

**WRITING THE AERIAL DANCING BODY:  
A PRELIMINARY CHOREOLOGICAL INVESTIGATION OF THE  
AESTHETICS AND KINETICS OF THE AERIAL DANCING BODY**

A thesis submitted in partial fulfilment  
of the requirements for the degree of

**MASTER OF ARTS  
(Cwk/Thesis)**

of

**RHODES UNIVERSITY**

by

**SHAUN ALBERT ACKER**

February 2010

## **Abstract**

This mini-thesis investigates some of the nineteenth century socio-cultural ideals that have structured a connection between virtuosic aerial skill and bodily aesthetics. It views the emergence of a style of aerial kineticism that is structured from the gender ideologies of the period. It investigates the continual recurrence of this nineteenth century style amongst contemporary aerial dance works and outlines the possible frictions between this Victorian style of kineticism and contemporary aerial explorations. From this observation, a possible catalyst may be observed with which to relocate and inspire a study of aerial kinetics sans the nineteenth century aesthetic component. This kinesiological catalyst may be viewed in conjunction with the theories of ground-based kinetic theorist, Rudolph Laban's choreutic study of the body in space. Thus, it may be possible to suggest and introduce a possible practical dance scholarship for aerial dance. This mini-thesis includes an introductory choreological investigation that draws on and integrates the disciplines of kinesiology; choreutic theory; existing aerial kinetic technique; musicology; and the physical sciences.

## Table of Contents

<b>Abstract.....</b>	<b>2</b>
<b>Table of Contents.....</b>	<b>3</b>
<b>Acknowledgments.....</b>	<b>4</b>
<b>Introductory Chapter.....</b>	<b>6</b>
 <b>Chapter 1</b>	
<b>The Airborne Aesthetics of the Nineteenth Century Aerialist.....</b>	<b>9</b>
1.1. The Original Swinging Man: A Pre-history of Flight.....	9
1.2. The Original Swinging Man: Tarzaneze.....	12
2.1. Flying Amazons: The "New (Aerial) Woman".....	15
2.2. Flying Amazons: Emergency Exits.....	21
3. Romance in Outer Space.....	23
 <b>Chapter 2</b>	
<b>De-Romanticising the Contemporary Aerial Dancing Body.....</b>	<b>30</b>
1. The Aerialist and the Church...Again.....	31
2. Twisted Trapezes...and Dancing.....	33
3. Natural Motility in Romantikineticism.....	35
4. Aesthetic Dance: Virtuositic Illusionists.....	38
5. Extreme Aerial Kinetic Action and Aerial Dancing.....	39
6. Weightless Terminology.....	42
7. Fairytale Reviews.....	43
8. Suspending a Ground-based Thinking.....	46
 <b>Chapter 3</b>	
<b>Towards an Aerial Movement Lexicon: Stability/instability and spatial orientation...</b>	<b>51</b>
1. Statement on the Ground.....	52
2. Stability in the Body.....	56
3. Macro Equilibrium.....	62
4. Macro-disequilibrium.....	68
5. Micro-equilibrium.....	71
6. Micro-disequilibrium.....	74
7. Simple Motion.....	80
8. Instigators of Motion.....	82
9. Aerial and Telluric Space: A Musical Delineation of Space.....	85
10. Choreutics. Delineating the Body in Space.....	87
 <b>Conclusion.....</b>	<b>95</b>
<b>Appendix to Chapter 1.....</b>	<b>98</b>
<b>Appendix to Chapter 2.....</b>	<b>100</b>
<b>References.....</b>	<b>105</b>

## **Acknowledgments**

- Gary Gordon:** An immeasurable thank you for your invaluable guidance and inspiration along this journey; and for allowing me to take flight into outer space.
- Hanna Richter:** For being enthusiastic about this research and understanding some of the tricky bits.
- Robert Haxton:** For not understanding the tricky bits...but being supremely supportive and always lifting my spirits when the chips were down.
- Shane Flanagan & Georg Pranshke:** The scientists who improved my knowledge of the pendulum.
- Clea Schultz:** For your proof reading skills and inspiring midnight conversations.
- My family:** *"You can shake the sawdust out of your shoes, but not out of your heart"* Phineas T. Barnum.





Cover image of the publication *Aerial Dance* (Bernasconi & Smith, 2008).

“The most joyous, ‘Peter Pan’ minutes of the evening occurred in ... *Air Part*, where everything was bungee, flying and fun .... The last section featured three red-dressed Wendies ... who sprang, flew and bounced before being eventually joined by [their] earthbound boyfriends ...” (Wade Simpson in Bernasconi & Smith, 2008: 28).

## Introduction

The performing aerial dancing body has been utilised since the late 1970's by ground-based choreographers such as Stephanie Evanitsky with *Aerodance* (1971), Trisha Brown with *Walking on the Wall* (1975), Alwin Nikolais with *Sorcerer* (1975) and Batya Zamir with *Prelude* (1974), who incorporated aerial apparatus<sup>1</sup> into their contemporary dance works. This choreographic device has since then developed into – and is now regarded as – an autonomous dance form known as aerial dance, pioneered by recent aerial choreographers Terry Sendgraff (founder of *Motivity Aerial Dance Group*), Johanna Haigood<sup>2</sup> (founder of *Zaccho Aerial Dance*) and Amelia Rudolph<sup>3</sup> (founder of *Project Bandaloop*).

From my research to date, there appears to be a paucity of writings and publications on aerial dance. This has been revealed through an examination of dance texts attempting to delineate the field of choreography and dance performance (Clarke & Vaughan, 1980), (Goellner, 1994), (Benbow-Pfalzgraf, 1998) and (Cohen, 2004). My research has revealed a few exceptions<sup>4</sup>: a probing article in *The Drama Review* (1975), which presents an informed account of the early experiments in aerial dance documenting the works of Evanitsky (Carroll, 1975: 3), and the first publication dedicated to the topic of aerial dance entitled *Aerial Dance*<sup>5</sup>. This publication is intended as an introduction for late high school learners or early tertiary level students and it appears to provide a descriptive account of performed works in addition to a valuable account of the evolution of aerial dance from its contemporary dance origins. It does not however present (or attempt) to initiate a critical ideological or kinesiological discourse surrounding the genre of aerial dance. There is also a writing of aerial performance from a historical perspective by Peta Tait entitled: *Circus bodies - cultural identity in aerial performance*

---

<sup>1</sup> An aerial apparatus refers to equipment utilised in order to suspend the body from the ground such as ropes, swings, harnesses which are used extensively in the fields of circus arts and gymnastics (Bernasconi & Smith, 2008: 2).

<sup>2</sup> *Zaccho Dance Theatre Company* (1980). Zaccho is noted for projects that focus on social histories, commenting on contemporary concerns through explorations of the past (Prickett, 2007: 15).

<sup>3</sup> Rudolph's work is informed by aesthetics, non-traditional relationships with gravity, ecology, natural and built spaces, community and human relationships. Rudolph founded *Project Bandaloop* in 1991, bringing together dance, climbing and varied off-the-ground movement through site-specific work on cliffs, buildings and in theatres (Project Bandaloop homepage, 2008).

<sup>4</sup> Additional information on the genre appears to apply to aerial dance companies, upcoming performances, reviews and basic outlines of the genre on the *World Wide Web*.

<sup>5</sup> The publication *Aerial Dance* co-edited by Jane Bernasconi & Nancy Smith, published by Human Kinetics and released in June 2008, covers practical aspects, such as teaching methodologies and safe rigging procedures with an introduction to the historical evolution of aerial dance.

(Tait, 2005). This publication delineates aerial dance's possible emergence from aerial circus arts. In it, Tait examines the cultural identity of the aerial body in a circus context, with a description of "aerial acts after the invention of the trapeze in 1859 and an exploration of social ideas surrounding muscular action" (Tait, 2005: 1).

From these readings, there appears to be a focus on the spectacular kinetic aspects in aerial dance. This could account for its insignificant status within dance texts devoted to contemporary choreography and performance. Howard posits that this is possibly owing to the "tension between the outward visually striking, and physically virtuosic nature of the form vs. the inward nature of serious art" and that "the entrancing lull of aerial dance's swinging motion and the work's sculptural, visual-art quality are two hurdles to acceptance [as a dance form]" (Howard, 2008: 1). Furthermore, aerial dance works tend to draw focus unintentionally to the physical virtuosity required to perform aerial movement, leaving the aerial dance as a spectacular display of skill rather than being located within the creative domain of choreography.

This feature of kinetic spectacle in aerial performance emerged during the epoch of circus aerial acts in the 1860's, as Tait posits: "[The] muscular flying action [of trapezists] was received as symbolic of birds, metaphoric of supernatural fantasy figures, and metonymic with abstract realism (...) [they] embodied the metaphysical; through the question of the human being freed from gravity" (Tait, 2005: 36). Tait suggests connections between this virtuosic aerial skill and the aesthetic of spectacular display. It is interesting to note that the aesthetic of nineteenth century aerial acts is still deeply rooted in twenty-first century aerial dance denoting the "visual-art quality<sup>6</sup>" as posited by Howard. This historical account provides an important locus for investigating current concerns for spectacle within the aerial performing body.

The first chapter, *The Airborne Aesthetics of the Nineteenth Century Aerialist*, investigates some of the nineteenth century socio-cultural ideals that have structured connections between virtuosic aerial skill and bodily aesthetics. This investigation views the emergence of a style of aerial kineticism that is structured from the gender ideologies of the period.

---

<sup>6</sup> I interpret Howard's description of a visual art quality as referring to sculptural or picturesque qualities of bodies in the air.

The second chapter, *De-romanticising the Contemporary Aerial Dancing Body*, investigates the continual recurrence of this nineteenth century style amongst contemporary aerial dance works and outlines the possible frictions between this style of kineticism and contemporary aerial explorations. This chapter also identifies a catalyst with which to relocate and inspire a study of aerial kinetics sans the nineteenth century aesthetic component.

The third chapter – *Towards an Aerial Movement Lexicon* – explores this kinesiological catalyst in conjunction with the theories of ground-based kinetic theorist, Rudolph Laban's choreutic study of the body in space. From this, it may be possible to suggest and introduce a possible practical dance scholarship for aerial dance. This chapter is an introductory choreological investigation that refers to, and integrates the disciplines: ground-based kinesiological study; ground-based movement theory; existing aerial kinetic technique; musicology; and the physical sciences.

## Chapter 1

### The Airborne Aesthetics of the Nineteenth-century Aerialist

#### 1.1. The Original Swinging Man: A Pre-history of Flight

Late nineteenth-century Western European society formed an inextricable relationship with social evolutionists. Through their scientific research and association with sociobiologists<sup>7</sup>, these governing social forces began to evoke ideas of human transcendence of the primitiveness of nature. The conception that the nineteenth-century man “must not be an animal repeated; he must be something more, something better” therefore followed (Ritchie, 1891: 26).

The advocacy of a progression from nature’s primitivism was in complete contradiction to the research discovered by sociobiologists, and it was the discoveries in the study of genetics<sup>8</sup> that sociobiologists sought to extend to sociological models. In these studies, the process of “natural selection” was identified amongst living things; a process favouring the extinction of the unfit species in nature (Ritchie, 1891: 5) and attributing superiority of the best genes to superior species: the survival of the fittest – those organisms “best fitted to cope with their circumstances in order to transmit offspring” (Ritchie, 1891: 12). This notion was extended to the understanding of society: through notions of self-improvement of the body and mind - based on the aggressive tactics of survival in nature (Tait, 2005: 15) which included ‘establishing the best genes’ for a species therefore ‘establishing the best blood’.

The notion of the aggressive tactics of survival in nature to ensure the perpetuation of ‘good blood’ and ‘best genes’ is anomalous with ideas pertaining to dominance between cultures and aggressive tactics of conflict, combat and the competition of physical bodies at war. As Ritchie points out, “In war...the ultimate appeal is force of brain or muscle, and the hardiest and craftiest win” (Ritchie, 1891: 11).

---

<sup>7</sup> A developing scientific field that investigates the biological bases of the social behaviour of animals, such as aggression, territoriality, social systems, and mate selection. It is the study of all aspects of social behaviour up to and including the evolution of social behaviour in human beings (Bullock & Stalybrass, 1977: 792).

<sup>8</sup> Gene: The basic unit of hereditary, corresponding to Mendel’s factors; capable of transmitting characteristics from one generation to the next. It consists of a specific sequence of DNA or RNA that occupies a fixed position locus on a chromosome (Bullock & Stalybrass, 1977: 348).

In considering bodies at war fuelled by the Darwinian notion of “individuals best fitted to cope with circumstances to transmit offspring”, one could surmise that bodies in exemplary physical condition would be most effective in the domination of other bodies to achieve the propagation of the finest genes. For bodies at war, preparatory processes of ‘self-improvement’ of the physical body were necessary to increase its capabilities – which would yield effective aggressive physical dominance over opposing bodies at war.

Such preparatory processes can be identified in militant sectors dating as far back as the ancient Greek culture established around 2600BC. Prominent in these militant sectors is the idea of the preparation for war “as a means of training for...military preparation assuring that human bodies performed at their optimum in combat” (Chisholm, 2002: 416). Such military methods were designed, for example, in “teach[ing] soldiers to mount horses at a run during battle” (Chisholm, 2002: 416).

In addition, with the emphasis on war in ancient Greek culture, the displays of dominant physical strength became a central fixture in Greek education; a means to “train young men to embody the virtues of civil society defined in terms of the free, male citizen” (Chisholm, 2002: 416). These supplements to Greek fighting forces were called “gymnazein” or “gymnastics” which is translated as “to train naked”. These displays of augmented human physical strength and agility were housed in state-provided gymnasiums (Locken & Willoughby, 1955: 2).

The competitive and aggressive tactics and dominant physical body types embodied in gymnastics is congruent with Darwin’s notion of dominant bodies which will propagate the best genes. If one observes the autonomous sport of competitive gymnastics<sup>9</sup> it is possible to identify the dominant/superior human through the kinetic technique named acrobatics<sup>10</sup> (The term “gymnast” can be used interchangeably with “acrobat”). Dominant/superhumaness could be read on the acrobatic body during the execution of complex kinetic activity. This is articulated by Chisholm:

---

<sup>9</sup> The method of training soldiers to mount horses whilst running alongside them is recognized in the sport of competitive gymnastics as Vaulting (Chisholm, 2002: 416). The gymnast utilises a piece of gymnastic equipment known as a pommel horse with four legs and a solid oblong leather body to execute various combinations of movements of leaping from the ground onto the apparatus, and on the apparatus itself. Invented by Friedrich Jahn in the early 1800’s (Locken & Willoughby, 1955: 87).

<sup>10</sup> Acro: The greek prefix meaning peak or summit (Chisholm, 2002: 416).

“The term acrobatics refers to bodies that leave the earth, master the effects of gravity and centrifugal<sup>11</sup> force, and seemingly defy natural laws. Images of these...bodies are striking in that they appear to carve out and to move within spaces beyond the reach of ordinary human bodies... By extending the limits in which human bodies are perceived to function and move, acrobats offer physical proof of their superior physical training and of their bravery; by surpassing what seems to be human physical limitations in their performances of phenomenal aerial manoeuvres, they appear to be superhuman” (Chisholm, 2002: 418).

Chisholm’s statement supports the claim that the execution of acrobatic kinetic activity suggests a dominant physical body through its visual aesthetic: “a body which (appears to) go beyond the physical limits of the ordinary human body and which appears to defy nature’s law of gravity”. The visual aesthetic of an acrobatic body executing complex kinetic activity suggests a superhuman body.

The term “superhuman” could be considered paradoxical due to the encapsulation of two binary systems: one of human capability; the other of surpassing human ability. For the feats of acrobats, who are able to “carve out and move within the space beyond the reach of ordinary humans”, the aesthetic of an “ordinary human” is viewable. It is this body of the “ordinary human” that propagates a sense of possible disaster or catastrophe and it is the exchange between these two polarities that summons a sense of extraordinariness around the acrobat during their execution of routines. As Chisholm states:

“[T]he *routine* (own italics) is therefore ritualised exercises of...calculated...disturbance and self-control. Therefore, [completing the trick] provides proof that balance has been achieved and the [trick] has been performed correctly. Perfect execution is also significant insofar as the human body, momentarily the body of possible ‘fault’ and ‘disaster’, is reconstituted as superior and superhuman” (Chisholm, 2002: 424).

The acrobat or superhuman therefore consciously upsets balance; no longer adheres to gravity; and momentarily faces the impending adversity of fault and disaster of an “ordinary body”. The re-establishment of balance through super-kinetic ability reveals the extraordinariness of the body. The performances by acrobats/gymnasts are

---

<sup>11</sup> Centrifugal: acting, moving, or pulling away from a centre or axis (Pitt, 1977: 156).

performances which illuminate the human body as a site for fault and triumph – bodies that survive are those best fitted to cope with the circumstances.

This study has revealed that the advent of gymnastics in history harbours a nexus of words that comprise it: war, survival, genetic propagation, aggression, competition, muscular power, masculine power, primitivism, natural law, fault, triumph, self-improvement, extinction, tactics, conflict, superhuman, blood, battle. It is these words that can be read on the body and that suspend the trapeze.

## **1.2. The Original Swinging Man: Tarzaneze**

Through the establishment of gymnastics as an autonomous sport form in history, especially in the Olympic Games<sup>12</sup>, much of the brutal forces of war from which it originated, have since dissolved in the appeal of modern gymnastics – though these brutal forces could be thought of as being ‘genetically handed down’ to other related kinetic forms of gymnastics. It was between 1859 -1860<sup>13</sup> that French gymnast Jules Leotard<sup>14</sup> began experimenting with suspending his body from a triangular piece of gymnastics equipment – two ropes and a crossbar utilised for callisthenics<sup>15</sup> (Tait, 2005: 11). Leotard modified the angle of the ropes outward such that the shape of the apparatus formed a geometrical shape named a trapezium – hence the name for the equipment, trapeze and the performer, trapezist<sup>16</sup>. The invention of the trapeze during the latter half of the nineteenth-century coincided appropriately with nineteenth-century socialist thinking that was developing. Darwin’s theory of evolution along with notions of transcending primitiveness and nature began to fuel society hence “the human body within society was predominantly [held to be] a site for self-improvement” (Tait, 2005: 15). The effect of this was seen in men of the middle-class society whose preoccupation in 1880’s and 1890’s was with “building character and self-control through building muscle” (Tait, 2005: 33). In considering society, the male trapezist’s effort to perfect his

---

<sup>12</sup> Classical gymnastic games began in 776BC and were discontinued in 392BC. They were subsequently revived in 1870 (Loken & Willoughby, 1955: 1).

<sup>13</sup> The origins of gymnastics and the origins of trapeze artistry have the commonality of designing dominant aggressive physical bodies. In this argument, I reveal that this commonality is still evident around 2656 years later.

<sup>14</sup> Leotard’s Austrian father, Jean Leotard, ran a gymnastic school in Toulouse, and Leotard reportedly practiced over the swimming baths into which he could fall if he missed the bar (*Ibid*, Tait).

<sup>15</sup> A physical exercise routine: vigorous physical exercises for improving fitness and muscle tone, including push-ups, sit-ups, and star jumps (Makins, 1996: 187).

<sup>16</sup> The label ‘gymnast’ was used interchangeably with ‘trapezian’ (Tait, 2005: 11).



physique competitively<sup>17</sup> had become indicative of scientific principles that accommodated the notion of social advancement and species progression (Tait, 2005: 15).

The perfection of physique could be read on the body in the visual aesthetic of the performance by the male trapezist – who emphasised the physical dimensions of the body. The male trapezist came to display a “bared chest, sweat, muscles, shows of strength and dressed [himself] in tunics and loin clothes” (*see appendix. Figure 1*) (Tait, 2005: 100). Furthermore, Leotard’s invention of a tight-fitting one piece costume (named ‘the leotard’) was designed to “display all the contours of his body; commonly used throughout history in other kinetic art forms such as dance” (Bolton, 2002: 20). Revealing the contours of the body allowed spectators to observe the mechanics, that is, the muscular workings of the body. Thus, this body conveyed a dominant physicality to spectators which alluded to super-humanness. Muscular masculinity appeared to be an indicator of super-humanness.

Though the physical efforts of the male trapezist were laudable in terms of social advancement, it was ultimately the brutalities of war in the origins of gymnastics that – as we shall see – lead to Western European society’s apprehension towards trapeze performance. The premise of social evolutionists aimed at eliminating primitivism from society; this included the notion that ancient war could now be identified as acts of barbarity due to its apparent reliance on non-conscious physical displays of muscular strength. This was anomalous within the nineteenth-century establishment of industrial society, which was “considered a triumph in the mental abilities denied to so-called savage people” (Tait, 2005: 15). Physical bodies which relied predominantly on physical strength and not on advanced cognitive processes of strategy could now be considered primitive, as illuminated by Ritchie:

“War is ‘natural’ only in the sense of being the primitive form of the struggle between races and nations, not in the sense of something which ought to be...tribes that were the bravest and the most coherent have been the most successful in the struggle for existence” (Ritchie, 1891: 31).

---

<sup>17</sup> Leotard competed against other aerialists to achieve bigger and better tricks.

Socio-evolutionists reinforced that earlier cultures, including Greek and Roman, depended predominantly on muscular strength which were therefore considered more primitive. This made nineteenth-century displays of muscular strength anomalous within linear creationist ideas of social development (Tait, 2005: 15). For the male trapezist – who was transmissibly connected to the muscular displays of strength developed by the Greek system of gymnastics to design physically superior bodies – his muscular displays began to allude to its brutal, primitive war origins. Trapeze performance was thus condemned as being analogous with primitivism and degenerate through the aesthetic of its kinetic action. As Tait postulates, “It might be new action but it denoted the past, when ‘adoration was paid to physical beauty’ and strength and sporting contests happened between nations” (*ibid*, Tait).

Upon discussing the notion of a ‘swinging primitive man’, one is reminded of Darwin’s original debunked theory of the translation of animal to human, and his study of apes. It seems that the visual aesthetic of the original swinging man alluded in performance to a swinging ape-man or a Tarzan from the Darwinian inspired novel by Edgar Rice Burroughes; *Tarzan of the Apes* (1914)<sup>18</sup>. The modern Tarzan of the nineteenth-century replaced his vines for the advanced aerial technology of a metal bar and two ropes and retained an exposed chest – or alluded to one – in performance. This is suggested by Tait:

“Tarzan’s action mimics the flying action of an aerialist [as] the increasingly exposed chest of the male aerialist began to mimic Tarzan’s body...[This] set the precedent for the symanticised look that became particularly accentuated [in aerial performance]<sup>19</sup> up until the 1950’s” (Tait, 2005: 100).

Tait’s statement not only illuminates the similar primitive aesthetic between the male trapezist and the character of Tarzan, but also provides evidence of the lineage of the aesthetics brought about in the nineteenth-century that continued to the twenty-first century. Tait also makes an interesting deduction from the paradox of Darwinism in that the bared chest of the male trapezist is a strong, masculine indicator that “denotes

---

<sup>18</sup> The synopsis refers to a boy who is reared by apes, learning from them a rudimentary language (the name “Tarzan” actually means “white skin”), a strong sense of family, and a system of political hierarchy based on kingship of the strongest. Tarzan also refers to a man of powerful physique and great agility (Makins, 1996: 172).

<sup>19</sup> Tait’s term “aerial performance” is concerned primarily with aerial artistry in entertainment spheres of the arts such as traditional or ‘new’ circuses.

virility” (Tait, 2005: 109). The sociological models of the nineteenth-century that were based on the evolutionary theories of sociobiology, such as natural selection and ‘the survival of the fittest’ prescribed that males should aspire to be virile in order to generate offspring with the best genes. Though it seems the visual aesthetic of virility was less desirable. The male trapezist conveyed images of a virile, hyper-masculine and unthinking primitive man. Notwithstanding that trapezists are not only “testament to strength per se, rather to a mastery of timing and space” (Chisholm, 2002: 418) – which requires significant cognitive processes.

The male trapezist displayed a dominant physicality in the execution of superhuman kinetic action. This visual aesthetic was further propagated through an emphasis on displaying the physical dimensions of the body through donning tight fitting leotards or little costuming. The aerial action performed by males in the nineteenth-century conveyed a hyper-masculine visual aesthetic through an emphasis on muscularity.

### **2.1. Flying Amazons: The “New (Aerial) Woman”**

In the conception of aerial dance, one can identify muscularity, and thus masculinity as the kernel which fed into early aerial artistry. As we shall soon discover, the hyper-masculine vein of aerialism began to be challenged. Aerial dance scholarship could include aspects of gender studies.

It is only due to the participation and experiences of nineteenth-century society’s most disabled figure that the primitivist aesthetic of aerial performance began to shift. In keeping with the idea of a cognitive absence in aerial performance, the Tarzanist’s mindless actions on the trapeze paralleled another naturally cerebrally disabled figure viewed by socio-evolutionists of the nineteenth-century – woman. Socio-evolutionists, such as Ritchie, highlight the diminution of females to males and attributes a “natural” defection to females:

“[The] difference between the sexes regards the cranial cavity; the alleged brain inferiority of women is due to natural selection” (Ritchie, 1891: 65).

This claim by Ritchie is further justified by his remark that the undersized female brain is largely due to their “increased physical capacity to reproduce and child raising” (Ritchie,

1891: 65). It seems that the naturally cerebrally disadvantaged female was not only marked as a bodily institution for spawning offspring, but elevated – amongst the social upper-class – to be included as symbol of status. As suggested by Delamont & Duffin, the Victorian ideal of the “perfect lady” came to represent “noticeable leisure and consumption...” (Delamont & Duffin, 1978: 26). This ultimately gave women no purposeful activity, and rendered them progressively more and more useless. “Their complete uselessness led to the belief that they were incapable and ultimately disabled such that they must be protected and prohibited from serious participation in society” (Delamont & Duffin, 1978: 26).

The prohibition of women from purposeful activity in society was further enforced by another patriarchal social force which shaped options and roles available to people – medical theory (Delamont & Duffin, 1978: 26). Medical practitioners advocated that women should be predominantly concerned with the prime physical capacities of reproduction and child raising. This thoroughly excluded women from social sectors governed by men. The woman’s body marginalised her from participating in purposeful activities in society.

For women such as Luisita Leers<sup>20</sup>, Miss Lala<sup>21</sup>, Madame Sanyeah<sup>22</sup>, Miss Pereira<sup>23</sup> and Zaeo<sup>24</sup>, the dominant patriarchal model enforced by society served an evocative site for transforming ideals of women. For these women who took flight on the masculine trapeze, society’s dominant patriarchal model was challenged in the medium in which it was founded – the masculine body. From as early as 1860 - 1870, women began swinging with Tarzan on his masculine trapeze as well as on their own.

---

<sup>20</sup> Luisita Leers (Luise Krökel), a physically powerful woman and acquired fame with an unusual acrobatic act. Her stepfather, Guido took care of Luisita’s artistic education without too much tenderness and made of her an extraordinarily strong female circus aerialist. Soon, she was able to accomplish one-arm “planges” and an “iron cross” (which were then supposed to belong exclusively to a male repertoire) (<http://www.circopedia.org>).

<sup>21</sup> Miss Lala (Olga Kaira) began performing at the age of nine. She appeared under various stage names including ‘Olga la Nègresse’, ‘The African Princess’ and ‘The Cannon Woman’ after a stunt in which she held up a cannon by her teeth (<http://www.nationalgallery.org.uk>).

<sup>22</sup> Madame Sanyeah (Elizabeth Heynes), worked in London around 1867 and subsequently toured North America. She was acclaimed for 100-foot flight and promoted to the title ‘Most Daring Women in the World’ and was known for her “handsome face and form” (Tait, 2005:16).

<sup>23</sup> Miss Pereira, a Spanish performer working in Manchester 1867. It was estimated one of the sixteen female aerialists in London between 1860 and 1870 (Tait, 2005: 21).

<sup>24</sup> Zaeo (Adelaide Wieland), worked as an equestrienne and trapezist in Wieland’s circus in 1878, and debuted at the London’s Aquarium in 1879 (Tait, 2005: 52).

The trapeze was still considered a vehicle for primitive muscular displays and surrounded by bodily notions of masculinity. Through its relation to sport through gymnastics, the trapeze echoed a gender ideology which labelled aggression, physicality, competitive spirit, and athletic skill as masculine attributes necessary for achieving true manliness (Cahn, 1993: 344). Female aerialists had access to these masculine ideas through their engagement with the trapeze which permitted them to mimic masculine muscular control. Women imitating male muscular action could have been seen as transgressive of patriarchal sociological models of women which challenged a broader social schema – one that required control over female bodies (Tait, 2005: 56). The aerial flight of women resonated with notions of escape from these social confinements of reproductive pressures and useless status symbols. As Chisholm articulates:

“For female aerialists, [flight] is the embodied performance of extraordinary femininity, individual achievement [and] liberation...”  
(Chisholm, 2002: 422).

Muscular action by female aerialists on the masculine trapeze defied notions of physical female weakness through their performances. Tait postulates that in performing “physically dangerous” kinetic action, female aerialists began acknowledging their sexuality with scant regard for dominant patriarchal models; which could be considered “socially dangerous”. The female aerialists sexually liberated acts expressed “ideas of social and physical danger” (Tait, 2005: 21). This is articulated in Tait’s account of an aerial trick named ‘The Leap for Life’, performed by female trapezist – Lulu<sup>25</sup>:

“[She] climbs up above the crowd to the leap for life, [swinging] 80 feet across the auditorium, breaking through two paper-covered hoops, to be caught by a male partner unable to see her. The ending, grasping his body, her face against his breast, seemed to mimic the sex act, and had she not been a professional aerialist, every man present would have rushed to rescue or assist her” (Tait, 2005: 22).

This account reveals that females performing masculine aerial kinetics could have been perceived as being too helpless to maintain the physical ardour of aerial action. A female swinging eighty feet through the air propagates an idea of (her) possible muscular failure during the kinetic action – which draws attention to the female muscular capacity. The

---

<sup>25</sup> Lulu performed in London in 1870 and was known for singing the line “wait till I’m a man” during her act (Tait, 2005, 67).

account alludes to the notion that Lulu violently took hold of her male partner to arrest her fall. The visual aesthetic of this female aerialist could have alluded to notions of a female risking her dignity in an unexpected physically dangerous circumstance. Furthermore, Lulu's ability to stay airborne and not fall affirmed her powerful physicality. This account reveals that females performing aerial kinetics could have been viewed as volatile and risqué, yet powerful with the possibility of undercutting Victorian social expectations of female invalidity.

It was not until female aerialists reversed weight bearing roles in aerial partnering work that the aesthetic of females in aerial performance began to challenge the patriarchal model of masculine muscular power effectively. When female aerialists in partnering acts with male aerialists began to assume positions which bore male weight in aerial acts, the previously exclusively male kinetics of such action evoked a possible deeper underlying anxiety – “that female physical progress might outpace male body development” (Tait, 2005: 45). It seems that images of females bearing males began to attribute to females the masculine sporting qualities of aggression, competitive spirit and athletic skill. In this kinetic action, female aerialists “would pull up the male partner from beneath her. The *female operates as a physical support structure*” (emphasis added. Jamieson, 1998: 21). It could be considered that female aerialists in their reversed weight bearing roles began to mimic an inverted version of the social dominance of the patriarchal system. Women in these positions dominated men with his/her muscular power.

“When female aerialists, such as Lala held her husband by an apparatus ...attached to his waist; [she] was doubly defiant of the perceived natural order with her sustained power over a male body” (Tait, 2005: 48).

The visual aesthetic of women in weight bearing positions on the trapeze echoed a broader social transformation of women's positions in nineteenth-century society. This notion is extended to include the continued absence of women from the public spheres of business, war and politics which began to be expressed in agitated political movements such as the campaign for women's suffrage<sup>26</sup> established in 1866 (Delamont

---

<sup>26</sup> The term 'Suffragette' is applied to women who were members of the suffragist movement but specifically advocating votes for women. By 1860 the discourse of republicanism and citizenship prevalent in Britain and France and the United States had stimulated the interest of middle-class women. They began to claim political and civil rights denied to them (Bullock & Stalybrass 1977: 827).

& Duffin, 1978: 58). The suffragette acted as a regulating force to allow female participation in male arenas of public work, politics, and urban nightlife – also named the “New Woman” (Cahn, 1993: 344). The kinetic action of the female aerialist challenging the patriarchal system which resonated with the endeavours of the New Woman in that she, the female aerialist, challenged men predominantly on the grounds of masculine corporeality. The (female aerialist) “captured the exuberant spirit, physical vigour, and braveness of the New Woman” (Cahn, 1993: 345).

Female aerialist's, in their actions of empowered displays of physical strength and sexual liberation, had earned a reputation paralleling the warlike women of ancient Greek mythology – Amazons<sup>27</sup>; who had advanced in the nineteenth-century to include flight. It was now possible that the weak female invalid of the nineteenth-century could transcend her previous disposition through aerial performance. Tait describes these women in her publication as “flying amazons” (Tait, 2005: 17).

Unfortunately the term “amazon” – which brings with it positive empowering ideals of women – also locates the female aerialist within masculine displays of strength associated with warlike bodies. This, as with the male aerialist, began to reveal itself during muscular displays on the trapeze. The flying amazon, through mimicking masculine control, began to develop the same muscles utilised by the Tarzanist – and in so doing developed a similar muscular upper body form in her muscular displays on the trapeze. The visual aesthetic of the physique of female aerialist's resembled their muscular male counterparts.

These highly athletic female aerialists of the nineteenth-century had completely contravened the dictation by medical theorists of the time who had stipulated that physical exercise for women should be prohibited as “too much exercise would damage the female reproductive capacity” (Cahn, 1993: 345). Furthermore, highly athletic activity – such as aerial action – “would interfere with menstruation and would threaten the female reproductive organs to harden or atrophy” (*ibid*, Cahn)<sup>28</sup>.

---

<sup>27</sup> Amazons – derived from the Greek word for breastless. Amazon women burnt off the right breast in order to facilitate bending the bow. Women excluded men from their society; though occasionally had sexual relations with men of neighbouring states. All male children born to them were either sent to live with their fathers or killed. Girls were trained as archers for war (Hawkins, 1986: 22).

<sup>28</sup> In studies by Jasienska and Ellisen<sup>28</sup> (1995), strenuous physical labour has been shown to have a suppressive effect on salivary progesterone levels: a sensitive indicator<sup>28</sup> of ovarian responsiveness to

The visual aesthetic of an erasure of femininity can be read on the body. This is illuminated by Chisholm who discusses the aerial kinetics of female gymnasts, who, in order to turn somersaults effectively, arch their backs in flight. As Chisholm extends, “the only protrusion is in the upper torso – and is that of the rib cage. Not of the breasts...the concave lower torso contrasts as a hollow at the site where the reproductive organs typically are housed” (Chisholm, 2002: 427). The female aerialist executing aerial kinetic action displays the visual aesthetic of a muscular female in which indicators of reproduction are erased.

The flying amazon appeared to audiences as an androgynous figure of dissolving femininity through her kinetic muscular displays on the trapeze and balanced tentatively on nineteenth-century woman’s social reputation as a female invalid serving mainly as a reproductive mechanism. The following accounts by reviewers of the period describe the visual aesthetic of the body of the female aerialist:

“For Luisita, there are none of the outward aspects of feminity. Eighteen years on the high trapeze... have robbed [her] of those feminine traits that women jealously guard and men look for in the ladies” (*see appendix. Figure 2 & 3*) (Tait, 2005: 81).

“Pereira’s flight was ‘not to be surpassed for elegance and agility’ and could be considered ‘reckless daring’. Her ‘undressed’ solo act on the static trapeze were ‘unfeminine feats done in a simply maidenly fashion: hanging head downwards, and by one leg’” (Tait, 2005: 21).

Madame Sanyeah’s performance in 1868 ‘excited much astonishment; but we are doubtful if such an exhibition can be in good taste’ (Tait, 2005: 17).

“Zaeo’s posters, which showed her with developed triceps and her arms raised revealing her armpits (...) where banned at the London Aquarium alongside prostitution and boxing in 1890” (Tait, 2005: 56).

---

physical stress (Jasienska & Ellison, 1995: 1847). Maintaining a constant state of high energy flux (such as aerial performance), may constrain a woman’s physiological capacity to allocate energy to the processes of reproduction (...). This, as studies have shown, can be “regulated by compensatory changes in energy intake” (*ibid*, Jasienska & Ellison). Furthermore, contrary views by medical practitioners during the nineteenth-century stipulated that “rigorous exercise endows women with strength and energy therefore allowing them to be fit to bear children” (Cahn, 1993: 345).

This study reveals that though female aerialists engaged in highly athletic activity and their muscular form may have appeared as if subjected to a dissolving femininity – their reproductive capacity, though pressured under aerial action, was not entirely diminished.



“The only sign of a woman about her [Lulu] was that she had a rose in her bosom and another in her short curly hair” (Tait, 2005: 22).

There are also accounts, by Tait, of the female form being marginalised amongst fellow male aerialists in swinging trapeze work due to their anatomic disposition. The dimensions of the female physique could interfere with the kinetics of aerial action.

“[W]omen should have narrow hips and slim buttocks because ‘a heavy posterior does not permit a graceful somersault’. For technical reasons, ‘heavier bottoms inhibit the body’s tuck in somersaults, and frictionally slow down its pendulum swing effect’” (Tait, 2005: 94).

These accounts propagate the notion that aerial women resembled aerial men. The visual aesthetic of women on the trapeze now began to hinder females performing aerial work as the masculine visual aesthetic communicated through their body could not be counteracted. The visual aesthetic of muscularity is written into aerial performance and defines it – therefore, women who performed aerial kinetic action could have appeared to society as tarnished mediums for reproduction.

The term “amazons”, which once resounded with ideas of powerful woman at war, now – in aerial performance of the nineteenth-century – came to resound with “unattractive failed women” (Cahn, 1993: 349) through the visual aesthetic of aerial kinetics.

## **2.2. Flying Amazons: Emergency Exits**

The performances of female aerialists whose visual aesthetic revealed a pollution of masculine muscularity lead to a decrease in audience attendance. As pointed out by Tait earlier, these women were banned from performing in public spheres and, ironically, alongside over-feminine, hyper-seductive trades as prostitution. However, these manly flying amazons challenged the patriarchal system through the kinetics of aerial action which “defied beliefs of female weakness and inactivity” (Tait, 2005: 57).

In order to counteract the recession in audience attendance, a clear counter-transgressive strategy became important for the flying amazon to garner public affection – it seems a method of tainting their manly visual aesthetic would be necessary.

I would like to point out an observation through the previous research and the research to follow. The attempt to dilute the current masculine aesthetic by the female aerialist in the nineteenth-century has probably been the most vital altering force in the history of aerial performance. The crux of this aesthetic modification – the reinstatement of the feminine visual aesthetic in aerial performance – is one that resounds, subliminally to contemporary kinetic applications of the aerial body. It is here, at this junction in aerial performance history, that the aerial aesthetics began to infiltrate aerial kinetics through the avenue of the feminine kinesthetic experience of bodies in flight.

To continue, the notion of the reinstatement of a “feminine” visual aesthetic by flying amazons provided a suitable method of garnering the affection of dwindling public attendance. Amongst the initial strategies employed by the female aerialist, the nineteenth-century woman – a submissive frail character – operated as a reservoir of perceived femininity, of “softness and docility” (Tait, 2005: 37) which flying amazons could draw on. In adopting this particular feminine aesthetic and theatricalising femininity, flying amazons gained an alluring performative aspect that allowed them to entice audiences into an enhanced state of receptiveness upon seeing the theatricals of fragile females in dangerous situations. By adopting stereotypical feminine visual aesthetics, flying amazons were granted far greater kinetic range in their masculine aerial abilities – which could be masked by theatricalised femininity. As Tait points out:

“[T]he feat was additionally enhanced to seem marvellous in its contravention of a female performers aura of softness and docility” (*ibid*, Tait).

This strategy of performing feminine theatrics is succinctly captured in female aerialist, Lietzel’s, display:

“Lietzel was often carried into the [circus] ring by a six foot man and, in a gesture of frailty, used to fake a faint after her act on occasions” (Tait, 2005: 86).

Female aerialists<sup>29</sup> in this way monopolised the patriarchal gaze of the audience through the distraction of their visual aesthetic, strategies and play – in turn attributing female

---

<sup>29</sup> Lietzel’s display of fragile femininity could “suggest a challenge to the male to ‘be the sex’, a challenge to the limits of its hegemony” (Baudrillard, 1979: 21).

aerialists with a seductive<sup>30</sup> atmosphere – as Baudrillard suggests, “seduction lies in the aura of secrecy produced by weightless, artificial signs” (Baudrillard, 1979: 23).

Of interest now is the kinetic illusion of weightlessness achieved through artificial signs. Flying amazons theatricalised their female separation from man by drawing on the metaphor of space.

### 3. Romance in Outer Space

One can observe that the idea of male and female separation was further emphasised through the female aerialist’s initial acknowledgment of aerial spatial parameters. It seems the female aerialist – first playing her female invalidity and separateness from man – extended this sexual difference into aerial space and represented it metaphorically as *the powerful man on the ground (spectator) and the delicate female suspended in the air (aerialist)* (emphasis added). Tait points out that the social idea of body identity presented by the female aerialist could be linked to metaphoric spatial associations (Tait, 2005: 35) commonly found in the nineteenth-century artistic genre of Romanticism<sup>31</sup>. The conceptual framework of aerial performance relies predominantly on a gross spatial separation of earth and ‘the above’ i.e. bodies suspended in the air. For the female aerialist, social ideas of body identity (masculine and feminine) could be expressed through metaphoric spatial associations (earth and the heavens) relating to the mystical and metaphysical identities of ‘Angels and Gods’ (*ibid*, Tait). Romanticism served as a brimming reservoir of artificial signs and symbols that were essentially feminine in their expressive content which could serve flying amazons in tainting their masculine muscular power through the essentially feminine associations of aerial space (Tait, 2005: 57). The employment of romantic imagery, as I shall discuss further, is an important site for observation in aerial performance history as it is here that the potential kinetic impregnation – through the embodiment of the feminine aesthetics of Romanticism – was conceived.

---

<sup>30</sup> Baudrillard’s notion of seduction can be applied to the flying amazon’s aerial action in that female aerialists performed seductiveness based on the artificial signs of the feminine aesthetic. More obvious strategies of seduction – pertaining to the female erogenous body – were also employed. This observation could be further investigated in other studies.

<sup>31</sup> Sources that impregnated Romanticism included the occult and supernatural, which held appeal for those Romantics fascinated by the mysterious corners of the mind (Guest, 1980: 3).

In the process of the feminisation of aerial performance, female aerialists relied on socio-cultural associations and understandings of metaphysical and spiritual connections with bodies that employed a gross separation between earth and the heavens – namely celestial bodies. The visual aesthetic of imaginary bodies such as angels were culturally associated with positive emotional impressions of personal upliftment; and the spatial location of aerial performance permits a visualisation of such positive imaginary bodies (Tait, 2005: 34). Aerial performance now served an emotionally metonymic function in the association and evocation of God-like figures through the aerial bodies' symbolic representation of spiritual mediums, connecting these God-like figures with man. This notion, as pointed out by Tait, "suited the romantic imagination, seeking to personify abstract ideals" (Tait, 2005: 35).

For nineteenth-century Western European Christian societies, the metaphorical spatial separation of man and the aerial heavens holds particular resonance with Christian symbolism and iconography by being suggestive of the spiritual journey of man's commuting between earth and God-like figures. This is postulated by Hart:

"As soon as freedom of movement was created, it revealed the possibility of establishing and maintaining, from [man's] earthbound station, a pattern of ascent, a direct spiritual link with the heavens... [A] procession of [man's] spirit out from God and back to Him" (Hart, 1988: 1).

Hart's statement suggests a possible artistic intelligence in the employment of spiritual symbols by aerialists in that aerial space metonymically suggested an exchange of up and down movement in the embodied representation of "contact between man and the unseen" (Hart, 1988: 52).



**Figure 5. *Elijah and the Angel*. Tintoretto (1518 – 1594)  
(Hart, 1988, pg. 80).**

The metonymy of angels (*see appendix. Figure 4*) brought about specific ideas of locomotion in aerial space for the aerialist. The visual aesthetic of the kinesthetic angels appeared to ascend and descend from the heavens and operated as a source for kinetic qualities that the aerialist could embody. These qualities can be observed in Hart’s analysis of a painting by Tintoretto entitled *Elijah and the Angel* (1577 – 1578) (*see figure 5 above*). In this work, Hart observes two kinetic qualities in the descending movement of the angel: one, a descent from the heavens could be “the bringing of grace in a violent, insistent rush” and two, “allowing it to enter man’s world more gently, more hesitantly (Hart, 1988: 52). In this visually arresting image, the angel appears to hover “mysteriously over the prophet, balancing his weight on his arms while pressing very intimately into the prophet’s psychological space” (Hart, 1988: 79). For aerialists, the kinetic quality of gentleness, hovering and intimacy began to appeal to their displays of aerial action.

Other important romantic imagery utilised by aerialists were references to birds. For the trapezist, the action of flying unaided through the air away from the apparatus made the trapezist more like a bird in flight, “[t]he flights of birds were associated with divinity and the soul” (Tait, 2005: 11). Tait points out that the emotional metonymy of birds in Christian culture contributed to enforce a romantic sensibility in aerial performance through birds’ celestial reference as “messengers between Heaven and earth” (Hart, 1988: 19). As Hart postulates:

“God’s creation of the birds on the fifth day was for mankind a present indication of salvation to come: ‘[t]he soul is carried to God by the wings and the great quantity of feathers and aerial spirit’” (Hart, 1988: 23).

In addition to the emotional metonymy of the flying action of birds and angels, the visual aesthetic of smoothness and effortlessness became prominent in kinetic displays in aerial performance - “energetic leaping, flying and diving could now be replaced with hovering, flapping, floating and gliding” (*see appendix. Figure 6*) (Tait, 2005: 56).

The kinetic qualities of hovering, floating and gliding associated with the overarching aerial kinetic quality of weightlessness and effortlessness of bodies which defy gravity can be identified in other kinetic art forms in the nineteenth-century such as the dance genre of the romantic ballet<sup>32</sup> - which made particular use of representing females as light, weightless bodies. This was particularly evident in the ballet *La Sylphide*, in which prima ballerina Marie Taglioni revealed how the *pointes*<sup>33</sup> (the manoeuvre of rising onto the tips of the toes) could be used to an artistic end to convey an aerial illusion of “weightlessness and impalpability to express an ethereal spirituality” (Guest, 1980: 5). In rising onto the tips of the toes, the ballerina achieved a fairy-like quality and appeared lightly attached to the ground. As Guest stipulates:

“It was the most sublime expression in Romantic mystery...in which the ballerina became transformed into a vision of the romantic ideal, remote and imponderable” (Guest, 1980: 18).

---

<sup>32</sup> “Its symbol, in dancing, is flight: the aerial flight of the ballerina as Sylphide, or dryad, or wili; the ballerina as a supernatural being, the visible incarnation of man’s idealism and aspiration (Guest, 1980: 9).

<sup>33</sup> “When she soared across the stage in an endless arc, or rose effortlessly on the tips of her toes, she created an image which lingered in the air with the compelling power of a dream – no one had made *pointe* work an integral part of the choreographic drama instead of a meaningless acrobatic feat” (Guest, 1980: 9).

The female aerialist – whose art form visually realised a gross spatial separation of earth and heaven, the presentation of the body in angles and poses in the representation of feminine weightlessness offered by ballet – served as a repository of romantic feminine imagery. Female aerialists in their supreme spatial difference of being suspended began to adopt the feminine dance-like body positioning of ballet (Tait, 2005: 56). This was noticeable in the aerial displays of female trapezist, Lulu, who introduced an impression of feminine weightlessness through the “positioning of her arms at an angle, outwards and delicate, with an almost supernatural look” (Tait, 2005: 67).

The representation of the visual illusion of kinetic weightlessness began to be diffused amongst aerialists. The kinetic quality of graceful smoothness in aerial movement and the artistic poise of the limbs became important (Tait, 2005: 97) and these qualities helped to transform the muscular density and weight of the aerial body (Tait, 2005: 96).

In the transformation of the aerialist’s muscular body density and weight in aerial kinetics, female aerialists now relied on kinetic imagery whose visual aesthetic did not appear to imitate masculine strength and power<sup>34</sup>. Imagery of butterflies became icons of femininity that increased perceptions of seemingly weightless action (Tait, 2005: 56). The Butterfly could be considered an instigating icon of a style of aerialism known as *Aerial Ballet* – identified particularly in the circus arts. These acts<sup>35</sup> encapsulate the female aerialist’s play of femininity in aerial performance as they display kinetic feminine weightlessness, seductive plays of desire, and subtle eroticism. The aerial ballet – also known as ‘Butterfly acts’ (see appendix. Figure 7) – makes use of iron jaw technology, a dental apparatus which permits the female aerialist to suspend her body in the air by way of hanging on the apparatus using her teeth (see appendix. Figure 8). These suspensions evoke a particularly desirable feminine imagery in that the suspension from an iron jaw maximizes the visibility of the angles of the female body drawing visual attention to the exposed throat, neck and protrusion of the breasts. The realisation of feminine weightlessness is enhanced in that the minutely visible apparatus also suggests a sense of flying without an apparatus (Tait, 2005: 56).

---

<sup>34</sup> Consider the image of Luisita Leers (see appendix. Figures 2).

<sup>35</sup> In the circus arts, “acts” refers to each respective routines in the ring (performance space/stage); each displaying various circus skills. That is, aerial act, lion act, knife-throwing act and so on (Jamieson & Davidson, 1980: 9).

As mentioned earlier, female aerialist's distraction through their visual aesthetic, strategies and play evoked a seductive atmosphere in aerial space. Apart from the seductive strategies of enhancing the female bodily form in Aerial Ballet/Butterfly acts, female aerialists also played the erogenous female body in performance. Tait points out that due to the employment of a dental apparatus, "attention was drawn to the female mouth cavity" (Tait, 2005: 56) alluding to eroticism which was further enhanced through the display of pleasure in representing weightless female bodies. This eroticism, as Toepfer points out, is often revealed through the visual aesthetic of body part as 'out of place' and appears to dominate the rest of the body and its attractiveness:

"[T]his attractiveness emerges most intensely when the body part is self-consciously 'out of place' and the performer treats this displacement as a pleasure in a spectacle" (Toepfer, 1988: 115)

The attractiveness created by a single body part in its domination over the entire body is something that could perhaps be extended to aerial performance in that at some moment there is always a single body part, be it hands, feet, mouth or hair that attach the body to the apparatus.

We can deduce that female aerialists appeared polluted with masculine masculinity and thus initiated a counter-transgressive strategy to appease audiences. This was achieved through a reinstatement of the feminine aesthetic – referencing the societal perceptions of female body identity through metaphoric spatial associations found in the era of Romanticism. That is, bodies that occupy the earth and the romanticised, feminised figures above it. These figures in their apparent weightless action utilised kinetic qualities that depicted effortlessness. To evoke the kinetics of these figures in performance, aerial action evolved to include (more feminine) kinetic qualities of gentleness, hovering, intimacy, flapping, floating and gliding<sup>36</sup>. These qualities of kinetic effortlessness allowed the aerialist to be transformed into a vision of the romantic ideal, remote and imponderable. Like the ballerina, aerialists also adopted the body positioning of the artistic poise of the limbs whose kinetic qualities included graceful smoothness. The influence of romantic imagery on the kinetic qualities of aerial action helped to transform the density and weight of the muscular aerial body.

---

<sup>36</sup> The kinetic qualities of floating and gliding have been identified in Rudolph Laban's choreutic studies. Floating and gliding will be later discussed in chapter three on aerial kinetics.



## Conclusion

This discussion has revealed the emergence of aerial performance history in the nineteenth-century and the socio-cultural implications on the form. These socio-cultural implications have created a significant shaping on the aesthetics of the aerial body in terms of its physique and kinetic action – which appear to stem from the particular transgressions of oppressed females in the nineteenth-century. These transgressions of gender – though an empowering factor for women of the period – overstepped audience and societal expectations of women and therefore had a hampering effect on audience attendance at aerial performances. The conscious decision to modify the masculine aesthetic of aerial performance by women was further encouraged through the aerial art form's strong artistic affinity with the period of Romanticism. This offered aerial performance an awareness of spatial parameters of aerial bodies as metaphors of ethereal and spiritual realms. In order to realise these metaphors in aerial performance, subsequent kinetic qualities were adapted in order to convey images of weightless bodies. Kinetic qualities such as effortlessness and smoothness could be observed in the kinetics of birds for example, and such qualities as softness and docility could be observed in expected behaviour of the nineteenth-century woman. Adding these kinetic qualities to the delivery of fast, masculine aerial action aided the aerial body in transforming the visual aesthetic of its muscular density and weight, and thereby transforming its previously primitive appeal of a body displaying muscular strength.

These discoveries are important as they reveal a strong affinity between the moving aerial body and the aesthetics of romantic feminised aerial action. As I shall later discuss, these romantically impregnated kinetic qualities (romantikineticism<sup>37</sup>) emerge in current applications of the aerial body in more contemporary art forms – such as the field of aerial dance: an aerial dance form, established from the kinesthetic experiments of the ground based genre of contemporary dance, supposedly revealing the kinetics of the aerial body. It is my suspicion that the kinetics of this art form are in fact unfounded in the knowledge or establishment of an aerial kinetic lexicon, such that the recycling of the nineteenth-century romantikineticism plays itself out in the subliminal conscious of contemporary aerial choreographers.

---

<sup>37</sup> I use this term to identify aerial kineticism utilising movement qualities evoking romanticism.

## Chapter 2

### De-romancing the Contemporary Aerial Dancing Body

#### Introduction

Romantikineticism is a term I ascribe to the performing aerial body to describe the style of movement observed amongst aerialists in the nineteenth century. This term affirms the style of kineticism that is strongly influenced by aesthetic imagery in the performing and fine arts initiated in the Victorian era known as Romanticism. Expressive imagery such as the symbolic metaphysical iconography of angels and birds were valued by trapeze artists for their imagery of weightlessness. The observed, or assumed kinetics of these aerial figures were valued for their feminine qualities of smoothness and effortless which contrasted with the aggressive and laboured physicality executed by performing aerial bodies. This style of movement identified as romantikineticism was introduced by female trapeze artists of the nineteenth century to mar their powerful physiques in their execution of visually hyper-masculine aerial action.

Throughout history, the performing aerial body has been a symbol for advanced kinetic abilities through its feature – particularly in the circus arts – as an art form that displays extreme kinetic action and “superhuman” ability. As Chisholm points out earlier, aerial bodies “carve out and move within spaces beyond the reach of ordinary human bodies” (Chisholm, 2002: 418) – these bodies could therefore be considered as propagating the vanguard of innovative kinetic probabilities (Jamieson and Davidson, 1980: 67).

The inevitable collaboration between the kinetic arts of dance and circus aerial work was inspired by need to delineate ground-based dance as a practical discipline and field of study during the 1970's. This was presented through the exploits of a particular dance initiative known as the *Judson Dance Theatre Company*<sup>38</sup>. The choreographers were united in their rejection of traditional form and technique, of narrative and overt theatricality (Craine & Mackrell, 2000: 265). The experimentation with notions of “what ground-based dance was” and “what could be considered ground-based dance” was evaluated by the Judsonites and thus – the notions of what ground-based dance

---

<sup>38</sup> Members, also identified as the “Judsonites”, included Yvonne Rainer, Steve Paxton, Simone Forti, Paulus Berensohn, and Marni Mahaffay (Peron in Benbow-Pfalzgraf, 1998: 418).

considered as fundamental to its existence, the ground, and the formal understanding of the mechanical and equilibrational relationship of the body with it, was reassessed.

### **1. The Aerialist and the Church...Again.**

The ethos of the Judson Dance Theatre – which comprised a divergence from known kineticism – included a “pluralism” of various art forms, including music composition and visual artists that it inspired in the 1960’s (Wendy Peron in Benbow-Pfalzgraf, 1998: 418). In their explorations, the Judsonites sought to frame the materiality of the dancing body in ways that forced the spectator to acknowledge the materiality of the bodies of their dancers. In so doing, they (the dancers) “contradicted conventional aesthetic expectations” (Burt, 2006: 3). This notion of direct non-conformity with known ground-based dance – and a focus on autonomous kinetic methods through the development of austere kinetic experimentation – was considered “innovative” and “superseded” the linear developments of previous dance forms (Peron in Benbow-Pfalzgraf, 1998: 640).

Amongst the “*Judsonites*” kinetic explorations involved a development of existing theories of kinesiology – that is, “the study of the human body as a machine for the performance of work (...) and concerns the mechanics, anatomy and physiology of the body” (Wells, 1966: 1). For the Judsonites, this kinesiological perspective of the physical body in the reassessment of ground-based dance was apparent through the inclusion and amalgamation of differences in types of (dancing) bodies, styles of mundane movement and the space occupied (Peron in Benbow-Pfalzgraf, 1998: 418).

The reassessment of the dancing body is interesting as one can observe that conventional assumptions of the ground-based body were being redefined through ideas of the body in space. This deviation from conventional dance involved a spatial deviation from the ground. For the Judsonites, the ground could be equated with a traditionalist occupation of the mechanics and equilibrational relationship of the body and its relationship with ground. Thus, this could have provoked a questioning of the problem of gravity and space for these artists (Sommer, 1972: 136).

To explore this problem, experimentation occurred which focused on the kinetic action of the ground-based body functioning in alternate physical mediums – which would

conventionally be considered “unnatural” space. This is particularly evident in the work of Judsonite – Trisha Brown<sup>39</sup> – whose dance work *Accumulation*<sup>40</sup> (1971) is an example of the use of water as an alternate performance medium. Burt points out that Brown’s employment of alternative dance mediums is intended to challenge audiences to abandon naturalised and automated ways of viewing dance performances...and develop new structures of perception (Burt, 2006: 3). “[H]er work has critiqued conventional ideas of what dance is<sup>41</sup>” (*ibid*, Burt).

Moreover, with regards to this study, Brown began experimenting with aerial elements in her dance works. These works, such as *Walking Down the Side of a Building* (1970) aided this critiquing of conventional dance. This work – which was exactly as the title depicts – drew attention to a “natural activity (walking) under the stress of an unnatural setting (down the side of a building)...to show movement as activity” (Brown in Burt, 2006: 3). Furthermore, Burt stipulates that the inclusion of aerial apparatuses in Brown’s work “permits the performer to realise, and the spectator to perceive, the clarity and directness of movement as unembellished activity, and the dancer’s actual weight and physicality” (*ibid*, Burt). This development in aerial performance history shows a clear redirection of the view of the aerial body from its inception in the nineteenth century. The aerial body was employed for a functional role; to show *movement as activity*. Brown did not attempt to portray the metaphysical aerial characters we have observed in the previous chapter.

The functional role of the aerial body can also be observed in Brown’s *Walking on the Wall* (1971) (*see appendix. Figure 1*) which “involved dancers in harnesses, moving along walls and making use of the different dimensions that vertical surface had to offer the movement” (Cohen, 2004: 543). Another work, *Planes* (1968) (*see appendix: figure 2*), involved dancers traversing a wall with drilled holes across the surface in which they could suspend themselves from an arm or leg. As Sommer points out, “[t]hey [were able to] turn around in place or lower themselves toward the floor” (Sommer, 1972: 139). An

---

<sup>39</sup> Browns work’s involve deep research into the roots of motor functioning (Burt, 2006: 3).

<sup>40</sup> *Accumulation* (1971), which is executed with the dancers on their backs, has been performed in public spaces of all kinds, including on water, with the dancers floating on rafts as they methodically work through the piece’s graduated gestures (Cohen, 2004: 543).

<sup>41</sup> Burt’s notion of “what dance is” is admittedly discursive. I am mentioning this notion to show that alternative performance mediums provoked such questions.

interesting observation of the quality of movement, which deviated from ground-based dancers, was that:

“[B]ecause the quality of the movement always remained the same, whether they were upside down or passing and crawling over each other, the visual impression was one of weightlessness. The bodies appeared to be suspended in space or involved in a slow motion free-fall (Sommer, 1972: 139).

As we have observed, the aerial dimension was included as a manner of re-evaluating the existing environment, that is, the physical surfaces on which ground-based dance is commonly realised. Sommer identifies that most of the kinetics have similar qualities – contributing to an aesthetic of weightlessness. The aerial bodies in Trisha Brown’s *Planes* appeared to move with qualities of weightlessness, and slow free-falling in the dance.

We can deduce that the Judsonites departure from conventional ground-based dance through kinesiological experimentation gave rise to a spatial deviation. This included alternative mediums such as water, in Brown’s *Accumulation* (1971) and specifically, the inclusion of aerial apparatuses in her works. The ground-based dancer in aerial space was afforded the kinetic possibilities of changing their facing on the apparatus and moving along the vertical dimension towards and away from the ground. The ground-based dancer – while exploring aerial space – presented an aesthetic of weightlessness.

I would like at this juncture in the discussion to abstain from focusing on the Judsonites’ explorations of unconventional space. For the sake of this argument, the significant developments of the spatial understanding of the body in aerial space would be valued with regards to the polemics of the development of the form of aerial dance. Of importance here is that through the experiments of the Judsonites, selected postulants were inspired through this rousing notion that ground-based dancing bodies could be suspended in aerial space.

## **2. Twisted Trapezes...and Dancing.**

The exploration of the Judsonites inspired individuals such as Terry Sendgraff and Stephanie Evanitsky, to explore the movement of the body in aerial space. This was

named “aerial movement”, or more commonly known today as “aerial dance” (This term was initiated by Stephanie Evanitsky in Bernasconi & Smith, 2008, 4).

Aerial dance could be considered a subgenre of contemporary dance and comprises an amalgamation of the hybridisation of contemporary dance and subsequent aerial techniques during the experimentation of 1970’s. The choreography of such aerial dances typically incorporates apparatuses often attached to the ceiling, which allows the performer to explore aerial space in three-dimensions. The apparatus has its own motion, which changes the way a ground-based dancer must move in response and changes – what would typically be considered – the ground-based dancer’s balance, centre and orientation in space (Bernasconi, 2002).

Aerial dance is also considered amongst pioneers of the form as a hybridisation of ground-based dance and circus based aerial technique and equipment. As mentioned in chapter one, the trapeze is a predominant fixture in the recognition of circus aerial technique. It is through aerial dance practitioner, and notable matriarch of the field of aerial dance, Terry Sendgraff<sup>42</sup>, that this iconic apparatus is included in the amalgamation of aerial and ground-based dance. Through Sendgraff’s experimentation with the field of aerial movement – the invention of an apparatus named the “motivity” trapeze – came to be a prominent fixture in the field of aerial dance.



**Figure 3. Terry Sendgraff Logo**  
([www.terrysendgraff.com](http://www.terrysendgraff.com))



**Figure 4. Sendgraff in rehearsal** ([www.terrysendgraff.com](http://www.terrysendgraff.com))

---

<sup>42</sup> Terry Sendgraff actively performed, choreographed and taught in the San Francisco Bay Area from the early 70’s until her retirement in 2005, at the age of 70 (Sendgraff, 2008)

This piece of equipment came into existence as a result of Sendgraff's experimentation with a low-hung circus trapeze (*see figure 3*). As discussed earlier, the trapeze, with its attachment high above the ground, was only conventionally able to *swing in a pendular motion; back and forth* (emphasis added). Sendgraff's relocation of the apparatus to a lower plane in space allowed her to interact with the trapeze from the ground (*see figure 4*). For Sendgraff, an iconic moment occurred during this meeting:

“The ropes twisted together, causing the apparatus to spin. By formalising this, hooking both ropes to a single point of attachment, Sendgraff used the apparatus to spin, twist, and fly in a straight line and in a circle” (Sendgraff, 2008).

The previously considered back and forth motion of the trapeze in space had now been expanded to include a *conical motion which included a lability for multidirectional movement* (emphasis added). Other practitioners of aerial dance began to take flight on Sendgraff's multidirectional trapeze and later formed their own companies such as Joanna Haigood<sup>43</sup> of “Zaccho Dance Theatre” and Amelia Rudolph of “Project Bandaloop<sup>44</sup>”.

### **3. Natural Motility in Romantikineticism.**

Sendgraff's labile motivity trapeze inspired a motility of continual fluidness for the aerial body. The fluidness that was allowed is based on the scientific principles of natural motion such as the pendulum<sup>45</sup> – the motivity trapeze allowed centrifugal force to act and project the body along a conical<sup>46</sup> trajectory. Through the lability of the motivity trapeze, the aerial dancing body was afforded a dynamic way of traversing aerial space based on natural pendular motion. The aerial body could traverse space based on the natural motion of free fall<sup>47</sup> whereby little effort would be required by the body to maintain its trajectory through space. Wells points out that to set an object in conical pendular

---

<sup>43</sup> Haigood's work is based on careful research of the history, architecture and societal impact of found spaces, and the translation of these memories into the movements performed in that space. (Zaccho homepage, 2008).

<sup>44</sup> Project Bandaloop combines rock-climbing with dance in performances that scale and/or descend canyons, rock walls, and tall buildings across the world. The company creates a blend of dance, sport, ritual, and environmental awareness (Project Bandaloop homepage, 2008).

<sup>45</sup> A device consisting of a mass, suspended from a fixed point that oscillates with a known period - that is, a known interval of time (Pitt, 1977: 275).

<sup>46</sup> The conical pendulum is a simple pendulum in which the bob swings in a horizontal circle. It uses the motion of free fall (Pitt, 1977: 275).

<sup>47</sup> The downward motion in a gravitational field, the motion being unimpeded by a medium that would otherwise provide the support of buoyancy or viscous retardation (Pitt, 1977: 275).

motion, the maximum effort required by the body is at the start of the swing. To initiate the movement of a body along a trajectory

“presupposes a starting position in which potential energy is present. The (hanging object) must be moved from resting position before gravity can make it swing” (Wells, 1966: 37).

For the aerial body, maximum effort would be necessary at the start of the circular trajectory. Therefore, the body would require little effort to maintain its trajectory through aerial space due to its reliance on pendular motion afforded by gravity. Through the natural motion of the pendulum, the aerial body would appear to be moving with the motile quality of smoothness.

Through the Judsonites experiments to re-evaluate the body in space and discard formal dance aesthetics, the lability offered by this aerial dancing body presented a body encapsulated in a trajectory of smoothness and kinetic effortlessness. The placement of the body in aerial space and the added motility of smoothness contributed an aesthetic of lightness, and so, “the aerial dancing body appears to defy gravity” (Bernasconi & Smith, 2008: 26) due to its spatial placement and quality of natural motion. As Bernasconi and Smith state in the first publication devoted to aerial dance, “aerial dance is a dance form that...favours illusions of lightness” in the kinetic action (*ibid*, Bernasconi & Smith). Aerial dance, due to its establishment on natural, pendular motion, has the ingrained tendency to perpetuate the aesthetic of bodies that appear to defy gravity through their spatial positioning and resultant kinetics.

The notion of the aerial dancing body propagating images of weightless bodies in these specifically contemporary works creates a polemic, in that images of weightless bodies in dance have, throughout the twentieth century, resonated particularly within structuralist ideals of kinetic art forms found in the nineteenth century. This is apt if one considers the notion that weightless imagery alludes to a feminisation of movement – and especially if one considers the history of the relationship between the aerial body and its feminisation of aerial movement – hence the term romantikineticism.

This notion is evident in Noel Carroll’s review of a contemporary aerial work by Batya Zamir, *Prelude* (1974). Carroll deduces in his observation that Zamir’s suspended body aims to achieve “balletic ideals of weightlessness and flight through repeated images of



swimming and floating...” (Carroll, 1975: 10). Carroll’s deduction misconstrues Zamir’s intention for the work in that Zamir, through her positioning of the body in aerial space, aimed at drawing attention to the kinesiological experiences of the body – that is the “muscular and skeletal functions<sup>48</sup>” – of the body functioning in unnatural physical extremes (Carroll, 1975: 10). In fact, Zamir sought to *display* the effort of the aerial body (emphasis added). Another work designed to draw attention to the physique of the body in suspension is *Rubber Piece on the Wall* (1974) (see appendix. Figure 5).

This example shows us that natural pendular motion and the resultant effortless appearing in the kinetics of the body in aerial space could mar the choreographic intention of contemporary aerial choreographers. Here we witness a dialectic between past and present in that the aesthetic resonances of the Victorian ballet and the feminisation of movement identified as romantikineticism in the nineteenth century were impingent upon contemporary aerial choreographers in the 1970’s. Thus, an interesting polemic appears which reveals fascinating observations of the form of aerial dance.

The style of romantikineticism draws on the feminine qualities of smoothness and effortless in order to contrast the aggressive and laboured physicality executed by aerial bodies. This is evident in aerial dance as one can observe extreme physicality and muscular strength in the kinetic action, which thus draws on aesthetically appealing qualities of effortlessness to create the illusion of weightless bodies. Bernasconi & Smith point out that the quality of “effortless movement is valued...for its aesthetic appeal in evoking images of flying and defying gravity,” (Bernasconi & Smith, 2008: 26).

We can deduce that Sengraff’s motivity trapeze inspired a motility of continual fluidness afforded by the natural motion of the body along a trajectory of a circular pendular pathway. In this motion, the body requires the most kinetic effort to initiate the swing and least kinetic effort to maintain its trajectory. During this trajectory of natural motion, the body appears to traverse space with a quality of smoothness. The contemporary aerial dancer propagates romanticised kinetic qualities of effortlessness, smoothness and lightness in the illusion of a body that defies gravity<sup>49</sup>. It seems romantikineticism is

---

<sup>48</sup> This is similar to the research that Brown conducts into the roots of motor functioning.

<sup>49</sup> These kinetic qualities have been identified by Laban and will be further explained in chapter 3.

embraced by practitioners who spearhead contemporary aerial dance today (see appendix. Figures 6 - 9).

#### **4. Aesthetic Dance: Virtuositic Illusionists.**

In the previous quotation, Bernasconi and Smith advocate that the quality of

“effortless movement is valued, not only for its aesthetic appeal in evoking images of flying and defying gravity, ...”.

A continuation of the quotation reads:

“... but is also an indicator of virtuosity” (Bernasconi & Smith, 2008: 26).

Here we see an interesting association between virtuosity and aerial performance. It seems the term virtuosity has evolved during the history of aerial performance – initially as a term to describe extreme aerial kinetic ability in circuses – to a term that now gauges illusions of weightlessness. Bernasconi and Smith support this impression by stipulating that “kinetic virtuosity in aerial dance is gauged by kinetic effortlessness” (*ibid*, Bernasconi & Smith).

With the importance placed on achieving an aesthetic ideal in aerial dance, kinetic action becomes a secondary feature. Virtuosity in aerial dance is focused on kinetically achieving images of effortless and lightness and not exclusively on kinetics. Virtuositic kinetic action for performers such as the *Judsonites*, was ignored and instead mundane, pedestrian movement favoured (Perron in Benbow-Pfalzgraf, 1998: 418). If one considers the experiments of Trisha Brown and Zamir, their focus drew attention to the kinesiological offerings of the aerial dimension, without intentionally focusing on creating images of weightless, ethereal bodies through kinetic action.

It seems aerial choreographer, Brenda Angiel, places some importance on investigating aerial kinetics in addition to attaining the overarching aesthetic illusion. Angiel points out that she strives to achieve a visual and kinetic pleasure despite the physical extremities of her work, and identifies this as her choreographic signature:

“I have developed an intuitive personal aesthetic in which visual and kinetic pleasure is a significant part, as is the artistic risk stressed by the exposure of the body” (Angiel in Bernasconi & Smith, 2008: 63).

Angiel also goes on to state that in her illusions of defying gravity, gravity itself is an important factor. Angiel identifies “gravity and lightness as dialectical opposites...*gravity as a force (is) inherent to all movement* and the search for the illusion of lightness” (Emphasis mine. Angiel in Bernasconi & Smith, 2008: 63). Unfortunately, Angiel does not reveal, from a critical kinesiological stance, *specific* discoveries of the effect of gravity on aerial kinetics - although she acknowledges that gravity is effective in creating movement. Instead, again, the importance of any understanding of kinetics of aerial action is towards realising the illusion of lightness. Angiel’s statement highlights the possibility of a dance form where kinetic action is secondary to achieving an aesthetic ideal – a visual pleasure.

However, Angiel’s statement holds potential in considering a kinesiological analysis of the kinetics of the aerial dancing body. If one considers the notion that the role of gravity – for the ground-based dancing body – is especially important in creating motion, one could obtain an interesting avenue to depart on a kinesiological study of aerial kinetics. Such a notion could concern the distribution of weight and gravitational relations for a body that is not moving on the ground (Wells, 1966: 1).

We could deduce that virtuosity in aerial dance refers to the ability of the body to achieve illusions of lightness through kinetic action and is gauged by the kinetic effortlessness of this action. This is interesting if one considers that virtuosic dance, for the Judsonites, was ignored as it represented a known approach to movement<sup>50</sup>. Angiel’s statement, that “gravity is inherent to all movement” refers to achieving the aesthetic ideal in her aerial dance; though it holds potential for a kinesiological study of the kinetics of the aerial dancing body.

## **5. Extreme Aerial Kinetic Action and Aerial Dancing.**

In studying aerial kinetics and its aesthetic appeal, it would be interesting to understand the possible view aerial dance practitioners have of the extreme kinetic action of circus

---

<sup>50</sup> By a “known approach to movement” I refer to dance that is realised through structural body design. Dance that embodies form, such as ballet.

aerial acts and how the aerial dance form delineates itself in relation to the circus arts with specific reference to aesthetics and kinetics.

“Aerial dance is different from circus arts in that words such as *routine* and *act* are not used. Instead *work* or *piece* is how dance is defined in the context of a concert or performance” (Bernasconi & Smith, 2008: 6).

Bernasconi and Smith point out that the fundamental difference is the separation between extreme aerial kinetic action – that is, “tricks” – and movement. Aerial dance aligns itself with its dance origins in its identification with the mode of concert performance and the presentation of aerial choreographies focused primarily on effortless movement. In a circus context, the choreography succeeds in highlighting spectacular kinetic action in sequence with the goal of accomplishing an impossible kinetic feat (Jamieson, 1998: 45). This is executed in a manner which appears effortless and contributes to an image of weightlessness. Both forms of circus aerial work and aerial dance are founded in generating illusions of lightness and a masterful control of the kinetics of the body.

For aerial dance choreographers such as Amelia Rudolph of Project Bandaloop, the rigidity of the physicality in extreme aerial kinetic action is one that does not appeal to the movement explorations of aerial dance. Rudolph delineates aerial dance from a bodily stance and its possible kinetics. She regards extreme aerial kinetic action as

“[r]igid and coming from a very old tradition...bodies are sometimes forced into positions. There are specific ways to do these positions and no other way is allowed. It is moving from the outside and presentational” (Bernasconi & Smith, 2008: 22).

Notably, Rudolph identifies the stern discipline that is necessary to achieve extreme aerial kinetic action and that in comparison, the natural pendular motion of aerial dance allows the body to adopt a more tranquil movement quality. This approach, as discussed earlier, resonates strongly with the war origins of gymnastics and thereby the impressive kinetic action displayed by aerialists of the nineteenth century. Extreme aerial kinetic action is designed, through its militant origins, to display exemplary physique – hence the focus on the *display* of kinetic action (*Emphasis added*).

It is interesting to note that aerial dance, too, with its employment of romantikineticism, could be considered “moving from the outside” especially in considering the focus of maintaining kinetic action that appears effortless. The “presentational” direction ensuring that aerial bodies appear weightless resonates with ideals of the superhuman, if not the metaphysical body and essentially advocates a circus aerial body. The aerial dancer and circus aerialist are similar in their illusive intentions. They differ in the intensity of their kinetic endeavours.

Amelia Rudolph points out that aerial dance differs kinetically from tricks and is reflective of the genre of contemporary dance

“The goal (in aerial dance) is not to build acts with feats that emphasise strength and daring but to build dances that conjure images, evoke feelings, delve into ideas and themes, and focus on the abstract pattern of movement for its own sake or in the lip service of expressing something” (Rudolph in Bernasconi & Smith, 2008: 58).

Rudolph redirects the aerial body from the spectacle of the circus, through her belief that the aerial body is able to connect with the creative choreographic processes of visual pleasure: images, feelings, ideas and themes – and like Angiel, appeals to the motion of aerial body as opposed to extreme aerial kinetic action of circuses. Rudolph also relishes the romantic imagery that aerial bodies can evoke such as “the heroics of flying through the air” and “grand gesture”. In contrast, Rudolph also appreciates “subtle [gesture]” which “evokes rather than tells – that burns an image on your deep imagination more than it thrills your senses” (Rudolph in Bernasconi & Smith, 2008: 58).

The continual recurrence of romantic imagery in aerial dance is further pointed out by Angiel who likens the kinetic abilities of ground-based dancers to aerial dancers in that aerial dancers embody the dimension of space that ground-based dancers sought to aspire to in narratives. Furthermore, the ground-based dancer’s aspirations to reach the aerial dimension are commonly associated with the heroic. Angiel states:

“Classical dancers shared the idea of using big movements on stage, with jumps and turns that suggested the desire of the hero to transcend the limit of his body, earthy and carnal. They manifested the search of virtue stressing the aerial within the linear narrative” (Angiel in Bernasconi & Smith, 2008: 63).

Angiel links the contemporary aerial dance with the aesthetic of nineteenth century ground-based dance.

From these statements one can observe that the differentiation between aerial dance and circus aerial acts refers predominantly to the choreographic intention for aerial kinetics. The choreography of circus aerial acts displays exemplary human physique – to present bodies that appear superhuman. Aerial dance choreography portrays effortless bodies while delving into thematic notions and imagery. This parallels the circus aerialist in that the themes that aerial dance could portray, could appeal to the superhuman – that is, heroism. Aerial dance could evoke narratives that the circus aerial acts depict through their kinetics.

Aerial dance differs from circus aerial work in that aerial dance names its programmatic format in relation to ground-based dance - that is, as *works* or *pieces*. The choreography of aerial dance kinetics draws on the fluid qualities afforded by pendular and circular aerial trajectories in order to discuss themes and ideas. The choreography of circus aerial kinetics constitutes a militant kineticism to accomplish an impossible kinetic feat. Both forms are concerned with the effortless appearance of movement – evoking weightless mystical or heroic bodies.

## **6. Weightless Terminology.**

The imaginative imagery in aerial dance also permeates the current kinesiological understandings of the aerial body in space. Bernasconi and Smith identify, as with ground-based dance, vocabulary for the various forms that the aerial dancing body adopts, mentioning also that movement is not experienced through the adoption of various positions in space – instead it is in the transitions between these body forms (Bernasconi & Smith, 2008:6. The terminology that aerial dance utilises involves terms such as “Lion in the tree”, “Gazelle” and “Monkey” (*ibid*, Bernasconi & Smith), in order to depict various positions on the apparatus. The use of this terminology suggests a focus on acquiring movement from an aesthetic point of view and contrasts ground-based dance’s spatial “terminology such as the five positions in ballet” (Craine & Mackrell, 2000: 183). However, aerial dance does utilise more anatomically referent terminology such as “knee hang”, “sitting position” and “hanging upside down” – though these, like

the first, do not provide information of the position of the body in relation to its centre of gravity or the distribution of weight as one would notice with the kinetics of established ground-based dance. This specific terminology is cumbersome in relating the body to its orientation in space – surely imperative for a form which claims to investigate alternative relationships between the body and gravity? We can observe the employment of this terminology in the description of a movement sequence by Bernasconi and Smith:

“A dancer may be hanging upside down from both hands with the legs in a perfect front split, then transition into a knee hang, move up to a sitting position, and move into a “lion in the tree” (Bernasconi & Smith, 2008: 25).

This sequence for example, provides no information on the kinetic quality of transitions (with the exception that one should assume these transitions should be effortless); it hints at impressive physicality and evokes irrelevant imagery that bears no description to aerial kinetics. This example of cumbersome aerial terminology highlights that the aerial movement lexicon – if such a thing exists – may not be grounded in a choreological science or even a kinesiological understanding of suspended bodies. It is this difficult terminology and the possible reliance on romantikineticism that could present further problems for the field of aerial dance.

## **7. Fairytale Reviews.**

One of the overarching problems that aerial dance continues to experience – since its emergence in the 1970's – is its acceptance amongst leading dance authorities as a legitimate form of dance. The form is absent from dance texts attempting to delineate the field of dance performance and choreography such as (Clarke & Vaughan, 1980), (Goellner, 1994), (Benbow-Pfalzgraf, 1998) and (Cohen, 2004). This is further expressed in the lack of critical writing on the form which, as Bernasconi and Smith point out, “makes it difficult for reviewers, critics, funding agencies, and audiences to fully understand (aerial dance) works” (Bernasconi & Smith, 2008: 28). However, I assume this could be due to the form's reliance on romantikineticism, aesthetic based terminology and its apparent relation to circus aerial techniques – for aerial dance, there is a tension between the form's aesthetics and kinetics. This is illuminated by Howard who states:

“[T]he question of whether aerial work is a valid dance form still crops up in reviews and grant evaluations. The entrancing lull of aerial dance’s swinging motion and the work’s sculptural, visual-art quality are two hurdles to acceptance. And there is an undeniable tension between the surface spectacle of circus techniques...and the inward-looking nature of serious art” (Howard, 2004: 2).

In this twenty-first century form of dance there appears to be a similar tension between aerial aesthetics and kinetics as was observed in nineteenth century aerial performance. In the nineteenth century, the complex kinetic manoeuvres that aerialists accomplished resulted in muscular bodies denoting primitivism. This problem was remedied by treating kinetic manoeuvres with feminine movement qualities particular to the genre of Romanticism in the arts: softness, docility and effortlessness – adopted from romantic imagery such as angels, birds and other feminine, lightweight bodies. In the twenty-first century, aerial dancers are challenged in that romantikineticism could affect its acceptance as a form of contemporary dance. Romantikineticism aided the nineteenth century aerialist. It now hinders the twenty-first century aerial dancer.

Another possible instigating factor for aerial dance’s exclusion as a recognised dance form is due to the fact that currently no substantial kinetic lexicon on which to support its declaration as a dance form exists. I suspect romanticised kinetic action results in some aerial dance works that appeal more to popular entertainment rather than situated within the creative domain of choreography. Therefore, works might appear superficial in the view of leading authorities on dance. This seems to be the instigating factor for dance reviewers such as Wade Simpson who in 2005 reviewed Brenda Angiel’s aerial dance work *Air Part* (2000).

“The most joyous, “Peter Pan” minutes of the evening occurred in...*Air Part*, where everything was bungee, flying and fun... The last section featured three red-dressed Wendies...who sprang, flew and bounced before being eventually joined by (their) earthbound boyfriends...” (Simpson in Bernasconi & Smith, 2008: 28).

This account by Simpson captures the aesthetic of the kinetics of aerial dances through his comparison to fairytale imagery. The overriding aesthetic of aerial dance may obscure the choreographic intent – which may have been designed with artistic intelligence. Bernasconi and Smith point out that reviewers – such as Simpson – who are familiar with the vocabulary of ground-based dance might not be aware of the



“complexity of (aerial) movement vocabulary with its traverse from upright to inverted and the emphasis on various body parts required for transitions” (Bernasconi & Smith, 2008: 25). Indeed, Bernasconi and Smith acknowledge that the information transmitted to readers regarding aerial dance composition is far too simplistic, and that “reviewers (and others) need to understand the (movement) vocabulary of the art form and speak intelligently about the extreme use of the vertical space, the impressive physicality (...)” (Bernasconi & Smith, 2008: 28). Naturally, with the cumbersome terminology that is in existence, no choreologically informative descriptions are available for such critical discussion.

Though Simpson’s account may indeed be considered simplistic in that he makes little attempt to speak intelligently of the aerial kinetics or choreography in *Air Part* – Simpson does capture the aesthetic that is presented by aerial dance, though it is likened to fairytale imagery. This could be the nearest identifiable comparison available for one – such as Simpson – who may be new to witnessing aerial dance which employs similar kinetic action which evokes metaphysical, romantic if not “magical” imagery, depicting bodies which search to create illusions of lightness.

We can observe from accounts of aerial choreographers that there is a dissymmetry between choreographic intention for aerial dance works; and the reviews which liken these works to superficial events. Sendgraft states that “[i]t’s important that aerial dance not be just about getting up in the air and twirling,” though a review of Rudolph’s work for example states:

“Suspended, she rolls in her harness turning upside-down and spinning in different directions. She gestures with her hands and head, moving like a swift, a small bird known for its rapid flight and shrill screams” (Thomas, n.d. )

As one can observe, this review speaks more of the kinetics in the work, though unfortunately they are likened to birdlike imagery. K.C Patrick in an article for dance magazine astutely captures the discussion of delineating aerial dance. He includes the dichotomy between “superficial” and “serious art”. Patrick states:

“Are these people pioneers, as in Star Trek, who genuinely believe in exploring ‘space, the final frontier’? Are these spiritual seekers who challenge the laws of physics and devise ways to defy gravity’s weight? Are they athletes who climb

breathhtakingly vertical ropes and then rappel down or outward, or are they artists creating images and making meaning in another dimension for themselves and their companies? Are they just trendy background wire work for films like *Crouching Tiger, Hidden Dragon* or Madonna and Britney Spears videos?” (Patrick, 2002)

From this we can deduce that the lack of critical writing on aerial dance may make aerial dance inaccessible to the dance public due to the aerial dancing bodies lulling swinging motions; spectacular visual art appearances; kinetically irrelevant terminology; and essentially romantikinetic qualities in the movement. This may cause this dance form to appeal to audiences of popular entertainment, and not – though admittedly discursive – to Thomas’ “inward, serious art”. The aesthetic of aerial kinetics becomes problematic for reviewers to decipher creative choreographic intent, reducing critical opinions of aerial dance to fairytale descriptions.

## **8. Suspending a Ground-based Thinking.**

The origins of aerial dance, as I have mentioned, came in part from circus techniques and, as Bernasconi and Smith refer, “the maverick, and sometimes lofty, mentality of the postmodern<sup>51</sup> choreographers” (Bernasconi & Smith, 2008: 1), constituting a hybridisation of kinetic forms. This is depicted by the explorations carried out by members of the Judson Dance Theatre in the early 1970’s.

Another influential force behind the establishment of aerial dance is Alwin Nikolais<sup>52</sup>. Nikolais worked improvisationally, placing obstacles in the way of his dancers, to confuse the process of dance and create a new investigation of space and movement. Amongst Nikolais’ teachings, his approach to space involved – as Evanitsky from Multigravitational Aerodance Group<sup>53</sup> states: “Nikolais taught you how to acknowledge the space around you” (Bernasconi & Smith, 2008: 14). This is depicted through his use of aerial apparatuses in his work, *Sorcerer* (1960), which involved putting a ground-

---

<sup>51</sup> The term “post-modern” is a contentious term and could initiate discursive studies into postmodern dance theory.

<sup>52</sup> For nearly sixty years, Alwin Nikolais was modern dance’s pioneer of multimedia. He invented not only the choreography but also the electronic music, costumes, and lighting design for his works (Bernasconi & Smith, 2008: 4).

<sup>53</sup> Premiered at the O.K. Harris Gallery in New York in 1969 and performed until 1989 (Bernasconi & Smith, 2008: 14)

based dancer in harness attached to a rope surrounded by a movable circle of fabric that served to distort the space and hide the aerial component until it was revealed later in the dance (Bernasconi & Smith, 2008: 4). Nikolais is considered amongst contemporary aerial dance practitioners as the forefather of aerial dance in that through his experimentation with aerial apparatuses he “encouraged students such as Terry Sendgraff and Stephanie Evanitsky to approach space in a new dimension using props and apparatus such as low flying trapeze, rope and harness” (Bernasconi & Smith, 2008: 6).

Some of the most important kinesiological and choreological discoveries in the development of aerial kinetics were discovered by Stephanie Evanitsky<sup>54</sup> in the early 1970’s. Evanitsky’s discoveries could be considered by aerial practitioners today as her findings could inspire an aerial movement lexicon.

Through Nikolais’ influence, a particular ground-based thinking was inspired in the aerial kinetic explorations of Evanitsky. The most important – especially for ground based dancers – being the notion of the location of the ground when the body is suspended. For Evanitsky, the apparatus could be considered the “ground” for the aerial body – as she identifies the dancer’s point of attachment to the apparatus as the dancer’s stance<sup>55</sup> (Bernasconi & Smith, 2008: 58).

*“When you are suspended off the ground, you don’t have less ground, you have more ground. You are always attached to a gripping point (to the apparatus)... You have ‘ground’ all around you.”* (Emphasis added. Bernasconi & Smith, 2008: 15).

The physical interaction with the apparatus, as stipulated by Evanitsky, allowed interesting revelations in space to occur. For Evanitsky, who utilised inner tubes from truck-tires which were hung by rope in various proportions and in vertical and horizontal aerial planes, in her early aerial kinetic explorations, different lengths and heights in space were further opened (Bernasconi & Smith, 2008: 35). In interacting with the apparatus across these aerial planes, a fundamental principle in considering the aerial body in space was discovered. Evanitsky posits that her aim was to dance “between”

---

<sup>54</sup> Founder of the *Multigravitational Experiment Group* in 1970 which today can be identified as *Multigravitational Aerodance*. (Carroll, 1975: 4).

<sup>55</sup> The term ‘stance’ in this instance refers in a physical sense to posture.

what supported the weight of the body” (Bernasconi & Smith, 2008: 35), that is, from apparatus to apparatus and “identify only with the open space...” (*ibid*, Bernasconi & Smith). It was the “in-between moment” – where apparatuses move along their own trajectory – that

“[Evanitsky experienced] a feeling that became stretched in time, and it was (the component of) time that became the actual support, that gave over the space and made it infinite. (...) The aerial dance reality was revealed to us by acknowledging the “in-between” (*ibid*, Bernasconi & Smith, 2008).

For the aerial body, the interaction between body and apparatus could be considered as similar to the manner in which ground-based dancers interact with the ground which is their support.

This interaction was extended to the anatomical components that were commonly responsible for bodies to be suspended. In Evanitsky’s ethos, the hands and “how one relates to the word *hold* needed to be explored and alternative modes of hanging – especially without the hands” (Bernasconi & Smith, 2008: 35) were experimented with. Evanitsky explored hanging by the sides of the fingers, back of the hand, palm, between the fingers – every possibility of redefining the hand was explored. This investigation revealed that any part of the aerial dancing body could become the fulcrum or support point for movement (Bernasconi & Smith, 2008: 35).

One can observe that through ground-based choreographer, Nikolais’ improvisational approach to space, unused space became important. As with Brown, aerial apparatuses became a means to engage with this space, and through Evanitsky’s experimentation, a ground-based thinking emerged for aerial dance. This ground-based thinking named the apparatus as the ground and the aerial dancer’s attachment to it as the stance. The conventional stance – that is, to hang by the hands – was reassessed and expanded to include any body part as the stance – that is, elbow, knee, and waist. The spatial parameters between the body and apparatus were also acknowledged.

## Conclusion

The Judsonites explored unconventional spaces by incorporating aerial apparatuses into their ground-based dance works. The resultant kinetics, as in Brown's work, delivered imagery of weightless bodies. The explorations by the Judsonites and Nikolais inspired a form devoted to the exploration of aerial kinetics named aerial dance which was spearheaded by Terry Sendgraff. Sendgraff's overarching contribution to the field was her invention of a modified circus trapeze which, in its adapted form, allows the aerial dancer to traverse space in multiple directions and with greater lability other than the conventional back and forth. The smoothness, effortlessness and lightness afforded by this apparatus contributed to images of weightless bodies suspended in space which resonates with the nineteenth century style of romantikineticism. Virtuosity in aerial dance is gauged by the ability of the body to convey romantikineticism – that is, the ability of the kinetics to convey images of weightlessness. This differs from circus lineage as virtuosity describes the ability of the body to achieve extreme aerial kinetic action in the accomplishment of “tricks”. Virtuosity and the aesthetic of romantikineticism are anomalous with the developments of contemporary dance. Aerial dance's absence from texts delineating dance could be due to the form's kinetically irrelevant terminology; romantikineticism; circus lineage and the absence of an aerial kinetic lexicon.

However, Evanitsky's ground-based thinking in aerial dance – that is, stating that the apparatus could be considered the ground and the dancer's attachment to the apparatus, the stance – combined with Angiel's stipulation that gravity is inherent in creating movement, kinesiological and choreological studies could take place. With these three components: surface, stance and gravity, one could begin to understand the placement of the aerial body in space and its mechanical and equilbral relationship with the apparatus without evoking romantikineticism.

This hybridisation of ground-based and aerial thinking offers a unique avenue to promote and enable practical aerial dance research through discussing that which is peculiar to aerial dance and thus instigate practical dance scholarship. This notion affirms Laban's term “choreology” and refers to dance scholarship as a theoretically sound practice. Of interest is that Laban – like the assimilation of contemporary ground-based dance and aerial techniques, or contemporary ground-based dance and circus aerial work – assimilated existing methodologies from other disciplines: music, theatre, the visual arts

and anthropology<sup>56</sup> in order to discover methods peculiar to dance. “[i]t’s making, its performing, its spectating, its medium, its choreographic treatments, its documenting methods, et. al.” (Preston-Dunlop & Sanchez-Coleberg, 2002: 2)

---

<sup>56</sup> Methodologies from culture studies and practice-derived methods peculiar to dance are necessary since they interlock theoretically (Preston-Dunlop & Sanchez-Coleberg: 2).

### **Chapter 3**

#### **Towards an Aerial Movement Lexicon: Stability/instability and orientation in space**

##### **Introduction**

We can observe from the previous chapter that aerial dance encounters problems amongst leading dance authorities as an autonomous dance form from its subsequent exclusion from dance texts. This as we have deduced could be due to the fact that, though practitioners claim it is a contemporary dance form emphasising investigations of alternative relationships between the body and gravity, the Victorian appeal of the kinetic qualities such as romantikineticism, are still evident. This aesthetic-based kineticism appears to form the foundation of aerial kinetics – due to the lack of critical writing on the form; no apparent kinetic lexicon is available to discuss basic aerial movement options. Evanitsky's discoveries of applying a ground-based thinking to the aerial body – that is, locating the apparatus as the ground and the dancer's attachment to it, named the stance – provides a suitable departure point for such a study. With relation to ground-based kinesiology, the ground (also known as the base of support) and the stance are essential in discussing the kinetics of the body – “the giving and receiving of impetus” (Wells, 1966: 8).

In this chapter I aim to extrapolate Evanitsky's notion through a kinesiological and choreological analysis of the aerial dancing body in order to reveal a possible practical dance scholarship for aerial dance. The application of ground-based research to the aerial body could reveal a mode of establishing and understanding aerial dance kinetics – which refers predominantly to Laban's term choreology. This chapter highlights the “assimilation of existing methodologies from other disciplines” – that is, ground-based kinesiology and ground-based dance (Laban's teachings on space harmony) with aerial technique. In the instance of this study, ground-based dance scholarship and kinesiology are the external disciplines.

I would like to mention at this early stage in the discussion, that this choreological study is merely an attempt to reveal a potential avenue towards the scholarly study of aerial movement. Laban's movement theory, as a source, provides an exhaustive reserve of

knowledge that has been refined through constant challenge and inquiry. Preston-Dunlop states:

“Rudolf Laban's original choreutic concepts are too complex, in both his practice and his writings, to be usable for the analysis of contemporary choreography in the form in which he left them. The central hypothesis of this research is that a *broadening, disintegration and reassembling of his material* provides a rich resource. When seen in context with the spatial practice of other dance artists, teachers and theorists, it is possible to conceive of this resource as central to the study of choreography” (Emphasis mine. Preston-Dunlop, 1983:77)

This choreological study – which draws on the ground-based dance theory of Laban; kinesiological study, from the discipline of human kinetics and ergonomics; the discipline of musicology; the physical sciences and established aerial technique<sup>57</sup> – is not intended to establish one principal avenue of aerial kinetic study. Instead, I aim to deconstruct, substitute, and compare aspects of these disciplines so as to offer a hypothetical commonality that may serve critical viewings of the moving aerial body in space, weight and time.

## **1. Statement on the Ground**

In considering Stephanie Evanitsky's discovery of the stance, let us further investigate the notion of “ground” for the aerial body. In this discussion, I would like to exchange the term “ground-based” for the term “telluric”<sup>58</sup>

In the discipline of the physical sciences, the gravitational relationship between the body and the earth could be defined as:

“The resultant effect of the gravitational attraction and centrifugal repulsion between anybody of matter and a planetary body as measured by the weight of the body near the planet; and the acceleration with which the body freely falls towards the planet” (Pitt, 1977: 172).

Telluric dancers, as objects, exert their weight on, and interact with a flat stationary surface beneath the feet known as the ground. This interaction in telluric dance is a creative experience whereby proprioceptive bodily processes during the interaction with the ground are translated into movement. This is pointed out by Dubois:

---

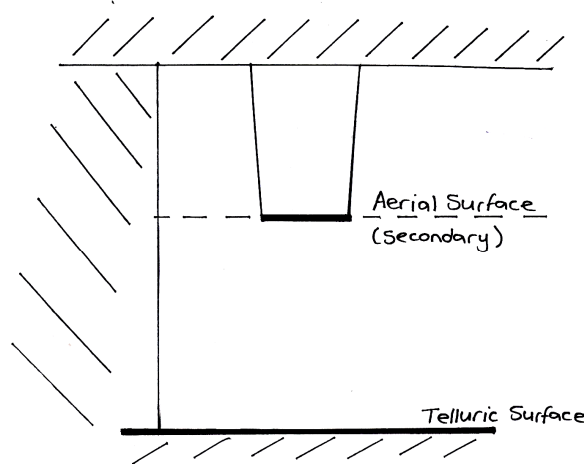
<sup>57</sup> As mentioned earlier, there is no current publication on this topic.

<sup>58</sup> Telluric: “of or originating from the earth; terrestrial” (Makins, 1996: 1388).



“(Telluric) dancers assimilate the body’s functional relationship to the environment through the assimilation of different external inputs – rhythmic, visual, spatial, olfactory, auditory and weight perception – in order to translate them creatively” (Dubois, 1994: 62).

Through Evanitsky’s aerial explorations in the late nineteen seventies, the apparatus could be considered the “ground” or secondary surface which the aerial dancing body – in considering Pitt and Dubois statements – transmits its weight and creatively translates it’s functional relationship with the aerial environment through the assimilation of its external inputs (*see figure 1*).



**Figure 1.** The author’s depiction of the aerial ground

The telluric dancing body is positioned on the ground and adopts a position which combines the requirements for stability with those for giving and receiving impetus. This position represents the base of support to the ground and is named the “stance” (Wells, 1966: 14). This is supported by Laban who points out that “the stance is always beneath the point of equilibrium of the body, never at the side or in front, or behind the body” (Laban, 1966: 10). This can be identified in telluric dance as the first position, in which “the feet are placed heels together and toes apart” (*ibid*, Laban). For the aerial dancer, the point of attachment to the apparatus – as pointed out by Evanitsky – is also named the “stance” and could be considered the position which is generally assumed to combine the requirements for stability with those for giving and receiving impetus. It

represents the base of support to the apparatus. In aerial dance, Laban's notion of the point of equilibrium could be considered as above the body.

Due to the unconventional positioning of the aerial body in space – that is, at a distance above the telluric ground – the aerial body tends to appear as if defying the telluric Law of Gravity. This has been pointed out in the previous chapters regarding the aesthetic of aerial bodies due to their position in space. It is interesting to note that this gravity defiant appearance is also observable in the telluric dancer's execution of elevation. Laban – in his thirteenth theme, elevation – points out that “skips, leaps and jumps are the characteristic actions of dancing” (Laban cited in Preston-Dunlop, 1980: 144). Preston Dunlop adds that with jumping: “to overcome gravity is a natural urge, because suspension in the air gives a sensation of freedom, and because the upward direction symbolises human aspirations” (*ibid*, Preston-Dunlop). However, Preston-Dunlop advocates that

“fault in (telluric) elevation is to strain in an attempt to gain height while in the air. The skill lies in getting the maximum strength at the moment of take-off and retaining only strength that is necessary to *achieve the lightness, which gives the body a feeling of freedom* (Emphasis mine. Preston-Dunlop, 1980: 145).

Perhaps in aerial performance the debacle of the gravity deviance aesthetic of romantikineticism could be reduced to the question of effort, and perhaps Laban's theory of dynamics. I would like to mention this notion very briefly as it may inspire a further study.

In Preston-Dunlop's publication, the author mentions Laban's fourth theme: *The Flow of the Weight of the Body in Space and Time* which explains the *free* and *bound* flow qualities of movement in space. Free flow<sup>59</sup> concerns “an action in which it is difficult to stop the movement suddenly, the flow is free” (Preston-Dunlop, 1980: 28). In aerial motion, the freest motion could be considered the natural motion of the body falling from the apparatus; a complete surrender to the force of gravity. Another aerial example of free flow could be observed in the pendular motion (conical and linear) of the body on a swinging apparatus. Preston-Dunlop ascribes verbs such as “fluent”, “uncontrolled”, “abandoned” (Preston-Dunlop, 1980: 28) to this quality.

---

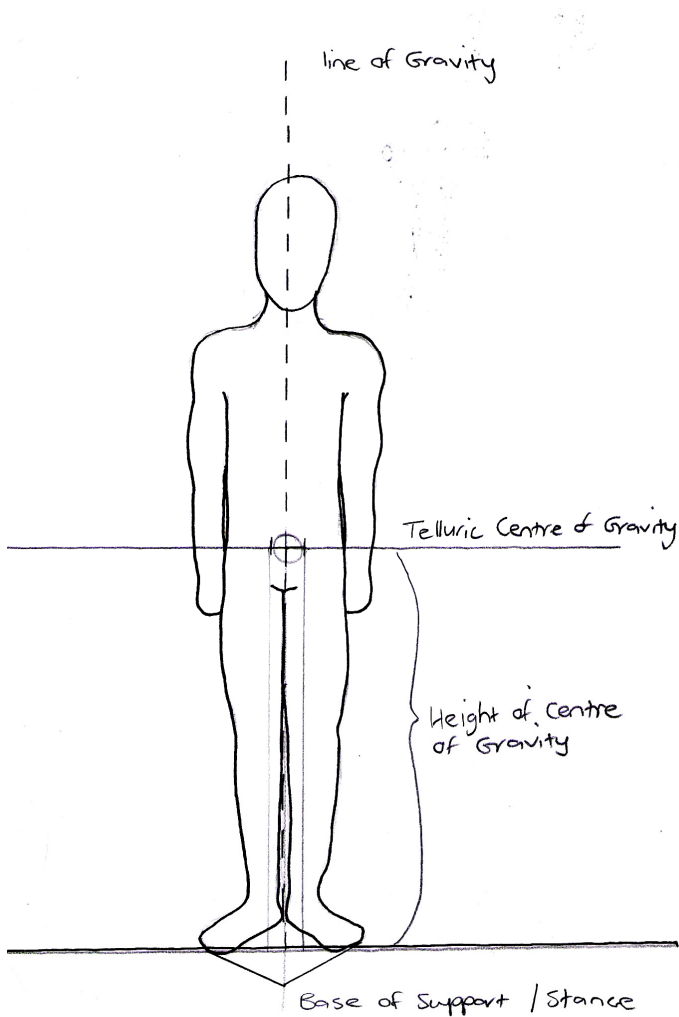
<sup>59</sup> Here, Preston-Dunlop draws from Laban's *Modern Educational Dance* (1966).

The contrasting quality; *bound flow*, concerns “an action capable of being stopped and held without difficulty, at any moment during the movement, the flow is bound” (*ibid*, Preston-Dunlop). In aerial motion, bound flow could be identified as forcefulness and rigidity of the torso during the execution of aerial actions. The aerial body strains to adopt unnatural positions in the form. Preston-Dunlop also points out that the control is caused by the intake of information which demands a change of some kind. If the mover is reminded of a moment that required correction, the movement becomes cautious and bound. The mover could also be nervous (Preston-Dunlop, 1980: 29). Preston-Dunlop ascribes verbs such as “careful”, “controlled”, “restrained” and “cautious” (*ibid*, Preston-Dunlop).

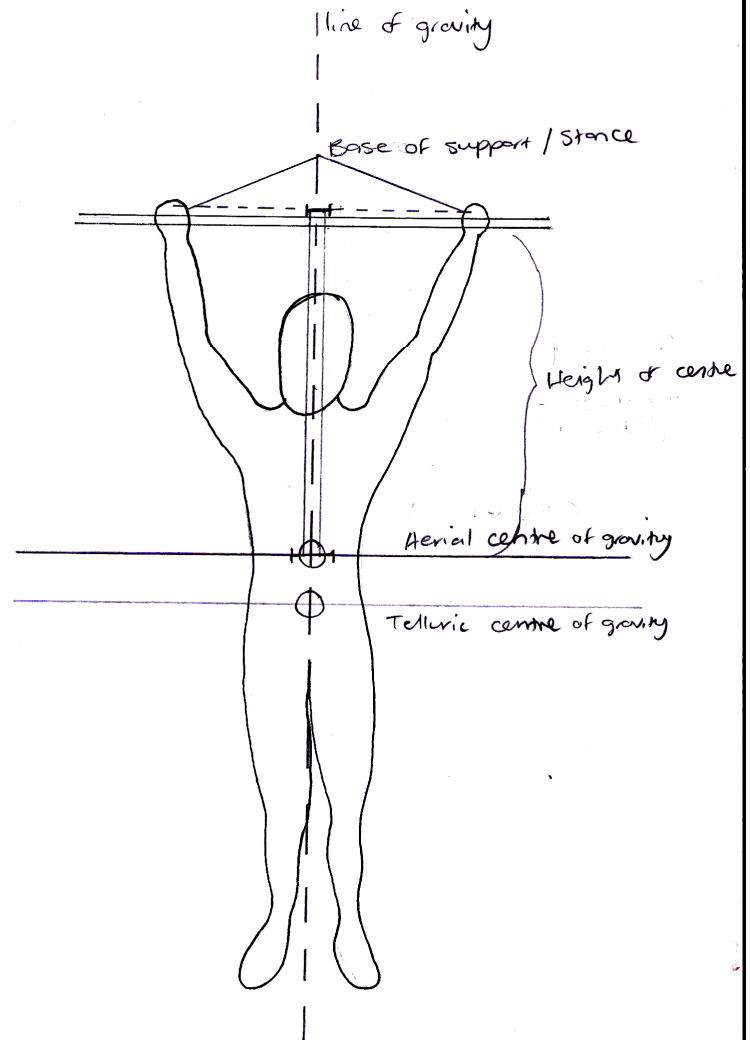
In aerial motion, the body often performs under significant risk - due to its height in the space – and experiences muscular strain from constant upper body use. Bound flow in aerial motion could occur due to the *behavioural situation* (Emphasis mine. *ibid*, Preston-Dunlop) of the body at risk. Thus, the appearance of the quality of free flow in the movement of the body is simulated (*ibid*, Preston-Dunlop). Perhaps aerial motion could be as considered inherently bound and simulates the quality of free flow?

Nonetheless, the Law of Gravity is effective on both telluric and aerial bodies. Though aerial kineticism may appear dreamlike, gravity defiant and neglecting the laws of balance, Laban points out that “even in dream-movements a fundamental sense of balance remains, and will remain with us even in the most fantastic aberrations from reality” (Laban, 1966: 5). Aerial bodies maintain a dynamic equilibrational relationship with the apparatus through the force of gravity. This is experienced as a transference of weight in the body.

Our current perception of balance or equilibrium is founded on the kinesiological science of telluric bodies. Since the respective aerial body and telluric body are united in their employment of gravity to generate motion, we could apply – in this choreological investigation – an examination of aerial motion from the perspective of the discipline of human kinetics and ergonomics. Wells’ kinesiological analysis of the telluric body’s notion of balance on the earth could be useful to the study of aerial kineticism.



**Figure 2.** The telluric line, centre and height of the centre of gravity as depicted by the author.



**Figure 3.** The aerial line, centre and height of the centre of gravity as depicted by the author.

## 2. Stability in the Body

### The Centre of Gravity of the Aerial Body

In Laban's *Choreutics* (1966), the author delineates the spatial parameters of the moving body through a three dimensional view of it. Laban refers to the height, width and depth of the body in space and identifies a central point in the "upright body which is approximately the dividing point between the two directions of each dimension" (Laban, 1966: 11) known commonly in dance as the *centre of gravity*. This observation by Laban seems to be from a spatial perspective. From a kinesiological perspective, it is interesting that the centre of gravity is described as a position of mass. As Wells points out, the telluric body possesses an "imaginary point representing the concentrated

weight of the entire body referred to as the centre of gravity (*see figure 2*<sup>60</sup>). Furthermore, Wells locates the centre from an anatomical perspective; “at the centre of the body in the pelvis in front of the upper part of the sacrum”<sup>61</sup> (Wells, 1966: 9).

The location of the centre of gravity depends upon the individual’s anatomic structure, posture, position and whether the individual is supporting external weights and differs for each individual (*ibid*, Wells). Similarly, like all telluric bodies, the aerial body possesses a centre of gravity (*see figure 3*). It is interesting to note that the location of the centre of gravity of the aerial body differs slightly from its telluric counterpart. I shall discuss this on the topic of vertical equilibrium.

Preston-Dunlop expounds the importance of the centre of gravity to the telluric dancing in maintaining states of balance and mentions another anatomical component to maintaining balance:

“Balance and the shape that the body makes are two considerations in holding a position...when trying to balance, the *gravity line* and the counter pull of the limbs are felt as spokes related to the hub, the *body centre*.” (Emphasis mine. Preston-Dunlop, 1986: 57).

### **The Line of Gravity of the Aerial Body**

As pointed out by Preston-Dunlop, and supported by Wells, all bodies experiencing gravity possess an imaginary line which passes vertically through the body and intersects the centre of gravity of the body along the anatomical division known as the *sagittal plane* (Wells, 1966: 16) (*see figure 2 & 3*). This could be identified in Laban’s *Choreutics* (1966) as an aspect of the body in cubic space, that is, the division which delineates the *wheel plane*; running along the body from head to toe. This is true for both telluric and aerial bodies. Furthermore, Preston-Dunlop – in her discussion of Laban’s Dimensional Cross<sup>62</sup> – mentions an *up-down dimension*: “When this direction passes through the body it follows the *line of the spine* ending exactly between the feet or exactly above the

---

<sup>60</sup> Diagrams are depicted in 1D and 2D. They should in all probability be considered in 3D.

<sup>61</sup> Experiments have shown that in man the height of the centre of gravity is about 56% of his height, and in woman, about 55% of her height. These figures are true for normal standing position (Wells, 1966: 14).

<sup>62</sup> A delineation of the spatial planes of the body expressed in a three dimensional geometrical representation of length, breadth and depth of the body in space (Laban, 1966: 13).

head” and can be experienced in the rising and falling of the body (Emphasis mine. Preston-Dunlop, 1986: 108).

### **Aerial Stance**

For the telluric dancer, the stance would refer to the placement of the body in relation to the ground relying on the anatomy of the feet (*see figure 2*). This has been highlighted by Laban (1963), and is supported by Wells. The telluric stance involves

“[S]tanding erect with the feet slightly separated and parallel with heels touching, toes pointed outward. This stance is generally assumed for gymnastics positions and military positions” (Wells, 1966: 8).

The stance for the aerial body – as mentioned by Evanitsky – is the point of attachment to the apparatus (*see figure 3*). The stance would refer to the placement of the body in relation to the ground – that is, the secondary surface – relying on the anatomy of the hands. The hands grip the apparatus and the body hangs downwards. The hands are separated and parallel.

These three components: stance, centre of gravity and line of gravity are connected in such a way as to bring stability or equilibrium to the body. When the centre of gravity is congruously placed with the line of gravity and the stance, the body is stable or static.

Though equilibrium brings stability to the moving body, Laban points out that movement is a continual state of flux between equilibrium and disequilibrium, and that these two components do not occur as fixed states in dance.

“Stability in dance does not mean either complete rest or absolute stillness. Stability has the tendency to facilitate temporary and relative quietude which is equilibrium. Mobility on the contrary, means a tendency towards vivid, flowing movement, leading to a temporary loss of equilibrium...stability follows the former state of mobility” (Laban, 1966: 94).

In my research, this statement by Laban has inspired me to consider multiple phases or changing states of equilibrium and disequilibrium; which are not classified in publications by Laban or Wells. Wells, however, does discuss stability with reference to the vertical and horizontal axes of the body. My impression is that shifting states of equilibrium and

disequilibrium are considered respectively in terms of the spatial deflection of the centre of gravity from the vertical line of gravity.

### **Horizontal Equilibrium: relationship between the line of gravity and the stance**

Wells expounds that telluric bodies maintain stability when the line of gravity is congruous with the stance. Conversely, the nearer the line of gravity is to the *margin* of the stance, the more precarious the stability. Wells highlights this using a circus aerial body, the tightrope walker, as an example:

“[k]eeping the line of gravity over the centre of the base of support is seen in the tightrope walker who carries a balancing pole, or, to a lesser degree, in the gymnast walking on a balance beam with his arms extended sideward. The poles, or extended arms, act as a lever and the reaction of the lever is in proportion to its length” (Wells, 1966: 17).

Therefore, equilibrium is enhanced along the horizontal axis when the body is aligned with the midpoint of the stance.

### **Vertical Equilibrium: vertical relationship between the centre of gravity and the stance**

One of the central aspects of maintaining stability in the body is the relationship between the centre of gravity and line of gravity; in relation to the stance. For the telluric body to increase stability in a static position, the centre of gravity should be lowered towards the stance. That is, the shorter the vertical distance between the stance and centre of gravity, the more stable the body. Laban describes this as the telluric dancer adopting the second position

“Movements directed towards the stance lead downward. In the second position the feet are placed apart sideways, on a line extending between the left and right diagonal directions” (Laban, 1966: 12).

This could apply to the aerial body – in order for the aerial body to increase its stability, the distance could possibly be decreased between the centre of gravity and the stance (i.e. the gripping point of the hands to the apparatus). Thus, the aerial body could raise its centre of gravity to the stance. For the aerial body – when the arms are raised above

the head in hanging position – the centre of gravity is located higher than the telluric centre of gravity (*see figure 3*). This is expounded by Wells:

“If the arms are raised or if a weight is carried above waist level, the center of gravity shifts to a higher position and equilibrium becomes more difficult to maintain. Activities and stunts such as walking on stilts, canoeing and balancing a weight on the head are dangerous because of the relatively high center of gravity...” (Wells, 1966: 14)<sup>63</sup>.

Therefore, we could deduce that equilibrium is enhanced along the vertical axis when the body is moved towards the stance.

## **Conclusion**

The Law of Gravity states that all objects on earth exert their weight on the earth due to the downward force of gravity. The earth or “ground” could be considered the stationary surface by which telluric bodies transmit their weight and interact with this surface through sensory inputs such as visual, spatial, olfactory, and auditory. The telluric dancer interacts with the ground and creatively translates a functional relationship with this surface through these inputs. The aerial body also interacts with a surface (though not always stationary<sup>64</sup>) by which it transmits its gravitational weight and interacts with through sensory inputs. This surface, known as the apparatus, could be considered the “ground”, and has been revealed by Evanitsky. The aerial body, as previously mentioned, appears to be a body which defies gravity due to its positioning in relation to the earth. The Law of Gravity is effective on all bodies situated on earth. The aerial body experiences weight.

Since the aerial body adheres to this law, as does the telluric, kinesiological study could be applied to the aerial body to outline its movement potential. Kinesiology refers to the starting positions of the telluric body, the centre of gravity, the line of gravity, the orientation planes in which kinetics occur and the axes of motion around which kinetics occur.

---

<sup>63</sup> The anatomical location of the centre of gravity can be observed in the previous diagram, figure 3.

<sup>64</sup> I am referring here to the trajectory of the aerial body whilst swinging in a conical or linear pendular motion.



The centre of gravity of the body – the concentrated point of weight of the body – is advocated by Laban in his delineation of the personal space of the body. The location of the centre for the aerial body is different to the telluric body and is situated slightly higher up in the body. This is apparent, as Wells highlights, due to the position of weight above the arms.

Wells also points out that the stable position for the telluric body in relation to the earth is important in the study of kinesiology. For the telluric body, standing erect with the feet slightly separated and parallel with heels touching and toes pointed outward maintains the stability in the body – it is named the “stance”. The aerial body also adopts a position that maintains stability. It is also identified as the “stance” by Evanitsky and could be considered, in this study, as the attachment of the hands to the apparatus. They are separated and parallel. Furthermore, stability, or equilibrium, is also brought about in the body by an alignment of the centre of gravity, the stance and the line of gravity. This is true for both telluric and aerial bodies.

As we have observed, there is an analogy between the aerial and telluric body in terms of centre of gravity, line of gravity and stance. Wells’ statement – that the telluric body is able to increase stability by lowering the centre of gravity towards the stance – is intriguing if one considers the aerial body. Could stability for the aerial body be increased if the centre of gravity is raised towards the stance?

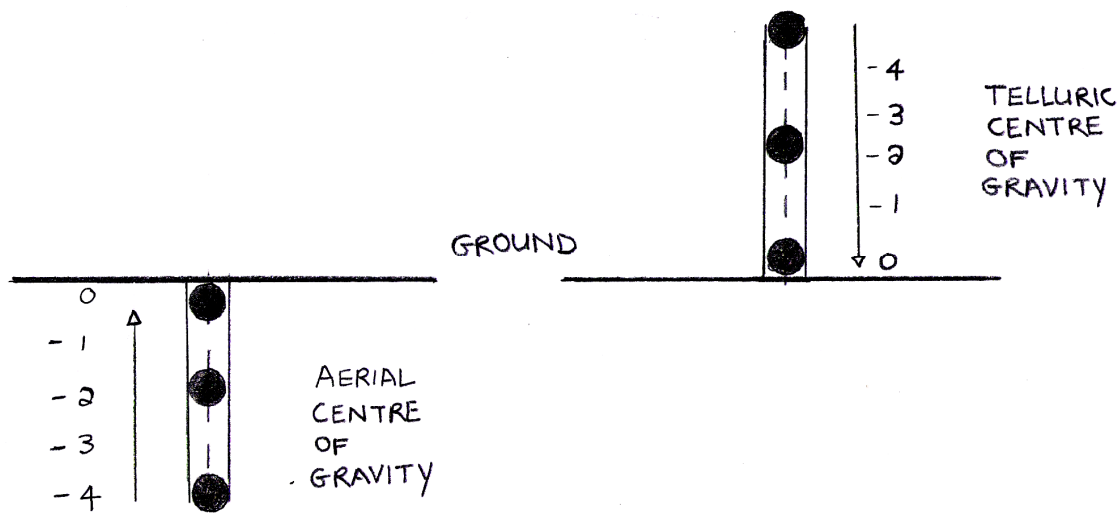


Figure 4. Macro-equilibrium as depicted by the author.

### 3. Macro Equilibrium

“Lowering the centre of gravity will increase the stability of the body. If, for any reason, the equilibrium is too precarious in the standing position, assuming a crouching, kneeling or sitting position will lower the centre of gravity and increase stability” (Wells, 1966: 15).

The closer the centre of gravity to the stance, the more equilibrium and thereby stability is experienced by the telluric body. This relationship between the centre and the ground could be considered in an upward/downward motion of the body. In the telluric sense, this upward/downward motion has parameters in which the body can be raised highest or lowest to its maximum. These parameters need to be deduced in order to understand the vertical equilibrium of telluric and subsequently, analogous aerial bodies.

Let it be acknowledged – with relation to Wells’ statement – that increased stability regards a shortening of the distance between the centre and stance. Therefore, the corollary could also be true; the greater the distance between the centre and stance, the more precarious, or unstable the body will be. This can be observed in the Ballerina who stands on *pointe* (Wells, 1966: 16) – a telluric body utilising the maximum allowable distance between the centre and stance.

The above graph (see figure 4) indicates the macro-equilibrium progression for aerial and telluric bodies. Progression towards zero indicates increasing stability; progression towards the negative indicates decreasing stability; and zero indicates maximum stability.

In my research I have observed three states of vertical equilibrium, which I term macro-equilibrium<sup>65</sup>, which the telluric body is able to pass through – ranging from most stable to least stable. These states are commonly recognised as lying down, sitting and standing. I name these three phases super-macro-equilibrium for lying down; semi-macro-equilibrium for sitting; and contra-macro-equilibrium for standing. Similarly, in Trisha Brown's work *Trillium*<sup>66</sup> (1962), Brown explored traversing these states; standing, sitting and lying.

"I broke these actions into their basic mechanical structure, finding the places of rest, power, momentum and peculiarity. I went over and over the material, eventually accelerating and mixing up to the degree that lying down was done in the air" (Brown in Burt, 2006: 67).

From Brown's statement we can observe that these three positions of equilibrium could be interpreted and applied to bodies that are not standing or sitting upright. Perhaps these states of equilibrium could be applied to bodies that are suspended in the air?

In Laban's delineation of space, he refers to the spatial areas along the vertical dimension. Three spatial levels may be distinguished; one on the floor, another at the mid-height of the body, and the third at the height of the hands when raised above the head. Laban names these levels high, medium and deep (Laban, 1966: 12). Preston-Dunlop describes these levels kinetically:

"The deep level can be experienced by bending the knees fully, kneeling, sitting, lying and crouching...The high level can be experience by leaping and jumping, reaching upward while on the toes, balanced on one foot or two. The medium

---

<sup>65</sup> I use the term macro-equilibrium to describe the contraction of vertical spatial difference between the centre of gravity and its distance from the ground. It could be considered the distance between the body as a whole and the ground. The distance between the telluric body and the ground is important to consider, as the aerial body is able to detach itself from the ground. The least stability for the aerial body could involve possible detachment from the apparatus.

<sup>66</sup> The work *Trillium* (1962) is described by Brown as "a structured improvisation of very high energy moments involving a curious timing and with dumb silences like stopping dead in your tracks. It was a kinaesthetic piece, a serial composition..." (Brown in Burt, 2006: 67).

level can be experienced by reaching out around the body” (Preston-Dunlop, 1980: 22).

Here we can observe a spatial delineation of the three altering phases of macro-equilibrium. The head in standing position occupies the high plane; the head in sitting position could occupy the medium plane; and the head in the lying position indicates deep plane.

### 3.1. Telluric Macro-equilibrium

This refers to vertical equilibrium occurring in the spatial parameters of the sagittal plane of the body and can be observed in the spatial difference between the centre of gravity and the base (ground).



**Figure 5. Super-macro-equilibrium as depicted by the author.**

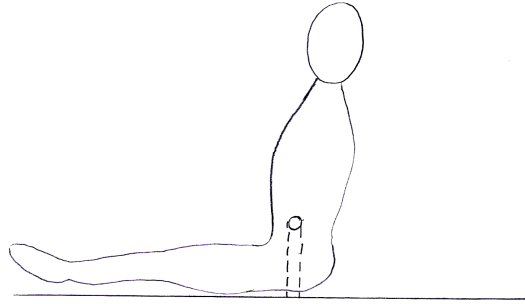
#### *Super-macro-equilibrium:*

This state is considered in relation to Wells' statement on the reclining body. Wells points out:

“Probably the only time the human body is not adjusting itself in response to gravitational force is when it is in a position of repose, either lying down or reclining with all parts completely supported” (Wells, 1966: 18).

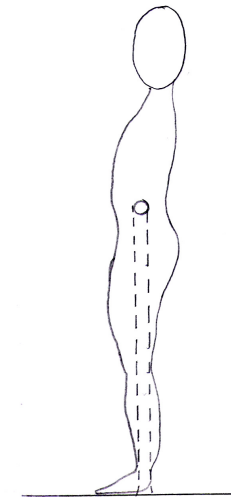
The body in super-macro-equilibrium (lying) is defined by a minimal spatial difference between the centre of gravity and the base. Thus, in achieving stability for the body, there is complete macro-equilibrium. This can be observed when the body is lying down (*see figure 5*). Laban expounds that this “simple one dimensional vertical, (when the body lies on the floor, the horizontal) is the fundamental structural extension of the body (Laban, 1966: 18). Furthermore, “the human body is constructed so as to favour the extension and contraction of the limbs in certain directions” (*ibid*, Laban).

We can observe that the body in super-macro-equilibrium is considered the fundamental dimension in Laban's geometric delineation of space. It is also emphasises the horizontal dimension, or breadth, of Laban's Cube (Laban, 1966: 18).



**Figure 6. Semi-macro-equilibrium as depicted by the author.**

*Semi-macro-equilibrium:* The spatial difference is moderate between the centre and base. There is moderate macro-equilibrium. Sitting (*see figure 6*).



**Figure 7. Contra-macro-equilibrium as depicted by the author.**

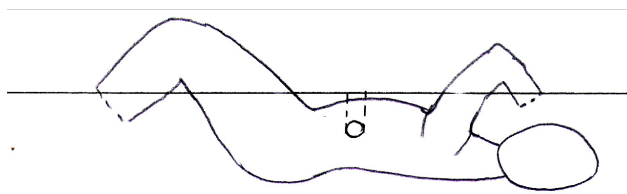
*Contra-macro-equilibrium:* The spatial difference is maximal between the centre and base. There is minimal macro-equilibrium. Standing (*see figure 7*)

We can observe here that the position of repose, lying down, could be considered the most stable position of the body. A lesser stable position could be considered standing in the upright position. This could be observed in the ballerina who stands in second position. Laban adds:

“The second extension originates from the bilateral organisation of our body, caused by the mirror like construction of the left and right sides. The vertical extension together with the bilateral extension gives a two-dimensional feeling. (This is expressed in the dancer’s idea of the second position)” (Laban, 1966: 18).

### 3.2. Aerial Macro-equilibrium

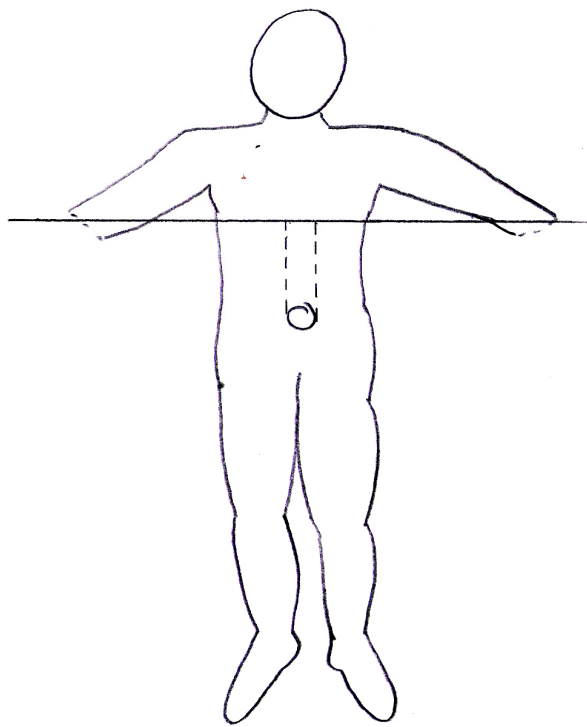
As with telluric macro-equilibrium, aerial macro-equilibrium occurs in the spatial parameters of the sagittal plane of the body and could be observed in the spatial difference between the centre of gravity and the base (ground).



**Figure 8. Aerial Super-macro-equilibrium as depicted by the author.**

#### *Super-macro-equilibrium:*

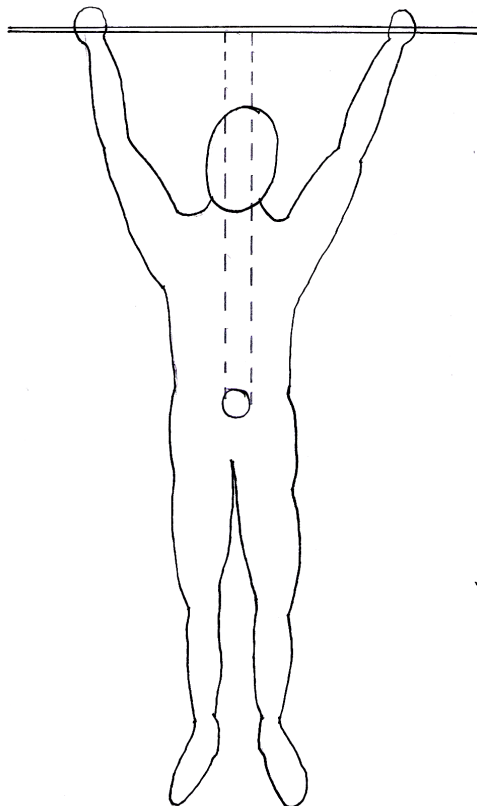
If one considers the minimal spatial difference between centre and base as described by the telluric body, a similar position could be adopted by the aerial body. For the aerial body to depict this spatial difference, the centre would need to be closest to the apparatus, with most parts supporting the weight of the body. This can be depicted in the above diagram (*see figure 8*) as the body clinging to the apparatus using the elbows and knees and could be considered the most stable position for the aerial body. Complete macro-equilibrium could occur.



**Figure 9. Aerial Semi-macro-equilibrium as depicted by the author.**

*Semi-macro-equilibrium:*

In considering semi-macro-equilibrium (sitting) of the telluric body, the moderate spatial difference between the centre and base could be depicted by the aerial body in the above diagram (see figure 9) as resting the body on the armpits along the apparatus. There is moderate macro-equilibrium.



**Figure 10. Aerial Contra-macro-equilibrium as depicted by the author.**

#### *Contra-macro-equilibrium:*

The maximal spatial difference between the centre and base is to be depicted in the above diagram (*see figure 10*) as hanging by the hands. There is minimal macro-equilibrium – this position could be considered the position of least stability for the aerial body.

The phases of macro-equilibrium for the aerial and telluric body highlight a number of points. The three stages of telluric vertical equilibrium – that is, standing (high), sitting (medium) and lying down (deep) – can be ranked from most stable; lying down, to least stable; standing. The same could be identified in aerial macro-equilibrium – that is, clinging with the whole body; resting on the armpits; and hanging by the hands. The most stable being clinging with the whole body, and the least stable; hanging by the hands.

Therefore, we could observe that contra-macro-equilibrium (standing and hanging) for aerial and telluric bodies could be considered the most labile positions for initiating asymmetry in the body thus disequilibrium or motion. This notion of asymmetry is expounded by Laban in Maletic's publication:

“The asymmetrical always arises from the symmetrical through a one-sided emphasis...The return to equilibrium, the symmetry, as well as the temporal persisting in asymmetry, are phenomena of movement and stillness (...) The stabile and labile balance is finally that which differentiates these phenomena” (Laban in Maletic, 1987: 53).

#### **4. Macro-disequilibrium**

The concept of macro-disequilibrium<sup>67</sup> is one that could be considered the undermining factor in experiencing motion by either telluric or aerial bodies. For both telluric and aerial movement, the experience of macro-disequilibrium is destructive.

Macro-disequilibrium concerns the vertical movement of the centre towards/away from the base (ground). The complete opposite could be considered – a severing of the body

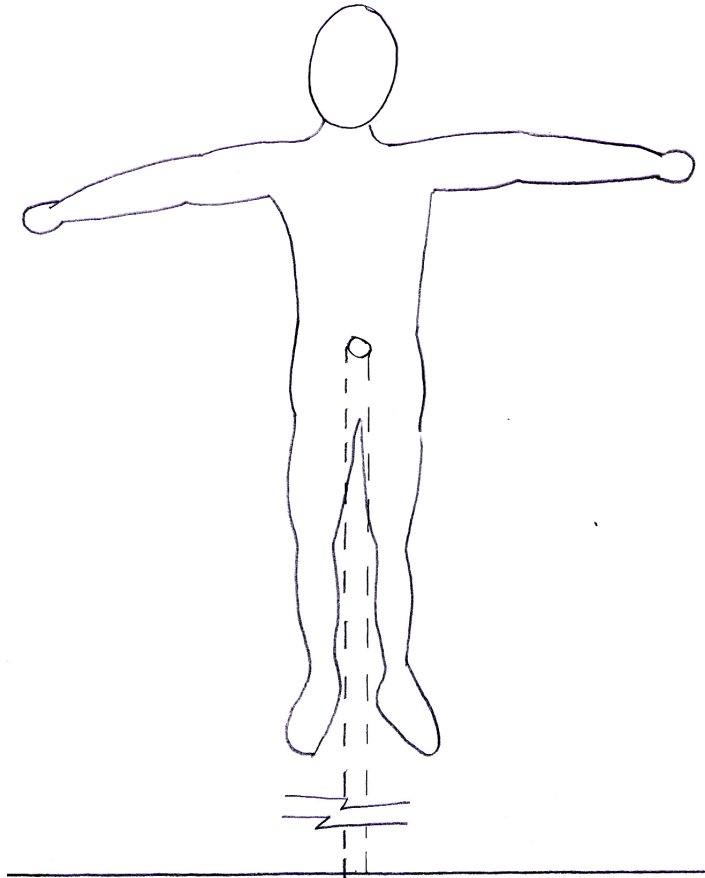
---

<sup>67</sup> I use the term macro-disequilibrium here to describe opposite effect of macro-equilibrium. Macro-disequilibrium refers to the expansion of the spatial difference between the centre of gravity and base.



from the base<sup>68</sup>. This would require the extreme absence of gravitational force (for the telluric body) or succumbing to gravitational force (for the aerial body).

For the telluric body, the occurrence of macro-disequilibrium is hypothetical and fanciful and would in all likelihood not occur on planet earth. For the aerial body, the concept of macro-disequilibrium is ever present and an all encompassing factor which constitutes the skill surrounding the aerial experience. The notion of suspension is encapsulated in macro-disequilibrium – for if a body falls from its apparatus, it is no longer suspended.



**Figure 11. Telluric Macro-disequilibrium (the body in zero-gravity) as depicted by the author.**

<sup>68</sup> The notion of macro-disequilibrium is inspired by the possible detachment of the aerial body from its apparatus. In this instance, the body does not return to the apparatus through the force of gravity – as one would observe when the telluric body performs a jumps or *jeté*. Therefore, the only situation in which the telluric body could not return to the ground would be in a zero-gravity environment.

#### **4.1. Telluric Macro-disequilibrium**

In order for the telluric body to be separated from the ground, the force of gravity acting on the body would need to equal zero. The body would levitate away from the earth and could be considered an aerial-telluric body (*see figure 11*). Though this concept is hypothetical, the experience of telluric macro-disequilibrium can be identified when the body experiences zero gravity – experienced by astronauts in outer space. Telluric bodies are unable to experience macro-disequilibrium on earth.

## **4.2. Aerial Macro-disequilibrium**

In order for the aerial body to be separated from its base (apparatus), the body would need to succumb to the force of gravity. The spatial difference between the aerial centre of gravity and the base would exceed its permitted spacing, such as hanging by the fingertips, the body would be separated (falling off) from the apparatus. The aerial centre of gravity would then adhere to the Law of Gravity and fall towards the telluric base – that is, terra firma – at an accelerating speed (constant for all falling objects) of 9.7 metres per second (Pitt, 1977: 20). This would occur until the aerial body collides with the telluric base (the earth) and serious injury or death could occur due to the extreme force acting on the body (*see figure 12*).

During macro-disequilibrium, the effect of gravity is fully realised or nullified. There is extreme natural motion for the falling aerial body and zero motion for the suspended telluric body. Motion is experienced in two extreme units: zero or accelerating at 9.7 metres per second.

Macro-disequilibrium is considered predominantly for the aerial body. This is because movements which return to the ground using gravity, such as jumps or *jetés*, cannot be executed by the aerial body. The aerial body cannot leave its stance and return to it during motion. All movement occurs through the connection of the body to the apparatus.

## **5. Micro-equilibrium**

In Laban's *Choreutics* (1966), the author draws attention to the deflection of the body from the vertical point of support which could facilitate mobility:

“Movements prompted by diagonal influences...have a tendency to real mobility, bringing the body into situations which lack the perpendicular support. In diagonal inclinations our body flies or falls, while in dimensional tensions it is stable and always connected with the perpendicular support” (Laban, 1966: 88).

Though Laban refers to diagonal inclinations – a directional potential in space – I would like to refer simply to a horizontal inclination.

My identification of micro-equilibrium concerns a horizontal alignment between the centre of gravity and the line of gravity. As discussed earlier, the line of gravity (the sagittal plane) bisects the body into two symmetrical components; it runs vertically from the head to the feet for the telluric and aerial body. Micro-equilibrium can only be achieved through the bisection of the centre of gravity of the body into two bilateral components by the line of gravity. Therefore, the bisection of the body into two bilateral components by the line of gravity will also bisect the stance into two bilateral components. Hence, in order for micro-equilibrium to be achieved the centre of gravity must always be congruous with the line of gravity and it must be symmetrical with the midpoint of the stance, that is to say, a perpendicular support.

### **5.1. Telluric Micro-equilibrium**

For the telluric body to experience micro-equilibrium, the centre of gravity should intersect the vertical line of gravity at a right angle of 90 degrees and be placed congruously with the mid-point of the stance. That is the connected heels of the feet.

### **5.2. Aerial Micro-equilibrium**

For the aerial body to experience micro-equilibrium, the centre of gravity should intersect the vertical line of gravity at a right angle of 90 degrees and be placed congruously with the mid-point of the stance. That is, equally placed between the hands.

Micro-equilibrium for both aerial and telluric bodies resembles the state of macro-equilibrium. Micro-equilibrium is a horizontal congruency between centre and stance and Macro-equilibrium is a vertical congruency between the centre and stance.

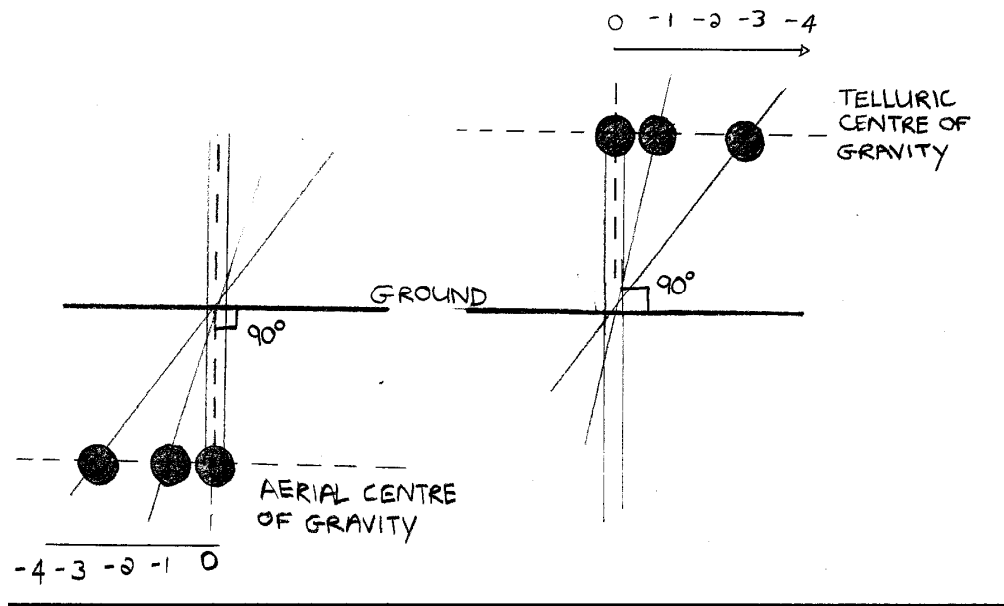


Figure 13. Micro-disequilibrium as depicted by the author.

## 6. Micro-disequilibrium

“Since an object maintains its equilibrium only so long as its line of gravity (and centre) falls within its base of support (the stance), it follows that the nearer the line of gravity to the centre of the (stance), the greater the stability; conversely, the nearer the line of gravity to the margin of the (stance), the more precarious the equilibrium” (Wells, 1966: 17)

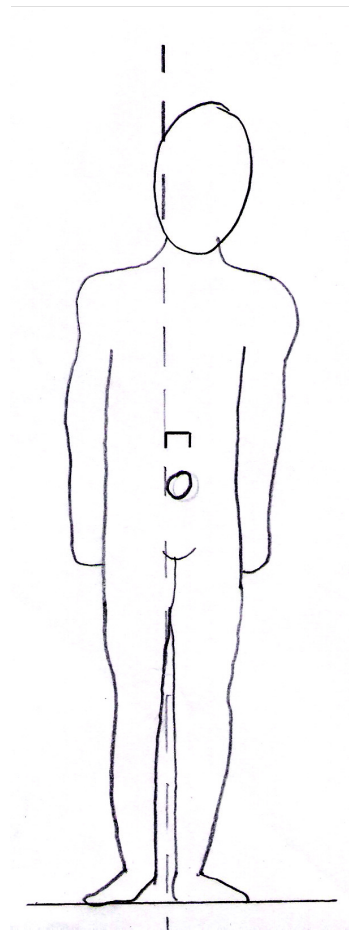
Wells points out a horizontal deflection of the centre of gravity from the line of gravity, thereby creating an asymmetrical relation with the midpoint of the stance. I have observed three notable horizontal spatial differences between the centre and the midpoint of the stance in micro-disequilibrium – each denoting varying phases of disequilibrium: I name these *contra-micro-disequilibrium* (the weight of the body is slightly shifted onto one foot); *semi-micro-disequilibrium* (the body stands on one foot); *super-micro-disequilibrium* (the body leans over enough to begin walking).

Preston-Dunlop articulates two of these phases in Laban’s delineation of the five body actions central to dance: gesture, stepping, locomotion, jumping and turning. Here, the

alternation between contra and semi-micro-equilibrium concerns the action of stepping: “transferences of weight from one support to another” (Preston-Dunlop, 1986: 53). Super-micro-disequilibrium concerns the action of locomotion, “which includes methods of transporting the body from one place to another” (*ibid*, Preston-Dunlop).

The diagram above, (see *figure 13*), depicts the horizontal relationship between the centre and stance. Positions closer to the line of gravity (zero) indicate increasing stability, those diverting away indicate decreasing stability

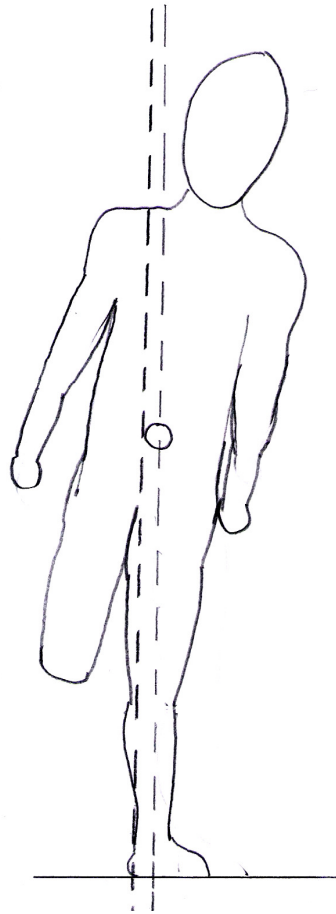
### 6.1. Telluric Micro-disequilibrium



**Figure 14.** Contra-micro-disequilibrium as depicted by the author.

*Contra-micro-disequilibrium:*

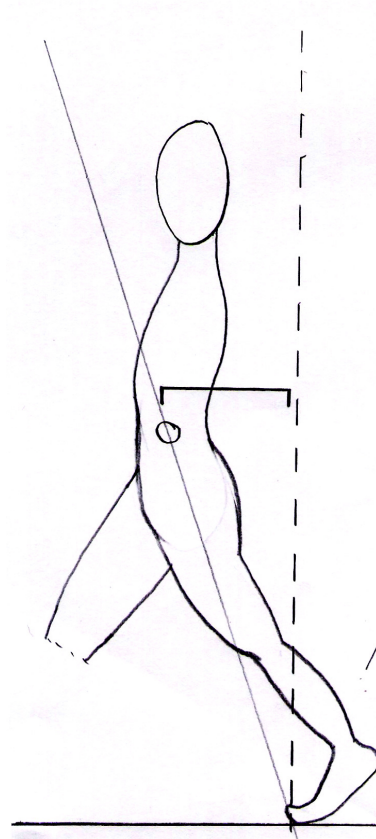
The centre is placed partially asymmetrically from the line of gravity. This can be observed when the body is standing upright with a slight shift in weight onto one foot. Contra-micro-disequilibrium could be considered the most horizontally stable position (see figure 14).



**Figure 15. Semi-micro-equilibrium as depicted by the author.**

*Semi-micro-disequilibrium:*

The centre is asymmetrically placed at the margin of the line of gravity. This can be observed when the body places its weight over the midpoint of one bilateral component of the stance; such as balancing on one foot (see figure 15). There is moderate micro-disequilibrium.



**Figure 16. Super-micro-disequilibrium as depicted by the author.**

*Super-micro-disequilibrium:*

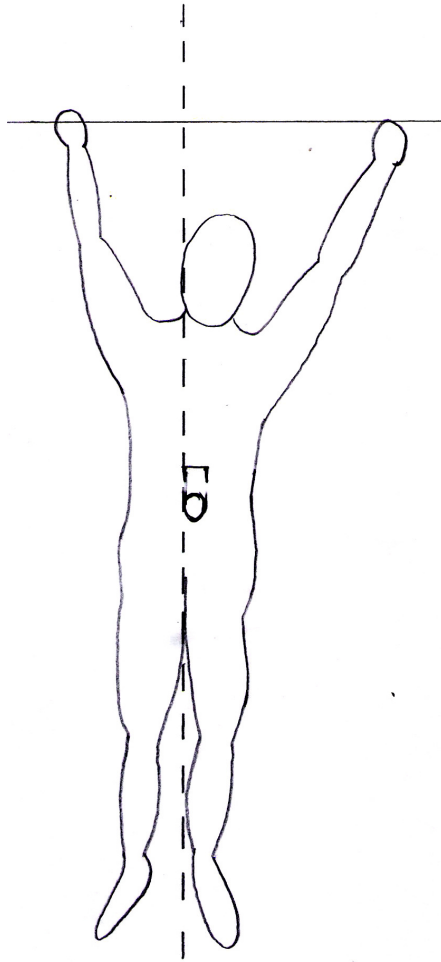
The centre is asymmetrically placed furthest from the margin of the line of gravity and beyond the margin of the stance (see figure 16). This initiates motion and is true for walking as Wells points out:

“Once the centre passes beyond the margin, stability is lost and a new (stance) must be established. It is this factor which constitutes the major problem in some modern dance techniques, in balance stunts, in walking a tightrope (...)” (Wells, 1966: 17).

We can observe here, that locomotion is possible through the anatomical components feet, ankles and legs.



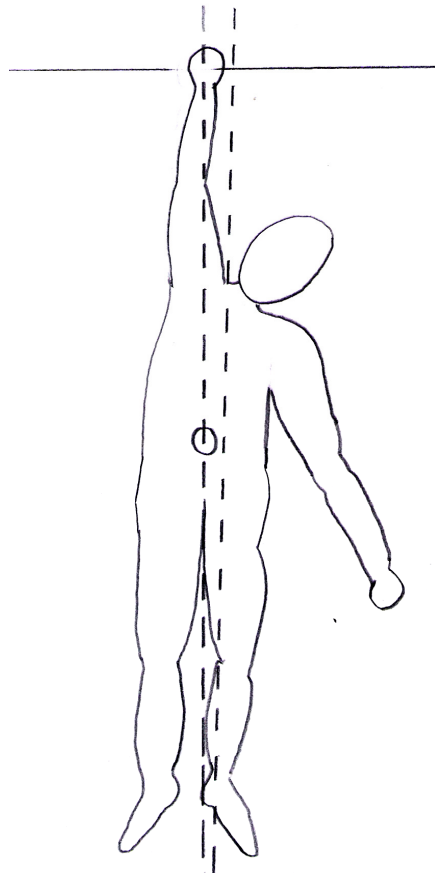
## 6.2. Aerial Micro-disequilibrium



**Figure 17. Contra-micro-disequilibrium as depicted by the author.**

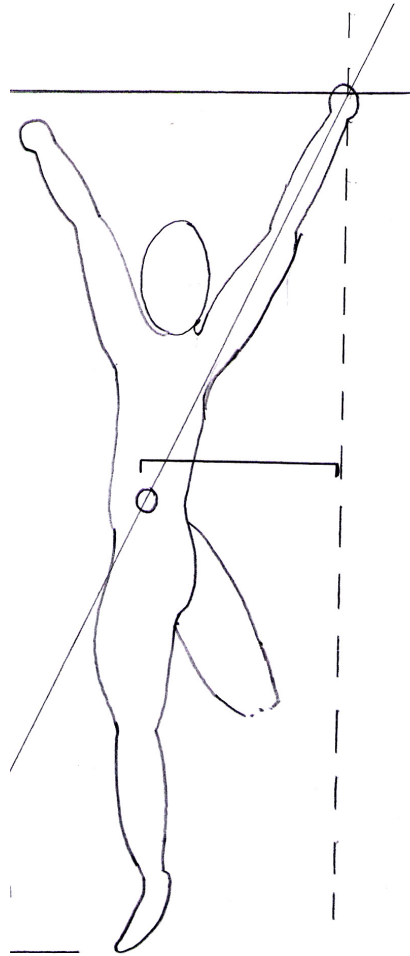
### *Contra-micro-disequilibrium:*

The centre is placed partially asymmetrically from the line of gravity. This is depicted in the diagram as hanging by both hands with a slight shift in weight onto one hand (see figure 17).



**Figure 18.** Semi-micro-disequilibrium as depicted by the author.

*Semi-micro-disequilibrium:* The centre is asymmetrically placed at the margin of the line of gravity, such as placing it over the midpoint of one bilateral component of the stance. This is depicted in the diagram as hanging by one hand (*see figure 18*).



**Figure 19. Super-micro-disequilibrium as depicted by the author.**

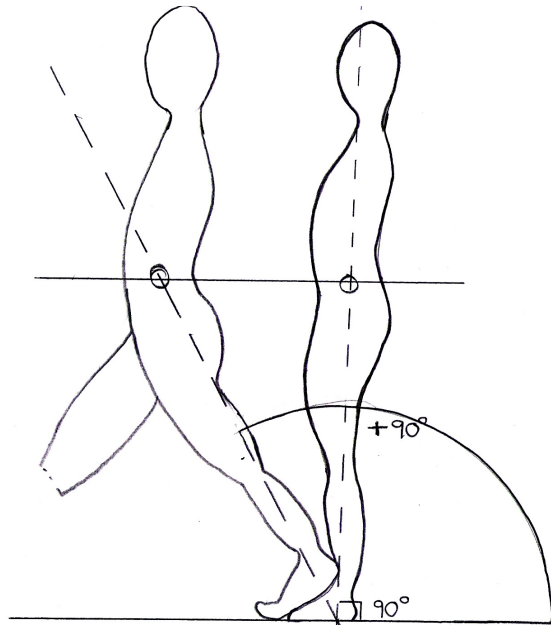
*Super-micro-disequilibrium:*

The centre is placed furthest from the margin of the line of gravity and beyond the margin of the stance. This initiates motion and is depicted in the diagram as an aerial body performing hand progressions<sup>69</sup> (see figure 19).

We can observe here, that locomotion is primarily through the anatomical components, hands, wrist and arms.

<sup>69</sup> I use the term *hand progressions* to refer to the progression of the body through aerial space such as swinging from hand to hand – which is commonly identified as “monkey climbing”.

## 7. Simple Motion



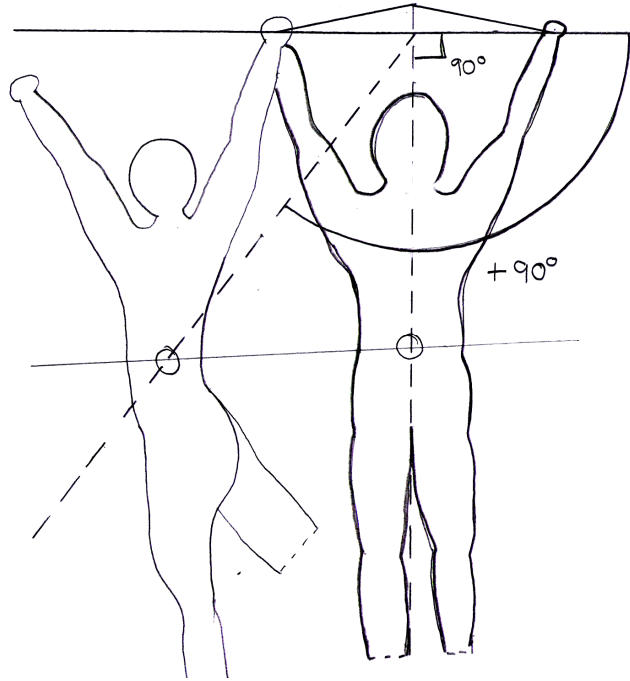
**Figure 20.** The motion of a step as depicted by the author.

### 7.1. The Telluric Step

When one examines the stance of the telluric body in contra-macro-equilibrium – that is standing feet apart with heels touching - one can observe that the feet are at right angles (90 degrees) to the centre of gravity. Semi-micro-disequilibrium is momentarily experienced as the centre is displaced to the margin of the line of gravity and the full body weight is momentarily transferred onto one foot. As the centre of gravity is placed further from the line of gravity in super-micro-disequilibrium, “a new stance is established” (Laban, 1966: 10), thus, the opposite foot steps out to align the centre of gravity with the line of gravity<sup>70</sup>. In this simple movement one can observe an obtuse angle between the two legs during the transfer of weight. The movement of walking involves the alternation of right and obtuse angles (*see figure 20*).

<sup>70</sup> If the opposite leg had not stepped out to equalise the shift in weight, super-macro-equilibrium could be achieved as the body could collide with the ground.

## 7.2. The Aerial Hand Progression



**Figure 21. The motion of a hand progression as depicted by the author.**

When one examines the stance of the aerial body in contra-macro-equilibrium – that is hanging from the hands with both hands unparallel with the shoulders – one can observe that the hands are at right angles (90 degrees) to the centre of gravity. Interestingly the hands or stance, are further apart and do not connect with each other as the feet and heels do for the telluric body. The stance for the aerial body covers more surface area than the stance for the telluric body – this is perhaps due to the fact that the aerial body is compensating for the less developed strength in the arms as opposed to the legs.

During *hand progressions*, semi-micro-disequilibrium is momentarily experienced as the centre is displaced to the margin of the line of gravity and the full body weight is momentarily transferred from one hand to the other. As the centre of gravity is placed further from the line of gravity in super-micro-disequilibrium the opposite hand reaches

out to align the centre of gravity with the line of gravity<sup>71</sup>. In this simple movement one can observe an obtuse angle between the two arms during the transfer of weight. The movement of hand progressions involves the alternation of right and obtuse angles (see figure 21).

## **8. Instigators of Motion**

Wells mentions in her publication that unless the force applied to an object is greater than the resistance or inertia offered by the object, motion cannot be produced. Wells states that the “magnitude of the force relative to the magnitude of the resistance is the determining factor in causing an object to move” (Wells, 1966: 31). Thus, the application of a force is the prime instigator in the realisation of motion. Furthermore, Wells illuminates that the body automatically reacts to forces enabling the body to keep its centre of gravity over the midpoint of the stance in spite of the complicating factor of being acted upon by a force. Such a reaction involves the widening of the stance in the direction of the oncoming force i.e. gravity (Wells, 1966: 18).

If the force applied to overcome the resistance of a body is significant enough, momentum will occur and the body will remain in motion. That is, the force will be significant enough to keep the centre of gravity in misalignment with the midpoint of the stance.

This notion is interesting if one considers the use of momentum to create motion for the telluric and aerial body.

### **8.1. Telluric Momentum**

Goodridge mentions Laban’s term ‘effort’, which could mean the energy content of action, in the first instance in relation to inner motivation, as in “inner impulses from which movement originates” (Goodridge, 1999: 133). As previously mentioned, force is an instigating factor in the realisation of motion. Preston-Dunlop identifies four strands of force which the telluric dancing body may utilise to create motion, namely: *The pull of gravity, kinetic force, static force and external resistance* (Preston-Dunlop, 1986: 10). The pull of gravity regards the “force which is exerted in a vertically upward direction

---

<sup>71</sup> If the opposite hand had not reached out to equalise the shift in weight, macro-disequilibrium could occur and the body could be separated from the apparatus and collide with the ground. This would result in super-macro-equilibrium.

equal to the downward pull of gravity, the body will fall. When upward exertion weakens, a feeling of weakness and heaviness is experienced" (*ibid*, Preston-Dunlop). This could be observed in the state of macro-equilibrium for the telluric body, which delineates the various stages of upright balance from the ground. The pull of gravity is a force which the telluric body must counteract to balance upright. With *kinetic force*, Preston-Dunlop mentions that "it could be thought of as the energy to move the body" (*ibid*, Preston-Dunlop). *Static force* "is exerted when a position is held in a state of active muscular tension. The force is not moving the body, but contained within the body. It feels as if internal resistance is being added to the movement" (*ibid*, Preston-Dunlop). Finally, with *external resistance*, force is provided by things and people. A partner, an apparatus, a prop can partially support the body (Preston-Dunlop, 1986: 10). It is interesting to note that external resistance could be considered by the aerial body as the aerial apparatus which keeps the body suspended

In Preston-Dunlop's analysis, the author goes on to mention that these four strands can be sensed as a dynamic condition; each of these strands can be dealt with in two dynamic ways, *strongly* and *lightly*. In this delineation, heaviness can be countered lightly or strongly. Body parts can be moved lightly or strongly. Internal resistance can be given lightly or strongly. External resistance can be overcome lightly or strongly (*ibid*, Preston-Dunlop).

For the telluric body to remain in motion, it is necessary for the centre of gravity to be continuously misaligned with the line of gravity and the midpoint of the stance, which is, alternating between the two states of semi-micro-disequilibrium (stabilised by one foot/hand) and super-micro-disequilibrium (stabilised by two feet/hands). The centre of gravity alters between semi and super, or half and whole, disequilibrium – a constant misalignment of the centre, line of gravity and midpoint of the stance. The continual alternation between these two states is periodic and repetitive and could be considered a pendular motion (Wells, 1966: 117). The motion in one state of semi-micro-disequilibrium is built up by the momentum expressed in the previous state of super-micro-disequilibrium and one alternation between states – that is, one step or hand progression – could be considered one period. The body utilises forces such as the pull of gravity, kinetic force, static force and external resistance to shift between these states of macro and micro-equilibrium. Furthermore, the telluric body is afforded a manner of

interacting and employing these forces dynamically through the two dynamic polarities of *strong* and *light*.

## **8.2. Aerial Momentum**

These four strands can be dealt with dynamically: as *strongly* or *lightly*. In aerial motion, where the body often strains to maintain the muscular power in using upper body strength, these two dynamics afford a useful way of viewing aerial motion.

This is particularly expressed by an aerial body when completing hand progressions. Momentum is created when weight is released from one hand and transferred to the other hand. Should the momentum be significant enough, the resultant force will be sufficient to create super-micro-disequilibrium and the body will swing periodically to the opposite hand.

Therefore, movement for the aerial and telluric body could be considered as the pendular alternation of the centre of gravity between two states of disequilibrium, semi- and super-micro-disequilibrium to attain an improved state of equilibrium – through the application of a force creating momentum. Aerial and telluric motion occurs as a deflection of the centre of gravity from the vertical line of gravity, alternating and creating obtuse and right angles.

Movement for the aerial and telluric body exists as a pendular alteration to the position of the centre of gravity in relation to the line of gravity. The more aligned these components are, the more stable or in a state of acceptable equilibrium the body adopts and vice versa. Since this notion is considered for bodies that are not reclining or in a state of complete balance and support – a state of super-macro-equilibrium – and should be considered in a state of disequilibrium acquiring improved states of equilibrium. Therefore, movement for the aerial and telluric body exists as a continuum between semi- and super- micro-disequilibrium. This is further expounded by Laban who states that

“movement is a dynamic process on a continuum between polarities such as from asymmetry to symmetry, from disequilibrium to equilibrium, from mobility to stability (...)” (Maletic, 1987: 55).



In Laban's delineation of the states of equilibrium and disequilibrium, these notions seem to be derived from locating the body in standing position – as is common for telluric dancing bodies. It is possible to consider that the notion of equilibrium in the body is unattainable – unless it is lying down with the majority of body parts supported. Laban also purports this notion in that equilibrium is never complete stability, or a standstill, but the results of two contrasting states of mobility" (Laban, 1966: 6) Therefore, the moving body could be considered as being in a continual state of acquiring *improved* states of equilibrium (Emphasis added).

### **9. Aerial and Telluric Space: A musical delineation of space**

Laban's teachings reveal that theoretical aspects of music aided his delineation of the body in space. Mary Wigman states:

"Laban gave to dance a structural foundation analogous to music harmony: the spatial theory of movement and with it, is a point of departure, a basis for each dance creation...he taught us the essence of tension, the harmonic connection of swing sequences, and the unity of body and space" (Wigman in Maletic, 1987: 23).

Wigman also points out that Laban's studies ultimately liberated dance from its dependency on music and for Laban, the theoretical aspects of music such as rhythm, dynamics and harmony for example, were departure points to inspire a choreological thinking for telluric dance.

"Equilibrium and disequilibrium, movement and stillness are amongst the fundamental aspects in dance" (Maletic, 1987: 55). This is equally so in the instance of the art form of music in which sound and silence are fundamental. From my studies in the field of music, music includes its absence – that is, silence (considered stillness for the body) and pitch (considered the body) and harmony: the ordering of positions of pitch (the position of the body) and melody (movement). In music, especially in the instance of western classical music, melody always originates from and returns to a single pitch or tonic note – considered the position of rest in music. The telluric dancing body always returns to a position of repose – considered equilibrium in the body.

In music, melody is constructed as a number of pitches played consecutively. The harmonic relationship between these pitches is known as linear harmony<sup>72</sup> (Sadie, 1980: 721). In movement this has been intuited by Laban, who in his choreological studies categorised the relationships between the various bodily positions in space. He named this “spatial harmony” (Maletic, 1987: 6).

If we apply Laban’s thinking, music is experienced aurally and dance is experienced visually. Both forms rely on the positions of the pitch/body in a structured harmonious relationship to create music/movement. The harmonic structure of music can be heard. The harmonic structure of dance can be seen; through Laban’s discovery that spatial forms or three dimensional geometric shapes can be *embodied* in movement. “These spatial forms have harmonic content and are performative” (Emphasis added. Preston-Dunlop & Sanchez-Coleberg, 2002: 83). Laban established the choreological study of the harmonic content of spatial forms and named it *Choreutics*.

Susan Langer describes the intimate relationship between music and dance in Preston-Dunlop’s publication. Langer describes dance

“as an articulate form. So also...is music, or a map or a graph or a sentence or any complex symbol. They are ‘logical expressions’. They express relations. They are articulated in that their ‘internal structure is given to our perception...Logical structure implies rules. There must be rules binding the way one movement is put together with another to form a structure in space and time through the body...That music is also an articulate form with logical expression suggests that its syntactical organisation might be relevant to dance (Langer in Preston-Dunlop, 1979: 135)

In this statement, Langer points out in her theory that the similarity between music and dance concerns the logical expression of the internal structure of either art form and thus it is our perception of these structures that inform our perception of dance and music respectively. The notion of a logical structuring of dance from the structures of music, as Langer points out

“is common, as both musical harmony and choreutics have a Pythagorean origin...it is hardly surprising that they are congruent. However, the mathematical

---

<sup>72</sup> Linear harmony is characterised by conjunct motion of notes in a given passage of music. The expression ‘linear counterpoint’, is a means of emphasising the melodic/horizontal aspect as opposed to the vertical/harmonic (Sadie, 1980: 721).

pitches via their vibration rates is not forthcoming in movement. No-one suggests that there is a mathematic/kinaesthetic way of relating one movement in a direction with another movement in a second direction<sup>73</sup>. The choreutic forms cannot boast any physical support of this kind. No, they are not proven to be innately harmonic when in a body, although, as a system, they have coherence” (Langer in Preston-Dunlop, 1979: 135)

It is also interesting to note that Laban also mentions Pythagoras in the introduction of his *Choreutics* (1966) which he reveals the mathematical resonances of the circle in choreography and music

“*Choreosophia*” - an ancient Greek word, from *choros*, meaning circle, and *sophia*, meaning knowledge or wisdom...These ideas concern the wisdom to be found through the study of all the phenomena of circles existing in nature and in life. The term was used in Plato's time by the disciples and followers of Pythagoras... (the) memory of Pythagoras is perpetuated by his discoveries in mathematics. One of these was the mathematics underlying musical scales...choreography literally means the writing or designing of circles” (Laban, 1966: 7)

From this we can observe that among the foundations of either art form of dance or music lies a possible mathematical structuring or influence. Moreover, this is apparent in the ordering principles that govern dance and music as either form expresses itself through a logical structuring – offering coherence.

## 10. Choreutics. Delineating the Body in Space

Langer further illuminates the hypothetical relationship between musical pitch and the body in space through an explanation of the study of music harmony.

“If musical harmony can be regarded as a syntactic study, so too can choreutics...While spatial locations are not tones, they occupy the same roles as tones, by being capable of organisation. They can both form unison expression, one forms melodies and the other shapes. One is open to polyphonic and the other polylinear organisation. Simultaneous chords of tone clusters are formed in music and simultaneous chords of spatial tensions in dance. Tones are produced by instruments, spatial patterns by dancing bodies” (Langer in Preston-Dunlop, 1979: 135)

---

<sup>73</sup> I assume that Langer is referring to the quantisation of pitch, that is, the categorisation of a continuously variable sound signal into defined levels. For example, the musical note known as the pitch “A” resonates at 440 hz. Langer is hypothesising a similar mathematical categorisation of the body/body part in space.

In my study of musicology, I am inclined to agree with Langer. As with music, the study of harmony can be separated into two areas: the study of harmony in the melody – that is, linear harmony; and vertical harmony – the relations between other pitches that are sounding at the same time. In movement, the field of choreutics is separated into two areas. *Micro-choreutics* – the study of spatial content occurring in the personal space of the body or *kinesphere* (which could be thought of as occurring in a linear progression) (Preston-Dunlop & Sanchez-Coleberg, 2002: 83); and *macro-choreutics* – which articulates the spatial form of the work as a whole – which refers to the relationship between other bodies dancing in the same space and time<sup>74</sup>

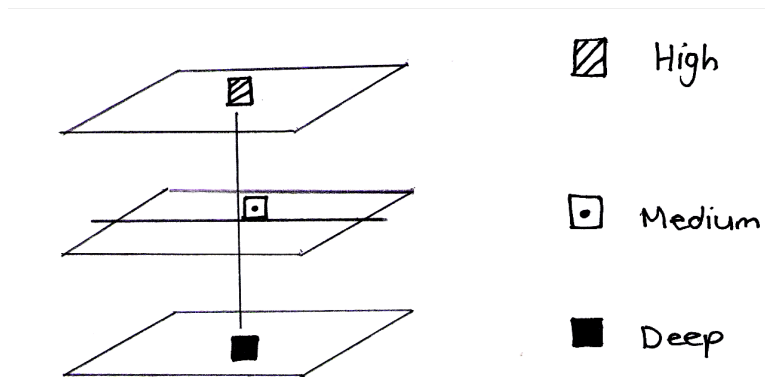
As stated earlier, the three dimensional understanding of the body in space forms the basis for much performed formal dance (Maletic, 1987: 55). This relates to micro-choreutics. Laban refers in his text *Choreutics* (1966) to the basic orientation of the body in space as being related to the vertical and horizontal dimensions in space: length, breadth and depth (Maletic, 1987: 58). Each of these dimensions is valued for their respective directional properties. Hence, the telluric body has the directional potentials of up and down for length; left and right for breadth; and back and forth for depth (Maletic, 1987: 58), (Laban, 1966: 11). These directional components irradiate from the centre of gravity into these directions and also deflect towards “space diagonals and diametral directions” (Maletic, 1987: 58).

In the study of micro-choreutics, Laban maintains that through these dimensional directions which provide the basic orientation of the body in space, it becomes possible to distinguish space. Laban identifies two types of space surrounding the body: the general or “infinite” space (Maletic, 1987: 59), and the immediate space surrounding the body which it can reach into with its limbs. Laban names this personal space the “kinesphere” (Laban, 1966: 10), (Laban, 1963: 85), (Preston-Dunlop, 1986:23) which can be geometrically visualised as a sphere which surrounds the body; and whose “periphery can be reached by extending the limbs” (Maletic, 1987: 59) without stepping away from the point of support, also identified as the “stance” (Laban, 1966: 10).

---

<sup>74</sup> Included in this are the theatrical elements such as design and lighting (Preston-Dunlop & Sanchez-Coleberg, 2002: 83).

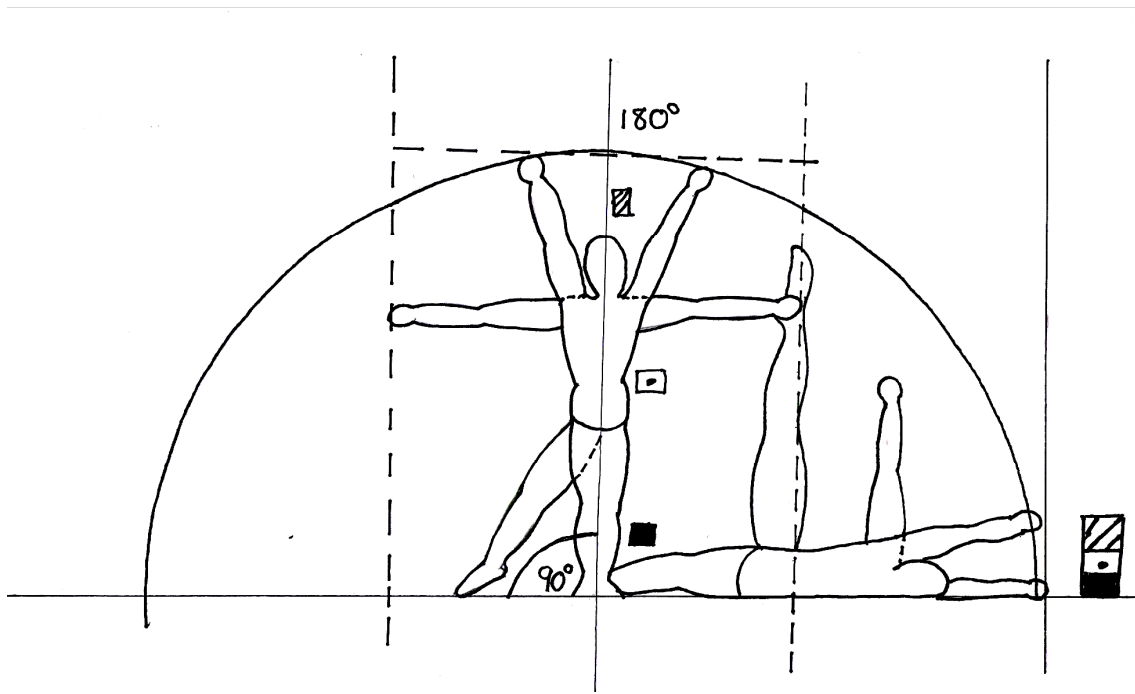
The centre of gravity of the standing body is approximately the dividing point between the two dimensional directions of each. Therefore, the midpoint of the stance becomes the centre of the kinesphere (Laban, 1966: 11) and we can deduce that the stance, centre of gravity and the dimensional directions are important in discussing movement potentials of the body.



**Figure 22.** Representation of Laban's three spatial levels high, medium and deep. Sketched from Laban's *Choreutics* (Laban, 1966, pg. 13).

In Laban's delineation of space, he separates the dimension of length into three sections: upper, middle and low. Laban attributes symbols: high, medium, and deep to these planes through his system of movement notion, named Labanotation (*see figure 22*) (Laban, 1986: 11), (Fügedi, 2003). In this delineation, the deep plane refers to the space closest to the stance; the medium plane to the centre of gravity; and high plane to the space furthest from the stance. This has been mentioned earlier regarding the shifting phases of macro-equilibrium: contra-macro-equilibrium (high); semi-macro-equilibrium (medium) and super-macro-equilibrium (deep). Furthermore, Laban mentions a geometric shape to visualise these dimensions named the cube. To establish this form further, Laban mentions oblique lines

"... which may be called "diagonals" of space, lead from each corner of the cube to the opposite corner, and each is a kind of axis, which is surrounded by three dimensions. There are four such space diagonals in the cube, and they intersect at a point in the body which coincides approximately with its centre of gravity, which is also the centre of our kinesphere...they are named by the three surrounding dimensions; for instance, a diagonal may lead towards high, right, forward, and in the opposite direction, deep, left, back" (Laban, 1966: 11).



**Figure 23.** The semicircular range of space occupied by the telluric body. Depicted by the author.

Laban points out that the kinesphere of the telluric body is established around the ability of the human body

“to favour the extension and contraction of the limbs in certain directions and that all points of the kinesphere can be reached by simple movements, such as bending, stretching and twisting, or by a combination of these. The spheric form of the kinesphere is simplified by our cubic conception of space. We recognise the cube inside the kinesphere as being representative of the most important space directions” (Laban, 1966: 18).

Furthermore, Laban points out that with regards to the telluric body in super-macro-equilibrium (lying), “it is interesting that, when moving, we think of the direction of our head as height, and of the direction of our feet as depth”. And that “it is the beginning of an *intellectual complication* when we transpose this primary feeling to the dimensions relative to the earth's centre of gravity, and to our surroundings, instead of to our own construction” (Emphasis mine. *ibid*, Laban).

It is important to recognise that orientation of the telluric body is centred on the vertical dimension of space. Laban regards a possible transposition – such as perhaps an inclusion of the body in super-macro-equilibrium, a non-vertical state, as included in the kinespheric range – as an intellectual complication. In aerial motion – where the body is

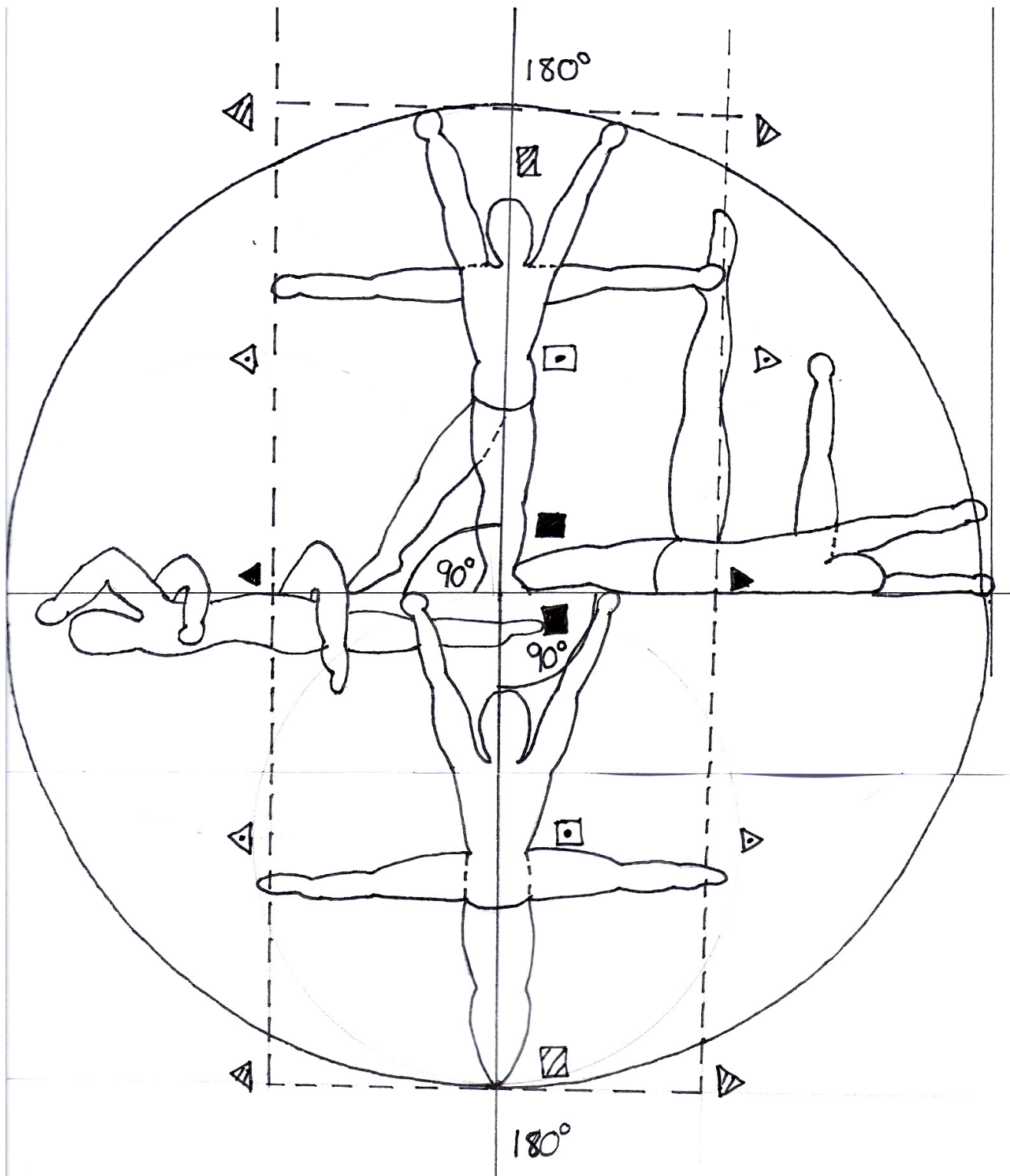
often not primarily in an upright position through its suspension from numerous body parts – the maximum range of motion needs to be considered. This is essential for the purpose of orientation.

The notion of which direction is 'up' for the telluric body has been discussed by Preston-Dunlop and Sanchez-Colberg and the accompanying theory that has been established has been named the "cross axes theory". This "theory looks at the way in which human beings orientate themselves in space, variously, while moving. One might expect there to be one view of orientation, one direction forwards, one direction upwards" (Preston-Dunlop & Sanchez-Colberg, 89). Thus, a questioning of the vertical dimension when the body is lying on its back emerges:

"where is upwards? To the ceiling or 'above' your head? Where is backwards? Down through the floor or 'behind' your head? Above and behind may appear to be in the same place...If 'up' is regarded as towards the ceiling then the vertical line of gravity in space dominates and 'down' is directed to the floor, forwards and backwards are conceived as at right angles to that dominating line. If the body's perception of itself dominates then 'up' is seen as 'above' the top of the head and 'down' as towards the feet, forwards and backwards being judged in relation to the front and back of the body's surface (Preston-Dunlop & Sanchez-Colberg, 89).

These questions could pertain to the aerial body which is often in positions such as lying or hanging inverted with the head towards the floor. In Laban's discussion of the kinesphere – the maximum spatial parameters of the body – he refers to the reach space of the body by its limbs without leaving the stance – true for the body in contra-macro-equilibrium or standing. As pointed out earlier, the state of super-macro-equilibrium should be included in the range of movement offered by the body. However, Laban does not consider the position of complete repose or super-macro-equilibrium as factor in the reach space of the limbs. As we can observe in *figure 23*, the body lying down, with the entire surface area considered as the stance, reaches further into the side-to-side planes of the standing body. The body in super-macro-equilibrium could inform further bodily extensions into space.

If one considers the body in super-macro-equilibrium on both sides of the standing body, the range of these three positions for the telluric body will equal 180 degrees and constitute a semi-circle (*see figure 23*).



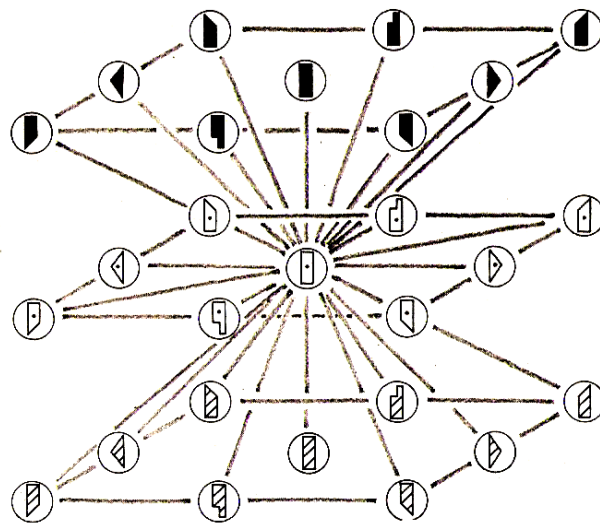
In discussing the kinetics of the aerial body, it is important to recognise the similarity between the telluric and aerial body in terms of stance and the similar effect of gravity on both bodies – that is, a downward pull. Gravity has the strongest effect on the stance or point of attachment to the apparatus where the weight is most intense. As stated earlier, this refers to the feet for the telluric body in standing position, and refers to the hands for



the aerial body. Both bodies possess a line of gravity, centre of gravity, and a relationship between these two components constituting stability.

It could therefore be argued that, from a geometrical perspective, the telluric body and aerial body relate to the ground in spatially opposing manners – one above the ground, and the other below; both bodies are connected to the ground on which they exert their respective weight.

If one includes the state of super-macro-equilibrium as part of the spatial range for both bodies, in particular the aerial body, we can discover that either body occupies 180 degrees of space in relation to their respective ground/apparatus. If we consider the state of super-macro-equilibrium for the aerial body – that is, hanging with most surface area covered – in relation to its contra-macro-equilibrium (hanging by the hands) the spatial range of movement could be considered 180 degrees in relation to the apparatus. This range constitutes the opposing semi-circle. Thus, the combination of each hemisphere of space forms a complete sphere of 360 degrees. This sphere, with its combination of spatial semi-spheres, could be named the *Omnisphere*<sup>75</sup> (see figure 24)<sup>76</sup>.



**Figure 25. The main directional rays establishing three levels in cubic space (Laban, 1966, pg. 16)**

<sup>75</sup> I use this term to name the maximum reach space of bodies that stand on the surface and hanging beneath the surface of the ground.

<sup>76</sup> Movement in 3 dimensions is not described here yet, as this would involve a grid-like piece of equipment that allows the performer to manifest dimensional pathways.

Therefore, if we locate the bilateral midplane of the omnisphere, we discover a plane where gravity is most condensed – located at the ground or apparatus. Using Laban's deduction of space, the area of immediate space to the ground/apparatus can be regarded as deep; the space surrounding the centre of the body could be considered medium and the periphery of the length of the body at the periphery of the sphere could be considered high.

With this information, the omnisphere could provide the dimensional axes for establishing an aerial kinesphere (see figure 25). From the diagram, we can observe that an aerial kinesphere would appear to be an inversion of the telluric kinesphere. Locating these spatial parameters could allow further aerial choreological investigations into Laban's teachings, such that one could now begin an interpretation of Laban's geometrical solids. These shapes – the cube, octahedron, dodecahedron, tetrahedron and icosahedron (Maletic, 1987: 60) – could provide informative avenues into the kinetics of the aerial dancing body. If they do not to provide an exact kinetic science for the aerial dancing body, they provide at least spatial investigations that may initiate creative choreographical inspirations for aerial dance.

## **Conclusion to the Thesis**

This mini-thesis has served as an introductory analysis of the aesthetics and kinetics of the aerial dancing body. From my research, aerial dance appears to lack the analytical and critical outline which seems to inform kinetic art forms, such as ground-based dance. It seems that this may be the instigating factor that bars aerial dance in its inclusion as a recognised kinetic genre amongst leading dance texts. This is also evident in the reviews written on the form.

Rudolph Laban's term "choreology" refers to dance scholarship as a theoretically sound practice and draws on methodologies from other disciplines such as music, theatre, the visual arts and anthropology. This approach allows one to explore the theoretical aspects of dance to determine "[i]t's making, its performing, its spectating, its medium, its choreographic treatments, its documenting methods, et. al." (Preston-Dunlop & Sanchez-Coleberg, 2002: 2). Choreological studies in the field of aerial dance could provide analytical and critical outlines to view the form.

Existing discourse on the aerial performance pertains to the sociological influences of the nineteenth century that informed the visual aesthetic of trapeze artists. In viewing these bodies, the performance of extreme aerial action configured muscular and masculine physiques. For females who performed on the trapeze during this period, their muscular and masculine physiques were in complete transgression of the view and function of women in society. Women were expected to serve purely as repositories for reproduction, and thus, it was expected that they abstain from athletic activity. In order to reclaim dwindling audience attendance, powerful female trapezists adopted and theatricalised feminine gestures. In the surrounding kinetic art forms of dance such as the genre of the romantic ballet, females were depicted as lightweight, metaphysical beings originating from realms a distance above the earth. Powerful female trapeze artists drew on this metaphysical opinion – afforded by their position in aerial space – to reconfigure their masculine appearing bodies. Thus, it appears a style of aerial movement appeared which evoked lightweight, effortless bodies and feminine bodies through apparent smooth and effortless kinetic action. I name this style romantikineticism.

Other existing discourse on aerial performance is revealed in studies of choreographies by contemporary dance practitioners during the nineteen seventies. Trisha Brown employed aerial apparatuses in her dance works; *Walking on the Wall* (1971), *Planes* (1968) and *Walking Down the Side of a Building* (1970). Brown sought to engage with kinesiological theories of the moving body. Interestingly, though Brown's aerial works explored motor functions of the body, reviewers claimed that the movement quality of effortlessness depicting weightless bodies could be observed in her works. This is similar in Batya Zamir's *Prelude* (1974) in which Carroll claims Zamir depicts "...balletic ideals of weightlessness" (Carroll, 1975: 10).

It appears romantikineticism emerges in kineticism of suspended bodies. In the foundation of the autonomous form of aerial dance by Terry Sendgraff, Jane Bernasconi, Nancy Smith, and Brenda Angiel to name a few, romantikineticism is acknowledged as staple to the form. Kinetic qualities of smoothness and effortlessness create "visual and kinetic pleasure" (Bernasconi & Smith, 2008: 63). Though, these practitioners delineate aerial dance as separate from the extreme aerial action in circuses, though it seems aerial dance, as a contemporary kinetic form, still draws on kinetic qualities evident in nineteenth century aerial performance.

In Stephanie Evanitsky's kinesiological explorations, the application of a kernel of ground-based knowledge in her study of aerial kinetics provides the impetus for a possible choreological study. By naming the dancer's stance as the point of attachment to the apparatus, it may be possible to further consider the kinetics involved in the same manner one would consider the kinetics of ground-based dancing body. In considering ground-based kinesiological theories of stability, we may be afforded an understanding of aerial stability. Thus, it may be possible to apply Laban's kinetic theories – regarding gesture, stepping, locomotion, jumping and turning – to the aerial body. This could be further purported by an investigation of Laban's choreutic theories of motion of the (aerial) body in space.

I have examined possible avenues to discuss the kineticism of the aerial dancing body and revealed possible modes to instigate a critical aerial dance scholarship. Some concepts may prove to be hypothetical, though it is the choreological process of combining theories from numerous disciplines that may inspire further ideas. A further

extensive choreological investigation would require case studies, interviews, field work and further practical choreutic experimentation on aerial and telluric bodies, and it is hoped that this mini-thesis could inspire such discussion. As mentioned earlier, Laban's kinetic theories do not present a single mode of viewing motion and instead, his theories are available to interpretation, challenge and inquiry.

An aerial movement lexicon may be far off. This study has attempted to contribute to the dearth of current available aerial dance scholarship and presented departure points with which to further examine the movement of the suspended body; through a suspension of its current aesthetics.

## Appendix to Chapter 1

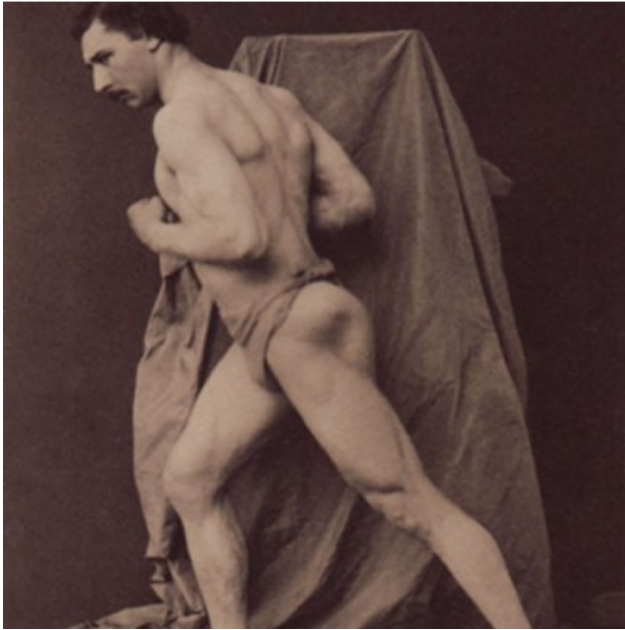


Figure 1. Jules Leotard ([www.madamesays.com](http://www.madamesays.com)).



Figure 3. Luisita Leers poster. Milner Library ([www.circopedia.com](http://www.circopedia.com)).



Figure 2. Luisita Leers ([www.circopedia.org](http://www.circopedia.org)).

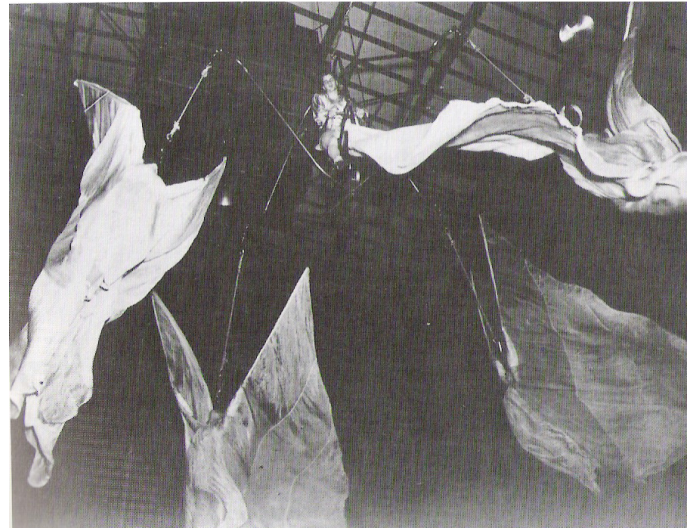


Figure 4. *The Dream of St. Joseph*.  
Philippe de Champaigne (1602 – 1674)  
(Hart, 1988, pg. 62).

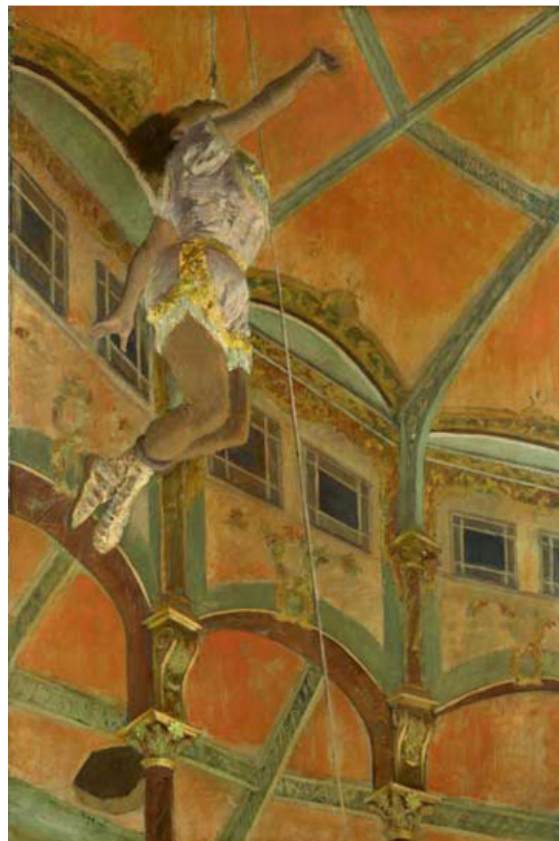




**Figure 6. *The Flying Grigolatis Girls*. Poster. Ringling Brothers and Barnum and Bailey (1907) (Tait, 2005, pg. 21).**



**Figure 7. *Butterfly Act*. Circus World Museum (Tait, 2005, pg. 62).**



**Figure 8. *Miss Lala at the Cirque Fernando*. Portrait. Hilaire-Germain-Edgar Degas ([www.newsima.bbc.co.uk](http://www.newsima.bbc.co.uk)).**



## Appendix to Chapter 2

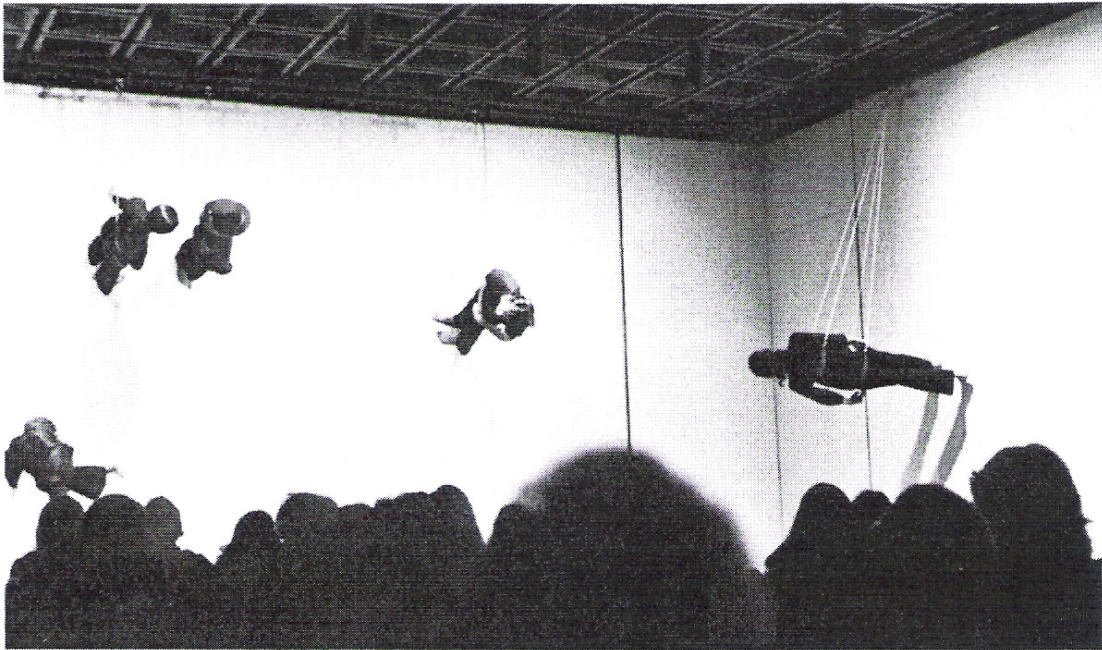


Figure 1. *Walking on the Wall* (1971). Photograph by Michael Kirkby (Sommer, 1972, pg. 138).

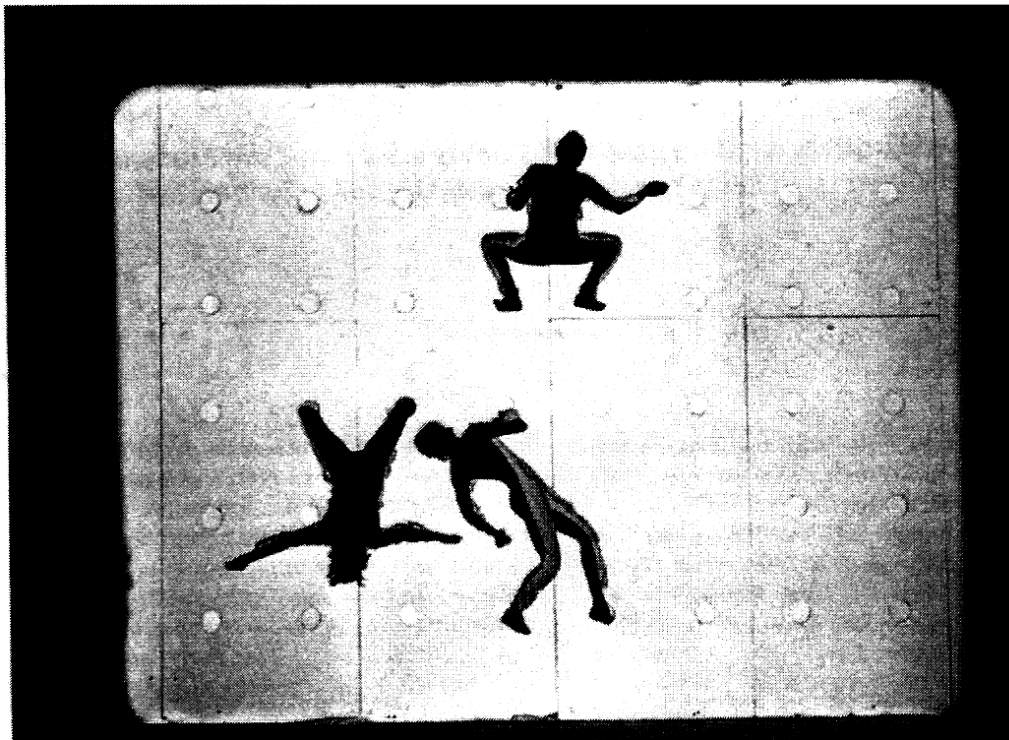


Figure 2. *Planes* (1968). Photograph by Peter Moore (Sommer, 1972, pg. 139).





**Figure 5. *Rubber Piece on Wall* (1974).**  
 Photograph by John Veltri (Carroll, 1975, pg. 9).



**Figure 6. Julia Taffe's *Stone Drift* (2006).** Photograph by Dominic Schaefer (<http://www.aeriosa.com/files/aeriosa.html>).



**Figure 7. Amelia Rudolph's *The Blue Moon Project* (2007)** Photograph by Carey Ritchie ([www.zareena.net/images/project\\_bandaloop.gif](http://www.zareena.net/images/project_bandaloop.gif)).



**Figure 8. Jane Bernasconi's *Stream* (2005).**  
 Photograph by Karen Jackson  
 (<http://airdancebern.com/page.php?categoryId=21>).



**Figure 9. Terry Sendgraff's *Butterflie* (2005).** Photograph by Vaschell. (<http://www.terrysendgraff.com/about.html>).

## References

### • Books

- Baudrillard, J. (1979). *Seduction*. New York: St. Martin's Press.
- Bernasconi, J., & Smith, N. (2008). *Aerial Dance*. Detroit: Human Kinetics.
- Benbow-Pfalzgraf, T. (Ed.). (1998). *The International Dictionary of Modern Dance*. Detroit: St James Press.
- Bullock, A., & Stallybrass, O. (1977). *The Fontana Dictionary of Modern Thought*. London: Fontana Press.
- Burt, R. (2006). *Judson Dance Theater*. New York: Routledge.
- Carlyle, T. (1993). *On Heroes, Hero-Worship, & the Heroic in History*. Berkley: University of California Press.
- Cheyfitz, E. (1991). *The Poetics of Imperialism*. New York: Oxford University Press.
- Clarke, M., & Vaughan, D. (Co-Ed). (1980). *Encyclopedia of Dance and Ballet*. London: Bookthrift Co.
- Cohen, S. (Ed.). (2004). *The International Encyclopedia of Dance* (6<sup>th</sup> ed., Vol 1). New York: Oxford University Press.
- Craine, D., & Mackrell, J. (2000). *The Oxford dictionary of dance*. Oxford: Oxford University Press.
- Delamont, S. & Duffin, L (co-ed) (1978). *The Nineteenth-Century Woman: Her Cultural and Physical World*. London: Groom Helm.
- Goellner, E. (1994). *Bodies of the Text: Dance as Theory, Literature as Dance*. New Jersey: Rutgers University Press.
- Goodridge, J. (1999). *Rhythm and Timing of Movement in Performance*.
- Guest, I. (1980). *The Romantic Ballet in Paris*. London: Dance Books LTD.
- Hart, C. (1988). *Images of Flight*. Berkley: University of California Press.
- Hawkins, J. (1986). *The Oxford reference dictionary*. Oxford: Clarendon Press.
- Jamieson, D. (1998). *Bertram Mills the Circus that Travelled by Train*. England: Aardvark Publishing.
- Jamison, D & Davidson, S (1980). *The Love of the Circus*. Hong Kong: Octopus Books Limited.
- Laban, R. (1963). *Modern Educational Dance (2nd ed)*. London: Macdonald & Evans LTD.
- Laban, R. (1966). *Choreutics*. London: Macdonald and Evans.

Locken, N., & Willoughby, R. (1955). *Complete Book of Gymnastics*. New Jersey: Prentice-Hall Inc.

Makins, M. (1996). *Collins Concise Dictionary*. England: Harper-Collins Publishers.

Maletic, V. (1987). *Body-Space-Expression*. Berlin: Mouton de Gruyter.

Pitt, V. (1977). *The Penguin Dictionary of Physics*. New York: Penguin Books.

Preston-Dunlop, V (Ed) (1979). *Dancing and Dance Theory*. Kent: The Scorpion Press Limited.

Preston-Dunlop, V., & Sanchez-Colberg, A. (Co-Ed) (2002). *Dance and the Performative*. London: Verve Publishing.

Prickett, S. (2007). *San Francisco Innovators and Iconoclasts: Dance and Politics in the Left Coast City*. *Dance Chronicle*, (30) 1, 256 – 257.

Ritchie, D. (1891). *Darwinism and Politics*. London: Swan Sonnenschein & Co.

Sadie, S. (Ed). (1980). *The New Grove Dictionary of Music and Musicians*. (6<sup>th</sup> ed., Vols. 1-20). London: Macmillan.

Tait, P. (2005). *Circus Bodies Cultural Identity in Aerial Performance*. London: Routledge.

Wells, K. (1971). *Kinesiology: the scientific basis of human motion*. Philadelphia: Saunders.

- **Journal Articles**

Cahn, S. (1993). *From the "Muscle Moll" to the "Butch" Ballplayer: Mannishness, Lesbianism and Homophobia in U.S. Women's Sport*. *Feminist Studies*, (19) 2, 343-368.

Carroll, N. (1975). *Air Dancing*. *The Drama Review*, (65) 1, 5 – 12.

Chisholm, A. (2002). *Acrobats, Contortionists, and Cute Children: The Promise and Perversity of U.S. Women's Gymnastics*. *Signs*, (27) 2, 415 – 450.

Dubois, K. (1994). *Dance and Weightlessness: Dancer's Training and Adaptation Problems in Microgravity*. *Science Quaterley*, (27) 1, 57-64.

Fügedi, J. (2003). *Movement Cognition and Dance Notation*. *Studia Musicologica Academiae Scientiarum Hungaricae*, (44) 3/4, 393-410.

Jasienska, G., & Ellison, P.T. (1998). *Physical Work Causes Suppression of Ovarian Function in Women*. *Proceedings Biological Sciences*, (265) 1408, 1847 – 1851.

Prickett, S. (2007). *San Francisco Innovators and Iconoclasts: Dance and Politics in the Left Coast City*. *Dance Chronicle*, (30) 1, 256 – 257.

Preston Dunlop, V. (1983). *Choreutic Concepts and Practice*. The Journal of the Society for Dance Research, (1) 1, 77 – 88.

Sommer, S. (1972). *The "Puppet" Issue*. The Drama Review, (16) 3, 136 – 141.

Toepfer, K. (1972). *Twisted Bodies: Aspects of Female Contortionism in the Letters of a Connoisseur*. The Drama Review, (43) 1, 104 – 136.

- **World Wide Web**

Bernasconi, J. (2002) *Airdance Bernasconi Homepage*. Retrieved July 14, 2009, from <http://www.airdancebern.com/page.php?categoryId=21>

Bolton, R. (2002) *The Philosopher on the Flying Trapeze. Lyotard or Leotard?* Retrieved August 2, 2009 from [www.usfca.edu/philosophy/discourse/9/bolton.doc](http://www.usfca.edu/philosophy/discourse/9/bolton.doc)

*Circopedia: The International Online Circus Archive*. Retrieved July 14, 2009, from <http://www.circopedia.org>

Howard, A. (2004). *Aerial Dance Rising*. San Francisco Chronicle: Retrieved November 21, 2008, from <http://www.sfgate.com/cgibin/article.cgi?file=/chronicle/archive/2004/01/18/PKGTA45O4N1.DTL>

Patrick, K. (2002). *Dance Magazine Online*: Retrieved November 30, 2008, from [http://findarticles.com/p/articles/mi\\_m1083/is\\_3\\_76/ai\\_83450380/](http://findarticles.com/p/articles/mi_m1083/is_3_76/ai_83450380/)

*Project Bandaloop Homepage*. (2008). Retrieved November 21, 2009, from <http://www.projectbandaloop.org>

*Terry Sendgraff Homepage*. (2008). Retrieved November 21, 2009, from <http://www.terrysendgraff.com/about.html>

*The National Gallery*. Retrieved July 14, 2009, from <http://www.nationalgallery.org.uk>

Thomas, A. (n.d.). *USATODAY.COM*: Retrieved November 21, 2008, from <http://www.usatoday.com/life/2001-07-25-aerial-dance.htm>

*Zaccho Homepage* (2008). Retrieved August, 15, 2009 from [www.zaccho.org](http://www.zaccho.org)

- **Images from Books**

Bernasconi, J., & Smith, N. (2008). *Air Part (2000): Aerial Dance*. Detroit: Human Kinetics.

Hart, C. (1988). *The Dream of St Joseph: Images of Flight*. Berkley: University of California Press.

Hart, C. (1988). *Elijah and the Angel: Images of Flight*. Berkley: University of California Press.

Laban, R. (1966). *The Main Directional Rays Establishing Three Levels in Cubic Space: Choreutics*. London: Macdonald and Evans.

Tait, P. (2005). *Poster of The Flying Grigolatis Girls: Circus Bodies Cultural Identity in Aerial Performance*. London: Routledge.

Tait, P. (2005). *Photograph of The Butterfly Act: Circus Bodies Cultural Identity in Aerial Performance*. London: Routledge.

- **Images from Journal Articles**

Carroll, N. (1975) *Rubber Piece on Wall: Air Dancing (1974)*. *The Drama Review*, (65) 1, 5 – 12.

Sommer (1972). *Planes (1968): The “Puppet” Issue*. *The Drama Review*, (16) 3, 136 – 141.

Sommer (1972). *Walking on the Wall (1971): The “Puppet” Issue*. *The Drama Review*, (16) 3, 136 – 141.

- **Images from the World Wide Web**

*Amelia Rudolph's The Blue Moon Project* [Image] (2007). Retrieved August 23, 2009, from [www.zareena.net/images/project\\_bandaloop.gif](http://www.zareena.net/images/project_bandaloop.gif)

*Jane Bernasconi's Stream* [Image] (2005). Retrieved August 23, 2009, from <http://airdancebern.com/page.php?categoryId=21>

*Jules Leotard* [Image] (n.d.). Retrieved August 23, 2009, from <http://www.madamesays.com>

*Julia Taffe's Stone Drift* [Image] (2006). Retrieved August 23, 2009, from <http://www.aeriosa.com/files/aeriosa.html>

*Luisita Leers poster* [Image] (n.d.). Retrieved August 23, 2009, from <http://www.circopedia.org>

*Luisita Leers* [Image] (n.d.). Retrieved August 23, 2009, from <http://www.circopedia.org>

*Miss Lala at the Cirque Fernando* [Image] (n.d.). Retrieved August 23, 2009, from <http://www.newsima.bbc.co.uk>

*Terry Sendgraff's Butterflie* [Image] (2005). Retrieved August 23, 2009, from <http://www.terrysendgraff.com/about.html>

## Bibliography

- **Books**

- Blom, L., & Chaplin, L. (1986) *The Intimate Act of Choreography*. Pittsburgh: University of Pittsburgh Press.
- Broadhurst, S. (1999). *Liminal Acts*. London: Cassell.
- Carlson, M. (1996). *Performance. A Critical Introduction*. London: Routledge.
- Choksky, L., & Abramson, M. (co-ed) (1986). *Teaching Music in the Twentieth Century*. New Jersey: Prentice-Hall Inc.
- Childs, N. & Walwin, j. (co-ed) (1998). *A Split Second of Paradise*. London: Rivers Osram Press.
- Fisk, R. (1967). *Score Reading*. London: Oxford University Press.
- Hinds, J. (1972). *Still Rings Skills and Techniques*. California: Sundby Publications.
- Howell, A. (2002). *The Analysis of Performance Art*. Australia: Harwood Academic Publishers.
- Humphrey, D. (1965). *The Art of Making Dances*. London: Dance Books.
- Hutchinson, A. (1954). *Labanotation – The System of Analyzing and Recording Movement*. London: Dance Books.
- Gilson, E. (1984). *From Aristotle To Darwin And Back Again*. Notre Dame: University of Notre Dame Press.
- Green, C. & McCreery, C. (co-ed) (1994). *Lucid Dreaming*. London: Routledge.
- Kostelanetz, R. (Ed.). (1992) *Merce Cunningham – Dancing in Space and Time*. London: Oxford University Press.
- Lepecki, A. (2006). *Exhausting Dance*. London: Routledge.
- Merleau-Ponty, M. (1945). *The Phenomenology of Perception*. New York: Gallimard.
- Wohl, R. (2005). *The Spectacle of Flight*. New Haven: Yale University Press.

- **Journal Articles**

- Birringer, J. (1989). *Invisible Cities/Transcultural Images*. *Performing Arts Journal*, (11) 3, 50 – 58.
- Burgess, H., & Felner, M. (1972). *Circus and the Actor: An Interview with Hovey Burgess*. *The Drama Review*, (16) 1, 39 – 46.



Carmeli, Y. *Text, Traces, and the Reification of Totality: The Case of Popular Circus Literature*. *New Literary History*, (25) 1, 175 – 205.

Conquergood, D. (2002). *Performance Studies: Intervention and Radical Research*. *The Drama Review*, (46) 2, 145-156.

Scott, C. (1994). *How Does Gravity Affect Meaning in Dance?* *Journal of Aesthetic Education*, (28) 2, 102-103.

- **World Wide Web**

*Aeriosa Dance Company*. (2008). Retrieved September 16, 2008, from <http://www.aeriosa.com/files/aeriosa.html>

*Cherie Carson Homepage*. (2008). Retrieved November 21, 2008, from <http://www.movingout.org/cherie/profile/profilefr.html>

*Project Bandaloop Homepage*. (2008). Retrieved November 21, 2008, from [http://www.projectbandaloop.org/sw\\_8\\_crossing.html](http://www.projectbandaloop.org/sw_8_crossing.html)

*Terry Sendgraff Homepage*. (2008). Retrieved November 20, 2008, from <http://www.terrysendgraff.com/faqs.html>

*Zaccho Aerial Dance Theatre*. (2008). Retrieved September 16, 2008, from <http://www.zaccho.org/projects.html>