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Approach to neurorehabilitation in Contact Improvisation: Mark Young, a case study

Aproximación a la neurorehabilitación en Contact Improvisation: Mark Young, un estudio de caso

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• TRADUCCIÓN

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Abstract

Contact improvisation is a postmodern dance style based on a continuum of proprioceptive communication between dancers. It has been established that proprioception is a factor utilized in certain neurorehabilitation techniques for different population groups, such as the Bobath Concept or Kabat Method. In deed there have been some studies into the application of Contact Improvisation strategies for rehabilitation purposes applied to prisoners and in the area of gender equality and to our knowledge, just one study in the field of neurorehabilitation with Parkinson's patients. To this end, the main objective of our study is to analyze the common aspects of Contact Improvisation with regard to the process of applying neurorehabilitation strategies in order to establish a suitable theoretical-practical framework of work for future research. The methodology used was based on the analysis of a case study. This consisted of applying inquiry strategies through the medium of a semi-structured interview with Mark Young – a 53-year-old Contact Improvisation expert with 21 years of experience in that practice. The results showed a line of improvement in the subject's symptoms of functional recovery. It would appear from this study that proprioception was key to the improvement in the neurological response of the individual practicing Contact Improvisation. In addition, there is a determinant and inherent social component to this process that seemed to facilitate and enhance the positive aspects of the practice of this form of dance.

Keywords: Bobath Concept, Kabat Method, proprioception, dance.

Resumen

Contact improvisation, es un estilo de danza posmoderna, fundamentado en una continua comunicación propioceptiva entre bailarines. Se conoce que la propiocepción es un factor utilizado en ciertas técnicas de neurorehabilitación perteneciente a diferentes grupos poblacionales como Concepto Bobath o Método Kabat. Existen ciertos estudios que han utilizado estrategias de Contact Improvisation con fines rehabilitatorios aplicadas a presos y en el ámbito de igualdad de género. Sin embargo, hasta donde tenemos conocimiento, solo hay constancia de uno en el ámbito de la neurorehabilitación con enfermos de Parkinson. De esta manera el objetivo principal de nuestro estudio es analizar los aspectos comunes del Contact Improvisation al proceso de aplicación de estrategias neurorehabilitadoras para establecer un marco idóneo teórico-práctico de trabajo para investigaciones futuras. La metodología empleada se basó en el análisis de un estudio de caso. Se aplicó una entrevista semi-estructurada a un experto en Contact Improvisation de 53 años de edad y 21 años de experiencia en dicha práctica, llamado Mark Young. Los resultados muestran una línea de mejora en los síntomas de recuperación funcional del sujeto tras sufrir un traumatismo craneo-encefálico en un accidente de tráfico. Parece ser que la propiocepción fue clave para la mejora en la respuesta neurológica del individuo practicante de Contact Improvisation. Además, existe un componente social determinante a dicho proceso que parece ayudar al individuo a mejorar sus funciones motrices tanto de autonomía como de movilidad.

Palabras Clave: Concepto Bobath, Método Kabat, propiocepción, danza.

Introducción

Various points of view and teaching styles in relation to this postmodern dance called Contact Improvisation (CI) co-exist, so not all teachers or practitioners follow the system of exploration of the style proposed by its founder Steve Paxton [1].

The sensory inputs provided by the two individuals practising CI are the basis of this dance form. Proprioception is an indispensable and ever-present element in the development of this dance [2].

Nowadays in the field of neurorehabilitation different contemporary complementary techniques and at times alternatives to pharmacological and clinical treatments

have been adopted. Most of these techniques involve proprioception such as for example, Bobath, Kabat, Rood, Carr, Shepherd, FNP, Vojta as well as Hydrotherapy and Perfetti Cognitive Therapeutic Exercise, among other physical therapies [3]. These strategies serve to re-train different motor-skills qualities and also functional aspects of daily life aimed at recovering [4-6] and improving the patient's autonomy [6-9].

In addition, there are many neurological disorders and pathologies in which these techniques are used for intervention: spinal cord injuries or disorders [10], multiple sclerosis [11], Parkinson's disease [6], neuromuscular disorders or diseases, and Acquired Brain Injury (ABI) [12,13]. The most common causes of ABI are often head injuries [14,15], frequently occurring in traffic accidents [16], or other causes such as stroke, hypoxia or brain tumours [13,15].

Neurorehabilitation disciplines such as the Bobath Concept [7-9,17,18] or the Kabat Method [19-21] establish proprioceptive interaction between therapist and patient as a general characteristic of the rehabilitation process [8,9,17,18,21]. This interaction pertains both to elderly people with neuro-cognitive impairment or dysfunction and to newborns in need of early stimulation strategies [24] within infant development itself [23,24].

As far as we are aware, CI has only been used in the field of neurorehabilitative therapies in patients with Parkinsons [25]. These patients showed some improvement after the practice of CI dynamics during the application of a pilot

study. However, CI has not been used on a continuous basis, as a contemporary complementary therapy in the treatment of neurological disorders and diseases.

CI has also been employed as a social reintegration therapy for prisoners [26] and as a gender integration therapy in a social and community context [27]. In another study, Cheryl Pallant [28] describes the benefits of finding this form of dance in 1979 in New York after being diagnosed with scoliosis as a teenager.

To date, there is no known medical prescription or recommendation by Public Health Health Services of neurorehabilitation strategies in patients based on CI dance form.

Yet this is in spite of the fact that the relevance of the emotional component underlying proprioception [29] has been well-established and is an inherent aspect of both CI as a dance form and the rehabilitation processes of patients with neurological disorders.

Thus, the main objective of our study is to analyse the common aspects of CI and the process of neurorehabilitation in order to establish a suitable theoretical and practical framework for future research.

Material and Method

• Sample

The subject of our study is Mark Young, a 53-year-old man, born in Toronto in 1965. Following a serious car accident, he moved to Lasqueti Island in British Columbia, north of Vancouver. He has been teaching and practising CI since the mid-1990s and what started out as a fun and alternative way of rehabilitation after his traumatic accident, very quickly developed into a conscious and rigorous investigation. In parallel, he developed the practice and knowledge of meditation disciplines such as Tai-Chi and Vipassana and in so doing transferred aspects to CI as Steve Paxton had done previously with Aiki-do and other disciplines. Mark Young belongs to the second generation of dancers to study CI – the first generation studied this dance form by Steve Paxton's side. He has also attended numerous lectures with the creators of CI at the Breitenbush Hot Springs Retreat Centre. In addition, he has participated in numerous CI improvisations at the Earthdance Retreat Center in

Massachusetts over the past 15 years. In 2000, he devoted all his resources to the creation of the Leviathan Studio, a dance studio committed to the study of CI. (<http://leviathan.lasqueti.ca/>). Lasqueti Island in British Columbia, north of Vancouver.

• Methodology

We used a semi-structured interview methodology [30], based on a script of open-ended questions and interaction with the interviewee [31]. We considered Mark Young's background (Figure 1) to be unique and worthy of a more in-depth analysis than just designing a series of questions to the interviewee. When we take full account of the serious nature of his injuries incurred from the accident (appendix) on the one hand; and on the other hand, the subject's current skill and mastery in the discipline of CI, it would seem an impossibility to attain such an improvement in his abilities (appendix). Given the subject's experience and mastery of CI, the



Fig. 1. Interview with Mark Young at the Leviathan Studio in Lasqueti Island BC. Canada. Image courtesy of Sören Wacker ©.



Fig. 2. International Research Centre for the practice of CI Leviathan Studio on Lasqueti Island BC. Canada. Image courtesy of Sören Wacker ©.

length and implications of his responses have been respected at all times.

A non-directed was planned in order to provide space for points of reflection and to generate a process of understanding of the phenomena being studied. We considered this to be the most appropriate methodology, as this interview provided the foundation for this study. Mark Young invited us to create a meeting space which enhanced our social rapport and which we considered as an essential part for our methodological pretensions. Moreover, throughout the previous year we had had the opportunity to discuss certain terminological aspects of this study with the interviewee.

The digitally recorded interview was conducted during June and July 2016 at the Leviathan Studio. As referred to above, this is an international research centre dedicated specifically to the practice and study of CI. It is located on Lasqueti Island, north of Vancouver in the State of British Columbia (Canada) (Figure 2).

The interview transcribed in the appendix has been the starting point and the guiding thread of this study. Likewise it served as a guide for the different theoretical concepts that we will develop later on. Therefore, the analysis of the interview established, at the same time, categories and codes that served as comparative discourse with other referential sources.

In order to carry out the data analysis process, we adopted qualitative research techniques. We began by carrying out a manual coding procedure, identifying passages of text that exemplified a thematic idea and relating them to a code, as an abbreviated reference to that idea. This

allowed us to retrieve the text and link it to the different analytical categories [30]. The aim of this task was to provide a theoretical foundation to the empirical material obtained [32].

Taking as a reference Flyvbjerg's work in 2004 [33] we propose that this case study serves as a starting point in the production of knowledge about functional therapeutic treatments and CI, which has been non-existent heretofore. One of the problems of this type of research is usually the selection strategy, and in this particular case, it has been based on the broad knowledge of the subject concerned and the context in question. Similarly, in order to avoid subjectivity in our study, we have embarked upon a review of hypotheses and other fundamental questions.

The main categories extrapolated are as follows:

1. Cranio-encephalic trauma.
2. Contact Improvisation.
3. Proprioception.
4. Neurorehabilitation.

Results and Discussion

• Cranio-encephalic trauma

Head injuries [14,15] are common in traffic accidents and in the case of cyclists, there is higher probability. In 2016 alone, there were 8,193 victims involved in bicycle accidents in Spain, 94 of them fatal [16].

This study is based upon a pivotal event in the life of Mark Young. In 1997, at the age of 32, he was hit by a car which should have stopped at the crossroads in Vancouver (Canada). At that precise moment our subject, who was riding a bicycle (as a means of transport), was run over, hitting the tarmac. A period of confusion and post-traumatic amnesia [14] followed the accident: he had no memory of who he was, what he did or where he was from (appendix: response 3).

The post-traumatic symptoms did not subside and for months he was unable to pay attention and suffered episodes of confusion and headaches (Annex: answer 5). On a physical level, the impact caused a fracture to the base of the skull. This is where the cervical spine, cervical vertebrae (C1-C2) articulates with the occipital bone. This impact caused a haemorrhage

or embolism in the right cerebral area causing an abrupt suspension of brain activity. That is to say, left-sided paralysis. Sensory-motor skills such as balance and coordination were totally compromised (appendix: answer 1).

Contact Improvisation

In Western culture, in sports as well as in dance and choreography, a form of controlled execution of movement is prioritised. In this context, the sensation of movement is merely secondary. In contrast, in CI dance, behaviour evolves from sensory movement [34]. Mark Young, our subject of study, in 1997 began to experiment with this way of using the body, which allowed him to explore and initiate his own functional recovery (appendix: answer 2). It is well known that motor skills begin to develop from a fundamental organ, the skin [35]. This aspect is the basis of early stimulation during the first stages of child development [22,24] and, in turn, a means of interaction in duos during CI practice. It is in the early stages of CI practice that Mark Young began to really feel progress and awaken mobility in his body (appendix: answer 5).

Steve Paxton [34] does not specify, when referring to sensory movement, whether it originates from tactile, proprioceptive or even interoceptive inputs from the internal organs [35]. In any case, in Steve Paxton's discourse, upon which Mark Young basis his own work, is fully conscious of listening to this primordial part of movement as an essential component of infant motor development [22-24] and of dance itself in CI.

Mark Young also assiduously adopts a participation system in CI, which he is not only very positive about but also believes is partly responsible for his own functional improvement (appendix: answer 5 and 8). It is a system or means of equitable relations between all participating members, inspired by the Round-Robin planning system [36]. Here we note that there is a social code of equitable and multi-purpose contact of skills. This system of organisation helps to socialise and integrate each of the participants in the group. Along these lines, we can establish certain parallels with the theories of stimulation in natural environments and the influence of emotions on neurolearning [18,37]. Although the aforementioned studies focus mainly on early age populations, it has to be said that CI has certain emotional virtues, not only because of its proprioceptive component, but also because of this particular way of management between those participating in the group. The rehabilita-

tive model of CI proposed would be based on an interactive and inclusive model such as the one studied here. It is important to establish an environment based on rules and in which rehabilitative therapies have a place [37,38].

• Proprioception

In keeping with Paxton [39], Mark Young stresses the importance of a pattern of communication which is based on proprioception as the basis for his own functional improvement. He also alludes to dancers who can encode and decode internal stimuli or inputs spontaneously during practice (appendix: response 9).

Proprioception is part of the strategies used in functional and mobility recovery through neuromuscular facilitation in certain contemporary neurorehabilitation settings [3]. Facilitation is understood during its application as a process of natural stimulation or, where appropriate, inhibition of the impulse within the nerve tissue [20].

Body contact through the skin helps us to develop this sense called proprioceptive or kinesthetic sense. In other words, it helps us to become aware of our movements in space. There are proprioceptors in muscles, tendons and joints and the skin's own receptors also help to develop this sense. Ken Dychtwald in his foreword to *Job's Body* in 1987 [35], states that:

Without adequate tactile stimulation, the human organism will die. Touch is one of the main elements necessary for successful functional development in the organisation of the central nervous system, and is as vital to our existence as food, water and breathing (p.xiii) [35].

Engelsrud [1] alludes to the many points of view in relation to teaching CI including the use of CI as an instrument of power or domination. On the other hand, studies in somatic practices and Bodywork [35] point out that the benefits of tactile stimulation and the pleasure of feeling touch are infinite.

Proprioception is a fundamental sensory process for the development of the central nervous system in the first years of an infant's life. The first studies on motor patterning and its modulation by proprioceptive inputs in adult humans are probably those of Gellhom [29]. In this article, the author establishes the neurophysiological basis of emotionality. He correlates the variable proprioceptivity and the level of exci-

tation of higher nervous structures such as the hypothalamus [32]. We know that this central region of the brain regulates emotional balance, sexuality, and sleep, among others. Proprioception in human development is essential for behaviour and harmonious growth. Mark Young refers to this physiological mechanism inherent to this form of dance on several occasions when he refers to his recovery of skills such as balance and coordination. He emphasises the progressive work done on neuromuscular response based on immediate sensory feedback during practice, which he feels improves these skills on a daily basis (appendix: answer 2).

As Voss et al. [20] point out, proprioceptive means receiving stimulation within the body's tissues. In CI, such stimulation is reciprocal. There is no distinction made between therapist and patient. Information through the skin from the different tissues, fat, muscle, connective, and bone must be managed in a way that is helpful to flow in a continuous and cooperative dialogue. It is, in effect, a horizontal relationship of equals. Mark Young, talks about bone-to-bone contact, in duo, between the hip bones of both dancers in learning the skill called rolling point or rotational point of contact (appendix: answer 4). This point constitutes the meeting point of communication between both dancers.

Mark Young, during the interview alludes to the origin of this CI technique referring back to Steve Paxton's work where he explores the methodology with visually-impaired individuals practicing aikido rolls (appendix: answer 4) – the important point being that the limitation of one's sense of sight is a factor in the enhancement of proprioception.

During his recuperation and more especially, throughout his own process of learning, the interviewee highlights two fundamental techniques in the shaping of his functional rehabilitation methodology: one is Vipassana meditation and the other is Tai-chi. The latter, Mark Young points out, was a work discipline that he integrated into CI and which helped him to work on proprioception through balance exercises. In this case, by using the sole of the foot and on other parts of the body by means of paired facilitation techniques (annex I: answer 8). Various authors [40,41] have similarly described the benefits of these traditional Eastern techniques.

Furthermore, Mark Young, emphasizes how this internal tissue-stimulating mechanism is also used in a specific way in the technique of mo-

mentum. More specifically, the appropriate expression is to conserve momentum (appendix: answer 8). This consists of avoiding collisions with contact surfaces such as the ground and using this frictional energy to continue the inertia of the movement. The rollings, whether referring to aikido roll, Steve Paxton's spiral roll (Figure 3) or Simone Forti's crescent roll (Figure 4), all serve to teach our body, as the interviewee states "to flow".

We must consider all of these points in relation to proprioception work, in other words, the ways of using the body, the benefits of rehabilitation itself and the enhancement of the individual's psychophysical capacities outside the limitations of any single function. In this sense, learning to listen to and trust in this sense of proprioception was vital for Mark Young, throughout the diffe-



Fig. 3. Steve Paxton's spiral roll or helix roll performed by Mark Young with flip from supine to prone in a shape similar to deoxyribonucleic acid or the DNA molecule. Transition in lateral decubitus on right side.



Fig. 4. Simone Forti's crescent roll performed by Mark Young in a supine to prone roll with the crescent facing the direction of the convex side.

rent phases of the learning process (appendix: answer 2 and 8).

One of the features of skill-based CI is that it enhances proprioception. In other words, it cultivates awareness of parts of our body that we do not normally feel. One aspect, Mark Young points out, that makes CI different from other types of dance is that the back of the body is used as a point of contact. The back constitutes the area of trust between both partners (appendix: answer 14).

In spite of Mark's experiencing continuous dizziness, disorientation and other reminiscent signs of post-trauma [14] for several months, he focussed on proprioception as his reference point for both safety and protection and concentrated on it as the focus of his training. Thanks to the codification underlying the teaching of CI, he was able to understand the internal processes he was experiencing while assimilating the technique. And consequently, the improvement and balance of his own capacities.

Mark Young, nonetheless, points out in our interview how fortunate he was to have known CI before the accident. Rebirth and opportunity were possible thanks to already having known this path or discipline which was ultimately going to help him to walk this path again in his life. He also alludes to this period: my mind was as distracted as a one year old baby (Appendix: response 5).

After the accident, Mark Young turned his energies to CI as it had certain components similar to modern neurorehabilitation techniques such as established by the Bobath Concept [7-9,17,18] and the Kabat Method [19,21]. For example, Mark Young discovered how proprioception can be developed as part of a sensory process initiated by body contact in these neurorehabilitation techniques. Aspects such as neuromuscular control, balance and the regulation of the individual's own homeostasis within the duo are part of this constellation of signifiers aimed at the development of a coupled listening between two CI practitioners, the benefits of which seem to be innumerable.

In the Bobath Concept, proprioceptive feedback from the therapist to the patient is based on the contact surface provided by the therapist. This strategy is used to provide security both in the search for balance or straightening and in the development of motor skills [17]. The Kabat Method is a method of proprioceptive neuromuscular facilitation of great relevance in the field of early stimulation. Neuromotor reprogramming by means of proprioceptive stimuli is the basis of sensory-motor re-education [21]. There is no doubt that the use of these proprioceptive-based techniques helps to enhance a neuromuscular response by stimulating proprioceptors [4].

This chance of life, by which we mean the fact that Mark Young had been practising CI before the accident, became, unintentionally at first, a rehabilitative process. For 20 years he had been surrounded by dancers and CI practitioners, who were to become authentic therapists for him.

• Neurorehabilitation

Steve Paxton mentions that in educational settings, from a student point of view, there is a notable lack of development in the areas of motor skills, demands on their own adaptive nervous systems or development of their peripheral senses. In his discourse, he adds that adults are subsequently integrated into a labour market that favours a sedentary lifestyle and exacerbates this lack of multifunctionality. Paxton refers to this as a serious cultural problem, since individualisation as a social rule, affects integral development and often triggers, in turn, a fear of body proximity [34]. In his discourse, it is probable that Paxton is already warning about both the limiting educational-artistic model in American society as well as in the evolution of modern dance. He also warns of the lack of physical and social contact as a possible

triggering factor for long-term neurological problems in the population.

When we discuss Mark Young's case, he explains that, in the early stages after the accident in 1997, he started a treatment prescribed by the doctors, which basically consisted of a rehabilitation protocol with repetitive exercises in a classic physiotherapy room, and in isolation. This consisted of segmented arm and leg movements. For this type of treatment, pulleys, wheels and balance pods, amongst others, were used. The interviewee himself felt «suicidal» in this office environment and confinement. Mark Young felt that he was at a dead end, as he was not getting any better and he felt increasingly anxious (appendix: answer 8).

We know that the sense of democracy [42,43] is regarded in CI as in itself a format which creates the necessity of depending on the other and of integrating other bodies into your own dance [36]. This aspect of CI determined the path that Mark Young needed to work on.

It was then that he decided to return to practicing a routine of those techniques which he had learned a year earlier. Disciplines such as meditation and Tai-chi complemented his practice of CI on two to three days per week. Gradually he devoted more and more time to this discipline in so-called art labs: intensive periods with groups of people dedicated to CI.

The social aspect to recovery became increasingly important to Young during this process (appendix: answer 5, 8, 9, 10). Indeed, with regard to therapies in the field of early childhood stimulation and rehabilitation, the importance of the social environment is highlighted. In other words, a non-pathological based environment, such as one's own home, the school playground or playgrounds where children meet in an everyday setting and with other schoolchildren is prioritized [37,38].

Young seemed to sense that this was the path to his own recovery, in other words, he allowed himself to be guided by the group effect. This fact is glimpsed throughout the interview (appendix: 5,8,9 and 10). The neurophysiological basis of emotionality is located in proprioception [22,32], which is key to the homeostasis of individuals, as a property of organisms to maintain their internal regulation, a function of the hypothalamus. The emotional component of CI has been used in populations in different situations of marginality [26] or inferiority in a so-

cial context [27]. In our case, Mark Young also seems to have found the solution to his psychophysical situation after the accident.

One of the most revealing testimonies regarding this change is when he talks about his new perspective on life and how amazed he was to feel such improvements every week with the practice of CI after being so seriously injured (appendix: answer 1).

One of the questions we ask ourselves during and after the interview is what codes of analysis underlie this apparent miraculous recovery. In the case of neurodegenerative diseases, it is from the moment of functional impairment that neurorehabilitative treatment can help the patient and caregiver to improve their quality of life [6]. Possibly, Mark Young's quick reaction time in opting for CI partly explains this. The difference in environments that Mark described between traditional rehabilitation and this new paradigm he had found involved anonymity in one and socialisation in the other. Of course, proprioceptive work and the warmth of encounters with the people he meets along the dance path were part of this choice. As he danced and incorporated more days of CI training into his daily routine, the feedback became greater and greater. The partner, in this case, performed the function of the therapist. This had an impact on both his self-esteem and his mood, and the desire to explore further increased within Mark Young himself once he had moved away from the prescription of the classic Canadian social security therapy: «But CI is also fun. When you're having fun, you're willing to make the effort. Physiotherapy is painful. To regain my balance, I was asked to stand on a board balanced on a ball in a small office. I was facing the wall in front of me. After a couple of minutes I felt suicidal. This was a kind of solitary confinement. My thoughts were: seriously, is this therapy?» (Annex I: answer 8)

If we analyse more objective aspects, we believe that there are two main reasons why he achieved or felt that he improved physically: a) one is the use of functional versus muscular patterns, and b) the use of curvilinear or spiral patterns versus the linearity of the exer-

cises described by Young within the rehabilitation clinic, prior to the continuous and conscious practice of CI:

a) Functional versus muscular patterns

In the practice of the Kabat Method of neuromuscular facilitation, we work with a series of patterns called mass movement patterns. Adler et al. [4], emphasise that movement of body mass is a characteristic of normal motor activity. This is in line with Beavor's axiom that the brain knows nothing of individual muscle action, but only of movement. This supports what Young experienced when during the first part of his rehabilitation he experienced no improvement in classical physiotherapy procedures based on isolated muscle repetitions (appendix: answer 8).

Our subject of study defends this functional work in which he feels an evolution of improvement as opposed to working on specific muscles. The movement pattern in this type of neurorehabilitative strategies should generally have a qualitative and not a quantitative aim [3]. Complex motor movement requires a more global perspective: shortening and lengthening reactions in many muscles and to varying degrees and, above all, activating components in an harmonious manner [4].

There is an aspect of opposition within functionality in CI, which represents communication



Fig. 5. Mark Young in a flipping facilitation pattern favouring cranial base support. Artistic Residency in February 2018. Murcia (Spain). (Photo courtesy of Victor Selva ©)

between the duo, and thanks to this communication the dance coexists between both partners. In neurorehabilitation techniques something similar occurs: when an action is performed between therapist and the patient overcoming resistance, the facilitation modalities promote selective irradiation, a process demonstrated by Sherrington [21], a fact that promotes neurological connection and potentiation in the activated zone or area (Figure 5).

In our case study, alternative movement therapies such as Qigong or mindfulness are also used as an alternative for functional recovery [40,41]. Mark Young uses a type of meditation called Vipassana, as an intermediary thread between each CI teaching practice. Mark's testimony is compelling in relation to the listening skills he developed as a result: «Vipassana is something that came into my life two years after rehabilitation. It requires you to stop thinking and focus on physical sensations. With my mind scattered I went to my first 10-day course in 2000. There, I saw first-hand what a wandering mind I had and how much work I had to do; and how much room for improvement there was. You wouldn't think that sitting still, cross-legged on a cushion for twelve hours a day would help you as a dancer. It took away unnecessary tension and made me softer with more appropriate reactions" (Annex I: answer 8).

b) The use of curvilinear or spiral patterns versus linear patterning

We start from an anatomical foundation based on the fact that all tissue anatomy: muscle insertions and fascicles, connective fasciae or myofascial meridians are arranged in a curvilinear or spiral fashion [44]. From this knowledge, Mark Young alludes to the concept of sphericity and spiral as opposed to the linear work that the interviewee himself observes when comparing CI and the previous classical physiotherapy sessions that were prescribed to him after the accident: "Conventional physiotherapy is based on what can be measured. Measurements look at how much weight the right arm can lift versus the left arm, how many repetitions? For the sake of measurement, these tests are designed around isolating parts of the body and looking at their linear movement, such as an arm extended with a weight, then contracted, then extended, repeat. In reality, the body is a series of spirals. The bones wrap around each other, most obviously the radius wrapping around the ulna in a spiral shape. The muscles are laid on the bones in spirals, the sartorius being the most obvious

muscle that is spiralled down the front of the body from outside of the hip to inside the knee. It is far more beneficial to exercise the body in its natural forms than to isolate individual muscles. I have met many weightlifters who cannot reach their shoelaces, nor can they pick up a sack of rice and throw it over their shoulder. Some muscles have become over-developed and other muscles completely undeveloped" (appendix: answer 8).

It is recognised that the components of mass modality movement in neurorehabilitative facilitation techniques are spiral and diagonal in nature [4]. This foundation underpins the theory that CI dance form involves collaborating in duos for a spiral component of the musculature in movement to take place, as described by Steve Paxton in *Material for the Spine* [45]. In turn, such a duo interacts as a movement of masses that empowers and facilitates the synergy of this type of spherical patterning. The proprioceptive facilitation mechanism in this case appears to be very similar to that used therapeutically in neurorehabilitation techniques themselves [3].

Conclusions

Proprioception is a unifying element in terms of CI dancers and would appear to be key to the physical rehabilitation of our case study. In addition, certain motor patterns of CI dance are shown to be characteristic of an infant's evolutionary development. Both factors are known to be part of the neurological facilitation and restoration processes, within the strategies of the Bobath Concept and the Kabat Method. Socialisation is a decisive factor in the learning and personal development of our subject of study, Mark Young. This aspect has probably influenced his functional improvement as emotion is implicit in body contact and alluded to as a visible and inherent part of CI.

Considerations and acknowledgements

Mark Young, during his teaching period, became a student of the first generation of dancers who accompanied the creator of CI, Steve Paxton. Mark Young can be considered as part of the second generation of dancers following on from the founding generation of this dance form in the 70s. Undoubtedly, we can affirm that he belongs to that generation of dancers where the con-

cept of rehabilitation is an inherent part of their artistic discourse.

Mark Young finished building his Leviathan Studio Centre in 2010. To this day his dedication to the practice of CI is unwavering. He sees the Leviathan Studio as a space for CI research and, at the same time, is committed to health as a primary form of performance.

In this article there are many other uncommented aspects of the interview transcribed in the Annex: "A personal encounter with Mark Young, Contact Improvisation as a Rehabilitation Technique through Repatterning". We open the possibility for the reader to access it in order to understand, not only a life story, but also the understanding of a dance form, thanks to an accident or coincidence itself.

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ANEXO

A personal encounter with Mark Young, Contact Improvisation as a Rehabilitation Technique through Repatterning

Mark Young is a man dedicated to sharing his life with the people who come to visit him at the Leviathan Centre (LC) on Lasqueti Island in Canada. As the boat edges towards the port to dock, he will be there waiting to pick you up and bring you to Leviathan. With Mark, there are no transitions – life is a continuous state of movement or flux whether it involves preparing freshly-caught fish for the barbeque, partaking in a dip in the sea or building one of the cabins at the centre. At the LC, Mark Young transmits his experience of life and movement, far removed from the noise-filled world and any time is a good time to share some wisdom on his passion: Contact Improvisation (CI). For the visitor, the experience is to submerge yourself into the world of CI in a veritable womb of engraved sensation.

1. Interviewer (I): “Can you tell us something about how your relationship with Dance and in particular how Contact Improvisation evolved and how it all began? We heard that you had an accident at an earlier stage in your life...”

Mark Young (MY): “In 1997 I went over the handle bars of my bicycle and hit the road with my head. The skull fractured at the base at the point where the spine meets the skull. There was hemorrhaging across the right side of the brain causing stroke-like paralysis to the left side of my body. Balance and coordination were compromised. I was lucky that I had already started learning Tai Chi with a very good organization, The Taoist Tai Chi Society. I was lucky that I had been introduced to Contact Improvisation before the accident.”

2. I: “We were wondering whether this accident had an impact on your focus in Dance and in your rehabilitation”.

MY: “After the accident, I decided to pursue these two disciplines of Tai Chi and Contact Improvisation to recover balance, proprioception, and coordination.

It was interesting to me from the beginning that both discipline use very similar language to describe movement. For instance, ...do not use your muscles, line up your bones, is often said in both Tai Chi and Contact Improvisation. The concept of remaining relaxed and not over stressing muscles is a common approach. Tension masks sensation is said in both schools.

My focus in dance became strongly routed in the physicality. I was intrigued by my body's limitations and abilities. It was fascinating to me that to access strength I had to be relaxed. Less is more. Contact Improvisation gives one immediate feedback. It is a way of looking at cause and effect. If I do something then I see the response I got from my partner. Was that the response that I wanted? How can I elicit the response that I want? What more is there? Where else could we have gone? I had no interest in performance. I was only interested in what it felt like.”

3. I: “Tell us about how the idea of creating the Leviathan Centre emerged?”

MY: “A car caused the accident; therefore I was able to receive support for rehabilitation. It took five years to settle the court case. During that time I studied Tai Chi, Shiatsu massage and Contact Improvisation full time for five years. When the accident first occurred I could not remember my name, what year it was, where I was from, anything about the accident, what I did for a living, why I was in Vancouver. Two years after the accident I was declared permanently disabled by the insurance company doctors. At that time I knew that I was continuing to improve but conventional medical knowledge was under the belief that no improvement would occur two years after the accident. Any healing will occur in the first two years with no change after that time is what I was told.

I continued to dance and do Tai Chi and go to school and improve my health. Because I recognized the healing benefit of playful, balance-based exercise...It was early in my rehabilitation that I realized the healing power of dance, in particular, CI. I realized that there needed to be a place for people to study

CI full-time. At two years post-accident one of my doctors said to me, you have rehabilitated yourself beyond anyone's realistic expectations. At that time I decided to commit all resources from the court case to building a dance studio. It was three more years till I left Toronto to move out west and buy land for the studio. The studio was completed in 2010, 13 years post accident".

- 4. I:** "A technical question: how does Tai Chi or any other martial art form relate to Contact Improvisation?"

MY: "Contact Improvisation is based on Vipassana Meditation, Tai Chi and Aikido. Steve Paxton was teaching Aikido rolls to blind people and it was the teaching of the pathway of the Aikido roll to blind people that led him to develop Contact Improvisation. In another conversation, Paxton explains the attempt to conserve momentum while bodies collide with the floor or each other, so birthed the concept The Rolling Point of Contact. The slow movements of Tai Chi, the slow stepping is a solo version of the rolling point of contact as you gently shift your weight. When teaching CI, I use this concept from Tai Chi of gently rolling your weight from back foot to front foot. As your weight shifts there is a rolling of the mass around various joints. An easy joint to feel, the largest in the body, where the trochanter meets the hip is a rolling point of contact that you can focus on. This is a transferable skill. Partnering in CI requires us to gently roll our weight onto our partner. The more you can refine this sensitivity the more fluid your dance will become.

There are recent studies by kinesiologists regarding rehabilitation exercises that are fun as opposed to competitive. Our muscles behave very differently when we are playing versus when we are competing. When we engage in competition there is a tension that is introduced that changes the physiology of the movement, a change for the worse. Tai Chi is a martial art that is practiced in a relaxed manner. Tai Chi can be turned into Kung Fu in an instant. If you can do it slow, you can do it fast. The health benefit is to effort in a relaxed way, controlled, and precise. This is when neural pathways in the brain are created. Tai Chi, Contact Improvisation and balance exercises increase your Intelligence Quotient".

- 5. I:** "There are connections created among the different dimensions of your life, such as:

Contact Improvisation, your accident, the Process of Rehabilitation, Tai Chi, Vipassana Meditation and the teaching of Steve Paxton... Where did you practice Contact Improvisation full-time in those years? And, would you like to mention some of the places, methods or teachers you encountered during that process of immense learning?"

MY: "The one skill that is transcendent of CI, Vipassana and Tai Chi is the skill of listening. The state of my mind after the accident was devoid of this skill. My mind was as distracted as 1yr old baby. I didn't have object permanence. I could not follow a conversation and sometimes walk away while someone was talking to me not remembering that they were talking. I would forget what I was talking about. I would forget that I put food on the stove until the kitchen filled with smoke. I needed to concentrate. Concentration is like a muscle. If you exercise it then it becomes stronger. For an accident like the one I had it is common for the sufferer to lapse into television and alcohol quickly developing dementia.

I started Contact Improvisation in Toronto, at the Sunday jam, the longest running jam in the world. I went every week at the beginning. Then the Wednesday jam in Toronto started and I would go twice a week. Then a Friday night jam started and the same group of people were labbing three times a week. This was my playtime after a day of studying Tai Chi. Don't get me wrong, I like doing Tai Chi but a few hours a day of it can be pretty dry. I often wondered why I was doing it and was anything happening to me, was I getting better. Then I would go to the jam and unleash strong, responsive muscles with improved balance. One of the fascinating things about such a severe trauma is that you get to see yourself getting better on a weekly basis.

John Faichney, Pam Johnson and John Oswald of Toronto were my first CI teachers. I still quote them when I am teaching twenty years later. I am grateful to their patience with me in the beginning. I was that young guy that smashes into the floor or drops their partner while trying to make something happen that really should not have been attempted.

Vipassana is something that came into my life two years into the rehab. It demands that you stop thinking and focus on physical sen-

sations. With my scattered mind I went to my first 10day course in 2000. There, I saw firsthand what a wandering mind I had and how much work I had to do and how much room for improvement there was. You wouldn't think that sitting still, cross-legged on a cushion for twelve hours per day would help you as a dancer. It took away unnecessary tension and made me softer with more appropriate reactions."

- 6. I:** "Concerning the Leviathan Studio, why did you choose the name Leviathan and is there some story behind its meaning?"

MY: "Leviathan means whale or large, ocean animal. When I was assembling the studio, the construction looked like the skeleton of a whale. It was very obvious and sudden, a eureka moment. Later, I found out that Leviathan also means gargantuan or massive."

- 7. I:** "From May until his arrival at the Leviathan Studio at the end of June 2016, Ramon had fallen ill. Because of this, his rapport with the teachings of Mark Young was based on a total sensory experience not unlike that of a new-born baby. Most of his time was spent lying horizontal and opening and closing his eyes as he watched Mark teaching Contact Improvisation. Ramon recalls that during his stay at the Leviathan Studio Mark said to him at one stage: You've come to the right place. This is the place where you will begin to heal yourself. Mark and the Leviathan Studio experience of the Summer of 2016 epitomized for Ramon the most profound incarnation of the concept of Re-patterning for which he had been searching for a very long time".

MY: "I remember the conversation. I checked in with because he was on his back with his hands over his eyes. I was concerned. He briefly told me his history of being ill. My comment about coming to the right place is because Leviathan Studio is committed to health. We use dance as the primary healing modality. Learning to dance is secondary to becoming healthy."

- 8. I:** "The term Re-patterning is a model of learning which helps to build not only a new motor skill functional structure but also the self-same techniques of dance. In this regard Mark, you mentioned earlier that physical therapy techniques did not result in a full recuperation for you and that is was indeed

Contact Improvisation and the approach to JAM which provided the way for you to begin recovery. Could you tell us some more about that slow process of recovering the evolutionary patterns of development? Rolling on the ground, for example, coming up to a sitting position or standing on both feet (biped). How did you learn to walk again to turn and to jump? How did this learning process and the process of integration evolve and were you consciously aware of the progress as it happened?"

MY: "Above all else, Contact Improvisation is fun. When you are having fun, you make effort willingly. Physiotherapy is drudgery. To recover my balance I was asked to stand on a board that was balanced on a ball, in a small office. I was staring at the wall in front of me. After a couple of minutes I felt suicidal. This was a type of solitary confinement. My thoughts were, seriously, this is therapy? Conventional physiotherapy is based on what can be measured. Measurements look at how much weight can the right arm lift versus the left arm, how many repetitions? For the sake of measurement, these tests have been designed around isolating parts of the body and looking at their linear movement, such as, arm extended with a weight, then contracted, then extended, repeat. In reality, the body is a series of spirals. The bones wrap around each other, most obviously the radius wraps around the ulna in a spiral shape. The muscles are laid on the bones in spirals, the Sartorius being the most obvious muscle that is spiralled down the front of the body from outside of the hip to inside the knee. It is far more beneficial to exercise the body in its natural forms than to isolate individual muscles. I have met many weight lifters who can't reach their shoe laces, nor can they pick up a sack of rice and throw it over their shoulder. Some muscles have become over-developed and other muscles completely undeveloped. The Tai Chi that I studied emphasized the spiral movement of the body. The slow, focused movements of Tai Chi allow the brain to make neural pathways. Unlike playing sports where the movement is made without conscious thought (hockey, golf), Tai Chi demands that we look at our limb as it moves constantly evaluating its position in space. This practice develops proprioception. The balance exercises of Tai Chi also develop proprioception. I went from being very clumsy, poor balance, stumbling on stairs, breaking dishes in the kitchen to being strong and stable and valued

as a base in aerials. After a week of practising Tai Chi, it was fun to play in an improv dance environment. The Tai Chi exercises would be imprinted into my muscle-memory. Movements would happen quickly, so fast that I would be surprised at what my body did. Contact Improvisation became an application of Tai Chi, and a lot more fun than going to Kung Fu. Steve Paxton's work emphasizes the spiral movement of the body. Contact Improvisation at its highest levels refers to spiral movement and spherical space. Spherical space refers to the perception that we are a ball or a sphere that rolls into and out of surfaces such as our partner or the floor. In Spherical space we are no longer a front body, back body, two sides, making rectilinear movements that collide with a partner. This is merely a perception but other people have described this phenomenon the same way. This perception of being spherical may also be described as a flow-state. Other people have gotten there in other ways. I believe hours of Tai Chi is what got me to this state. Tai Chi is far more exciting than standing on a wobble-board in a physiotherapist's office. Contact Improvisation was the icing on the cake at the end of a long week of Tai Chi."

- 9. I:** "From the perspective of creating new techniques, we know that Release Technique integrated another way of intervening in dance which was a lot more humanised. This technique was based on the evolutionary development of sensory patterns and our anatomical architecture. The fundamentals of this dance technique were very much influenced by different generations (of dancers) including Mabel Todd, Irmgard Bartenieff or Joan Skinner. On the same note, Body-Mind CENTERING, uses the concept of Re-patterning in terms of The Art of Touch, based on proprioceptive inputs through contact and more particularly by using the hands. In this regard, Re-patterning could equally be considered as a model which has contributed to the creating of Contact Improvisation as a style of Dance. This fact may be because of how Contact Improvisation itself evolved. What would your take be on this idea?"

MY: "CI gives you immediate feedback. I lean into my partner, I observe their reaction, I get a sense if I am leaning too hard or am I not having an impact. I moderate my response by leaning more or less, faster or slower. The real practice of CI is to remain observa-

tional. By exercising our observational-mind we increase our capacity to listen and notice the effect we are having on our partner. We develop awareness of unnecessary tension in our body. To this extent, being in a long CI jam, 8 days, with the same people, you are able to learn the habits of others and see your patterns of movement, then reflect on what works and what doesn't work. Having a long dance, more than an hour, with the same partner can be very informative. In a one-hour duet, the dance will have boredom and repetition, it will be frustrating at times, this is when real development and change from old habits takes place. This is more than learning how to crawl again. At this level re-patterning your personality may change".

- 10. I:** "Could you also comment in Fall After Newton how Nancy Stark Smith manages to withhold a natural reflex to contract in order to allow a continuum of movement instead of collapsing onto the ground (as one would expect). Is it that the stimulation and retraction of primary reflex patterns is part of the development or flow of Contact Improvisation when working at higher levels off the ground"."

MY: "By stretching out and spreading the collision over a greater surface area we learn to absorb the collision with grace. I think you need to practise falling in order to learn that contracting into the foetal position does not help you. The opposite is what preserves you. In fact, we can take the kinetic energy of the collision and redirect it, essentially bouncing off of the floor by rolling through the soft parts of our body, conserving the momentum and redirecting it towards up. The fear response from infant stage is to clutch into a foetal position. If you do this while falling to the ground, the points of contact may be your elbow, tailbone, head, shoulder, hip prominence. That method of landing leads to a sudden stop with most of the energy going into a sharp point on your body causing pain, and the dance comes to a stop, the energy between the two dancers has gone into the floor. This is the value of practicing the rolls. Steve Paxton's spiral roll, Simone Forti's crescent roll and the Aikido roll teach our bodies to transit through the soft parts of our body not pressing the same hip prominence into the floor roll after roll. We train with these rolls in a slow, concentrated manner. When we dance, these mo-

vements are accessed as muscle memory”.

11. I: “Mark, I admire the fact that given the accident and head trauma that you have managed to re-pattern your fear and are capable of inhibiting or controlling that fear during phases in a contact duet involving spiralling on the shoulder of the partner at a considerable height from the floor. Could you talk us through the process of over-coming fear of colliding during those moments when you are flying with your partner (and doing this with no tactile proprioceptive aides or support). Where is your focus of attention during these phases of flying or in the sense of agility?”

MY: “Shortly after the accident I had vertigo. This is the result of disturbance to the inner-ear as well as stroke-like damage to the brain causing partial paralysis to the left side of the body. Simply put, the messages were not reaching the brain and I would fall over. When I got back up I would be severely dizzy. I read that a way to overcome this condition is to bring it on. I would do forward rolls till I was dizzy and then hold the ground with both hands telling myself that the world really isn’t spinning, telling myself that that information is not real and to ignore it. I learned to rely on proprioception as a mode to maintain balance while ignoring the information from the inner-ear. The inner-ear was telling me the world was spinning as my eyes were bopping around trying to orient to the horizon. The proprioceptive nerves in my joints were telling the truth, I am stable on the ground and it isn’t moving. One of the Tai Chi meditations involves headstands. Again, disoriented, dizzy, and exploring what is real sometimes means ignoring your senses. Once you learn that your inner-ear is giving false messages, ignore them and focus on your proprioception. CI is an advanced training in proprioception. As your dances become more adventurous with back bends and tumbling to the ground head-first you force your body to learn survival skills that emphasize, Don’t panic. Stay relaxed. Now, I can make myself extremely dizzy by spinning around in space but stand still afterwards, ignoring the inner ear and eyes, focusing entirely on what the physical body is sensing. The feeling of being dizzy is like having your very own amusement park ride (roller-coaster). Children love playing this game. Adults should do more of it. I took this pursuit of disorientation to CI jams, trying to find myself lost in the dance, to

bring on the roller-coaster effect. When you learn to rely on your body, you learn that it will do what it needs for survival. Movements become faster than the intellect. You cannot think this fast. Your body will react in a way to preserve itself. Of course, this isn’t where you start. This ability might take a decade to develop unless you have a background in gymnastics. Where do I put my focus? Now, when I get disoriented or overwhelmed, I focus on my breath and let me body sort out its own salvation. I focus on the sensation of breath as it passes my nostrils and upper lip. I let me body do the rest”.

12. I: “I think it’s important to reflect upon a wonderful word used in the field of Dance regardless of the degree of improvisation and that is the word CODES – or in other words, the patterns or rules in each style. What are your feelings about this term? How important are codes in Contact?”

MY: “Although CI has been left uncodified, there are plenty of rules. I like the quote by Steve Paxton, do under others as you would have then do under you. In fact, you can’t do whatever you want. Your movement should have something to do with my movement. If I am on your shoulder there is an implicit code that you will do your best to preserve my safety and moderate your movements accordingly. If we break contact in our dance and we move back towards each other, I may reach out with my hand to connect with you. I have the entire front of your body to connect with, it doesn’t have to be your breast. In fact, I can moderate my reaction to find your forearm as a place to reconnect with. There are codes. They just aren’t written down. You will have to figure them out for yourself”.

13. I: “Could you comment on these CODES from the time we first used this term, if we set that at 1972 up until the present moment 2017, so around 45 years? Which patterns or codes have been retained, albeit with changes (many filters/amendments?) – as a result of what I suppose to be trial and error basis in the development of this style of dance?”

MY: “I can’t comment. I don’t know of any codes in the beginning. There was just a score. There is still no written code. CI has gone down some varied avenues of late from social activism to tantra. I stay in the physicality,

the training, the Shaolin temple of CI. In that realm I can meet a stranger and assess their skill in an instantaneous touch. They may be from another country and have different teachers from different back grounds but our understanding of dance is mutual, and we quickly find ourselves in a fast paced dance with aerials. We may crash but we do not get hurt, never a bruise. The energy of the fall is conserved and redirected in both our bodies towards up...until we are exhausted, then we take the fall as an opportunity to rest and change our sweaty shirts”.

14. I: “In Spanish, words such as codes or patterns could refer to the same thing when we speak about forms of dance. For example, Crescent Rolls and Helix Rolls or Arches are codes or patterns belonging to Contact Improvisation Technique. Could you explain from your own point of view how you consider these skills and how they can help us to develop CI?”

MY: “I am glad you asked about codes. Yes, it translates differently. Steve Paxton and the original dancers decided to leave Contact Improvisation un-codified. There are no codes. What it means is there is no Registered Trademark. Gabrielle Roth demanded that you get certified with her if you wanted to teach 5 Rhythms dance. If we wanted to be ballet teachers we would first have to graduate from a ballet school and know the codes of ballet. A lot of people teach Contact Improvisation, not all those teachers can dance. There is no set of knowledge that you need to know to teach CI. Steve Paxton walked away from millions of dollars in royalties. It could easily have been that if you wanted to teach CI you had to complete a teachers course with Steve, pay Steve \$10 000, pay annual fees to use the Trademark, etc.

Patterns also has a slightly different meaning. When used in CI, the word patterns refers to the habits that you repeat in an improvisation dance. These patterns are unique to all dancers. You will notice them change in yourself over time. Having patterns in an improvised dance is considered poor. We are suppose to be improvising, not executing patterns or phrases of choreography.

Crescent Roll, Helix Roll and Aikido Roll help us to cultivate awareness of parts of our body that we normally don't feel. In particular, the back side of the body. One thing that is uni-

que to CI is that we offer our back to our partner as a point of contact. This rarely, if ever, happens in other dance forms. It is helpful to cultivate awareness of our back side of our body. Developing sensitivity cultivates a more evolved dance.

The ROLLS also help with sequencing of the body. We learn to soften through parts of the body that are tense. In becoming softer, we are able to absorb and redirect energy. The Aikido roll is a prime example of this: we learn to direct the forward momentum through our body as we roll head first landing on our feet and continuing forward if we wish. Without this cultivated awareness, cultivated softness, cultivated ability to redirect momentum through our body, we would smash into the floor causing our body to bruise or break. The Spiral and Helix Rolls are more subtle and therefore more effective in cultivating this skill of absorb and redirect. They are more applicable to the duet form of CI as the point of contact that is more relevant is the one with your partner. If my partner loses their balance and falls into me then, perhaps, I can take that momentum into an upward trajectory.

Regarding your question, «how have the codes changed from the beginning?» It is better English to say, «how have the exercises or trainings changed?» My answer to that question is, Contact Improvisation has gone down so many different tangents from the early days. Different teachers have a wide variety of exercises that they use to teach CI. One teacher at my studio used most of the week to talk about non-violent communication. In the beginning it was very physical. Some of the catching exercises that we see Nancy doing as a small woman catching a large man are hardly ever done any more for fear of liability but excellent exercises to when you have a committed group of dancers. They teach you to be spontaneous and take risks and provide for your safety”.

15. I: “At the moment, there are many interpretations, whether correct or not of what is Contact Improvisation. Any performance or approach to this art can be called CI but limits are necessary, at least, in my point of view. This is also why for Ramon, his experience of Mark's teachings in the Summer of 2016 have been so important to him. It was in the limits of this art form that he was able to find his identity and the recognition not only of what exactly CI is but also about what it is to be human. A

key part of your teaching for me was that I learnt that entering from Form to Energy had a very decisive impact. Up until that point, Ramon had held a uni-directional approach to Contact Improvisation in which he worked from the point of Energy to Form. In the Leviathan Studio, encountering the Form helped Ramon to find a way into how energy flows in Contact Improvisation. What more can you say Mark about this relationship between Form and Energy?"

MY: "Paxton once said to me, "First you link up then you dance like hell." That first part, link up, that can happen in an instant with two experienced dancers. Before then, we must go refine the skill. I like the exercise of keeping a ball between my partner and me. As we dance, we have to keep this ball from falling on the ground. If my partner moves away from me then the ball falls. My partner learns to stay connected to my core. Once I know that they are stuck to me, we can lose the ball and focus on the point of contact between us. Then, we can roll the point of contact up and down, one of us will step away to maintain balance, the other will follow staying glued. In that momentary loss of balance one centre of gravity will be higher than the other. Rolling into and then up, a gentle lift occurs. Just like the transition from Tai Chi to Kung Fu or Spiral Rolls to tumbling, gentle lifts can be accelerated".

16. I: "Do you think that the map of Contact Improvisation is fixed in terms of new codes? Do you think that it is worthwhile to maintain the existing legacy and to protect it?"

MY: "I hope the existing legacy remains protected. I am committed to it. There seems to be phases that come and go. Lately, there is a tendency to have music on during the jam. This of course dampens the CI experience not enhance. You cannot be dancing with me and the music at the same time. A lot of people are coming to CI without ever studying it or learning the history. There are small communities that think they invented it not realizing that CI is worldwide. I hear of workshops in CI with such cross-overs as social activism, tantra, or cuddling. I don't want to cuddle. I want to dance. I resent when someone comes to my studio to cuddle on my \$20 000 sprung dance floor.

Leviathan emerged from the depths of the Pacific Ocean and Mark found on Lasqueti Island, in the State of British Colombia along the North Pacific borders of Canada, a place, a home where he built this wild beast that he himself had encountered face-to-face during his life journey. When he hit his head that day and fell slowly into the ocean, falling like lead, without a life-jacket, that is when he met the marine beast, the skeleton of the Whale buried deep inside the Sea bed. Together they floated to the surface and decided to share the experience of life with humanity through Contact Improvisation".