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Influence of Aikido and Taijiquan-Tuishou on Contact Improvisation

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Oriental Martial Arts such as Taijiquan-Tuishou and Aikido represent some of the Asian influences on western culture resulting from immigration from China and Japan to the United States of America during the middle of the 20th century. Contact Improvisation, a style of post-modern dance performed in pairs, is one of the manifestations enriched by this oriental influence. The purpose of this manuscript is to document which dynamic, proprioceptive and somatic elements were transferred to the choreographic language of Contact Improvisation from these martial arts. In the case of Contact Improvisation, the most important technical components highlighted include: center of gravity, weight sharing, point of contact, sphericity, rolling, the embryonic relationship of axial axis and limbs, *ki* and proprioceptive communication. Although an evolution in the interpretation of the meanings and uses of this particular dance form may exist, we can nonetheless establish some kinesthetic communication codes and strategies derived directly from its original sources. These sources belong to martial arts such as Aikido and Tuishou or Taijiquan and are essential to the intercultural communication component of the Contact Improvisation duo since they involve the learning of fundamentals and principles of non-verbal interaction considered as specific for the mastery of intercorporeality. This is discussed in light of the work of Mark Young, a Contact Improvisation choreographer who maintains Paxton's legacy of roll technique documented in "Material for the Spine" by perfecting the execution and technical variations of *helix rolls* in a constructed system of spirals. This concurrence of strategies adopted from Aikido and Taijiquan and the usefulness of these elements in terms of performing this partner dance would appear to be key in the understanding of Contact Improvisation.

KEYWORDS

contact improvisation, choreography, martial arts, intercultural communication, non-verbal communication

Introduction

The postmodern dance style, Contact Improvisation (CI), was broadly discussed in 2008 in the book “Caught falling: the confluence of contact improvisation, Nancy Stark Smith, and other moving ideas” by the co-founders of Contact Improvisation, Nancy Stark-Smith (1952 New York, NY United States–2020 Florence, MA United States) and Steve Paxton (1939 Phoenix, AZ United States) co-authored by David Koteen. This book provided a theoretical compilation, bringing together different definitions of Contact Improvisation with the common thread being the appearance of concepts belonging to the field of physical laws governing bodies such as weight dialogue, balance, reflexes, impulses, bodies in movement and in physical contact, gravity, momentum, inertia, friction, and centrifugal force. As an example, one of the definitions stated that “Contact Improvisation is a form of partner dance originated in 1972 by choreographer Steve Paxton based on the communication between two moving bodies that are in physical contact and their combined relationship to the physical laws that govern their movement - gravity, momentum, friction, inertia, centrifugal force, etc.” (Koteen et al., 2008, p. 12). If we look closely at these parameters, they are the same ones that underlie the technical development of certain disciplines of martial arts. Specifically, we refer to those where spatial, proprioceptive, and tactile communication predominates in pair work, such as Aikido¹ and Tuishou (Kauz, 2007, p. 62).

Aikido is a discipline that derives from traditional Japanese martial arts (Benedetti, 1993, p. 14) where combat methods, mostly unarmed, are linked to traditional warrior arts and the military caste known as buke (Protin, 1977, p. 109–110). It is a discipline of coordination, a way of strengthening the mind and body, of fusing the individual’s physical and mental powers so that the individual may become a more fully integrated human being. The word Aikido means method or way (*do*) for the coordination of harmony (*Ai*) of mental energy or spirit (*ki*). The Aikido method was developed by Master Morei Ueshiba (1883 Tanabe, Japan- 1969 Iwama, Japan) in Japan between 1930 and 1960 (Westbrook and Ratti, 1970, p. 17–18). Although it should be noted that it is difficult to isolate the technical dimension from the spiritual or personal, it is also risky to trace its religious, historical, and cultural genesis. We can, however, consider the origin of the birth of Buddha 556 BC as an essential seed of influence of what is now the modern discipline of Aikido (Protin, 1977, p. 31).

Tuishou, on the other hand, is a modality involving high contact skill in duets and is the most widespread martial art form of Taijiquan. This training modality was created by Chen Wangting (1600 Chenjiagou, Henan China-1680) who founded the system some 350 years ago (Gaffney, 2006, p.32). Chen

Wangting, who resided in Wenxian County, Henan Province (China), was a military warrior of the imperial guard of the Qin Dynasty (1644–1911) (Dudukchan, 2017, p. 5). The aim of Tuishou practice is to sensitize oneself to an opponent’s movement and intention while concealing one’s own intention and energy (Gaffney, 2006, p. 38). In a synthesized way, we can say that it consists of unbalancing the other using basic techniques of one’s own martial art (Wolfson, 2007, p.40) while maintaining physical contact. Taijiquan has been used by missionaries and martial arts traders as a vehicle for the cultural transmission of Chinese culture to the West. Western practitioners have used it for a variety of purposes, from self-knowledge and spirituality to physical and social therapy (Wile, 2008, p. 37).

The transmigration of people and of ideas from East to West also influenced the development of somatic practices, encouraging exposure to philosophies and practices of mind and body, such as Eastern martial arts and yoga. It is in North America that most practitioners of somatic practices were concentrated and the personal experiences of these so-called “Somatic Pioneers” who had suffered decisive events in their lives (psychological traumas, physical injuries, or painful processes) triggered a change toward more holistic models and the establishment of a close relationship between movement pedagogy and rehabilitation. These pioneers developed the use of somatic awareness in movement work based mainly on dance, physiotherapy, and martial arts (Eddy, 2009, p. 11). Among the best-known somatic pioneers are Moshe Feldenkrais (1904–1984), Mabel Elsworth Todd (1880–1956), Irmgard Bartenieff (1900–1981), Gerda Alexander (1908–1994) and Ida Rolf (1896–1979). And, as mentioned above, their work was based on the influence of Eastern disciplines such as yoga, Chinese Internal Martial Arts, and Japanese Martial Arts (Eddy, 2009, p. 7).

We must return to the end of the 19th century to fully understand the germination of the relationship that was to evolve in the 1970s of Aikido and Taijiquan-Tuishou with the dance style of Contact Improvisation. At the end of this century, North America became a host continent for large migratory influxes from countries such as China, Japan, and the Philippines. Indeed, China became the main exporter of labor at that point in time. In the 20th century, Chinese citizens migrated to the West, both to North America and Britain (Liu, 2009, p. 213). A total of 408,493 Chinese-born people were admitted into the continental United States as visitors, students, or immigrants between 1850 and 1960. Japan succeeded China as the second most impactful migration influx to the United States. Japanese nationals first settled on the Island of Hawaii, a migratory stopover off the Pacific coast, and California, Washington, and Oregon were the primary states where Japanese migrants settled. In 1930, the state of California alone counted almost 100,000 Japanese immigrants (Boyd, 1971, p. 50). Immigration from China and Japan to the United States of America, especially in the last two decades of immigration in the 1950s and 1960s, had

¹ Rothman, 2000.

a lasting impact on local art and culture. This fact influenced the spread of Chinese martial arts such as Taijiquan to the West. Tuishou, or pushing hands, was one of the six components of the art along with *qigong*, *neigong*, weapons applications, and self-defense (Ryan, 2008, p. 527).

From this decade on, Eastern philosophies were of particular interest to many American artists as an alternative to the Western model. Similarly, Zen practice was seen as an antidote to the competitiveness that characterized the capitalist society of the time (Novack, 1990, p. 184). In the case of Aikido, it was after World War II that Mori Ueshiba decided to expand the knowledge of this discipline both to Japan and the rest of the West². In the 1960s, interest in body training from martial arts such as Taijiquan, Karate, Judo, and Aikido increased throughout North America (Novack, 1990, p. 52). Specifically, the city of New York became the meeting point of two distinguished masters, Yoshimitsu Yamada (1938 Tokyo), who taught at the *Aikikai* in Manhattan, and Zheng Manqing (1902 Wenzou, China-1975 Taipei, Taiwan), who established the Taijiquan Association in New York's Chinatown, and later his own school at Bowery. In retrospect, we can recognize these two figures as essential in the development of the Contact Improvisation style of dance, both for the accessibility of their teachings and the opening to the West of meditation practices based on *Zen* Buddhism or *Taoism* (Protin, 1977, p. 31–32). In short, martial arts masters transmitted cultural elements that permeated contemporary dance.

From its birth in 1972, Contact Improvisation philosophy declared itself as an evolving system open to a wide range of sources both for inspiration and to help establish working principles and skills (Stark-Smith, 1980, p. 2). The existing material in Contact Improvisation did not differ, in the words of Steve Paxton, from that found in wrestling, jitterbug, or Aikido, among partner disciplines, but is defined as a form of activity that is unique in that its objectives are different from other forms of duo activity (Paxton, 1975, p. 40–42). Specifically, both Taijiquan and Aikido influenced the founder of Contact Improvisation, Steve Paxton, in those years prior to 1972. For his part, Mark Young (1965, Toronto, ON Canada) became a practitioner of this style of dance following a serious traffic accident in Vancouver on 26 June 1997. This was 25 years after the foundation of Contact Improvisation. Mark Young was part of a second generation of dancers who developed a system of spirals based on Taijiquan-Tuishou work. Mark Young had previously studied in the 1990s with Master Moy Lin-shin (1931–1998) of the *Taoist Tai Chi* society in Toronto. At the beginning of the 21st century Mark Young built one of Contact Improvisation's most unique training centers called the "Leviathan Studio" on Lasqueti Island (British Columbia, Canada) (Gómez-Lozano et al., 2022b, p. 10). In Mark Young's

spiral system one can recognize kinesthetic patterns of radius-ular rotation which is characteristic of Taijiquan forms (Gómez-Lozano et al., 2022a); and particularly recognizable is the Chen style (Wile, 2008, p. 26–27). Such a kinesthetic pattern is also used in the so-called "helix rolls" exercises designed by Steve Paxton and was influenced by the recurring interaction maneuvers in Aikido³. This concurrence of strategies adopted from Aikido and Taijiquan and the usefulness of these elements in terms of performing this partner dance would appear to be key in the understanding of Contact Improvisation.

It should also be noted here that as early as the 1960s, Huang (1970, p. 32) clearly states that Aikido draws on the fundamentals and principles of Taijiquan. These fundamentals in Contact Improvisation are embodied by two choreographers, Steve Paxton as the founder of the style, and Mark Young as an exponent of intergenerational relay. The semiotics of movement in American dance history itself took a turn in this journey of meanings when these martial arts were transferred to the postmodern dance style called Contact Improvisation (Novack, 1990, p. 59). We will follow a review methodology based on analyzing the most relevant existing audiovisual documentary records on Contact Improvisation combined with the bibliographic material found on the object of study up to the present day. As mentioned in the introduction, the purpose of this manuscript is to highlight and discuss which dynamic, proprioceptive, and somatic elements were transferred to the choreographic language of Contact Improvisation from the martial arts. Through this analysis, the common aspects in the practice of Aikido and Taijiquan-Tuishou will be identified as well as the extent of their influence on the practice of the Contact Improvisation duet.

Section 1. Characteristics of communicative language in Aikido

In a perspective close to self-knowledge, Aikido as a martial art is relegated to a somatic and integrative practice. Aikido is not only an effective Japanese self-defense combat method; it also enables the human being to rediscover their natural psychophysical balance (Westbrook and Ratti, 1970, p. 17). Aikido is aimed at the search for harmony within oneself and between people, whether they are rivals or not. It is a discipline of coordination-harmony and mind-body strengthening (Cuéllar et al., 2019, p. 13–14). In other words, it can be said to represent the union of Taoism, Confucianism, and Buddhism which is synthesized in Shintoism (Protin, 1977, p. 13). Aikido according to Kohn (2003, p.139), must overcome the sporting competitive side or concept of "Hero" and aspire toward the concept of "Master" that each one of us can find in ourselves in that interaction with the other. In this sense, in the words of Levine

² Cohen, 1980.

³ Paxton, 2008.

(2007, p. 46) Aikido allows the unification of the whole body and mental system through proper posture by focusing attention on the body's center of gravity. In the practice of Aikido there is a cooperative interaction between individuals. For example, in the case of *tori* and *uke*, which is an attack-defense role system created for learning techniques, communication between the partners is extremely sensitive in terms of listening to the situations and phases of interaction that are generated. Kimmel and Rogler (2018, p. 195) develop this as "Theory of affordances to settings of coregulative interaction", in other words (Kimmel, 2012, p-77), good contact requires complex attentional and cognitive skills that make the body receptive to the partner, guide active perception, and create good dynamic form. This happens after many years of practice under the acquisition of the elements of understanding that underlie the practice and, in effect, creates a system of communication. Kimmel (2012, p. 78) adds the concept of the emergence of this flow within and between partners as a very powerful experience of bodily intersubjectivity.

Furthermore, the process of communication between two *aikidokas* (named to Aikido practitioners who follow its precepts) can only be understood when the martial origin of Aikido is explained. *Bujutsu*, *bushido*, or *budo* are different approaches performed throughout the history of traditional Japanese martial arts. These concepts can help us to understand contemporary Aikido or Aikido as we know it today. *Bujutsu* is a generic term used to describe the art of fighting in both strategy and technique in relation to dialogue between adversaries. This art was not only developed by military or warriors but also by other social classes such as peasants and Buddhist monks, which has helped to develop unarmed combat techniques (Protin, 1977, p. 109–110). *Bushido* is a concept related to morality and honor. And the expression *budo* determines the path of the warrior's spiritual realization (Benedetti, 1993, p. 15–16). In other words, it is inevitable to allude to the warrior origin of the use of weapons in order to understand *uke's* non-verbal communication in relation to *tori*. At the origin of this combat duo, between *tori* and *uke*, there are points of contact that condition and affect the body in both a motor response of torsion and spiral movements (Figure 1).

In all the techniques used in Aikido, there is a living connection at the center of gravity of both opponents. Undoubtedly there is an opposition between the two *aikidokas*. This relationship is originally understood for survival but nowadays as an attitude of acceptance, non-resistance, victory over oneself, and the search for harmony (Tamura, 1991, p. 21). In this way, a series of bodily exercises is designed in Aikido whose purpose is to reveal to the *aikidoka* the potentiality, the unexplored possibilities of the body, to transcend the spirit and finally the unification of both (Protin, 1977, p. 13).

The posture of Aikido is everyday, detached from the fight and with an easy willingness to move in any direction, grounded and flexible at the same time. The *aikidoka* generates centrifugal



FIGURE 1
Aikido: contact points between Uke and Tori, hand and forearm. In the 3rd frame Jesús Arce (Black Belt, 5° Dan) in demonstration of Tori provoking torsion in Uke.



FIGURE 2
Aikido: Tori performing techniques on Uke through basically immobilizing, projections or combinations of both. Jesús Arce (Black Belt, 5° Dan) in demonstration.

forces from the center of gravity, creating enormous power with little effort of movement at the periphery. By lowering its center while spinning the *aikidoka* generates vortices from the spherical center of energy called *hara* (Westbrook and Ratti, 1970, p. 21) that project *uke* in a sinuous path. For longevity in his Aikido practice, the *aikidoka* cultivates smoothness and roundness in his movement (McKenna, 2004, p. 16). The communicative origin is an attacking intention of *uke* that must be neutralized by *tori* through basically immobilizing techniques, projections, or combinations of both (Westbrook and Ratti, 1970, p. 159) (Figure 2). All of these dynamics of circular, spherical, or spiral movements which emanate from the strategies and techniques used in the confrontation between *aikidokas* are what will later influence the founder of the Contact Improvisation style, Steve Paxton.

Section 2. Steve Paxton & Aikido

Steve Paxton was a dancer with Cunningham until 1960 and then he joined Robert Ellis Dunn as leader of the Judson Dance Theater Collective where he developed a different form

of choreography. In 1962, he became a founding member of the “Grand Union” and, later, the “ReUnion” companies. His own evolution as a movement researcher led him to study Aikido and its Buddhist influences for several years at the *Aikikai* in New York with Yoshimitsu Yamada *Sensei*⁴. The influence of Asian, and specifically Japanese, culture on Paxton is undoubtedly related to the “Merce Cunningham & Dance Company: World Tour 1964”. The tour included musicians, artists, managers, and dancers traveling to 30 cities in 14 countries from Europe to Asia, ending in November in Japan⁵. It is possible that his Asian tour of Japan was instrumental in terms of the influence of Aikido: “Imagine my astonishment at discovering movement systems that were not aimed at astonishing the audience or derived from the aesthetic of a single artist (the choreographer); with the body seen and felt from the center rather than seen from the outside, and a posture with use of upward and downward directions at the same time, rather than the always upward practice of Western dance” (Steve Paxton in McKenna, 2004, p. 16). Particularly in the early years of Contact Improvisation’s existence, it was possible to observe a close working model based on Eastern Martial Arts’ training principles (Novack, 1990, p. 184).

In 1972, Steve Paxton stated that the working material on which he based Contact Improvisation could be found in many manifestations of the martial arts, such as Aikido. This Japanese martial art influenced Steve Paxton so much that he integrated Zen philosophy into his practice (Novack, 1990, p. 184). This fact is manifested both in the individual practice and in the way of integrating improvisation in the duo. First, by its introduction to standing meditation in the application of 20-min routines, allowing the gravity factor to act on the skeleton, using the minimum energy necessary to maintain verticality (Gómez-Lozano et al., 2022a) and second, during the action, apply the concept of “flow-dynamics of interaction”. Kimmel (2012, p. 77) describes it in the Argentinian dance style Tango when individuality dissolves into a meditative unity, where time and space give way to a unique moment of presence, of “flow” in the couple. This way of approaching this new dance by couples, at the level of choreographic language, provided for a breaking of codes based on the work of sensitive and physical contact. In this new dance, new changes in spatial movement patterns were produced in relation to the work of Merce Cunningham. In 1972, the traceability of space in Steve Paxton’s work in New York acquired a spherical conception based on curvilinear and spiral trajectories. Steve Paxton was later considered the producer of a new choreographic syntax coined in a style called Contact Improvisation⁶.

4 Smithner et al., 1980.

5 John Cage and Dance, 2022.

6 Salas, 2014.

Paxton himself had an even more revealing experience with Jack Wada *Sensei*, instructor of Aikido, University of California at Santa Cruz, during a demonstration at the Workshop on April 19, 1976. Paxton makes it clear that what is essential is invisible to the eye in relation to the principles underlying Aikido which is an art built on warlike characteristics or the “Art of War.” These principles are transformed in Contact Improvisation to become the art of life⁷.

Steve Paxton considers that somatics is inherent to all human beings and is manifested in both Aikido and dance⁸. Paxton describes the origin of this link between somatics and Contact Improvisation based on the evolutionary theory of anatomical conformation of tissues during embryonic development. This explains both the fundamentals of the movements born from the axial axis and the fluid spiral movements of the CI practitioner and *aikidoka*. Paxton in 1986, brings to light a whole process of recapitulation of fundamentals and exercises from the spine that he had experienced within the practice of Contact Improvisation during that decade and a half. This system of spinal exploration is based on two dimensions of movement: forms versus senses-sensations. He calls it “Material for the Spine,” a construct or technical approach to improvisational processes. He defines it specifically as a system for both inner and outer exploration of the musculature of the back, which attempts to illuminate the mind from this work of body awareness and compression (see footnote 3).

Section 3. Characteristics of communicative language in the *Tuishou*

Taijiquan practitioners not only practice forms (*Taolu*) and weapons form (Qi Xie), but also push hands (*Tuishou*) as well as scattering (*Sanshou*). Inherited “master-disciple” Taijiquan practice in urban parks is increasingly rare (Ma et al., 2021, p. 2), although in relation to *Tuishou*, it is more widespread in the West, regardless of the practical context. In the practice of *Tuishou*, the objective is to avoid being unbalanced and, at the same time, to unbalance the opponent. In this type of dynamic, the aim is to maintain the verticality of the body structure during body contact with the partner with the minimum necessary force. The basic *Tuishou* work always begins with a series of pre-established exercises to learn not only to move correctly, but also to integrate the non-verbal communication process of active listening. This listening is done by listening to the partner’s actions through constant body contact as the best way to connect to one’s own body is through contact with another (Huang, 1970, p. 80). This work constitutes a fundamental part of *Tuishou* training (Gaffney, 2006, p. 40–42). Domaneschi (2019, p. 386)

7 Paxton, 1980b.

8 McKenna, 2004.

reinforces the concept of this binomial of practice in the Chinese Internal Martial Arts Traditions by alluding to the relationship of their customs, rites, and costumes and the intensification of their traditions.

In the communicative learning process between two people practicing Tuishou, there is a battery of basic exercises that describe circular and infinite trajectories in continuous hand and forearm contact. This is done with fixed feet called “8-disc methods,” transmitted in the West through the Canadian master Sam Masich (Mroz, 2011, p. 33). Chen Yanlin was instrumental in this systematization based on the traditional Yang style, applied in a Western way from a somatic perspective (Wolfson, 2007, p. 40; Kauz, 2007, p. 61). Initially, Yanlin⁹ describes the traditional systemization of Tuishou communication work based on the acquisition of specific basic skills prior to the acquisition of the so-called “13 techniques” as part of the acquisition of listening skills by both components of the duo. Chen Yanlin’s systemization is trained through a sequence of fixed exercises: (a) the one-handed horizontal push and neutralization; (b) the two-handed circle grip; (c) the two-handed push and pull back; (d) a one-handed pull back; (e) a two-handed push and neutralization; (f) the two-handed pull and neutralization; (g) the two-handed folding; and, (h) a one-handed vertical circulation. These types of systematizations are a way of ordering the general principles that are common to all styles. This is the case of Dr. Yang Jwing-Ming (Yang, 1996, p. 30–33), who explained schematically that learning should be “from static to movement mode” (steps), “from slow to fast,” “from low to high” or “from expanded to compact” (Figure 3).

The predefined Tuishou exercises are always ordered in such a way that those executed with “fixed feet” give way to more complex ones with increasingly free steps and movements, until reaching the almost total freedom of sparring. On a formal level, Gaffney (2006, p. 40–42), reminds us of the importance of recognizing these phases in the duet system. The reaction forces of the ground change during Tuishou practice, as there is a redistribution in the play of pressures between the practitioners. These exercises constitute one of the experimental improvisation laboratories of the Tuishou practitioner (Wolfson, 2007, p. 37).

In any of the Taijiquan styles we can find the so-called “13 techniques,” which include eight qualities or ways of expressing movement (Gaffney, 2006, p. 42). Four would be frontal or “square”: *peng* (barding), *lu* (deflecting), *ji* (squeezing) and *an* (pressing) (Wong et al., 2013, p. 400). The other four are called “diagonals” or corners: *cai* (pull down or tear off), *lie* (split), *zhou* (elbow or nudge), and *kao* (“lean,” shoulder strike or bump). The remaining “five techniques” refer to orientations in space (“five lines”). They correspond to the transverse directions from the base position: forward, backward, right, left and center. The understanding and mastery of these 13 techniques is sought in Tuishou through exercises of increasing difficulty and

complexity. Each school systematizes it differently, but always in a certain order. In Tuishou, all the work of these “13 techniques” underlies a dynamic of interaction in the duo that can be divided into the following strategies of continuity in the communicative work of physical contact: *Zhan*, *Nian*, *Lian*, *Sui* (stick, adhere, continue, follow). In addition, we find a fundamental quality known as the *Chansi Jin* (coordinated rotation of “reeling silk”). These features of Tuishou are essential elements of Taijiquan, as Tuishou is part of it (Wang, 2009, p. 6–7).

Section 4. Mark Young and Tuishou

Mark Young is a key figure in the history of the development of the Contact Improvisation style technique. This is due to his relationship with the Chinese Internal Martial Arts, with a methodological line of work that tries to complement Taijiquan and Tuishou in order to transfer this combination by evolving toward the Contact Improvisation style. Mark Young trained with first generation representatives of Contact Improvisation such as Karen Nelson, Alito Alessi, or the co-founder Nancy Stark-Smith herself before her near fatal accident in Vancouver (Canada) in 1997 (Gómez-Lozano et al., 2022a). This prior knowledge of the style of Contact Improvisation led her to rescue her practice after the accident. Mark Young’s transition and search for the origin of Contact Improvisation brings us back to the somatic relationship with dance. In addition to delving into Taijiquan, Mark Young also delves into *Vipassana* Meditation and in so doing transferred aspects to Contact Improvisation as Steve Paxton had done previously with Aikido and other disciplines (Gómez-Lozano et al., 2022b, p. 9).

In the beginning, many Contact Improvisation practitioners coming from modern dance backgrounds tried to draw inspiration from Asian martial arts, or movement techniques based on kinesiology, rather than from traditional techniques based on expressive vocabularies (Novack, 1990, p. 11). The communicative choreographic language in Contact Improvisation, from its beginnings, has been a system of spirals or sphericity in the interactions of body contact in the duet. In this sense, Young represents a key choreographer in the history of Contact Improvisation as his work is based exclusively on the kinesiological study of the human body: a system of spirals based on the work of Taijiquan (in its forms, *Taoulu*) and Tuishou. These spirals are an amplification of the technique of *Chansi Jin* or coordinated “coiled silk” rotation (Wang, 2009, p. 22). Mark Young uses the radio-ulnar rotation pattern as the motor of movement. Just as Steve Paxton did in analyzing the spiral movement of the body in Aikido, Mark Young designs helical bodies at different spatial levels from the ground in relation to the partner’s shoulders. His battery of exercises implies an adaptive evolutionary concept of challenging the laws

⁹ Chen, 1943.



FIGURE 3
Tuishou: Nacho de la Encina on the right (Official Representative in Europe of The Line of Zhang Zhijun Chen Shi Taiji) working in pair with Miguel Barberá on the left (Black Belt 1° Dan).



FIGURE 4
Contact Improvisation: Technique for maintaining communication through the spiral between dancers in high level. The Choreographer Mark Young demonstrating in pair; Excerpts from the documentary film "Mark Young in Search of Spirality" (<http://www.flamencoinvestigacion.es/mark-young/>).

of gravity in a collaborative way aspiring to a shared elevation (Gómez-Lozano et al., 2022b, p. 11–17) (Figure 4).

In the documentary film on Mark Young's personal story and his own rehabilitation through Contact Improvisation (Gómez-Lozano et al., 2022a), he says (our transcription):

"Steve had this experience in Aikido where he had this spiral movement in his body. The *Aikido* roll is a diagonal

roll but there's a twist in the body that's in the spiral. I think that informed his movement - choices, then it became more obvious in Contact Improvisation. It was a long time, maybe more than 10 years of exploring Contact Improvisation and Taijiquan before I realized that we were in - before I encountered spiral rolls as taught by Steve Paxton. It was more than 10 years of practicing Taijiquan and Contact

Improvisation before I knew there was a correlation between the two.”

Undoubtedly, not only Steve Paxton, but also Mark Young, deepened both disciplines, Aikido and Taijiquan-Tuishou, which are very interconnected with each other. Common points of technical development were established and applied to the interaction patterns in Contact Improvisation style partner work. Previously, the history of both martial arts had already provided us with these connections between both modalities in which Taoism is considered as one of the pillars from which Aikido is nourished (Protin, 1977, p. 12).

Discussion

Transfer of the communication elements in the language of Aikido and Taijiquan-Tuishou to the duet system of Contact Improvisation

The following elements of communicative interaction are inspired and drawn from *Aikido* and Taijiquan and subsequently transferred by Steve Paxton and Mark Young to the work of Contact Improvisation.

Axial axis and extremities

Aikido aims to align the body axis with the *uke's* axis of motion and gravity, so that the response is executed with minimal use of force or muscle. As a result, both the *uke* and the *uke's* response become invisible, leaving the attacker with the feeling that his target has disappeared into thin air. The practice of *aikido*, therefore, aims to train the formation of the primary axis, to have it aligned for maximum efficiency and effectiveness. *Aikido* makes use of in its practice an awareness training of maintaining the primary axis of the human body running longitudinally from the top of the head to the coccyx. Good *Aikido* practice seeks the integrity of this primary axis (or vertical alignment with the axis of gravity) as a primary and independent foundation for the movement of the limbs. This also happens in face-to-face interactions during *Tuishou* (Wolfson, 2007, p. 37). From this primary axis arises the expansive force of *tori* and the undulatory flexibility of good *uke*. As the primary axis adapts to the vertical, the budding limbs rotate around their own axes to create the spirals of the musculature. This principle carries over into Contact Improvisation duet work where the axis of a partner allows for the spiral adaptation of the partner limbs (Gómez-Lozano et al., 2022b, p. 48). In the phylogenetic development of the human species, the same is true: As the limbs of the human species evolve, they rotate 180° around their own axes, causing bones, muscles, and nerves to form spirals. This vital growth force, like the extension of

the *aikidoka's* *ki* through the fingertips, is what determines the circular and spiral dynamics of interaction in both *Aikido* and Contact Improvisation (see footnote 8). It is very common in the dynamics proposed in his exercise routines by choreographer Mark Young, as there is a constant adaptation of the relationship between the axes of the two practitioners. Both the lower and upper limbs leave space for the contact relationship to predominate between both axes (Gómez-Lozano et al., 2022a). In Steve Paxton's work, the Axis is one of the motor centers where the dance really begins and it constitutes the territory through which he articulates the method of “Material from the Spine” (see footnote 3).

Gravity

At the beginning of the decade, Steve Paxton highlights a subtle piece of information: Experience of gravity, through the so-called “small dance”¹⁰, is where the skeleton balances vertically in the solo form (standing individual) with the minimum of energy needed to sustain the force of gravity with the Earth (Paxton, 2018, p. 36–40). It is through the ground that this experience of the flow of weight through the body occurs, subsequently facilitating the key work in the weight exchange between practitioners during lifts, jumps, holds, or catches, and the feeling of sharing center of balance dynamics with another person in movement¹¹. McClure¹² alludes to the fact that gravity for the Contact Improvisation practitioner is like the wind for the sailor that allows us to change course or direction in three-dimensional space. Paxton redefines the concept of Contact Improvisation as the first dance style duet that appears in the life of any human being in the womb (see footnote 6) but in the absence of gravity. Steve Paxton considers gravity the determining and essential factor both in the life of a human and in Contact Improvisation's own style, since from birth, and in the state of extrauterine life, begins what Paxton calls “negotiation” with the gravity factor (Paxton, 2018, p. 5).

This is a new approach in the beginning of Contact Improvisation where it was reflected on how to invite the body into new ways and conditions of relating the body to gravity, the ground and other bodies (see footnote 10). In *Aikido*, the upward thrust of the *aikidoka* is the equal but opposite force of gravity, moving through the fulcrums of weight, into contact with the earth (see footnote 8). It is in the fall, where gravity is sought to go into the void, as a universal concept through which the enemy is accepted and the conflict of confrontation is released “A teacher understands this and expects an imbalance, an opening in the defense of the other. He surrounds with his presence

¹⁰ Paxton, 2004.

¹¹ Stark-Smith, 1980.

¹² McClure, 1980.

the void, the negative space in which to trap the spirit and vibration of the enemy.” (Saotome, 2013, p. 169). In *Taijiquan-Tuishou*, gravity is a constant allied with the reaction force of the Earth to unbalance the opponent, *Tuishou*, a constant but light contact is sought to maintain control of the redirection of the opponent’s forces with the help of that reaction force (Wang et al., 2010, p. 480). According to choreographer Mark Young, in addition to mastering the term grounding with the ground, as an essential parameter in the work of stability in the duet, he challenges the very force of gravity of the earth. Young aspires at all times to elevate verticality through a spiral momentum and the supportive assistance of the partner (Gómez-Lozano et al., 2022a).

Ki and quality of movement in the duo

Aikido training helps us to develop our individual *ki* or energy. It is a form of practice that does not allow us to gain a sense of connection easily with the weight of ourselves (Paxton, 2018, p. 63). *Ki* helps us to focus our mind and helps to replace bound muscle movement with free-flowing energy. By freeing and concentrating our mind and using it in a positive way, it is replenished by life energy. so that there is a vitalizing flow of energy through us. To help extend or send out *ki*, students are taught to use their *hara* or lower abdomen (see footnote 8). This is our physical and energetic center of gravity (see footnote 3). Bringing the mind to the *hara* unifies body, mind, and spirit. Extending *ki* from this center to the periphery, away from the top of the head and fingers, imparts a tensile force to the whole body with the skeleton being the system that provides space for the rest of the tissues (see footnote 8).

When the body and mind are calm, it is much easier to be in harmony with the *ki* of others. By acting, we do not stop or block the flow of someone’s *ki* but join with it and guide it to where we want it to go. This is called guiding the *ki* of the partner or the other (see footnote 2). In the early development of Contact Improvisation before performing at the Weber Gallery in NYC in June 1972, 6 months after the “Magnesium” performance, Paxton invited, among others, Lecturer Mary Fulkerson from the University of Rochester who had worked with Release technique, a movement technique based on *anatomical imagery* where she emphasized the softness and this “flow of movement” (Novack, 1990, p. 65). It was known that the “Release Technique” had been influenced by the principles and fundamentals of *Taijiquan*. Undoubtedly Zheng Manqing’s presence in New York in the mid-1960s until his return to Taiwan in 1975 influenced the life of New York intellectuals and artists for a decade (Lowenthal, 1993, p. 48). At the same time, Contact Improvisation was also in dialogue with *Taijiquan* and Release Technique in this new way of understanding dance. Most of the dancers who experimented with Paxton in June 2022 practiced both in a Chinatown loft with mats for falling and rolling to find that flow of energy as part of their more primal foundations (Novack, 1990, p. 66). There

are many techniques in *Aikido* that, applied in a natural way following the flow of mind and movement, help to stimulate the flow of *ki* throughout the body (see footnote 2).

Paxton (2018, p. 63) reflects on this concept, alluding to *ki* as a concept that refers to both the quality and potential of connections. Furthermore, he points out that applied to our body and its interactions it allows for flows into relationships with the environment. It seems to be active in an ideokinetic way, as an image-effect that would influence the course in which events unfold. Paxton further remarks that the concept *ki* describes the potential of the principle of extension and the source of energy radiation within the body with the environment where the parts of the body become interconnected. This system relies on the proprioceptive and tactile senses to generate a constant balance and imbalance. The members of the duo transmit information to each other through the skin about each other’s movement (Kimmel et al., 2018, p. 4).

Proprioceptive vs. perceptual communication

In *Aikido*, the role of *uke* is an example in this sense when, faced with the threat of being decapitated or killed, *uke* generates a gripping pattern on *tori*’s forearm. In *Aikido* a system of interaction has been developed based on this logic of the weapons carried by the warriors in origin (Westbrook and Ratti, 1970, p. 31). The logic of being in the armed to unarmed state generates a process of proprioceptive communication between *tori* and *uke*. This translates first and foremost into a mastery of listening to the threat of the opponent which first generates the maintenance of the grip with full hand contact on *tori*’s forearm involving the neurological activation of the wrist joints. Second, there is an adaptation of my body to the body of my aggressor. And finally, under a rotational movement of the joint chains, an imbalance is produced as stability is compromised in the face of aggression in order to survive. Active and passive states complement each other, thus creating the duo in an agreed partnership behavior (Sanati et al., 2021, p. 39).

In the dance style of Contact Improvisation, it is transferred in the following way. Steve Paxton describes that during this social system of duets in full kinesthetic communication, certain roles classified as “Active (A), Passive (P), Demanding (d) and Responding (r)” are established. All possible combinations lead to different possible situations in the dynamics of the duo. In order not to block the flow of communication, it is necessary not to “hold on” to these roles but to assume them as an improvised part of this flow (Paxton, 1975, p. 40–42)¹³ as is the case in the practice of *Aikido*. This flow of communication is based on a balance of sensitive neuronal afferents and efferent motor neurons that regulate the decisions to activate those fibers

¹³ Paxton, 1975.

and inhibit others in the communication of body contact with the partner. The basis of this postural control and constant unstable equilibrium in the duo is governed by the cerebellum. This is the governing organ of the vestibular system, visual system, and proprioceptive system conditioned by a system of duo interaction stimulated by physical sensations through body contact (Juhan, 1987, p. 235). Perhaps of the components of the proprioceptive system, such as the golgi apparatus, free endings, or temperature and pressure nerve receptors, it is the latter that most conditions this two-way afferent and efferent motor communication (Juhan, 1987, p. 29–30). This model of interaction has a key word coined by Erick Hawkins “kinesthetic awareness”: the sensation of movement happening in muscles and joints, so that the body can be used efficiently and without tension or stress. At the same time, the dancer should “think-feel,” Hawkins’ phrase for a state of “intellectual awareness with sensory experience” (Novack, 1990, p. 31). Such an experience is reflected when, in 1977, Steve Paxton was asked what was important in the practice of Contact Improvisation, he replied that the pleasure of using your body was the main thing. He adds that it is also the pleasure of dancing with someone in a spontaneous and unplanned way, where you are free to invent without hindering others, in short, a form of social pleasure (see footnote 11). Each part of the duo improvises freely with the aim of working as easily as possible so that their masses flow in a mutual movement. This attitude manifests itself in the quality of the use of energy. Dancers strategically perceive the possibilities of action, recognize them and exploit them on the fly as happens in other disciplines such as Tango (Kimmel, 2012, p. 76). Steve Paxton focuses on learning in relation to the body’s reflexes or reactions to environmental stimuli, which allows learning to be transmitted through interaction and observation with others (Turner, 2010, p. 127).

Point of contact

Balance is established in the relationship of the body to that part which is a useful fulcrum, since in this work a body can be as often on the head as on the feet and in relation to the partner as often as to the ground (see footnote 13). This relationship of balance, often permanently unstable as it happens without physical contact in other more traditional styles (Barba and Savarese, 2009, p. 115–116), leads to a stylization, and to the recognition of the style of Contact Improvisation. It is through this point of body contact that the functioning of the proprioceptive system is activated. This process allows degrees of freedom to be applied to the other articulations which, combined with alternate contact points, form a kinesthetic communication as the basis of this duet system called Contact Improvisation. Paxton explains that it is through the sense of touch that information about the movement of both the other and oneself is transmitted (see footnote 13).

The technical construction of the interaction pattern of physical contact in the Contact style of improvisation, based on the sophistication of rollings, or rolls, aims to create a simple point of contact between two bodies called “rolling point of contact” (Gómez-Lozano et al., 2022a).

Sphericity

In 1972, the first year of Steve Paxton’s work, there is a very significant evolution in the assumption of the concept of sphericity. This concept has been present as a routine training for Contact Improvisation practitioners since its inception. Sphericity of movement is evident in the dynamics of *Aikido*, mostly in the rolling falls (Novack, 1990, p. 147). Both in the Documentary film “Chute” (1979)¹⁴ and in “Fall After Newton” (1987)¹⁵ an evolution of the dancers can be observed. In the early phases they concentrated on the internal sensation of movement rather than on the spatial intentionality of their bodies or particular shapes and paths in space. However, the spatial path-trajectories through which the bodies fell and the development of the qualities of movement were different from the piece “Magnesium” in January 1972 in relation to 6 months later in June 1972. In this second phase the patterns in space were schematized by the body and its movement often spiraling through three dimensions. It was often said that Contact Improvisation had to acquire a “spherical sense of space.” Steve Paxton reports transforming the “vertical momentum” into a horizontal journey (Novack, 1990, p. 66). A change of plane in which most vertebrates move horizontally in a way that lengthens the segmented vertebral structure and reinforces its spacing function (see footnote 8). In that early 1972 phase, dancers moved and darted through space in many different patterns, usually curved and spiral in nature (Novack, 1990, p. 67).

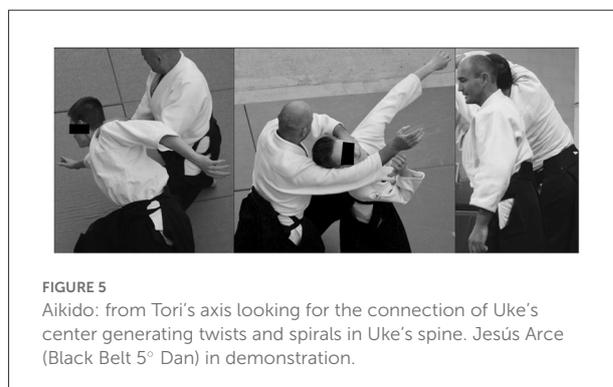


FIGURE 5
Aikido: from Tori’s axis looking for the connection of Uke’s center generating twists and spirals in Uke’s spine. Jesús Arce (Black Belt 5^o Dan) in demonstration.

14 Chute, 1979.

15 Fall After Newton, 1987.

The constant reference to the *hara*, or center of gravity, depending on the eastern or western approach to study, represents the most important energy center in the human body. It is from this point that displacements, movements, and specifically in this art, circular or spherical dynamics are produced (Westbrook and Ratti, 1970, p. 19). The movements of *Aikido* are very fluid. This is precisely because they are mainly circular or spiral in nature, although there is some linear movement (Figure 5).

Circular movement is not only fluid but has a powerful energy (see footnote 2). It is based on the principle of sphericity governed by two fundamental traits: first “centralization,” the mental attitude of the *aikidoka* (Szabolcs et al., 2021 p. 11), is strongly centralized in this so-called *hara* (Westbrook and Ratti, 1970, p. 19). Second, feature “extension,” the energy required in *Aikido* is extended outward, in a condensed manner and radiated from that center. There are three main types of neutralization circuits, which would be the type of circular trajectory that *uke*’s center of gravity describes when projected around *tori*’s axis of gravity: horizontal, vertical, and diagonal circuits (Westbrook and Ratti, 1970, p. 93).

Rollings, or rolls, belong to the type of “repetitions drills” that are integrated into the warm-up and preparation dynamics across the floor prior to duo work in Contact Improvisation. This design provides curved lines of body contact with other bodies facilitating the spherical nature of partner movement. It also facilitates a kinesthetic understanding of this dual communication as in *Tuishou* partner work where sphericity is present in the relationship between hands, forearms, and hands in contact between practitioners (Dudukchan, 2017, p. 31–32).

Rolls or rollings

There are three general types of rolls in relation to the type of trajectory described by the upper and lower limbs around the center of gravity of the Contact Improvisation practitioner. These rollings generate circular dynamics in the individual and their adaptation to the partner in order to maintain continuity of contact: “*aikido* rolls” (vertical circles, with ascending and descending trajectories around the center of gravity) which, in addition to allowing you to fall without injury, allow you to wrap around the dance partner while maintaining contact; “spiral rolls” (diagonal circuits of spirals around the axis that promote ascending and descending dynamics between Contact Improvisation practitioners) and “crescent rolls” (horizontal circuits that maintain the same level of contact between Contact Improvisation dancers). These roll skills that support body interaction are designed for Contact Improvisation practice. They can be trained alone or in pairs and are grouped into three types: *aikido* rolls (which come directly from *Aikido*), crescent rolls, and helix rolls which come from both the reinterpretation of the fundamentals of *Aikido* and *Taijiquan-Tuishou* (Wang, 2009, p.150–180). In this sense, Mark Young highlights the

usefulness of these patterns by pointing out that they teach us to move through the soft parts of our body without putting pressure on the prominent bony parts such as the hip. Training with these rolls should be done slowly and concentrated on the floor. When we dance, these movements are transferred through partner work because the “muscle has memory,” (Gómez-Lozano et al., 2022a).

Aikido rolls

Steve Paxton remarked that in *Aikido*, where there are numerous throwing techniques, it is necessary to learn how to fall without injury. In this way, the art of rolling and falling is taught from the beginning¹⁶, an aspect that he applied in those early stages of exploration in the development of Contact Improvisation (see footnote 14). Steve Paxton picks up on *aikido* roll as a skill of listening to the sensations in the back and neck, to enhance the development of a sensitivity to one’s own performance (Turner, 2010, p. 125).

The *aikido* roll is a fluid and graceful way of dealing with loss of balance and falling. The *aikido* roll eventually becomes larger as the *aikidoka* learns to traverse an energetic arc larger than his body. The longitudinal curve of the body becomes a piece of the arc and the *aikidoka* may not actually contact the ground until halfway through a roll (see footnote 8). The principle of relaxation is applied to the transfer of conflict situations in those children who practice *Aikido*. The bodywork tool is part of an alternative methodology to assimilate *Aikido* work in a pleasant way. In the sense that there is a way to handle such compromised situations of confrontation where the resource of rolling becomes an essential resource of application in these conflict situations (see footnote 16).

Aikido roll is a skill used to learn to flow and master this energy when the *aikidoka* uses it as a survival skill in the face of an opponent’s projection and has no choice but to fall into the void. This technique is used as a way to understand the path or trajectory (dotted line) on the ground. It is also a technique that can be transferred to the way two spherical bodies in movement and contact can flow. The absence of broken lines allows the permanence of the contact in the duet¹⁷.

Helix rolls

The primary vertical axis extends from the soles of the feet to the top of the head. The opposition between the top and bottom of the vertical axis is a key aspect in the integrity of the *aikidoka*. When this vertical axis aligns with gravity, it allows the possibility of turning forces or moments and spirals to meet the preform in the face of *uke*’s opposition (see footnote 7).

¹⁶ Heckler, 1984.

¹⁷ Paxton, 1980a.

The *aikidoka* is able to generate vortices or flows of spherical movements that characterize *Aikido* (see footnote 8). From this basis, Steve Paxton developed the rollings known as helix rolls (see footnote 10). Furthermore, any style of *Taijiquan* has a common element. This is its kinesthetic pattern of radius-ulnar rotation reminds us of those upper limb and hand motor centers of the helix roll where they seem to converge in the same strategy that Steve Paxton uses when performing these “vortex” generating turns or circuits. This is a concept translatable into mathematics terms within fluid dynamics, such as circular, rotating, or spiraling flow of current around an axis (Westbrook and Ratti, 1970, p. 96). Underlying a rival projection are the same dynamic principles whether *Aikido* or *Tuishou*. In the latter modality, rotational dynamics are most visible in the Chen style in certain qualities between opponents of releasing force to unbalance the opponent (Dudukchan, 2017, p. 23). Just as an *aikidoka* blends with the trajectory of an attack to turn it into a circle/sphere/spiral, the contactor can create vortices to give his partner a ride on centrifugal force, or a moment of suspension at the top of an arc of movement (see footnote 8).

The forces applied between *tori* and *uke* are respected in order to maintain the sense of martial origin. The resultant of these two vectors are generators of a spiral movement in both roles more or less visible depending on the technique used. The principle of permanence underlies *Aikido* to maintain the connection and unity between *tori* and *uke*. The spirals allow for such a connection. The same concept underlies Contact Improvisation where spirals allow for permanence in contact in the duo.

The helix roll set is a construction designed with four variants depending on the motor segment leading the movement, the direction of the movement, and the position or reference plane. This type of skill designed by Paxton and developed by Young is based on the same principle of generating energy (*ki*) from the form. It is interesting how the skill of helix rolls helps to sequence the body in movement—a very graphic parallel with the sequence and shape of DNA (deoxyribonucleic acid) designed by Paxton in the helix form in the structure of the human body in movement (see footnote 10) (Figure 6).

The influence in *Aikido*, in the techniques of projection from *tori* to *uke* are very explicit in the way in which Steve Paxton performs the maneuver of execution of the helix roll arms. For his part, Mark Young develops a similar strategy based on one of the movements of the sequence belonging to the *Taijiquan* forms, with a movement of pronation with the palm of the hand upwards and outwards which reminds us, at the same time, of the technical defense gesture of *uke* in relation to *tori* in *Aikido*. There is no doubt that there are connections both in the styles of both martial arts and in the ways of acting of both choreographers. As well as adding to the knowledge of the technique, they are at the same time complementary and help its development.

Crescent rolls

Finally, we find a set of crescent rolls with four possible variants of execution and training: from the left or right side with the body shape in the curvature of the crescent or waning moon, in addition to the possibility that the motor of the movement is generated in the center or in the extremities. This type of rolling was designed by Simone Forti who describes it as “slow sinuous play arching spine rolling on to back”¹⁸ (Figure 7).

These interaction patterns or rolls are the communicative potential generated in improvised dance between two people. In the Documentary Film: “Mark Young in Search of Spirality. An approach to neurorehabilitation through Contact Improvisation” (Gómez-Lozano et al., 2022a) the following features can be seen:

- Effectiveness in redirecting movement through the physical contact point as an element of intersection.
- Constant interaction that allows the couple’s situation to be recorded.
- Spontaneity and adaptability to changes in the postural situation or in the coordinates of the duo.
- It also provides security, due to the technical mastery of this pattern of interaction with the partner.

Sharing weight and momentum

Stark-Smith (see footnote 11) points out that Contact Improvisation is an activity without a goal, linked to sensations as opposed to achievements. It also emphasizes the freedom to choose any spatial direction and a means of communication through body contact. The dialogue between dancers takes place through the exchange of weight between partners. The duo fine-tunes the physical forces that effect this shared movement between them. In Contact Improvisation, each person needs at least the bodily response of another individual and their own so that a third force can emerge to direct the dance (Novack, 1990, p. 189). The terms of weight sharing, the turning moments due to rotational movements on an individual’s axis, as well as the relationship or dialogue of centers of gravity by spatial levels physically determine the spatial dynamics. In Contact Improvisation the shared momentum favors the dynamics of interaction in the duo. It is the imbalance and asymmetry between centers of gravity with a common contact surface that allows the cooperation and collaboration of supports and elements such as lifts and rolls over the partner, inviting risk-taking, reflexes, controlled falls and rises, as well as disorientation, and moving through space together. The

¹⁸ Forti, 1980.

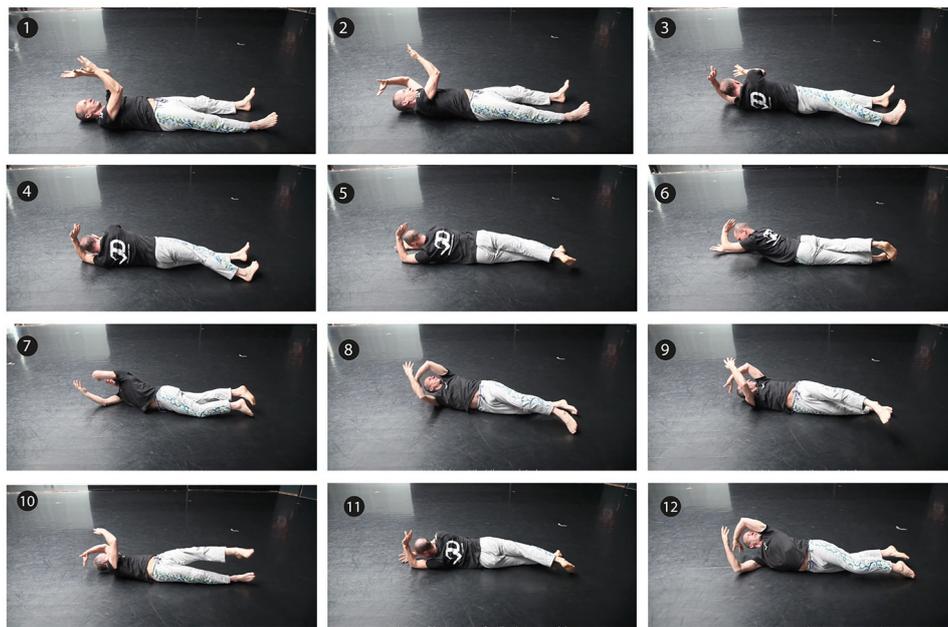


FIGURE 6

Contact Improvisation: Sequence of working floor movement of spirals called “Helix roll.” The Choreographer Mark Young in demonstration; Excerpts from the documentary film “Mark Young in Search of Spirality” (<http://www.flamencoinvestigacion.es/mark-young/>).

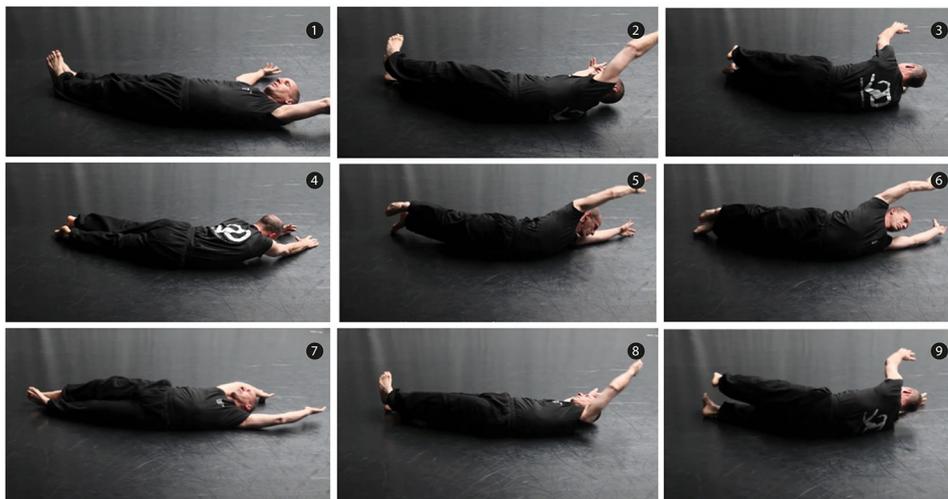


FIGURE 7

Contact Improvisation: Sequence of working floor movement called “Crescent roll.” The Choreographer Mark Young in demonstration; Excerpts from the documentary film “Mark Young in Search of Spirality,” (<http://www.flamencoinvestigacion.es/mark-young/>).

dynamics are varied in relation to both the speed of interaction and the complexity of the movement or the inclusion of fine motor skills in that duet (Kimmel et al., 2018, p. 4). Spiral and spherical movement in *Aikido* is intended to avoid aggression by generating a shared void between *tori* and *uke* (Saotome, 2013, p. 169). However, in Contact Improvisation style it is

about exploring limits, and ranges of movement, as well as alternative loading points and vectors for driving the thrust. In “the Small Dance” awareness of the edges of balance and playing with them, so that we can ride the momentum rolling created by the fall and find suspension again at some new point of balance, rarely centered or upright (Paxton, 2004, p.

14). No position or relationship to another dancer or to the floor is incorrect. Anything is possible and (almost) anything goes. The *aikidoka* mixes with an impulse coming from an unexpected direction, but always with the idea of standing up again. In Contact Improvisation, the feet are only one of the many options of footholds. One is constantly experimenting with new trajectories or thrusts, often through contact with a partner rather than the ground. The extension of the *ki* provides resistance to traction. It widens the periphery of the contactor to generate a more rounded movement and connect it more fully with the partner and the ground. As a dancer's kinesphere expands, so does their ability to follow larger arcs of movement, to take bigger walks and to "take in more air." *Aikido* means "harmony with the *ki* of the universe" In movement, this translates into awareness, connection, and blending. The connection, in both *Aikido* and Contact Improvisation, occurs at the point of physical contact and in the path of movement. In Contact Improvisation, the mantra of the rolling point of contact creates a moving meditation (Gómez-Lozano et al., 2022a). In the same sense the duo in movement is integrated in nature itself, because both participants follow the laws of gravity, of the momentum or inertias of the flow of life (Novack, 1990, p. 185). *Aikido* cultivates living alertness, a presence in the moment with a willingness to respond spontaneously. Unlike Contact Improvisation, most *Aikido* practice is not spontaneous, but an endless repetition of prescribed pathways of movement. Only at the pinnacle of *Aikido* practice, the *randori* (a more advanced training system used in *Aikido* competition) does the *aikidoka* not know what kind of attack will come, or from where. Not knowing is the basis of Contact Improvisation. It keeps us in the moment. Contact Improvisation works best if we don't plan, don't manipulate, don't try to be clever. The contactor is concerned about where they will be in the next moment. Because the contactor is not concerned about the outcome (such as getting back to vertical or immobilizing the other), they can ride the not knowing into new places and relationships (see footnote 8).

Somatic practices and Contact Improvisation

Somatic practices are also known as "Body Therapies" or "Body Work" (Krasnow, 1997, p.3). Differentiating Contact Improvisation from a somatic practice is a very difficult and painstaking task, since somatic practice may evolve into an improvised dance in pairs, i.e., it converges in the same prism of movement. There are several noteworthy aspects of Somatic Practices and Contact Improvisation:

- a) In 1973, Dr. Thomas Hanna (1928–1990), philosopher, somatic educator, and member of the American Council of Learned Societies founded the first postgraduate training program in Functional Integration, taught by Dr. Moshe Feldenkrais from 1975 to 1977 in San Francisco (Amory, 2010, p. 5). It is known that the pedagogy of Moshe Feldenkrais has spread all over the world, especially in Europe right up to the present day through university academic dance programs. It is Dr. Thomas Hanna who coined the term "Somatic" in 1976. This refers to corporeality, leaving other entities such as the mind out of the term (from the Greek -somatikós, of the body). The term "Somatic" is developed by Bonnie Bainbridge Cohen (1941 Miami FL United States) in "somatization" as an experience of the body derived from that used by Thomas Hanna as "Soma" (Cohen et al., 2012 p.6).
- b) Thomas Hanna differentiates the experienced body in contrast to the objectified body (Amory, 2010, p.6). In other words, somatic practices require an experiential experience based on four pillars between two practitioners: (I) Postural and continuous movement assessment, (II) communication and guidance through touch and words, (III) Experiential anatomy and Imagery, and (IV) "patterning" of new movement options - also known as movement re-education, "movement patterning," or "movement repatterning" (Eddy, 2009, p. 8).
- c) The influence of Contact Improvisation with second generation disciplines or teachers of somatic practices has been tangible during the five decades of its history. The close relationship between the postmodern style of Contact Improvisation and Somatic Practices, whose most universalized systematized method was created by Bonnie Bainbridge Cohen, namely, Body-Mind Centering[®], is well known. Both styles shared the 1970s as a moment of birth and expansion¹⁹.
- d) The martial disciplines *Aikido* and *Taijiquan* themselves have undergone a transformation from their own warlike backgrounds to a path of harmony and well-being, which began in the mid-20th century.

In themselves, both *Taijiquan* and *Aikido* are somatic disciplines in that they convert the martial origins of fighting and lethality into a symbolic resolution of behavior between practitioners "somatic metaphorism" (Foster, 2015, p.179). Non-competitive *Tuishou* is a collaborative somatic listening application of how the full range of possible applications of forces are directed in an attempt to unbalance and defeat the opponent. *Aikido*, according to the foundations of its creator, Mori Ueshiba, not only teaches practitioners to use the energies of an aggressor as a fulcrum of self-defense (Foster, 2015, p.170), but also represents the victory of oneself over the opponent in that acceptance of defeat. Rothman (see footnote 1) points out that in *Aikido* there are modes of attention to oneself and others through tactility and proprioceptive sensitivity. He refers to its principles of

¹⁹ Damian, 2014.

“loving protection” and non-competitiveness to produce a sense of group solidarity. Both *Aikido* and *Tuishou* concur in the same somatic teaching when there is a collaboration of the process of confrontation between rivals.

In both lies the paradox of avoiding lethal confrontation, and the metaphor of transformation is installed (Foster, 2015, p. 179). Notions, such as *Tao* in Chinese culture or *Do* in Japanese culture, have a very similar reading of meanings (Protin, 1977, p. 12). Both expressions integrate the personal search for a state of well-being or psycho-physical balance. These concepts are experienced and transferred in the context of somatic practices integrating art and life. As with all martial arts from a psycho-physical health point of view, they all attempt to train a potential and intrinsic state of the body known in the Chinese tradition as *qi*. This state is the one we are born into and is present in any healthy and free baby. This word is found, for example, in the discipline of *qigong*, a discipline belonging to the Chinese cultural tradition and internal martial arts that aims to prepare the body in an optimal state of energy mobilization. In the philosophy of applied *Taoism*, the use of *Jing* energy, which comes from the work of conscious *qi* breathing, is distinguished. Mainly distinguished are: *Ting Jing*, the energy of listening; *Hua Jing*, the energy of transformation and *Don Jing*, the energy of understanding (Dreyer, 2017, p. 158). In the *Tuishou* or pushing hands interaction system, these energies (*Jing*) correspond to the tactics employed. These consist respectively of reading the intentions of the opponent through sensitive body contact (listening) in order to adapt to these continuous changes from attack to defense and vice versa according to the situation (transformation), which allows a global perception of the situation (understanding) in the duo, be it in this case of *Tuishou* or of the partner work in dance as in Contact Improvisation. When the *Jing* is rooted in the earth it is named to *Nei Jing*. It gets the *qi* to mobilize with maximum efficiency *wuwei* (Dreyer, 2017, p.60). In this sense we recognize in Western culture a free skeleton (experiential anatomy) in the movements. Energy is then when it can expand in all directions with strength or *Peng Jing*. It is in this way of acting that the experience of a body is strengthened from a somatic conception and applied to dance and the work of Contact Improvisation.

- e) It has been the vital moments or crisis situations, such as accidents, injuries, or pathologies, of the leaders or “somatic pioneers,” which have triggered a change of consciousness in them to focus the direction of their relationship with their context of bodywork toward an environment of somatic practices:

Irmgard Bartenieff who suffered from childhood polio which led to neuromuscular sequelae created over the course of her life the Bartenieff Fundamentals method. Bartenieff has been the choreographer with the greatest legacy in the history of contemporary dance in the 20th century, together with Rudolf

Von Laban (1879–1969). Moshe Feldenkrais who, after suffering a serious knee pathology from *Jujitsu* and *Judo*, created his own technique called the Feldenkrais method. He is noted for his help in the recovery of children with cerebral palsy. Feldenkrais had two sources of work “Awareness through Movement” & “Functional Integration”. Mabel Elsworth Todd, who suffered from idiopathic paralysis or paralysis of unknown origin, was an invalid and unable to walk. Mabel began to work with an “Imagery” method aimed at anatomical muscle balance and neurological recovery. Her method is currently having a great impact on dance in functional capacity training and injury prevention. Such trends in transforming styles and personal events are what create the germ of somatic awareness, which lead the resurgence of somatic methods at the turn of the 20th century (Eddy, 2009, p. 12).

- f) Finally, we find a process of “Somatization” of *Aikido* in France in its evolution toward *Kinomichi* founded by Masamichi Noro (Aomori, Japan 1935-Paris, France 2013) as a discipline originating from *Aikido* in September 1979. It seems that there is a key fact in the creation of *Kinomichi*. Masamichi Noro, a direct disciple of Mori Ueshiba, was involved in a traffic accident in France in 1967. Masamichi Noro’s need to create this new style brought together a melting pot of factors: among others, we can mention his adaptation to the Western world since his arrival in France, his opposition to the sportification of *Aikido* in Europe or the close relationship he had acquired with dance. But it was the road accident that triggered his discovery of Western physical therapy methods. He then felt the need to find another discipline that would favor the development and harmonization of *ki*. Curiously, since the 80’s, *Kinomichi* has been related to a very useful discipline for contemporary dancers. Toutain²⁰ stresses that “it is a practice in search of *ki*, an energy of life and not an energy of destruction of oneself and others. Through the search for balance and harmony inherent to this practice, the dancer rediscovers an essence, and finds himself while repairing the “damage” created by certain extreme situations in dance” (p. 72).

Alluding to Eddy and Moradian (2020, p. 1794) we suggest that developing a lifelong somatic relationship with our bodies in movement, through disciplines such as *Taijiquan*, *Aikido*, *Kinomichi* or Contact Improvisation, is a powerful way of reclaiming that integrity that allows us to care for and connect with self and others. Perhaps it was the way Steve Paxton, Mark Young, and Masamichi Noro himself found a way to find their own energy. These disciplines have become interconnected in recent decades, bringing together links that foster an evolution

²⁰ Toutain, 2005.

of expansion and fusion. In them the human being can establish links of personal growth through the communicative language of interaction between the partners of these disciplines.

Conclusions

Throughout this historical journey, the influence of the construction of Contact Improvisation based on *Aikido* is evident, especially due to the proximity of Steve Paxton in his background as a dancer. Furthermore, the influence of *Taijiquan-Tuishou* seems to be considered as a previous antecedent, but it is not until 1997 with the appearance of the choreographer Mark Young that a system of exercises based on this form of Chinese internal arts is typified. It is perhaps in *Taijiquan-Tuishou* with its kinesthetic pattern of radius-ulnar rotation that converges to those same motor centers that initiate the form of the helix rolls recorded in “Material for the Spine.” Concerning Contact Improvisation, from a technical point of view, there are many essential non-verbal communication components in this style construction such as: center of gravity, weight sharing, point of contact, sphericity, rollings, embryonic relationship of axial axis and limbs, *ki* or proprioceptive sense among the most important ones. We must recognize that these factors, often used unconsciously in the teaching of Contact Improvisation, are inherited from martial arts such as *Aikido* and *Taijiquan-Tuishou*. Mark Young undoubtedly follows an evolutionary process inherited from Steve Paxton, perfecting the execution and technical variations of helix rolls in a constructed system of spirals. This choreographer maintains Paxton’s legacy of roll technique documented in “Material for the Spine.”

Although there is possibly an evolution in the interpretation of the meanings and uses of this dance form, called Contact Improvisation, we can confirm some kinesthetic communication codes and strategies coming from original sources. These sources belong to martial arts such as *Aikido* and *Tuishou* or *Taijiquan* in pairs. These arts are essential in the intercultural communication of the Contact Improvisation duo because they allow the participants to learn fundamentals and principles of non-verbal interaction considered as specific for the mastery of intercorporeality. Moreover, they are already inherent to this dance form, due to its transmission over decades through at least three generations of dancers since its birth from 1972 to the present day.

Somatic practices have been more than just a part of the construction of this style of dance, they have been part of the communication form that has sustained more than 50 years of Contact Improvisation’s historical development. This also holds true relative to the elements that have been transferred from both *Aikido* and *Taijiquan-Tuishou*, i.e., center of gravity, weight sharing, point of contact,

sphericity, rollings, spiral movement, embryonic relationship of axial axis and limbs, *ki* or proprioceptive sense. There are exercises or practice routines that help us to incorporate these technical elements from martial arts into the style of Contact Improvisation dance.

Ethics statement

Written informed consent was obtained from the subjects of the photographs for the publication of any potentially identifying images or data contained within the manuscript.

Author contributions

Conceptualization and research review: SG-L, CK-L, and MG-S. Formal analysis and discussion: SG-L, MG-S, and AV-M. Conclusions: SG-L and KL. Writing—original draft preparation and supervision: SG-L, MG-S, and KL. Writing—review and editing: SG-L, MG-S, CK-L, and AV-M. Submission: MG-S. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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