chains. GDS understands the postural attitudes of the human being as being constructed by different factors: historical, socioeconomic, cultural, genetic, psychological etc. Godelieve established six families of postural typologies, each one expressing a muscular chain: AM (antero-medium), PM (postero-medium), AL (antero-lateral), PL (postero-lateral), PA (postero-antero), AP (antero-posterior). For further information on the GDS method, please refer to the site of the Association of Practitioners of GDS Method (APGDS): <<http://www.apgds.com.br/homolog/metodo.aspx>>.

<sup>7</sup> The fascia was defined by the *International Fascia Research Congress*, in 2012, as “[...] fibrous collagenous which are part of a body wide tensional force transmission system” (Third International Fascia Research Congress, 2012, n.p.).

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