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Contents

Using Laban Movement Analysis to Assess Progress in Dance Therapy

Alice Owen

This case study of a man with autism who participated in a Dance Therapy Program over a twelve month period examines his spontaneous dance, comparing two sessions five months apart using scales that were based on Laban Movement Analysis (LMA). The scales were The Movement Observation Scale by Samuels and Chaiklin (Costonis 1978) and The Movement Diagnostic Scale by Martha Davis (Costonis 1978). A third scale was also devised by the author to indicate improvements in the client's ability to initiate specific movements.

The Participant

Scott was a young man of 29 years whom I had had seen in my work as a Speech Pathologist over the course of one year. He asked me to teach him to dance, after coming to a Spanish dance performance in which I was taking part. So in my continuing work with Scott I also included a dance program over the next twelve months.

Scott had a clinical diagnosis of autism and intellectual disability (Williams 1993), but after working with him and getting updates on his progress to the present, I would suspect that the label of intellectual disability might have to be used with caution.

Scott also had a past history of being hospitalised for a year with severe anorexia when he was twelve years old, but due to his diagnosis of autism he was not offered any psychological treatment at that time.

Scott was both a pleasant and cooperative young man to work with and never refused to try anything, no matter how strange it seemed to him. He often chose the type of music with which he wanted to move and, as well, chose many of the movements often asking for and needing assistance in carrying them out. If he was pleased with his prowess, he would say "See, see" - to get me to look and approve.

He was therefore a willing participant for my study and happy to be involved. His mother, also pleased with his involvement in dance therapy, was supportive of the dance therapy project and offered her Yoga studio for the therapy sessions.

Alice Owen has an ADA of the Performing Arts (Southern Cross) and a Grad. Dip. of Movement and Dance (Melbourne). She has twenty years experience as a Speech Language Pathologist, and is currently at Queensland Government Disability Operations. She has taught dance to children and adults for twelve years and works privately as a Dance Movement Specialist.

Communication

Scott had attended the DEAL Communication Centre since September 1991. During that time he communicated using a small typewriter with physical support from a facilitator. This technique, known as Facilitated Communication (Queensland Report 1993) had attracted both controversy and scepticism from some health professionals, notably those who subscribe to the hypothesis that the underlying cause of autism is a severe deficit of cognitive functioning (Dwyer 1996). This young man had passed the many 'validation tests' noted in the literature (Parsons and Baldac, 1995), had intensive speech therapy using Melodic Intonation Therapy (Morris 1998) which uses rhythm to 'carry' the words, and enabled him to speak in sentences. I would suspect he had some underlying aphasia and/or dyspraxia (ibid), which had gone unrecognised and untreated for many years.

Scott began to speak by trying to read what he had typed on the Canon Communicator. Any suggestions that his typed communications were false were negated by his improved ability to speak or type as he chose.

Physical Status

The use of the technique of the Facilitated Communication allowed Scott to fully express his

thoughts and feelings for the first time in his life. As a result Scott was able to describe the difficulties he experienced making his body do what he wanted it to do. His description correlated with what I observed within the dance therapy sessions.

These difficulties, transcribed into the problem list I worked from as the dance therapist were:

- Poor hand-eye co-ordination
- Weak kinaesthetic and proprioceptive sensation
- Poor sense of rhythm
- Poor co-ordination generally
- Difficulty stopping actions and difficulty changing tasks rapidly. Scott's own words in relation to this problem of 'out of control' were:- "I don't know where it stops".

The Dance Therapy Sessions

The dance therapy sessions usually followed a definite structure as follows:

Warm-up: Involvement of body parts in identification and isolation and using activities such as shaking to release tension and increase body awareness.

Introduction of new movements: These movements generally involved explorations of the kinaeshere and use of the effort factors of space, weight, time or flow (Laban 1984, 1988).

Free Dance: In the free dance activity Scott chose the kind of music he felt like moving to and danced for as long as he liked within the time limits of the structure of the session.

Relaxation: This stage included some exercises based on the work of Bartenieff and Lewis (1980), breathing techniques and voice work.

Movement Analysis

A journal was kept for the majority of the sessions and the fifth and seventeenth sessions were videotaped. I viewed these two sessions on videotapes and scored them according to *The Movement Observation Scale* as devised by Arlynne Samuels and Sharon Chaiklin (Costonis 1978) and *The Movement Diagnostic Scale* as devised by Martha Davis (Costonis 1978).

The Movement Observation Scale looks at different areas of movement in Laban terms and assigns a numerical rating of 1-5 for various movement qualities. For example for the effort factor of flow the scale is from Bound 1-----5 Free. An increased number on the scale signifies an improved ability to vary movement between bound and free. An increase on the scale is therefore a positive outcome.

The Movement Diagnostic Scale has descriptions of various types of distorted movement patterns, which include areas such as Fragmentation, Diffusion, and Reduced Mobility. The numbers on the scale indicate the number of times these features were identified in each of the categories of movement. A decrease in the number on the scale would therefore represent a move towards more normal movement patterns.

As well as these two standardised checklists as described, I devised *The Spontaneous Movement Rating Scale* to add a further dimension to the movement analysis. This scale enabled me to indicate where and when movement needed physical guidance from the therapist when it was first introduced. This scale also demonstrated when the physical guidance could be reduced, or replaced with demonstration, physical facilitation or verbal prompting, until eventually the client could initiate the movement spontaneously. A description of the progressions on the *Spontaneous Movement Rating Scale* are as follows.

Spontaneous Movement Rating Scale

0 Cannot perform the movement even with assistance

1 Needs assistance to start and continue the movement

2 Needs assistance to start, but can continue for one or two repetitions

3 Needs assistance to start, but can continue as long as needed

4 Can initiate the movement but needs a demonstration

5 Can initiate the movement with verbal prompting only

6 Can initiate the movement spontaneously

Using this rating scale, I was able to define new movement patterns as 'easy to learn' or 'hard to learn' and rate how long it took Scott to integrate these patterns into his personal movement repertoire. The level of difficulty also provided clues as to the areas most in need of remediation. With this scale I was able to check up on movements or Laban concepts to see if there had been any spontaneous improvement or carry over from other things we had been exploring.

The Results

The results are the changes as rated over a 5 month period of time using the *Movement Observation Scale*, the *Movement Diagnostic Scale,* the *Spontaneous Movement Rating Scale* and my *description of Scott's progress.*

This evaluation involved a comparison of the improvised segments of the videotaped dance therapy sessions five and seventeen. The observations made were from a five minute segment of each video at the point when improvisation was to the music of Scott's choice.

The Movement Observation Scale

On this scale, the significant changes noted are displayed in Table 1.

An increase in the number demonstrates improved access by Scott to the specific movement quality. Scott increased his use of his personal kinaesphere and his access to the range of variations within the effort factors of space, time, weight and flow (Laban 1984, 1988).

Movement Quality	Session	
	5	17
Use of free flow	2	3
Use of bound flow	1	2
Use of indirect space	1	2-3
Use of horizontal and sagittal planes	—	Yes
More neutral body attitude	—	Yes
Expanded kinaesphere	2	3-4
Increased use of gesture	2	4
Increased use of postural movement	1	3
Movement can occur in all areas of the body	—	Yes
Improved eye-contact	—	Yes
Trunk used as two units instead of one	—	Yes
Evidence of tension	7 areas	3 areas
Rhythm – moving towards synchrony of body parts	—	Yes
Energy level	2	3-4
Expressiveness	1	2
Kind of expression	1	3
Initiation	2	4

Table 1. The Movement Observation Scale

The Movement Diagnostic Scale

Observations, again made by myself from the same videotape segments, are listed in Table 2. The results suggest a reduction in the number of times the distorted movement patterns rated were observed.

Movement	Session 5	Session 17
Fragmentation	1, 6, 8, 9	6
Diffusion	3	0
Fixed, Invariant	3	0
Bound, Active Control	1, 5	0
Reduced Mobility	7, 11	0
Borderline features	1, 3, 4	0
Dynamic, Vital	5	2, 3, 7

Table 2. Movement Diagnostic Scale

Spontaneous Movement Scale

The two same sections of videotape also were compared to rate the degree that certain body movements needed assistance. This comparison, again made by myself, clearly demonstrated to me the change in Scott's ability to initiate movement patterns.

A selection of body activities explored during the dance therapy sessions and the results from my observations are set out below in Table 3.

Sample of Body Movements	Session 5	Session 17
Shoulder lift	2	4
Shoulder rotation	2	4
Hips - Side to side	3	4
Knee bend	3	5
Arm circles	5	6
Clapping (Rhythm poor)	2	5

Table 3. Spontaneous Movement Scale

I would hypothesise that the changes made were due to the input that Scott had from his dance therapy sessions. Also, on the *Spontaneous Movement Scale*, his progress with movement initiation had been well documented and this enabled me to focus on areas of movement skill which were obviously achievable for him in shorter time spans. This strategy gave him a sense of mastery quicker and thus an obviously increased level of confidence which seemed to let

him feel good about his body for the first time in his life. With this increased confidence, movements that were harder for him to achieve were then more easily learned and he became more willing to attempt activities that were difficult for him.

Description of Progress

The results of my ongoing recording on *The Spontaneous Movement Scale,* together with the documentation from my journal, were used for the following description of Scott's progression which covers the period throughout which he had dance therapy. This description supports the positive changes made by Scott as evidenced in the results tables from the comparison of the two videotaped segments. This description has been summarised and collated under headings of The Kinaesphere, The Effort Qualities, Posture and Gait and Breath control.

The Kinaesphere

Initially, in the dance sessions Scott had great difficulty exploring his kinaesphere and held his trunk rigid with his hands close to his chest. He would often 'flap' his index fingers together obsessively. He told me (via his typed communication) that he didn't know why he did this, but once he started he could not stop by himself.

One of the first areas we worked on together was breaking away from his tightly held body by 'opening out' and making large bi-lateral arm circles with the hands coming together in a prayer position. This was then developed to extending his arms above his head to reach a full stretch position before separating the arms to reach out to the side and down. This kind of movement was a revelation for Scott. He had never reached out into his kinaesphere before and he was really excited spending time exploring this new freedom.

One of the many difficulties noted was that Scott was unable to follow his hand with his eyes when he was moving his raised arm to the side. His eyes would flicker away and back no matter how hard he tried to fix his gaze and keep looking at the outstretched hand. His proprioception was very poor and an explanation for the closely held arms could be that his hands disappeared from his awareness when they were not visible (Bernstein 1981).

By Session 5, he was able to spontaneously initiate the big circle movement and keep it going. Although, he still needed reminders to extend in all directions more often.

On some days the old obsessive pattern would re-assert itself and he would say to me, "Look, look!" At those times we moved right back to hands-on assistance until the 'flaps' disappeared.

As is typical of autism (Williams 1993), Scott had good days and bad days, although he never regressed very far back. On the days he did regress, we spent some time 'mirroring' and this usually relaxed him and he regained that feeling of improved control over his body.

The Effort Qualities

As Scott's coordination improved as the dance therapy sessions progressed, we started to concentrate more on the *effort qualities.* Scott became able to access *free flow* in some gestures, but overall his *effort flow* remained relatively bound and control of this dynamic did not become evident.

Scott's use of *space,* was very *direct* but he progressed to showing some spontaneous use of *indirect* space. These movements were more apparent when he was in the vertical plane and mainly with the arms.

In his use of *time,* Scott had difficulty accessing the movement quality of *sustained* and could usually only achieve this with my assistance as a model or when using a prop such as a balloon or a veil. However, when he was lying on the floor and involved in The 'Bartienieff' exercises (Bartenieff and Lewis, 1980), he was able to achieve movement in a *slow sustained* way. A possible reason could have been that movements on the floor were different from anything else he had done in the past. Also, he was fully supported and secure in that position and it did not trigger off his habitual movement patterns and qualities.

Responding appropriately to the time elements in music was something Scott found difficult and he made very little progress. He liked to choose music that had a strong rhythmic structure however, and obviously enjoyed trying to clap the beat.

Scott's use of *weight* had been mainly neutral, and he was not able to stamp, punch, or push with any degree of conviction. He progressed when we concentrated on movement qualities of *strong weight.*

The first occasion that Scott was able to push me back, he was both surprised and delighted. I think it was the first time in his life he had been able to push someone around. It is possible that a seven year period of being institutionalised had made him particularly compliant. It took me several years to teach him to say 'no' when he wanted to instead of an automatic 'yes'.

Posture and Gait

Initially, Scott walked on the balls of his feet with his whole weight forward with his feet turned out at a 45 degree angle. His trunk and pelvis were held as one rigid unit and his shoulders and head were carried forward with the focus downwards. There was little synchronised arm swing.

We began working on heel strike and a 'head up' orientation, and devoted some time at every session to this fundamentally important movement pattern. The 'head up' prompt is one I used constantly throughout the sessions as it is basic to good posture and use of space. Scott would sometimes say to me, "See, see - head up" when he was managing to keep his head up without prompting. He was very aware of how different it felt to walk and dance with this orientation.

Because Scott had so much practice at walking the 'wrong way', there was a huge degree of habit factor to overcome. Even so, he made slow and steady progress during the course of his dance therapy program. Scott began to walk with a good heel-toe gait and was able to look where he was going. After a couple of circuits of the room, he needed verbal prompting in order to maintain this head position, but generally could sustain the heel strike on his own.

Adding an alternating arm swing added another level of difficulty and really challenged his co-ordination. This was too much of a challenge in a rhythmic sense and that trying to focus on feet, head, arms, moving forward in space and finding a cohesive rhythm, was perhaps too complex.

Breath Control

Breath control is another fundamentally important area of movement where Scott had poor awareness and function. As working in a standing position was not successful, we generally worked on breathing in conjunction with the Bartenieff Fundamentals (Bartenieff and Lewis 1980) when Scott was on the floor.

As soon as Scott was asked to focus on his breathe, he seemed to concentrate so fiercely, that he almost stopped breathing altogether. His breathing was shallow and arrhythmic and he had little control or awareness of it.

To try and remedy this we worked with kinaesthetic cues to build up the awareness. I also used vocalisations to try to develop control of inspiration and expiration. After a year he could still only vocalise for one second in a controlled way, with firm breath support for his voice.

This extreme difficulty with control of his vocal mechanism affected his speech which was muttered, hurried and delivered in a descending volume as his breath ran out, in contrast to his typed language which was relatively normal.

I felt that breathing could also provide a key to rhythm but I was aware that it would take a lot of work in several areas before we could expect significant progress.

Summary

A comparison of two dance therapy sessions, five months apart, demonstrated to me the changes that took place in Scott's movement abilities over time. The results of the observations and comparison I made from the two videotapes were confirmed by a Certified Movement Analyst (CMA) who was my lecturer at the time I was involved in this study. Changes occurred and Scott's movement were extended in his use of the *effort factors, shape*, the *planes* of movement, and his access to the *kinaesphere.* Also, he progressed to involving more body parts and his trunk in the movement, as well as demonstrating more spontaneity and expressiveness.

Comparisons of the videotapes also demonstrated a shift from 'unhealthy' to 'healthy' movement characteristics. The use of the *Spontaneous Movement Scale,* enabled me to chart the progress of specific movement patterns that initially were totally assisted and improved to the point where they become a part of Scott's own movement repertoire. He could then perform them spontaneously. This scale enabled me to target areas of need and assess whether or not these movements were easy or difficult for Scott to learn. It was a very useful tool in planning sessions and reaching goals.

Postscript

One of the major rewards of working with Scott was, that with his improved ability to articulate his feelings he was able to communicate his enthusiasm and motivation about the dance sessions. He communicated through his typing how the lack of control over his body and speech had been helped by being able to learn to dance, and that the dance program had also helped him to gain control.

My involvement with Scott as his Speech Pathologist continued for many more years. His speech did improve markedly, although

he still exhibited problems with rhythm which do not manifest as dysfluency, but give an impression of hurried urgency (1997).

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Note

This case study was undertaken by A.Owen in 1992 and was edited by the editors for Dance Therapy Collections No. 2 in 1999. This account offers a similar Laban Framework to the work-shop Alice presented at the conference.

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