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Merging the arts of song and dance: New methodical options for teaching students within the disciplines of song and dance

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Abstract: To learn, acquire knowledge, and develop skills is an embodied process. In this article, the authors argue that merging the fields of song and dance is dependent on a deeper understanding of how the mind and the body interact, and they utilize the concept of enactive cognition to explain these processes. The authors maintain that students need insight into these processes in order to improve their learning and, consequently, their performance. Retrospective examples taken from three educational situations within the musical theatre context elucidate the discussion of the concepts of alignment and breathing. These frequently used concepts are often a source of confusion and misunderstanding for the student. To alleviate this, a stronger, interdisciplinary dialogue among the singing and dance teachers who are involved in the genre of musical theatre needs to be developed. The authors suggest collaborative teaching as a means to develop the teaching methods and as the pathway to attaining a common base when integrating the skills of singing and dancing.

Keywords: musical theatre; song; dance; enactive cognition; implicit memory; habits; alignment; breathing; collaborative teaching.

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Introduction

In 2014, the first musical theatre students graduated with a bachelor's degree awarded by the Norwegian College of Musical Theatre (Musikkteaterhøyskolen-MTHS). The students are trained in the disciplines of song, dance, and drama, as well as in musical theatre, which combines the three art forms. Traditionally, these disciplines have their history in different and separate departments or schools, and considerable research has been devoted to the teaching methods for song, dance, and theatre. Less attention has been paid to the methods combining the three genres. Dunbar (2014) has noted an increase in the number of research projects over the past years, albeit centered mostly in practice-based and practice-led endeavors within musical theatre. Furthermore, he states that continued exploration "may deepen and enrich three domains of knowledge in musical theatre: pedagogy [...] process [...] and performance" (*ibid.*, p. 67, original italics). In Norway, an example of exploring the integration of the three genres can be found in research being undertaken by two doctoral candidates, Silje Aker Johnsen in 2016 and Njål Sparbo in 2014, at the Oslo National Academy of the Arts (Kunsthøgskolen i Oslo-KHIO).

The purposes of this article are the following: 1) to contribute to what we see as a gap in the study of educational methods used in the field of musical theatre; and 2) to elucidate how a deeper understanding of the discipline of musical theatre is important in order to raise the standards of current educational methods. This article is an attempt to initiate debate and discussion regarding methodological options when teaching within the disciplines of song and dance, as well as to encourage increased interdisciplinary collaboration within the musical theatre field.

One essential task is the development of a practical understanding of the concept of enactive cognition. Gallagher and Lindgren (2015) see this as an ever-changing and reactive developmental process involving "interactions between brain and body, and between body and environment" (p. 394). This description governs the way this term is used in this article. Drawing on Varela's (1991) work, Gallagher and Lindgren's definition of human cognition enables a theoretical framework suitable for this article.

The theoretical concept of enactive cognition must imbibe and inform the practical teaching methods utilized in the studio setting, thereby aiding students in strengthening their knowledge and awareness of how the body and mind communicate through self-discovery. This article provides preliminary suggestions on how this skill could be developed and discusses how to merge the song and dance arts in an educational context. Additionally, we suggest that more effective teaching methods can be developed through collaborative teaching. To this end, it is important to elucidate and discuss the use of the contrasting positions concerning the frequently used concepts of alignment and breathing in both song and dance instruction. In the ensuing discussion, we draw both on our own practice and experiences as singing and dance teachers in a musical theatre context and the existing literature and debates within the field.

Each of the domains of the knowledge of song and dance has very strong traditions in practical teaching (LeBourgne, 2015; Puttke, 2010). Methodological choices, terminology, master-student relationship, cultural understanding and expectations, contexts, and musical genres all influence our teaching. It is beyond the scope of this article to embrace all of these elements, but it is important to remember the complexity of teaching and the dynamic and influential processes that contribute to the teacher-student interaction (Fuchs 2012, p. 11, 2016, p. 200; Gallagher & Lindgren, 2015, p. 394; Thurman & Welch, 2000, p. xxiii).

Song and dance lessons and shaping of the triple threat

The majority of the singing lessons at MTHS take place in the singing studios with teacher-student tuition. The repertoire covers a wide range of styles in musical theatre songs, from the 1930s to contemporary songs. In the autumn of 2015, we introduced regular group classes during the semester; they consist of five to seven students, the singing teacher, and a pianist. In addition, the students take regular choir and smaller ensemble lessons during the three-year program.

In dance classes of 25-35 students, we tend to follow the traditional expert teacher and novice student style of teaching, relying heavily on the demonstration and copying of movement. In Elizabeth Gibbons's (2007) *Spectrum of Teaching Styles*, this is called "cued response" and lies at the teacher-centered end of the spectrum. Included in the objectives of this style are the precision of the student's response, adherence to aesthetic quality, and learner conformity (ibid., p. 79). Similar to the singing lessons, this is a continuation of the "master-apprentice setting tradition" in which we are trained as classical singers and concert dancers, as described by Luff and Lebler (Gaunt & Westerlund, 2013, p. 173). Jazz and ballet make up the core dance technique base, but students are exposed to various styles including Latin and Afro jazz, modern, contemporary, ballroom as well as tap and musical dance, which are essential skills for the musical theatre artist.

In developing and adapting the learning goals of the curriculum, we have utilized knowledge, not only from our training background and practices as teachers and artists, but also from different traditions and schools. This mirrors the words of one of the dance teachers quoted in Fortine et al. (2002, p. 176) who states that she combines and blends different influences in her teaching technique. This is of vital importance, as we constantly adapt our teaching to students of differing needs, experiences, and competence levels. As with many other teachers within the performing arts, the teachers at MTHS believe that their teaching is an embodiment of both teaching and artistic practices.

Musical theatre artists are expected to develop high levels of proficiency in dancing, singing, and acting and to be able to demonstrate a successful integration of these skills (Dunbar, 2014; Melton, 2012; Moore, 2008; Mourik, 2008). A three-day interdisciplinary workshop at the beginning of the students' first year of study serves as an introduction to and starting point for their journey through the process of becoming *triple threats*. This journey continues via other interdisciplinary projects during the first, second, and third years, incorporating both teacher-led and student-centered exploration. The students' final examination is a musical theatre production where their triple threat skills within the main and ensemble roles are assessed by external examiners.

Students are expected to weave the disciplines together, but they are often told that this implementation of integration is something they are expected to discover on their own. In one-on-one sessions, singing teachers often encounter confused, questioning students who struggle to combine singing and dancing. For dance teachers, this artistic struggle is a major obstacle to the learning process in the musical theatre class environment. It is mainly rooted in the fact that the students often experience that the instruction of the two skills are different, contradictory, and unsatisfactory when attempting to combine the two genres, especially in terms of breathing practices.⁴

⁴ It should be noted that associate Professor Matthew Edwards of Shenandoah University called our attention to this professional challenge in his master class at the MTEA Conference in Oslo on 26th August 2016.

The gap between theory and practice

Over the last decades, a large and growing body of literature has emerged surrounding the terms *embodied* and *enactive cognition*. This includes the research agenda of "cognitive psychology, neuroscience, artificial intelligence, linguistics, and philosophy" (Warburton, 2011, p. 66), which has largely positioned the mind as embodied (e.g., Bonde, 2008; Damasio, 1994; Gallagher, 2006; Gallagher & Lindgren, 2015; Johnson, 2007; Shapiro, 2011; Thurman & Welch, 2000). Fuchs (2016) elaborates and enlarges the embodied and enactive concept with his term "embodied interaffectivity": ". . . the partners' subject-bodies are intertwined in a process of bodily resonance, coordinated interaction and 'mutual incorporation' . . ." (p. 196).

There seems, however, to be a considerable challenge in putting this body of theory into practice. The pedagogical and practical methods at MTHS and, as far as we know, similar performing arts programs tend to foster and perpetuate the heritage of a traditional instrument-driven view of the individual. A possible reason for this is the separation of human behavior into the *physical* and *mental* (Damasio, 1994, 2010; Varela et al., 1991). In addition, the students' past and personal experiences and their preconceptions are influenced by a separation of humans into aspects of being either *physical* or *psychological*. Initial peer discussions revealed that both singing and dance teachers generally agree that body and mind work as an integrated whole; however, the methods used are strongly influenced by an objectification of the body and fixed binaries of mind and body, constantly cemented by the language and concepts used in the teaching, characterized as "Cartesian, dualistic language" by Fortine et al. (2002, p. 171). This has been a source of confusion and misunderstanding, and is, therefore, an important question to address.

To alleviate the gap between theory and practice, we have initiated collaboration with other singing and dance teachers through workshops and discussions. Two of the main questions for discussion have been the following:

1. What challenges do we face as teachers when we try to communicate within these two disciplines?
2. Is it possible to impart our knowledge within each field so that the student experience becomes less contradictory?

As a long-term project, we plan to improve teaching practice by encouraging a more profound and open interdisciplinary dialogue among the teachers inspired by the emerging trends within higher education in music and musical theatre programs (Gaunt & Westerlund, 2013; Mourik, 2008). These trends call for increased emphasis on practice-based research and collaborative teaching to eliminate rigid binaries between theory and practice and the traditional divisions between the disciplines (Gaunt & Westerlund, 2013, p. 4). This ongoing investigative process of teaching methods is also inspired by the methodology of action research (McNiff & Whitehead, 2010, p. 2). It is an attempt to hold ourselves accountable for what we are doing, to improve our own practice and, consequently, to improve the students' learning process, and to prepare for future research projects.

Methodology

The primary purpose of this article is to identify a better way to bridge singing and dance teaching methods. This arises from educational experiences concerning the above questions, and the frequently used concepts of alignment and breathing are useful points of departure. To begin this process, it has been important to investigate the existing body of literature and research to identify patterns, constructs, and trends; to locate our personal experiences within theoretical frameworks; to discover any gaps within

the field; and to critically engage with the material that pertains specifically to our context (Arthur et al., 2012; Cohen et al., 2011; Punch & Oancea, 2014; Robson, 2011).

The discussion is further elucidated by retrospective examples from three educational situations: Example 1) a singing lesson involving a singing teacher and a student; example 2) a rehearsal situation in which a director and a singing teacher work with a student on a musical theatre production; and example 3) an observation from a dance class at the University of Gothenburg. The examples were analyzed and are used to elaborate on the discussion of alignment and breathing. The selected examples highlight typical situations experienced in our present context.

Relevant theory within the paradigm of embodied and enactive cognition elucidates and underpins the discussions, examples, and concepts used herein. The students who are cited as examples in this article and used to describe and illustrate our teaching practices and experiences have given their consent for this purpose. They were also given the opportunity to read the finished article or the parts of the article that pertained to them prior to submission.

Setting the scene - Discovering habits

Subconscious and ingrained habits are common obstacles experienced when learning song and dance skills. Habits include what is referred to as implicit memory, as addressed by Fuchs (2012):

Through repetition and exercise, a habit develops. Well-practiced patterns of movement and perception become embodied as skills or capacities that we apply in our everyday lives as a matter of course [...] implicit memory does not represent the past, but re-enacts it through the body's present performance (pp. 10-11).

According to Heirich, habits are both mental and physical in character: "an acquired or learned response to some stimulus" (2005, p. 2). Some habits encountered in our teaching practice include students contracting their necks when reaching for a high tone; the over-tensing of knees in preparation for singing; the tendency to sink into their backs or not pull up on their supporting leg in kicks and turns in dance classes; and even discouraging themselves with negative thoughts ("I will never manage to belt the high notes!") before a performance. One underlying reason for the habits may be the students' strong wish to reach the goal and to improve quickly, a trait termed end-gaining by the developer of the Alexander Technique, F. M. Alexander (1869–1955) (Alexander, 1932). We will address this concept below.

Habits influence the way the students think and, consequently, the way they use their bodies (Heirich, 2005). For example, if a singer is told that s/he should "breathe with their stomach", s/he might become too preoccupied with the movement in the lower abdominals and forget that breathing depends on flexible movement in all the ribs. *Body mapping* is a term used to describe the mental representations of how one experiences one's body (Malde, Allen, & Zeller, 2013, pp. 2-3). In this article, we see this as part of one's automatic and ingrained habits. Habits are often irresistible by nature and seem almost impossible to change. When making body maps, humans create images of their bodies, and these maps are used to guide motor behavior. Awareness of habits and body maps that interfere with the function of song and dance is, therefore, a necessary part of the students' learning process. McIlwain and Sutton describe these points of interference as "silent zones," which form hurdles to skill acquisition: "the first challenge is to realize that the *silent zones* are there" (2014, p. 659, original italics). Thus, the students need to identify their own habits in order to eliminate non-expedient habits and replace them with more expedient ones.

This can be illustrated briefly by example 1: During one of his weekly singing lessons, a first-year male student was made aware of one of his habits. He had a strong tendency to raise his chest and chin to reach for the high notes. At the same time, he pushed his hips forward and shortened his back. He believed he had to lift himself to produce a good sound and to communicate the intention of the song to the audience. This habit and way of thinking was so ingrained that it also occurred in his dance classes where he repeated the habit as a means to activate movement. Consequently, this gave his voice an artificial sound and contrived pitch. To counteract this, the singing teacher encouraged him to trust in and listen to his natural speaking voice by forgoing this habitual tendency. Frustrated, the student stated: "But the dancing teacher always tells me to 'hold my center,' and to accomplish this I have to raise my chest!" This was the student's interpretation, physical manifestation, and understanding of the word "center" to aid in correct alignment and placement in dance.

Defining key terms

Alignment is a commonly used term in the dance teacher's vocabulary referring to the students' body balance and how the different parts of the body are related to each other. *Placement* is a term used interchangeably with alignment. These terms are used to create the line which describes the physical manifestations that the dancer's body may adopt and is central to the dancer's presentation (Ellison, 2003, p. 93). Singing teachers are also engaged in alignment and placement, though the term alignment is not widely used among teachers, and placement is often used in the context of "placing the tone" in the chin to accomplish a more focused tone (Melton, 2015, p. 4). In this article, we use these terms to refer to body balance rather than tonal placement.

Singing and dance teachers use different approaches to address alignment. The term *support*, used to describe the airflow when producing sound, and the term *posture*, used to describe alignment and balance, are obvious words to discuss considering that they have caused so much confusion among the students. Discussions between the singing and dance teachers revealed that the words were used frequently in both dance and singing classes. "The student has to strengthen the support muscles," "breathe with the stomach," or "release abdominal muscles" were common statements from the singing teachers. The dance teachers might say, "He needs to strengthen his core muscles and center for better posture." The meaning or interpretation of these words will differ from one subject to the next, and their inherent and embodied meanings vary greatly from one teacher to another, especially regarding how to teach or how the words are implemented in teaching.

Breathing is an important element in both song and dance and has long been a source of controversy and discussion within the teaching tradition of song. There is considerable research available on breathing methods describing different breathing patterns in vocal production (LeBorgne & Rosenberg, 2014, p. 26). Many teachers and researchers point out that in the natural human ability to breathe and make sound, there seems to be a commonly held belief that breathing is, or should be, something the singer needs to manipulate in order to sing. This is often the starting point of voice training and commonly consists of the extensive use of breathing exercises. Many techniques and teachers are concerned with the extension of the ribcage (Brown, 2008; Edwards, 2014; Sadolin, 2012), while others focus more on the activity in the abdominal muscles when working on what is traditionally referred to as vocal support (Melton, 2012). This dichotomy is possibly influenced by Vennard, who recognizes three types of breathing: "chest, rib and diaphragmatic or abdominal" (1967, p. 20). The natural ability to breathe is also underpinned in dance, whereby tension in the body is a by-product of holding one's breath, which restricts the natural flow of movement. The inherent pulse of breathing leads to an organic movement flow (Ellison, 2003, p. 61).

Dancing with voice

A general theme in the explored literature on both song and dance is finding a better way to bridge the gap between teaching methods. One of the pioneers who strongly advocates for the integration between the fields of song and dance is Joan Melton (2012), who describes alignment, in the context of a balanced body, as the starting point for both dancing and singing: "The body is designed to move, so alignment is not about being in any one position; rather, it is about moving with ease and using the body with maximum efficiency" (2012, p. 3). Melton has evolved a training paradigm for actors and singers, underscoring the benefits of voice training which includes movements and exercises from yoga and Pilates. This merging of song and dance occurs not only in an intuitive way, but also through practice. She stresses that,

... with performers in musical theatre, physical theatre, opera, and even some dance forms now being expected to move and use voice simultaneously, phrasing, along with the body's natural ability to multi-task, would seem to suggest the possibility of a new training paradigm (Melton, 2012, p.1).

In light of this, the task of finding either good balance for dancers or good breathing for singers must be seen within the context of alignment (Pulliam, 2009). Despite the need for freedom and flexibility in dance, many students get the impression that alignment and placement need to be something rigid, something that is *held*. This is likely a response from the student who repeatedly hears "hold your center" from the dance teacher. Pulliam states: "When the spine is allowed to lengthen without force, the rib cage, diaphragm and abdominal wall are free to function fully" (Pulliam, 2009, p. 60). This can be described as *dynamic alignment*, a term first coined by the dancer and teacher Rudolf Laban (1879-1958). This concerns the fact that the body is always malleable, as is the relationship between muscles and joints (Melton, 2015, p. 4).

Let us return briefly to example 1: The habit of lifting his chest and raising his chin was the way the student reacted to a stimulus ("Now, you are going to sing."), and it felt right and natural to him. As described in the section above, the automated pattern of holding his center influenced his dynamic alignment and became a part of his body map, which corresponded to his interpretation of the dance teacher's instruction. As Thurman and Welch (2000, p. 353) ask: "Is the teacher likely to know what images the students are creating as their bodyminds make sense of the terms and then translate them into action?" This example clearly indicates another challenge when merging song and dance—that misinterpretations might occur when singing and dance teachers have to learn about each other's work through the students' interpretations. As a result, separation between the subjects is maintained. In order to describe and, hopefully, understand the reactions of the student in example 1, it is necessary to call attention to the concept of end-gaining, which is, more or less, a "universal habit" (Alexander, 1932, p. 74).

End-gaining, a "universal habit"

End-gaining implies a strong wish to reach the goal, be it to sing a beautiful tone, dance a difficult combination of steps, or simply cut bread or write at a computer. De Veer (2009) describes it as follows:

End-gaining refers to hyper-focus on the achievement of a goal at the expense of noticing the means whereby we achieve it. When we are so focused on the end we hope to reach, we revert to familiar habits of use to get us there as quickly as possible. The result is often less than desirable (De Veer, 2009, p. 32).

In example 1, the male student wanted to reach his goal—to sing the high notes in the best possible way. The singing teacher observed that the means by which he reached his goal were not efficient; in effect, they were the opposite of what he needed to do to achieve his goal. In the dance classes, this tendency resulted in a strained, tense, and contrived movement quality that did not reflect the student's actual talent or potential. After this habit had been brought to his attention, and upon reflection, he described the process of "holding his center" (lifting his chest, etc.) as a necessary part of his preparation.

Example 2 illustrates how end-gaining affects the breathing mechanism. A student was struggling to meet the demands of the stage director who wanted her to sing louder. "Why don't you use your support?" he asked. "I do!" the student answered. She was trying to "do" everything she had understood about breathing, which manifested itself in her holding her ribs out and pushing on her abdominal muscles. She described the process as "supporting" the tone all the way, trying the hardest she could to reach the goal, and to "please" the director. However, her voice was still not very strong, and transition between the registers was difficult. Dimon (2011b) maintains that this end-gaining creates an obstacle to learning and causes an imbalance in the vocal outcome:

Breathing works as a whole, and trying to manipulate or control specific components of breathing has little real meaning if we lack a positive understanding of how the system is meant to work as a whole, prevent interference with this, and restore normal breathing based on this total understanding (Dimon, 2011b, 23-24).

To help the female student improve her performance, the vocal coach tried an indirect approach that did not focus on the breathing. Instead, the student was asked to be aware of the consonants in order to project her voice out into the room and, at the same time, be aware of her body. The awareness included how she balanced her weight on her feet and the relationship between her head, neck, and back. She was also told to focus on the narrative, and to direct the phrase towards certain main words. Allowing this to happen, the student experienced that the voice became more stable and powerful. When asked to describe the process, she said, "It was really hard work," and placed a hand on her abdominal muscles. "Did you focus on what the abdominal muscles should do?" asked the coach. "No," she said. "That just happened".

This case clearly demonstrates that end-gaining often occurs during instruction when both the teacher (or director) and the student are preoccupied with reaching the goal. The student was so anxious to achieve the goal that she held her ribs out, a familiar habit, and, as a result, she was out of balance. Her automated motor behavior or habits were not expedient, and her hard work on support was getting in her way. Mirroring the concepts of enactive cognition (Gallagher & Lindberg, 2015) and implicit memory (Fuchs, 2012), Dimon (2011) argues for a deeper understanding as to how mind and body work during activity, and how they are completely intertwined. He emphasizes that it is impossible to isolate actions and muscles, for example, singers' breathing, without considering the global muscular system of which breathing is a part. According to Dimon, we cannot separate the workings of this system from our thinking process:

When we have the intention of making a sound, the in-breathing tendency is maintained as a reflex form of controlling exhalation. This enables us not to exhale the air all at once but to regulate the flow of air, which is coordinated with the closure of the vocal folds to produce a sustained tone. All this happens automatically when you have the intention of making a sound because the larynx and breathing are designed to work together for that purpose, just as they are designed to coordinate automatically for the purpose of swallowing or holding our breath (Dimon, 2011, p. 47).

Moreover, example 2 is in accordance with Oren Brown (2008) who claimed that singing techniques are to be found within the singer himself and that the skill of singing is a matter of non-doing: a letting

go of tension and thinking of the desired action. Since voice responds to the mental concept however, you must think before you can act, but that thinking should not inhibit a free and natural physical response (2008, p. 15).

Example 3 gives a good illustration of how focusing on the means leads to a dynamic alignment. In 2016, one of the authors observed a jazz class at the University of Gothenburg. The author observed a student discovering how her tendency to end-gain disturbed her alignment and the means by which she reached her goal. The students were practicing a combination ending with a grand battement.⁵ After some attempts in front of the mirror, struggling with the combination of steps and alignment, the teacher covered the mirrors. Doing the combination and the grand battement again, without seeing themselves in the mirror, a student commented, "This time I did not focus on the height of the battement, but on what I actually did and how it felt. I was not busy pleasing my own image, trying to get the battement as high as possible." It seems the student was so busy attempting to "please" her own reflection in the mirror that she forgot the process whereby she reached the goal. A simple action like covering the mirrors helped the student become more aware of the means, and she strove less to reach the goal. Thus, her learning was based on awareness and self-reflection, mirroring the work of Dimon (2003, p. 1) who claimed "awareness and attention to oneself as the most crucial element in learning".

The examples above show how a tendency to focus excessively on the goal might be a hindrance to good alignment and breathing, and how end-gaining is an impediment to enactive cognition. In the following, we will discuss how specific methods within the musical theatre context contribute to preserve an instrument-driven view of the student.

Separation into schools

Many schools and methods ascribe either physical or mental approaches to learning, and thus continue to separate mind and body. A recent example of this mental approach to learning can be seen in the work of Brown, Roediger, and McDaniel (2014) who continually stress the cognitive process in education (p.x). Cognitive strategies to overcome stage fright or to develop expedient rehearsal strategies are also used in the education of the performing artist by using strategies from sports psychology (e.g., see Gallwey, 1986).

The discipline of singing also has a long tradition of being divided into "schools" with different physical approaches to breath management and body coordination coming from classical traditions such as bel canto. Over the last decades, many methods have been developed to provide the needs of contemporary popular styles in musical theater and pop music, such as Jo Estill™ (Europa), The Voiceworks® Method and Fitzmauritz Voicework® (both USA), Speech Level Singing™ (USA/UK) (LeBorgne, 2014, p. 25) and Complete Vocal Technique (Scandinavia) (Sadolin, 2012).

These methods, albeit unintentionally, further the concept of end-gaining and an instrument-driven ideal when the teachers separate the different elements when teaching the art of singing. For example, breathing is perceived as an isolated phenomenon as breathing exercises continue to form an integral part of the teaching experience. Breathing is seen as paramount and a premise for all vocal activity; consequently, some teachers and schools tend to try to fix a breathing problem (for example, an airy voice, too little air to hold a phrase, or a compressed voice) by pushing on the lower abdominal muscles or by expanding the ribcage. All of the above teaching methods are reliant on anatomical referencing.

⁵ The grand battement is a high kick with the working leg held straight (Ellison, 2003, p. 61)

The need to understand and explain the complexity of our instrument (how the body functions anatomically) in both dance and singing, as well as to describe and understand every part of that instrument, is crucial. However, perhaps the most serious disadvantage of this anatomic approach is the problem of putting the pieces back together and not considering how the system works as a whole. Puttke (2010, p. 109) sees this as "a fatal confusion" whereby the individual parts of the body are put back together like "some sort of human jigsaw puzzle" after a process of intense training and repetition of separate elements, resulting in a supposedly better dance product. "For the whole is not equal to the sum of its parts," he says (p. 109, original italics), meaning that the understanding of the instrument must also include enactive cognition. Taking this into consideration implies that trying to solve the problem where it occurs is counterproductive, as in example 2 in this article where the female student was end-gaining to "solve" the problem. The director could not hear her voice, and the meaning of the song disappeared; as a result, she end-gained by pushing her ribs out, using her old habit of trying to control the breathing coordination.

Dimon criticizes singing teachers in general for teaching ineffective ways of controlling the different parts of the breathing (for example, by holding the ribs out or pushing the abdominal muscles). He emphasizes that natural breathing is a consequence if mind and body are coordinated:

In order for the breathing to work properly, it is crucial that the head balance freely on the spine and the trunk lengthen and widen [...] In this sense, proper postural support doesn't just help us to breathe better. It would be more accurate to say that the lengthening, expansive support of the trunk is the primary condition on which breathing depends (2011b, p. 21).

Similar to Dimon's ideas, enactive cognition explains how human cognition and the understanding of concepts are perfectly interlinked with bodily and affective processes. These processes shape the way one perceives and interacts in the world. According to Gallagher and Lindgren, our understanding of the world is continually constructed through bodily and affective processes: "walking, moving, gesturing, reaching, grasping, and interacting with others" (2015, p. 393).

Self-discovery

The development of enactive cognition is the realization of the kinesthetic sense, together with an awareness of how we think. The "perceiving of self," the process of body mapping, is also known as proprioception, kinesthesia, or the sixth sense (Brown, 2008, p. 21). Leborgne and Rosenberg (2014) ask the voice teacher to be aware of impractical habits that need to be unlearned. Accordingly, they raise questions concerning whether the teaching methods commonly used are adequate:

Voice teachers and voice pathologists often address deviant posture and alignment when working with students [...]. However, these professions typically do not receive formal training on how to complete general physical assessment of posture and alignment. The research dedicated to the impact of posture and alignment on the singing voice is limited (Leborgne & Rosenberg, 2014, pp. 14-15).

We argue that the students need to strengthen their knowledge and awareness of how body and mind communicate through the process of self-discovery. In accordance with Heirich (2005) and Dimon (2003), self-discovery must include awareness of subconscious habits.

In singing, as well as dancing, there has long been a need for complementary methods to enhance the student's road to self-discovery. Methods, often known as "somatic education" (Fortine et al., 2002), such as Feldenkrais, yoga, Alexander Technique, Pilates, and Timani, have been present in higher performance education for singing and dancing in Norway in line with international practice. Despite the extent of the use of these methods, it seems that they have hardly influenced the methods of teaching

in either singing or dancing (Dayme, 2009, p. 3). Fortine et al. (2002) studied how the Feldenkrais method informed professional and contemporary dance technique classes. One of the findings was that the integration of this method contributed to a stronger awareness of how the dancers perceived themselves and their movements—their procedural knowledge developed. Advocates for taking somatic approaches to learning into the dance studios argue that “somatic learning stimulates the kinesthetic sense, relying on physical sensation as a source of learning and expression” (Caraker, 1998).

On the other hand, physical sensation alone can be an inadequate tool when learning through self-discovery. This can be illustrated briefly by turning again to the example in the singing studio. When the male student became aware of his habit and implicit memory (shortening his back and lifting himself from the floor), and tempered both the lifting and his wish to please the teacher, the student said, “But now I feel like a sack of potatoes. All out of balance and leaning forward!” His proprioception and new body map told him that this was wrong. He perceived the inhibition of his ingrained habits and the new way to use himself as incorrect, according to what he thought he had to do to accomplish his task. The singing teacher noted, however, that the sound that was produced was less strained with a richer timbre, and that his overall expression was more convincing, despite how he felt. The mirror image showed that he was aligned and did not look like a sack of potatoes. This shows a gap between the messages his brain was transmitting and what his body was actually doing. If the student were to rely purely on his physical sensation, he would be on the path to failure; his reliance on this feeling (“a sack of potatoes”) would probably have led him to straighten up again, returning him to what he considered as familiar and known.

This example indicates that feelings and physical sensations are unsatisfactory tools when it comes to changing ingrained and inexpedient habits, and more importantly, when brought to a conscious level, implicit memory and habits are changeable: “the concept of body memory does not involve a deterministic stance but is open to individual creativity and social change” (Fuchs 2016, p. 204). Taken together, the examples discussed in this paper indicate a need for new methodical options with a fundamental understanding of enactive cognition and the interactions between brain, body, and environment as a basis.

Inclusive awareness

Is the solution to the habit of end-gaining, then, to overlook all ambitions and give up on trying to reach a goal at all? As we have seen, if we constantly confirm our motor behavior without regard to how we execute action, habits remain subconscious and, therefore, difficult to grasp. It is important to have an idea of what we are trying to accomplish. Thus, in order to achieve a positive result, we also need to focus on the actions leading us there and the means whereby we achieve the goal. Thurman (2000) states, “Brains learn by taking target practice, and bodyminds have to miss bull’s-eyes in order to find them” (p. 196). The educational process is therefore, to observe, relearn, find new pathways, and create new maps. McIlwain and Sutton (2014) see this as maintaining a mental connection and relationship with the body. This constant and flexible overview of the body is a resource that can be nurtured through learning (p. 656). In the relearning process, the concept of inclusive awareness may serve as a way forward:

Inclusive awareness is the skill of perceiving self and world simultaneously. It includes your kinesthetic sense: it will help develop your kinesthesia, and kinesthesia will help develop your inclusive awareness. Inclusive awareness includes information from all of our senses: seeing, hearing, moving and so on. [...] Some of us simply need to expand this skill, and others need to relearn it. The reason we say, “relearn” is that most of us had this skill as children. So the

good news is that the skill of inclusive awareness can be relearned and refined. (Malde et al., 2013, pp. 8-9).

By way of illustration, when the student in example 3 was expanding her attention (inclusive awareness) and focused more on the means whereby she reached the goal (the grand battement), rather than trying to get the battement as high as possible, she reported that the movement became easier to perform. Replacing end-gaining with inclusive awareness was also a more expedient solution in example 2: The student, trying to meet the demands of the director, experienced that singing was "hard work," but, by submitting to her internal processes, her environment, and the text, the "hard work" in her abdominal muscles, as a means for vocal production, was an indirect result of inclusive awareness.

Concluding thoughts - Learning to learn

In this article, we have argued that the main objective in merging the fields of song and dance, and, at the same time, making the art more accessible to the student, is to find a common base between the arts of singing and dancing. It is our hypothesis that increased interdisciplinary collaboration and dialogue between the two fields, whereby the singing and dancing teachers work together in the same classroom setting, will contribute to a more consistent understanding concerning the concepts of alignment and breathing. We suggest that one of the keys to merging song and dance lies in the skill of increased inclusive awareness of mind, body, and surroundings. Only through the targeted developing of this awareness can we enable students to juggle several skills at the same time and at a high level. This is not in the sphere of a new "school," in the traditional sense of specific exercises or teaching plans, but in terms of a better incorporation of the concept of enactive cognition and the importance of self-discovery for each student.

As we suggested in the introduction, enactive cognition, as a whole, is not new to either singing or dancing teachers, and the research we have focused on in this article takes this fact into account in several ways. Nevertheless, it is our experience that we fail to bring the profound knowledge of this forth in our teaching and into our studios. Dimon (2003) advocates that we do not take the process of learning skills seriously: "We tend to be so busy judging their performance that we forget to question the legitimacy of the methods being used to teach them" (p. 28).

"I did not try hard enough" is a common phrase in our culture, and to try hard is a highly valued quality within the arts of song and dance. The myth that learning to dance or sing should cost you blood, sweat, and tears is still very much alive (Puttke, 2010, p. 106). Dimon (2003) argues that "the problem of trying too hard" interferes with the process of learning a skill. If the teacher and the student are too concerned about reaching the goal, whether it is to perform music or learn to climb or play tennis, the student loses the opportunity to explore and discover the means whereby one reaches the goal, and the profound way of learning a new skill may be lost (Dimon, 2003).

Despite the preliminary suppositions of this article, the examples discussed would seem to indicate that our conscious and subconscious habits are among the greatest obstacles to learning. This would include the way we do things, the way we think, and the way we move and act. The problem with habits is that we are seldom aware of how powerful they are. Teaching needs to go beyond the espoused teaching traditions in both song and dance that prescribe how to teach and what to teach and to determine which elements are regarded as important and which are not. As we see it, the teaching of "support" and "breathing techniques" seems to maintain the gap between teaching traditions within the field of song and dance.

MTHS sees this as a worthy field of study and has embarked on this process, intent on changing some of the concepts used in our teaching, increasing collaborative teaching, and furthering research projects that underpin the growing discussion.

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