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Dance-making for adults with Parkinson disease: one teacher's process of constructing a modern dance class

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Within the last decade, research has supported the use of dance for people with Parkinson disease to improve health and wellbeing. While the majority of study findings have been positive for a variety of psychophysical outcomes (gait, mobility, and balance confidence, for example.), little has been reported in regard to the process of selecting class content. This paper describes one teacher's process of action research in developing a program in modern dance for a small group of adults with Parkinson disease and their spouses. The program was generated as collaborative pilot research to identify variables within modern dance that could be more rigorously examined and applied in future studies. Here the dance teacher describes her rationale and outlines the components of the class structure as a means of stimulating dialogue on a designing community-based dance curriculum for this population. Generating such dialogue will contribute to the developing body of literature in dance curriculum research.

Keywords: dance; Parkinson disease

Background and purpose

Each year, 115 per 100,000 of the adult population between the ages of 50 and 99 are diagnosed with degenerative, idiopathic Parkinson disease (PD) (Bower et al. 1999). The clinical signs of PD – bradykinesia, rigidity, resting tremor, and postural instability (Morris et al. 1995) – worsen as the disease advances. Normal movement timing is altered, at times slowed down or sped up, or interrupted by episodes of freezing. The automatic flow of everyday life becomes increasingly challenging, and people are forced to rely on conscious attention and other cognitive control strategies to sustain the simplest of functional actions, such as rising from a chair, walking, and turning (Smith and Batson 2010). Robbed of spontaneous expression of normal movement, persons become habituated to increasingly smaller spheres of activity and nonuse (Hirsch 2009). As bodily and spatial usage shrink, risk of physiological deconditioning increases, leading to increased incidence of falling and other health problems (Bloem et al. 2004). Interestingly, the motor program does not appear to be 'lost' in early-to-middle stage PD: people can still move 'normally' when cued (verbally, or through visual or auditory cues). The intention to move is

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still intact, but the ability to activate a sequentially flowing motor is impaired (Baker, Rochester and Nieuwboer 2007). The question becomes how to awaken the brain affected by Parkinson's in such a way as to evoke and sustain the ability to move spontaneously (automatically, on one's own), not only when prompted by conscious cueing strategies.

Dance has shown promise as a rhythmic, enjoyable, social, and cost-effective approach to helping adults with PD move more easily, and has other associated cognitive and psychological benefits (Marchant, Sylvester and Earhart 2010; Hackney and Earhart 2010; Ying 2010; Westheimer 2008). Through the exploration of the sheer physicality of the body and its capabilities, dance empowers people to 'own' their physical selves by communicating more fully with self and others (Stevens and McKechnie 2005). Dance also offers an image of the 'possible' (Chappell 2010, 43). Dance is conceptualized as human behavior that is 'composed of purposeful, intentionally rhythmical, and culturally influenced sequences of non-verbal body movements and stillness in time and space and with effort' (Hanna 2008, 492). Dance is a powerful mode of non-verbal communication (Stevens and McKechnie 2005), intertwining cognition, emotion, and kinesthetic senses through the playful engagement of the total moving body (Hanna 2008; Winters 2008). Other common activities (such as sports, leisure activities, physical occupations, and functional movement) also integrate rhythm with spatial patterning and body part synchronization into whole body coordination (Brown, Martinez and Parsons 2006). Dance, including modern dance, is distinguished from both functional and athletic activities in that the 'goal' of movement is the deliberate and purposeful expression of bodily movement (Stevens and McKechnie 2005; Longstaff 2000).

Through scientific research, clinical trials, and social networks and support groups, people with PD are becoming more aware of the benefits of dancing. Community dance programs are proliferating and commercial exercises are being endorsed by focused groups and organizations (Parkinson Disease Foundation 2011). Scientific research and clinical trials have focused on various forms of dance, with positive results for the majority of participants on a number of standardized outcome measures (Dance for PD® 2010). Some examples of these positive outcomes include static balance and balance confidence, gait, and freezing episodes from a trial of tango (Hackney and Earhart 2009, 2010), multiple psychophysical improvements on generic health-related quality of life surveys through modern dance (Ying 2010), and improvements on measures of disease severity and mobility through contact improvisation (Marchant, Sylvester and Earhart 2010). When initiating or collaborating in research, dance educators have these and other scientific reports to consult. While the bulk of researchers have named the type of dance, and described the dosage and other aspects of the experimental environment, the actual class content has not been well described. When embarking on scientific collaborations, dance teachers may be overwhelmed by the spectrum of movement options and features – the type of movement, sequencing and pacing, music choices, and cueing, to name a few considerations in class design. Due to the nature of scientific blinding, principal investigators cannot lead dance teachers in the selection of the material, and can only provide guidelines in terms of safety. This demands that dance teachers (who may be working with this population for the first time) utilize their own resources and other scant video footage to determine the best way to design a class that allows for full participation within margins of safety.

In this paper, a process is described for designing a modern dance class for adults with early-to-middle stage PD. The context for the class was a collaborative research project designed to pilot the class content over a two-week (daily) period, to determine feasibility of the structure/content for prospective studies. As an example of action research (Lewin 1948; Reason and Bradbury 2001), the project provided the dance teacher with a means of honing her own inquiry into the process in dance making for this specialized population. In dance scholarship, curriculum content is under-researched (Blumenfeld-Jones and Liang 2007). What constitutes curriculum research – its formulation, deliberation, design, etc. – is more complex than convention suggests in terms of the goals, overall plans, and outlines (Blumenfeld-Jones and Liang 2007). This paper offers one teacher's example of investigation into this question with a special population, with appropriate guidance from the research team. Below, Soriano speaks in her own voice in describing her rationale and structure of a modern dance class content for this population. Since the entire process evolved from Soriano's discretion, the aim of the paper is to provide dance educators with an overview of one modern dance teacher's decision-making process. As a collaboration between science and the arts, the process proved to be an invaluable experience in articulating a malleable curriculum that could assist other dancers in formulating new program designs for this population. Below is the dance teacher's narrative of the process of conceiving and executing the dance class specific to this research project.

Formulating a rationale

In entering into this project, my knowledge of Parkinson disease (PD) and its devastating effects on mobility was superficial. As someone who has routinely taught able-bodied dance students in undergraduate college dance programs for the last nine years, I was accustomed to designing dance classes that would challenge the limits of physicality. I commonly ask my students to exploit complex movements combining full-range body relationships in leaping, rolling, and counterbalancing suspensions, both alone and with partners. As I had never taught dance to people with PD, I wondered if my inexperience or lack of scientific background would inhibit my ability to work with this population. In preparation, I read research reports citing the benefits of dance, but realized that specific published information relating the exact details of movement content was difficult to find. I could infer the kinds of steps and movements in select research on tango (Hackney and Earhart 2009), but actual movement content for modern dance was not explicit. My collaborator on this project, a physical therapist who had experience working with people with Parkinson disease in a rehabilitation context, encouraged me to trust my general knowledge and experience of the body as a dance instructor. I visited YouTube videos, but they mainly offered testimonials from class participants, or snapshot glimpses of class activities with few statements regarding the rationale for the content. My colleague's guidance on class structure and content was purposely limited to issues of safety so as not to bias the study. Her suggestions were obvious to anyone instructing exercises to novice elderly: namely, to avoid potentially injurious movements, such as abrupt, impulsive movements of the neck and spine, or other jerky dynamics and quick transitions that might severely perturb balance. As I contemplated the scope of class exercises, I naturally worried over how my choices would best serve this population. Certainly, dance and Parkinson disease is not a

new partnership, yet not knowing the exact nature of curriculum content previously utilized, I wondered what contribution I could make that would build on previous research while benefiting the class participants.

Dance and Parkinson's disease is a growing field of study with dance and Parkinson's certification programs offered at places such as the Mark Morris Dance Group in Brooklyn, NY. Without this certification, could I create a valuable and stimulating class? Ultimately, as I continued to read more about the overwhelming effects of PD on the body, I realized that I was in a conundrum on another level: I was on my own, knowing full well that excessive class preplanning was not feasible in the short amount of time I had to prepare for this study since I would not know the participants' level of function until the day they would arrive for the first class.

With this ambiguous beginning, I needed to trust my abilities and listen to the needs of my students and their bodies in my class as I would in any class I teach. As my physical therapy collaborator trusted my expertise as a dance teacher in this study, I should also do the same. I realized that my aims should at once be solid enough to provide a coherent structure for participants who had never danced, and, at the same time, fluid enough to allow for changes in content as needs arose. The participants allegedly had lost the ability to move easily and freely in their daily lives. I hoped that through dance, the structure and content of the class could foster the ability to generate expressive movement (Love 1997). This ability to generate movement on their own was to be the hallmark of my method, enabling the participants to find new expressiveness and not merely copy movement vocabulary (e.g., learn prescribed steps).

In this vein, this voyage of curriculum discovery – embarking on planning and executing the class structure – grounded the experience within the scope of action research (Lewin 1948). Action research is a process-based approach to investigating educational issues in which the researcher examines his/her own practice systematically and carefully (Ferrance 2000). Rather than guided from the outset primarily by theory, action research allows practitioners to address those concerns that are closest to them in an ongoing manner of personal and collaborative inquiry. Through a cycle of posing questions, reflecting on data gathered, and deciding on a course of action, teachers can exert influence and foster change in educational practices (Ferrance 2000). Action research assumes that teachers will be more effective through examining participatory, democratic collaborations where reflective inquiry is integral to the process (Watts 1985). Through the inter-relationship of action and reflection, theory and practice, practical solutions are generated that address issues of pressing concern to people that might ordinarily not be uncovered (Reason and Bradbury 2001).

At the outset, three general threads of inquiry guided my process. First, what class environment or atmosphere would nurture a sense of self-confidence and self-efficacy in ways that would foster bodily expression. This was of primary importance. In modern dance, the authenticity of the movement phrase (how and in what way does the dancer bring full presence and commitment to executing the phrase) is as important – if not more important – than the steps themselves. If the steps are too complex, they hinder the generation of authentic movement. In my general research about PD, I learned that step complexity could easily prove to be a linchpin in the process of learning. Thus, it was important for me to engender confidence and ability at every step of the way and to have these newcomers to modern dance not get bogged down by trying to 'copy' the teacher.

The second thread had to do with choosing the movement content. My second question was, what movements would be most accessible, enjoyable, and memorable? My challenge was to provide ample material to investigate and retain. This was easier in that I knew I could rely on rhythmic structures (through counting, vocal emphasis, or music) to help support movement learning, and that repetition with and without variation would help also provide a scaffold for movement learning (Enghauser 2007). Thus, the third thread dealt with timing issues: how would I work within the one hour timeframe with the pacing and rhythmic structures of each segment to best facilitate mobility and not be unduly complex or fatiguing? Within the hour, several safety-related questions needed to be considered: how much dancing could they do; where would I embed rest periods; how would I explore what dance can offer but not fatigue them or challenge them beyond their capabilities?

Since dancing was an entirely new option for everyone in the group, I wanted to make sure that movements were demonstrated in ways that would help them focus and understand more readily where to initiate from in the body, or what body parts played a more 'active' role in a given exercise. I knew I needed to adhere to one basic premise: go slowly at first, building consistency of material from simple-to-complex through repetition and reinforcement. While this sounds a wise strategy for any beginning modern dance class, an example of how this might have a different connotation for those with PD is in the choice of tempo. For me, it meant introducing new content at a considerably slower tempo than for the healthy young dancers I was accustomed to teaching. Slowing the tempo down considerably helped promote a sense of safety and helped them master material before they were able to 'dance' it at faster tempos.

In following the first thread of my inquiry, I laid the groundwork for a class atmosphere that would be most conducive to fostering confidence in movement learning, regardless of movement choices. I strove to create a class environment (atmosphere, language, movement choices) that first would minimize fears the participants might have about their limited ability to dance (either in spite of or because of their disease). My basic philosophical (and ethical) premise is that everyone has the potential to generate interesting movement that can be called dance. Although I was working with a community that most likely would not conceive of themselves as 'dancers', I wanted to challenge such a notion. What movement experience could I offer them that would convince them that they, too, were capable of being physically expressive and creative movers? To my mind, the class environment and structure should simulate the approach I routinely share with my undergraduate dance students, in terms of the overall organization and sequencing. The difference here was that the participants with PD came into the study not only without previous dance experience and knowledge, but also with even less confidence about their ability to move. I needed at once to provide a traditional dance class structure and at the same time foster a non-threatening and non-judgmental class environment as possible. I wanted all participants to feel as safe and free as possible to move with others who may or may not have equal challenges. Intellectually, I knew, dance was not limited to healthy, youthful bodies alone, but the adults who enrolled in the study were unaware of this. I sought to reinforce several 'mantras' in many interchanges with the participants – both within the class and in casual conversation before and after class and during class demonstrations as well – affirmations that I believe are critical for fostering self-confidence and empower-

ment in anyone entering into dancing where full body expressiveness readily is called forth:

- Dancing is empowering. Therefore, if you practice, it can engender a sense of self-ownership and agency.
- All of you are capable of generating your own, authentic movement style and experiences that are unique and interesting.
- Therefore, by inventing movement and sharing it within the group, you will become empowered and invest more deeply in the class experience.

I wanted the participants to feel encouraged, excited, and confident about the strides they were making in class. My job was to be supportive of their successes, and yet mindful of moments where they may have difficulty executing a certain step. I knew from teaching college students that the act of learning the order of a sequence of dance steps – even a simple one – to be able to recall it from memory, inherently is not simple. I expected an even greater challenge for these participants, and therefore, I strove to create a consistent class structure in which participants could improve (both daily and through the course of the two weeks). When physical difficulties and confusion emerged, I always had an alternative version of an exercises or movement, so that one should not feel defeated. Finally, I needed to be mindful both of impairments associated with Parkinson disease as well as pre-existing injuries, and co-existing systemic illnesses (e.g., hypertension) or musculoskeletal compromise (e.g., arthritis). My goal as the teacher was to help participants realize that, through whole body movement within the context of ‘safe’ challenge to mobility and balance, the participants could actually move beyond discomfort and immobility towards more normal patterns of initiation and sequencing. I believed that alleviating fears surrounding the perceived risk of physical harm or, freezing (complete inability to act), would help renew their sense of confidence in everyday actions.

The second thread of inquiry dealt with movement essentials (class content): what would be the essence (purpose) of each specific exercise I wish to share? First, I wanted to offer an experience to free up spontaneous movement expression; second, to encourage a sense of embodiment while training concepts in alignment, balance, and coordination; and third, to encourage stability, as much as mobility, for safety. How could I emphasize support from key muscles without focusing deliberately on muscle function, so that the integrity of dance is maintained without defaulting to ‘fitness’? Given my overall aims of empowerment through dance, I considered their challenges in generating movement, especially gestural, non-functional movement. I decided that the best way to foster their ability to generate movement freely and easily would be through improvisation. This proved to be a particularly powerful ingredient in generating movement and in addressing issues of self-confidence. I originally thought that improvisation would be a useful ‘ice-breaker’: a way into learning more formal movement structures. I found, however, that improvisation proved to be the most powerful *eureka!* moment for the class participants with PD and their spouses. While improvisation is a widely accepted tool for generating original, authentic movement material, teaching improvisation to dance newcomers is a specialized skill. Experience has shown me that for the novice dancer, following an improvisational prompt can be daunting. Being asked to improvise can conjure up a lot of anxiety and fear in even accomplished dancers. Even after teaching improvisation to college-aged students in a dance minor program for five years (most of them having a wealth

of Western-based dance training), the same fearful reactions that bear on self-confidence and self-efficacy emerge. Unlike traditional class exercises with sequence, patterns, specific dance steps and counts, improvisation exercises can yield questions such as: ‘Am I doing what you asked?’ or ‘Is this right?’ If the improvisational material is too unstructured, it can leave newcomers without a sense of personal movement resources.

Interestingly, however, this group of adults with and without PD welcomed improvisation exercises and seemed genuinely open to the expressive experience. Overall, I found that creating simple improvisational exercises (for example, using the breath as a guiding impetus for movement decisions), the class became focused, relaxed, and fluid. The potential concern of self-judging ‘what the movement looked like’ seemed less of a problem with this community. They readily launched into the movement for its own sake, without pre-determined goals, inviting options to discover new movement throughout our two-weeks together.

Designing the dance experience

I set about designing an hour-long class as a basic structure for the 10 consecutive sessions. After conferring with researcher Batson, I determined that one hour would be sufficient for the five participants in our group. Because our class size was small, one hour would be sufficient enough time to engage in a full-class experience and yet still be able to stop and work individually with subjects if needed. The overriding motivation behind my instructional approach was to offer a dynamic, powerful, and rewarding experience of dance, regardless of level of ability. On the one hand, I hoped that the expressive power of dance could speak for itself without losing anything in translation by attempts to ‘customize’ movement for this special population by making the movement more ‘pedestrian’ or ‘functional’. Nor did I want to default to a fitness model of exercise. I wanted to create exercises not just for people with PD specifically, but to take existing movement ideas and have them make sense to a body living with PD. In this, I hoped that the participants would grasp that modern dance was accessible, enjoyable, and that I would not have to sacrifice the integrity of movement expression in order to ‘accommodate’ for perceived physical restrictions.

My first personal mandate was to adhere to tradition: to offer a traditional modern dance class structure, that is, one based on a codified progression of movements within a set time frame for the entire series (Lockhart 1966). The class structure followed a format familiar to many modern dance teachers: warming up, isolating various regions in the body, mobilizing the body, and generating movement freedom and autonomy throughout class. I had been trained as both dance student and dance teacher in this paradigm. I believe it offers a sound framework that would foster body expressiveness while providing enough familiarity and continuity for successful retention of movement material. Such a format would offer an ongoing, progressive engagement of full body movement expression.

I emphasized four approaches to structuring material to support these values:

- (1) Pare down exercise complexity. Normally, I would teach complex and often lengthy combinations to undergraduate level college students. In this context, I sought to reduce movements to their basic elements and to avoid complex and lengthy sequences and patterns of movement, focusing instead on

repetition and reinforcement of movements that required their focused attention to one activity. Once an established set of exercises was introduced as our class structure, new material rarely was added to this structure so as to affirm trust, familiarity, ease, and comfort with the participants and their participation in this class.

- (2) Create movement phrases that simulate and support everyday movement habits and patterns but with enough rhythmic and effort variations that the 'ordinary' could become 'extraordinary'. Simple acts such as walking and reaching, or changing directions, while pedestrian in nature, transform to become dance through rhythmic and effort variations, and non-task specific play. In my experience, it is often these 'simpler' actions that when intentionally expressed are the most beautiful to watch even the most skilled and talented dancers perform.
- (3) Encourage the ability for each person to generate movement – on their own, easily and freely. I was not interested in merely teaching a class where the participants simulated my movements. It was important that I encouraged the subjects to create movements that emerged from *their* bodies. Improvisation proved to be a great tool in this regard.
- (4) Link individual contributions from improvisation into a piece of dance choreography to support egalitarian dancing.

Class structure

Each one-hour class session was scheduled in the late morning to give participants ample time to start their day, eat, have their medicine take effect, and get to the class without feeling rushed. The class series took place in a large college dance studio that was accessible by elevator. This multi-purpose dance studio had a sprung, Marley® floor with mirrors and ballet barres that flanked the periphery of two of the walls in the room. A large window offered plenty of ambient light. Participants were asked to dress in loose baggy clothing and wore tennis (jogging) shoes. The class built on the following structure:

- (1) seated warm up with isolations;
- (2) standing locomotion exercises;
- (3) ballet barre alignment, stability, and stretching exercises;
- (4) improvisation; and
- (5) collaborative choreography.

Movement began with all of us seated in chairs placed in staggered rows facing the same direction towards a large window (away from mirrors). I not only wanted to foster a sense of kinesthetic (as opposed to visual) learning among the participants (Radell, Adame and Cole 2004), but also to encourage them to move as they were able – and not judge their movement or attempt to keep pace with others. I chose to have a Djembe drummer accompany the class through the warm-up section and barre exercises. I used recorded music in the second half, mainly to provide the class with familiar, recognizable tunes and to provide variety. I speculated that live music would feel more empowering and enlivening to the class environment. Also, a live musician could alter the pace at will, either speeding up or slowing down the tempo

as need demanded, rather than our movements being limited by a three-minute recorded song. On the other hand, group members seemed to move more easily when they heard recorded music that they knew and identified with personally. I chose popular music from the 1940's through the 1960's, such as Rosemary Clooney, Ray Charles, the Beatles, and Aretha Franklin among others. Here, participants could rely on music familiarity and could relax and enjoy free-form dancing without having to be concerned with someone calling the tempo.

Seated dancing

Chairs provided a safe beginning place certainly as well as an opportunity for the participants to push their movement curiosities and take risks to discover their fuller movement potential. This portion of the class lasted approximately 15 minutes. My choice to begin the class seated in chairs also derived from several other premises: first, I wanted to accommodate all potential recruits, even those who might be in wheelchairs. Second, the familiarity and nature of sitting provides a convenient tool for reinforcing good postural habits and breathing. Focusing on balancing mobility with stability exercises for the whole trunk reinforced concepts of core strength and support as well as provided an excellent place to amplify breathing within gravity. I used imagery, for example, to simulate the expansion and release of the rib cage cylinder and the lungs, which they mimicked with their hands to 'expand and release'. Third, using chairs permitted the class to simplify movement and focus on select body regions and to isolate and articulate body parts. In this context, seated movement offered a stable platform that allowed for safe exploration of spinal mobility and upper limb reaching beyond a stable base of support. We explored spinal flexibility in all ranges – flexion, extension, lateral flexion, and rotation. The chair exercises primarily focused on spinal ease and freedom of spinal movement in common mobility patterns, not as a static exercise but as dynamic transitions through many movements. The chair offered the starting place to establish one's personal kinesphere (Bartenieff and Lewis 1980) as a starting point for reaching within and beyond the body's dimensions into space. Adding reaching variations informed the body of its potential to surpass customary and habitual boundaries. While seated, participants reached from trunk center to the periphery of their kinesphere along diagonal pathways in space with imagery. I asked them, for example, to reach for 'that delicious apple on the high branch of the apple tree', or 'your tea kettle in the low cabinet in the kitchen'. This addition of purposeful task-specificity to abstract reaching movements helped people take greater risks in reaching beyond their base of support. Finally, reaching from the chair also helped combine several goals at once. By putting one leg on another chair in front of them, the participants could reach forward in a gesture of 'giving' to an imaginary person in front of them. This had an indirect effect on lengthening (stretching) the hamstrings without having to focus on them as a separate stretching exercise.

Getting out of the chair was an important transition for them to learn. This movement generally is not easy for persons with PD (<http://cumc.columbia.edu/dept/neurology/movdis/learn/glossary.html>). Common patterns of getting out of a chair among the elderly (including those with PD) involve disjointed movement, neck hyperextension, inability to get the body weight forward over the base of support, and instability on finally standing, creating fall risk. Rhythmic foot tapping to wake up the legs was the start of this transition. The combined sound of multiple

feet tapping the floor in unison patterns also created a stronger sense of group rhythm that could be immediately transferred into standing and locomoting across the floor. I taught them a sit-to-stand exercise using momentum to transfer the weight of the whole body and coordinate with a logical flow throughout the whole movement from beginning to completion. Suggesting that the head and base of the spine ('tail') are linked created a fulcrum for the whole torso moving through space. Maintaining this sense of the head-to-tail connection of a long spine, I invited the participants to send their upper-body weight forward *and* up, rather than just forward *or* up. This connected lever arm assisted them in moving their bodies through space more readily and easily. They used their hands on the top of their legs as a base of support to push away from as their hip flexors engaged and the upper body could extend forward in space. Similarly, we practiced reversing action to sit back down seamlessly in the chairs.

Part II of the class

The second portion of the class consisted of practicing simple walking patterns through space that emphasized variations in rhythmic shifts of weight and direction. As participants familiarized themselves with these patterns, they learned to coordinate upper body gesturing with leg movements. For instance, participants walked three counts in one direction, paused to clap on count 4, changing directions in a zigzag pattern to the opposite corner of the room. Clapping alternated with snapping, flicking, or other hand and arm gestures. Though challenging at first, the patterns became easier with repetitive practice to a steady drumbeat. I then varied the number of steps, speed, direction, and quality of movement. As participants mastered one combination, other elements were added to make it more challenging. This portion of the class lasted approximately 20 minutes.

The next 15 minutes were spent challenging postural stability at the ballet barre. Traditional ballet barre exercises strengthen the muscles of the trunk and legs by asking for an upright, relatively still trunk while legs perform stepping, swinging, and other dynamic actions (Foster 2010). Here, they practiced balancing tasks both as statically (in place) and dynamically (walking and weight shifting), utilizing many patterns of ankle-hip coordination, changing their center of mass and altering the base of support while gesturing with their arms. The barre exercises also emphasized directional changes through steering with the pelvis. I continued to challenge them at the barre through varying timing, pacing, and effort in simple combinations in which they followed one another in linear stepping. If balance was jeopardized, they could quickly regain stability by grabbing hold of the barre. At the end of the barre series, I added stretching exercises at the barre for the rib cage and lower backs. In general, what began in simplicity of static placement at the barre took on additional stages of dynamic complexity as the 10-day period evolved as all participants learned to move to varying tempos in ensemble along the barre.

Part III: improvisation

The last 15–20 minutes of the class was reserved for improvisation to support movement spontaneity and creativity. My hope was for the group to gain confidence in their ability to improvise with others and to regain a sense of spontaneity that

they may have felt they had lost. Improvisation increased the challenge and made for more interesting and intense engagement among the participants in the class. Improvisational games in class included an exercise where participants created ‘sculptures’ – whole body shapes that they had to produce quickly when prompted by a one second beat of the drum. These movement ideas emerged quickly, surprising the group members, who realized that they were ‘dancing’. We began with each person creating shapes, which evolved into opportunities for contact. Verbal prompts, such as, ‘Create a shape with your body and then join this body shape with someone else’s shape’ facilitated the generation, witnessing, and recollection of original, spontaneous movement. Through repetition and variation, this exercise encouraged further investigation of body and spatial configurations. Participants began to generate these moments more readily and to repeat them randomly and on command. As everyone in the group practiced the exercise, signature movements that could be called choreography naturally ensued.

Center floor group shape building progressed to improvisational locomotor sequences. This invited the class to explore diverse movement timing, direction, efforts, and sequences that diverged from their normal everyday habitual movement. I would ask them to navigate in unusual spatial designs (‘Travel from point A to point B’, for example), with different gestural and effort qualities (‘As though you are underwater, or in peanut butter’). Improvising while traveling through space with multiple elements challenged balance as well as cognitive abilities.

The next improvisational strategy was mirroring with partners. Here, one partner (the ‘mover’) would move freely without specific timing or spatial direction. The ‘follower’ was given a chance to experience his or her partner’s unique movement ideas for approximately two to three minutes, observing pathways of movement articulation that when imitated, repeated the movement back to the leading mover in as seamless and ‘real-time’ a way as possible. This short dance generated by the notion of ‘letting the movement guide you’ evoked an atmosphere of freedom and enjoyment. We found this exercise not only broke through feelings of self-consciousness but also helped remind the group of the multiple and diverse choreographic possibilities the participants could create on their own. In essence, improvising allowed everyone to interpret the movement task each in his or her own way without worrying about being correct.

Improvising was a way for us as a community to name our movement ideas and create our own class lexicon. As we repeated improvisation exercises each day, favored movement trends began to reveal themselves in each of the participants and became physically familiar, enjoyable, identifiable, nameable, and thus, repeatable. Improvising unearthed a unique movement voice for each participant – one that I wanted to celebrate in the final choreographed dance. Each participant coined a handful of ‘moves’ which, when strung together, became the choreography for a final group dance. For example, ‘so and so’s basketball move’ or ‘stretch’ or ‘arms’ became a nametag for a specific, often complex, movement idea that each person created. For this final group dance, I chose Rosemary Clooney’s ‘Give me the simple life’ because of the song’s familiarity to this age group, its upbeat and happy lyrics, and its simple 4/4 rhythm. The final dance – while structured – reflected optional moments for improvisation, interaction with one another, and places for physical contact – all of which facilitated autonomous movement. Through daily focused attention, repetition, and variation, the final dance was completed within two days of class termination, giving ample time to repeat our dance over and over again to cement it

into the body memory. I hoped that this dance would carryover at home as an exercise ritual that participants could practice to music with their spouses. At the end of the class series, I created a handout with written descriptions and photos of the exercise sequences and a description of the group dance, along with a CD-ROM of the music choices for continued home use. Because participants with PD were joined by spouses, I felt comfortable encouraging everyone to practice these exercises together at home. Using a kitchen countertop as a ballet barre, for example, or the improvisation exercises while seated at the breakfast table, or the walking patterns as they navigated throughout the house, could bring the class exercises to consciousness in a daily fashion.

Summary observations

Dance has been mainstreamed into many communities and contexts as a fun, healthful activity for virtually anyone. The therapeutic value of dance also has been established for elderly populations (Hui, Chui and Woo 2009) – including those with PD (Westheimer 2008) – who show improvements in balance, functional mobility, and who show the motivation to choose healthier, more active behaviors (Song et al. 2004; McKinley et al. 2008). At the same time, dance differs from complementary therapies and fitness in its use of improvisation, musical accompaniment, partnering (intentional touch to lead and follow in movement), progressive advancement in coordinative structures, and intentional touch for leading and following movement sequences (Hackney and Earhart 2009).

In spite of the general benefits gleaned from dance practice, the specifics of dance content (the curriculum) rarely are reported in full in the science literature. This paper reports one teacher's action research in building a class series in modern dance for adults with Parkinson disease and their spouses. The teacher strives to flesh out the philosophical underpinnings and justify the movement content chosen for a mixed group of newcomers to modern dance. Entering into a research collaboration has afforded me the chance to rethink what dance is and why it is such a powerful tool that allows people – even those with degenerative diseases – to find ways to succeed in generating movement. When designing a dance class for adults with special needs that arise from PD, a basic question that helped spawn my movement content was, what elements should be incorporated that best help participants generate movement on their own – movements that balance physical risk-taking with safety in learning – so that the participant's curiosity and potential grow and are sustained over time? My inquiry into this basic question is reported here.

As a teacher, I was proud of the range of expression and fullness of engagement over the two-week period. From seated and barre exercises to moving through space across the floor, and improvising, the participants kept their energy and enthusiasm in building a final piece of collaborative choreography. Watching these people dance showed me that the vocabulary of modern dance, and particularly improvisation, does not have to be complex or obtuse. Simple movement structures can be conveyed immediately without need for rationale. Embedded within modern dance is the intrinsic expressive capacity to generate whole body coordination in the simplicity of a single gesture and single word command. Modern dance offers an experience of embodiment with a high degree of absorption/immersion in sensory-motor feedback and space-time elements (Stevens and McKechnie 2005). Here,

participants practiced multi-tasking and instantaneous problem solving in which they had to ‘dance’ out the answer to how to change directions, efforts, and rhythms. Such problem solving within an atmosphere of acceptance and non-judgment, and the freedom to explore movement without habitual associations, was exhilarating. This dance class introduced people who would not normally conceive of dancing as beneficial – or even possible – a chance to realize benefits while enjoying themselves. By promoting a safe, non-judgmental atmosphere, everyone could be free to be expressive without having to worry about ‘getting it right’.

While spontaneous joy and other positive emotions of the moment are difficult to quantify and capture (Fenech 2010), success can be measured in part by attendance (no absences) and by individual verbal responses to the class experience. Overall, the group unanimously expressed gratitude for this introduction to dance and an opportunity to practice exercises they had never done before taking this class. No one ever appeared tired of repeating the same walking pattern exercises with the group, as they managed to keep this simple act fresh and new each day. They also shared that the class helped them feel more confident about coordinated movement, and that through repetition, many exercises became easier to execute. Improvisation, particularly mirroring, was rated highly among the movement choices. Everyone appreciated having a glimpse of him or herself as ‘creative’ and capable of moving in ways they never imagined. The group showed great willingness to try challenging and new movements, and their affect showed genuine joy and sustained interest.

One major lesson I learned about pedagogy was to appreciate genuine simplicity of expression. By paring down some of my normal exercise patterns and routines and teaching the essentials of movement, each version of each exercise appeared to emerge naturally, realistically, and logically. This made me appreciate the beauty, simplicity, and universal power of movement. What is so striking about working with PD patients is these movements are indeed the ‘stuff’ of dancing. Walking from one point in space to another became a qualitatively distinct act from the everyday familiar act of walking. This simple act – when ‘danced’ – became a means of psychophysical communication, a means of connecting self-to-self and self-to-others.

Conclusion for future dance making

Dance offers multiple ways of learning complex skills that challenge the inherent nature of the body’s capacity to self-organize (Stevens and McKechnie 2005). For this group of people with PD and their significant others, modern dance offered a multi-sensory experience, full of elements of surprise and novelty in an environment of acceptance and play. Further, modern dance offered them a means of going beyond their conceived limitations towards actual accomplishment of freedom of movement. It offered a chance to generate and express what, to them, would have seemed impossible. The experience offered me a platform for action research that deepened my inquiry into the nature of dance, the process of curriculum building, and the opportunity to collaborate with a unique population in dance making. I am eager to continue working with dance and Parkinson disease, both within a scientific and a community context. I hope that future studies will continue to provide evidence for structuring dance classes to maximize the sense of expressive movement potential for this population.

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