Back It Up

To what extent can we archive social dance?

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INTRODUCTION

Dance has always been a part of my life. From a young age I've tried many styles, from ballet to hip hop. Ballroom seemed to resonate with me the most for a long time. There was something about the variety in styles and structure that allowed me to get into character whilst maintaining a distinction between the dances. A few years ago I had a strong brain reset and had problems with my memory. I struggled to take in new dance steps during class and to put the ballroom structure that I already knew back into place. I wanted to find a way to write it all down, capture the memory, for now and for future reference.

As a graphic designer, I aim to communicate data in an easy and universal manner. Initially, the concept was to create context-free transmissions of dance, no matter the place, culture or time. The graphical representation could be intuitive enough for others to read and possibly to learn from. Before I knew it I was sucked into the world of swing culture, thanks to its history and community, and the focus broadened beyond footwork.

This research is a synthesis of examples and experiments to approach the question: to what extent can we archive social dance? A series of experiments supported by psychological theory, personal graphical approaches and interviews with dancers create a collected view on the matter of documenting social dance and the means in which we could do it.

From a dancer's perspective, video on its own is a bad medium to view and learn a dance from[1]. It's usually filmed from the audience perspective, not to mention the annoyance of watching in small clips and constantly rewinding to understand the steps. Mura Dehn attempted to preserve African American social dancing styles from the turn of the century till the 1980s in her 1989 three-part documentary film The Spirit Moves[2]. The content feels subjective; professionals performed choreographed steps, the audio was manipulated and her foreign narration did not portray cultural meanings such as the political purpose of the Cake Walk[3]. This did not show the true, nor whole picture of the recorded dances.

Photography, film and social media help our craving to document our lives, share treasured moments and hold on to these archived memories, yet they also do not portray the full picture. Although technology may have its limitations in this aspect for now, it is developing and is pushing the boundaries of what is possible. Advances in virtual and augmented reality promise the ability of capturing life, yet there is still a vast gap to explore to what extent an experience can truly be captured. My curiosity lies specifically in why an experience such as dance is difficult to capture.

The research is divided into three segments. Part One looks at preserved social dances, analyses previous graphical notation systems and suggests how these could be developed. Part Two investigates how the brain processes dance with regards to time perception, memory and

flow, and how that shapes perception. Part Three compares dance to language and discusses what non-verbal communication among social dancers is, and how difference in perception could harm the process of passing down dance person-to-person.

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1 History of Swing: Its Birth and Revival

Swing dance is an umbrella term for a few different social dance forms which developed in the United States by African Americans[1] in the mid 1920s, reaching their peak in the '30s and '40s. They are danced to jazz music[2], which due to its free and improvised nature thanks to syncopation, created an open blueprint for dances to play with. These improvised social dances fall into a few common styles: Lindy hop, Charleston, Balboa and Shag[3]. They did not have strict rules or steps, yet each style can be identified by its tempo, vibe and rhythm. Lindy hop is goofy, with open positions and turns. Charleston is energetic and has fast kicking steps. Balboa is sweet, has a close connection and has subtle small steps to fast music. Shag, similarly to Balboa, is fast, but has more expressive footwork and a silly vibe.

Lindy hop, being one of the most famous swing dances, began in Harlem at the Savoy Ballroom[4] (Figure 1). It was a way for people to escape the thought of war and let loose, socialise and laugh. Famous dancer Frankie Manning said, "These were the depression years (which didn't make that much difference to my family since we were poor anyway) and dancing was an outlet for people because there wasn't much else they could do. We all stayed in Harlem, but you could find someplace to step out every night of the week. Going to a ballroom became our social life." (Manning and Millman, 2007, p. 67). With time, politics, social tension and financial instability started calming down. Therefore, people focused on work, family and rebuilding the economy. There was less time for dancing in ballrooms in the evenings, and swing died out. It also evolved into other dance styles, such as rock and roll and hip hop.

In the mid 1980s there were a few dancers from the Whitney Lindy Hoppers, a popular dance group who performed at the Savoy during its craze, who started teaching swing to the youth around the world, despite their old age. The dancers we can thank the most are Frankie

Manning, Norma Miller, Dawn Hampton, Al Minns and Leon James. Minns travelled to Stockholm in 1984 to teach the dance to The Rhythm Hot Shots dance company, who until then, used old archived clips to interpret Lindy hop moves. Nowadays, the Swedes are seen as one of the better swing dancers, together with the Americans. From then on, the swing hype started spreading beyond classes, as it was visible in pop culture too: a movie called Swing Kids (1993) and an iconic Gap commercial (1998). These dancers travelled the world and shared the joy and culture, passing the knowledge person-to-person (Figure 2). The students who mastered it went on to becoming teachers themselves. Millman recalls seeing Frankie Manning for the first time sometime in the 80s: "It was a dance of great beauty and grace, intensely musical, with roots that delved deep into African American culture, but Frankie's subtlety was beyond me at the time. My eyes and ears had become so attuned to white-washed, commercialized versions of the Lindy hop as depicted on television, on Broadway, and in films that I couldn't appreciate the real thing." (Manning and Millman, 2007, p.15). So, although the dance had a revival thanks to the teachers who were at the time and place of its origin, it was still taken out of context.

2 The Case of Kizomba

In comparison to swing, kizomba (Figure 3) is a more extreme version of an out-of-context shift in dance, with regards to both steps and ambience. Currently, it's a vastly growing in popularity social dance originating from Angola. Its popularity in Europe and America can be explained by the fact that it's seen as a very sexual dance. Because of the Angolan Civil War, many Angolans fled to Europe and decided to share their native dance style. Singer C4 Pedro, who is also known as the king of kizomba, criticises: "Some Angolans decided to become teachers and they didn't teach exactly the same kizomba as we do in Angola. It's easier." (BBC, 2017). Angolan dance teacher Freezy Bruce explained: "If you go on the internet you'll see many videos about kizomba, but mostly people don't know exactly what is kizomba. There are a lot of people dancing something else that is not kizomba. Kizomba is mostly social dancing. You can dance with your son, a father can dance with his daughter. People need to understand the difference. It's really sensual, not sexual." (BBC, 2017). This shows the flaw of passing down the knowledge person-to-person. The physical steps may have been similar, but not passing down the culture of the dance created a large misinterpretation of the dance itself. Although only twenty to thirty years have gone by, kizomba's essence has changed profusely.

It makes you wonder, do we really need that personal connection and contact to pass down dance, knowing it may have disadvantages, or could we manage if we self-taught ourselves from archived content? These preserved forms should ideally be context-free transmissions of dance. Their aim is to translate dance to another person, in another context or time.

3 Graphical Dance Notation

Dance is an intangible experience that is difficult to be quantified. Despite the challenge, many have attempted creating graphical notation systems. Experiment #1: Previous Notations is an analysis of famous dance notation systems. These allow for a better understanding of which elements of dance could be to transcribed graphically.

Favier

The first Western attempts to graphically notate dance was in 17th and 18th century France. Choreographer Jean Favier notated a Baroque masquerade, *Le Mariage de la Grosse Cathos* (Figure 4), in 1688. The notation consists of three aligned five-line music staves. The first one is dedicated to music notes. The second directs the movements of the left dancer on stage, whereas the third directs the movement of the right dancer on stage. The instructions for the dancers are focused on their footwork: d for *droit* (right) or g for *gauche* (left).

Favier's main focus was to communicate footwork, yet it lacks an explanation of body movement itself and the direction in space. Also, hypothetically, the movement staves being aligned to the music stave should allow the reader to interpret how the rhythm of the dance matches the melody of the music. However, the dance notation does not explain what happens with the feet: do they stomp, clap, shuffle or glide? This lack of information makes it difficult to decode a rhythm, as the silent steps, such as sliding, could cause breaks in the rhythm.

Marche pour 9. Hautbois, 8. Danseurs, et 9 Musiciens.

Lorin

King Louis XIV sent André Lorin to England to introduce English country dance to the French court. Lorin adapted the steps to suit the French dance style. The manuscripts *Livre de contredance présenté au Roy* (c. 1685) (Figure 5) and *Livre de contredance du Roy* (1688) (Figure 6) differ only in presenting spatial awareness. Both use letters directly below the music stave representing steps, similarly to Favier. Although, there is an accompanying diagram showing the movement in space. The former from a bird's-eye view, the latter from a third person's perspective. Despite Lorin's notations showing music, steps and a diagram of direction in space, it does not portray rhythm, nor the progression through space according to the music measure. He used two different notation systems – music staves and an accompanying diagram – to communicate the necessary dance elements.
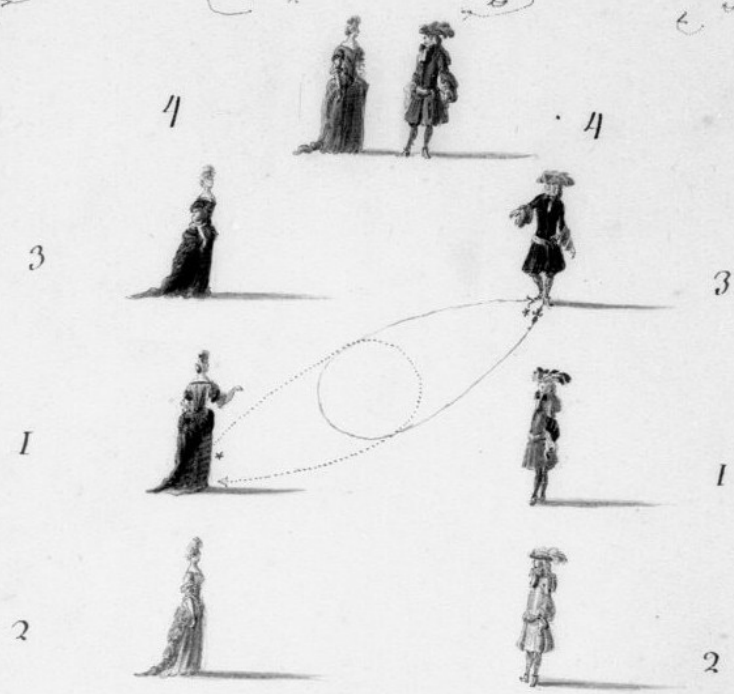
Contre dance pour Sa Majesté

Contredançe du Roy.

La Dame 1. Et le Caualier 3. partent tous deux du pied droit pour faire vn tour ensemble Suiuant la demonstration cy dessous lequel tour est composé d'etrois pas de bouurée, et d'vn couppé assemble, A la premiere mesure de l'air jls Se presentent la main droite par vne petite jnclination, A la 2.e jls la joignent, Et a la fin de la 3.e jls la quittent pour retourner a leur place, apres quoy la Dame fait vn petit Saut deuant le caualier 1. Et le Caualier 3. ne Saute pas.

Le Caualier 1. qui demeure posé le visage en dedans Sans rien faire pendant que la Dame 1. et le Caualier 3. dansent ensemble fait aussi vn petit Saut dans le meme temps que Sa Dame, ce qui Se rencontre justement au milieu de la 4.e mesure.

Le Caualier et la Dame 2. Et la Dame 3. restent aussi posés le visage en dedans Sans rien faire.

1	2	3		4

●

Beauchamp–Feuillet

Louis XIV also commissioned Pierre Beauchamp to create a dance notation system in the 1680s, which was later described in detail and published by Raoul-Auger Feuillet in *Recueil de Dances* (1700) (Figure 7) and *Choregraphie* (1701) (Figure 8). The Beauchamp–Feuillet system is the most known Baroque notation today. In the first example, the score starts with introducing the dance rhythm type, Bourée, followed by a music stave. In the centre of the page, the dance title, *la Bourée d'Achille*, is accompanied with a bird's-eye view diagram showing the spatial path of the dancers, which is notated measure by measure. It does not require great in-depth knowledge of the score to understand the concept of the dance. The Beauchamp–Feuillet system was more successful than others, as it managed to communicate the most detail such as music, rhythm, and spatial paths for both male and female dancers. Although it is the most complex Baroque notation system, it does not communicate arm movement well. The arm movement symbol was developed (Figure 9), but rarely used. It is not clear when the dancers hold, or let go of each others' hands.

la Bourée d'Achille.

Supplément de pas.

demy coupé, en suite tortillé un talon, en suite les deux pointes et en suite un talon pour se rendre en la 3.e position.

Contre-temps tortillé, en suite tortillé l'autre pied sçavoir la pointe et en suite le talon pour se rendre en la 3.e position.

le premier pas chase le second en sautant, et le second chase le 3.e en pas tombé.

le premier pas chase le second en sautant sans plier ou en ne pliant que le moins qu'il est posible, et le second chase le 3.e en pas tombé.

pas de menuet en auant à un seul mouuement.

le même en ariere.

pas de menuet à deux mouuemens ce qui n'a pole ale boemi à lemonuet onne.

le même en ariere.

le menuet en fleuret.

le même en ariere.

le menuet à trois mouuemens en auant.

le même en ariere.

le menuet à trois mouuement de costé par deriere.

le même desus et desoue.

le menuet en fleuret de côté.

le contre Temps du menuet en auant.

le contre du menuet Temps en ariere.

pas qui communement dans le menuet se fait ainsi.

Autre.

autre de côté.

Des Ports de Bras, & de leurs Mouvemens.

QUoy que les Ports de Bras dépendent plus du goût du Danceur que des Regles qu'on en pourroit donner, je ne laisse pourtant pas que d'en mettre icy quelques Exemples, où l'on voira par des caractères démonstratifs les differens mouvemens que les bras peuvent faire en dançant, au moyen desquels caractères on pourra aisément marquer dans les dances chaque port de bras qui doit accompagner chaque pas.

On connoitra la figure du bras par les figures A B C, sçavoir A marque l'épaule ou haut du bras, B marque le coude ou milieu du bras, & C marque le poignet ou extremité du bras.

E X E M P L E S.

Le Bras étendu.	Le Poignet plié.	Le Bras plié.	Le Bras tout-à-fait devant soy en hauteur.

Comme on doit placer les Bras sur un Chemin.

ON distinguera les endroits où on va en avant & en arriere, d'avec ceux où on va de côté.

Ceux où on va en avant ou en arriere, on marquera les bras au deux côtez du Chemin, dont celuy qui sera du côté droit sera le bras droit, & celuy qui sera au côté gauche sera le bras gauche, & aux endroits où on va de côté, on les marquera tous deux audessus ou audessous, observant toujours que celuy qui est à droit est le bras droit, & celuy qui est à gauche est le bras gauche.

E X E M P L E S.

Les deux bras ouverts	Le bras gauche ouvert & le droit plié du coude.	Le bras gauche ouvert & le droit tout-à fait fermé.	Les deux bras ouverts.	Le bras gauche ouvert & le droit fermé du coude.	Le bras droit ouvert & le gauche tout-à fait fermé.

Benesh

Jumping to Western modern history, British mathematician Rudolf Benesh composed Benesh Movement Notation (Figure 10) in the 1940s. His wife, who danced at the Sadler's Wells ballet, struggled with dance notation. The figurative representations of the human body is written in a five line stave, so it can be aligned with music. It concentrates on body parts and movement, with each stave representing a location: the top of head, shoulders, waist, knees and floor, as shown in figure 11. (Benesh and Benesh, 1977). As Benesh Movement Notation was an attempt to visualise the already existing strict ballet structure, it didn't need to be versatile. There is a finite selection of classical ballet steps with specific names, and the foot positions already have a standardised numerical system (one to five). The ability to notate footwork and body movement translates the posture relative to time, yet this notation system does not take spatial direction into account. This needs to be interpreted by the dancer or choreographer.

10

11

Cunningham

At the same time in America, music, dance and performance were explored in avant-garde art. Composer John Cage[1] worked with dancer Merce Cunningham from 1944 till Cage's death in 1992. Unlike other notation systems, each piece he created looked graphically different. It was the technique of creating notation systems that interested them the most. Cunningham based his method on geometry, mathematical structures and chance, which allowed for a wide range of outcomes. He explained his approach in creating his 1952 piece *Suite By Chance* (Figure 12), "The individual sequences, and the length of time, and the directions in space were discovered by tossing coins" (O'Mahony, 2000). Scores for *Rune* (Figure 13) explore space in layers. Cage wrote that the score "sometimes restricts the performers to particular notes, and at other times allows them freedom of choice in terms of all the aspects of sound" (Merce Cunningham Trust, 2018). Space Patterns for *Summerspace* (Figure 14) transcribes dancers' "sudden bursts of speed and suspensions, zigzagging every which way, like flying creatures" to portray a summer's day (Merce Cunningham Trust, 2018). All of his pieces are meant to be read and performed in a manner that are unreproducible. With each score, Cunningham's aim was to capture the fundamental instructions for the dance, intentionally leaving everything else to interpretation.

12

13

Labanotation

The most famous notation system today is the Labanotation. It was described in *Schrifttanz* (Written Dance) in 1928 by Rudolf Laban (Figure 15). It manages to incorporate direction, body part movement, duration and dynamics of the movement. His abstract scores are read bottom to top on a three line vertical stave. The shape of the block symbols point to the directions of action (Figure 16 and 17). Rhythm and duration are indicated by the length of the movement symbol (Hutchinson Guest, 1984). His focus on analysing human movement from a very technical perspective allowed for his method to be used not only in dance, but also in physiotherapy, robotics and human movement simulations. Due to its detail, The Dance Notation Bureau has been notating dances using the Labanotation since 1940 (Venable, 1991). Although Labanotation managed to convey the most information from a dance in a graphical form, his score method is not commonly used by dancers. This could be due to its complexity. Hutchinson Guest suggests "while a familiar comment is that Labanotation does not look like dance, the designs are readily recognized by those who have learned to read them, just as patterns created by musical notes are readily recognized by musicians" (1984). We could overcome this struggle of learning a complex notation system if there were something more intuitive.

15

148

147

146

145

ONQJD   BHIPK   HEGC   Γ

145-6   X = moment of fell   147-150

16

17

Dance which is captured in a written form could allow for another type of retrieval of data. Future dancers would be able to read it and reconstruct it. However, currently this seems to be harder than it sounds. There are three main hurdles with this documentation process. Firstly, unlike music, dance doesn't have an accepted universal score system. Secondly, there are many aspects such as direction, speed, intent, rhythm, not to mention the body movement itself, which make it difficult to convert data collectively into one graph or system. Lastly, each notation focuses on different elements, such as music, direction or footwork. This may be because of personal interest – Benesh for example – or out of necessity to focus on some elements more than others. Each score managed to tackle translating some aspects of a dance, yet none have managed to simply convey all elements into one notation system.

4 Dissecting Dance into Layers

Action

Tap your hand againts your thigh on stressed syllable

Stop Action

Fontana Mix (Figure 18) by John Cage is a scoring system for a performance composition. It offers many outcomes mainly thanks to the concept of layering. Each layer represents a different score, and when placed on top of one another, create a unique performance[1]. If it is difficult to translate dance into one scoring system, could it be possible to break dance down into different elements, such as direction, movement, rhythm and spatial-awareness, and score each in a different layer?

18

To understand the difficulty in creating choreology[2], I attempted to visualise the difference in all ten of the ballroom and latin styles[3] I used to practice. Experiment #2: Basic Choreology Analysis (Appendix 1) looks at what happens if dance styles are dissected into different elements. The analysis was based on four tasks: the general movement of each dance was expressed using illustrations (Figure 19), the rhythm was explained using words as well as in my own graphical system and the beats per minute (BPM) of the appropriate music was compared. Each dance has a standardised[4] characteristic tone, speed and rhythm. I tested what would happen if the distinctive aspects were altered. Breaking the dances down into direction, speed and rhythm showed how changing one influences another. The speed can change the tone, but the rhythm must stay the same for the dance style to maintain identifiable.

Note to self

Some dances have similar shape, yet are completely different due to rhythm. I attempted to communicate that graphically (Figure 20). Illustrating rhythm proved to be harder than predicted, as I had to multitask: counting beats by tapping on my thigh and saying the rhythm out loud while dancing, to see how they overlap. It was difficult to process and capture so much information at a time.

CHA CHA

ENGLISH WALTZ

FOXTROT

JIVE

PASO DOBLE

QUICKSTEP

RUMBA

SAMBA

TANGO

VIENNESE WALTZ

None of the mentioned historical graphical notations communicate rhythm well. Personally I find rhythm to be the starting point of learning a dance. Professional dancer and international teacher[5] Earanee Niedzwiecki told me in an interview that "relying on understanding the rhythm that you are going for, informs a lot of the movement [...]. I try to watch and learn and really internalise the rhythm that the person is getting or going for, and then I use that as a basis for everything else." (Appendix 2).

Evolving from Experiment #2: Basic Choreology Analysis (Appendix 1), I have expanded my solution for capturing rhythm (Figure 21). As music is the blueprint for dance, rhythm scores can be presented on a timeline. With each horizontal line, more information is added to understand how rhythm matches the music. If a song is slower, the dots representing the BPM would be further apart. That would stretch the representations of all count, rhythm and footwork. The footwork shown below is for Lindy hop, which phonetically is taught as a 'rock-step, triple-step, step-step, triple-step' rhythm. The system can also be used for dances with different rhythms.

1 - 2 - 3 - 2 - 4 - 5 - 6 - 7 - 2 - 8

116

rhythm of dance placed on count.

BPM

indicates
tempo/
possible style

116

L R LRL R L&RLR

116

footwork L/R
as follow

don't need # that long.
count of 8 is enough.
line continues to show flow/
repetitiveness.

116

116   SWING

92   ENGLISH WALTZ

120   RUMBA

116   ← FOXTROT

repeat after
6 counts

116

Lindy Hop notation to Benny Goodman's 'Don't Be That Way'

seconds

BPM

162

8-count

count to BPM

162

rhythm

footwork to rhythm

● right
● left

●

BEYOND STEPS AND COUNTS

BEYOND STEPS AND COUNTS

-

BEYOND STEPS AND COUNTS

BEYOND

STEPS AND

COUNTS

5 Time Perception in Dance

Although breaking dance down into separate elements may help understand its structure better, there are other elements that come into play when learning a new dance. Notation doesn't cover time perception, which is relevant to how the brain processes dance and how we read scores.

Previous psychological theory research on time perspective and cultural diversity has left me wanting to explore more of Robert Levine's clock-time and event-time in relation to dance. Clock-time is a way to perceive time as the clock directs it, whereas event-time is a perception of when participants *feel* an event should start or end (Levine, 1998). Levine travelled around the world for research and saw clear patterns in preference between cultures for either one or the other time perception.

This binary division in understanding time can be also found in Robert Wiener's view on Newtonian and Bergsonian time (Wiener, 1965). He explains this contrast using astronomy and meteorology. Newtonian time, just like astronomy, is strict and mathematical. Wiener describes, "the positions, velocities, and masses of the bodies of the solar system are extremely well known at any time" (Wiener, 1965, p. 32). Newton used this time perception for engineering and space, not as a social human system. Bergsonian time on the other hand, like meteorology, is flexible and more adaptable to human experiences. Wiener continues, "the number of particles concerned is so enormous that an accurate record of their initial position and velocities is utterly impossible" (Wiener, 1965, p. 33). Bergson emphasised the difference between Newton's reversible time in physics (where if the movement of the planets was rewound, nothing would change) and Gibbsian irreversible time in evolution and biology (where rewinding would always cause something new). When analysing Levine's and Wiener's work, both mention two contrasting perceptions of time: one concrete and mathematical, the other adjustable and human.

Newtonian time shows many similarities to Levine's clock-time due to its strict, mathematical and rigid approach. Wiener explained Newtonian time as "the planets are either very nearly rigid bodies, or where they are not, their internal forces are at any rate of a relatively slight significance. [...] The space in which they move is almost perfectly free from impending matter" (Wiener, 1965, p. 32). The strict and set structure is fixed and definite, just like reading the time from a clock. Neither of the two cases can be altered by external factors, and both cases could be described as mechanical, structured, strict and concrete.

Bergsonian time, just like Levine's event-time, shows flexibility and duration. Wiener suggests "the term 'cloud', 'temperature', 'turbulence' etc., are all terms referring not to one single physical situation but to a distribution of possible situations of which only one actual case is realised" (Wiener, 1965, p. 33). Levine's event-time is based on a fluid social decision that has no strict duration and cannot be predicted mathematically. Both can be altered by external factors, and both cases could be described as human, social, flowing and continuous.
Time perception in dance also has two opposing sides: tempo, count and rhythm are strict and precise; not analysing the steps and flowing with the music is fluid and uninterrupted. These contrasting perceptions in time within dance are very alike to Newtonian clock-time and Bergsonian event-time. During my ballroom and latin dancing classes I saw two types of dancers; those who worry about the steps and/or count, and those who flow. How does our brain and method of falling into flow shape our perception of dance?

6 Memory and Flow

For a broader understanding of processing information, I have looked into neurology and memory in Opening Skinner's Box (Slater, 2005). In 1953, Dr. Scoville discovered that memory has a specific location in the brain, the hippocampus, and is not scattered around as thought before. Patient Henry Mollison was still able to brush his teeth after his hippocampus was removed, but wasn't able to create new memories. Dr. Brenda Milner continued research on Henry and was able to identify procedural, or unconscious memory. Dr. Eric Kandel at the same time tested how information travels through neurons of sea slugs. He was able to prove that every time a task is repeated, the stronger the webwork of carrying that task becomes, the stronger the memory, the stronger and smoother the electrochemical conversation between those particular synapses in the brain becomes. This would explain falling into a flow, whether for athletes, musicians or dancers. The more a task is practiced, the stronger the memory, the smoother the task becomes.

What if I were to challenge my flow and memory when dancing? Experiment #3: Jive Mix Up[1] (Appendix 3) aimed to see how much the fluidity of a dance was disturbed when the order of the choreography was changed. My dancing partner and I deconstructed and reordered a choreology we knew very well; the jive. Ten jive steps were listed and numbered accordingly. Dice were rolled and the outcome was noted down (Figure 22), corresponding to the numbered steps. The randomly created new order was danced and we analysed our performance. I was aware that the links between my neurons would need rewiring, but to what extent would it interrupt the fluidity? As predicted, it was challenging to grasp a flow. Once we knew which step to dance next, the following few counts were easy, as we were using our procedural memory. The moment when one step ended and a new one started, we noticed hiccups in our fluidity. Our brains needed to process new information: what is the new step and in which direction will it go? Memory shows to be vital in maintaining flow. There was too much to

think about at once. Yet how much was too much?

Psychologist Mihaly Csikszentmihalyi is famous for his research on flow states[2]. He explained how our nervous system is incapable of processing more than about 110 bits of information per second (2009). That would explain how new dancers cannot fall into flow when trying to think about the rhythm, tempo, direction and body movement all at the same time. Csikszentmihalyi continued with explaining how our brains need to feel high levels of challenge and high levels of skill in order to be stimulated enough to reach flow.

Flow in dancing is also dependent on the communication with a partner. Anticipation and trust in a partner are just as important as high levels of challenge and high levels of skill since it is done together. In Experiment #4: Learning a New Dance Style (Appendix 4) I have taken up a challenge to learn the basics of the swing in an hour private session and try to achieve flow with a new partner. To start, I focused on the rhythm, moves and direction in a mathematical structured manner. Rigid like Newtonian clock-time. After a while of getting to know my partner, I started feeling the moves and rhythm without thinking about what I needed to be doing. I forgot about time passing by and enjoyed the moment, smooth like Bersgonian event-time. It is difficult to fall into flow straight away. Firstly, the links between neurons need to strengthen like Kandel's sea slug experiments have proven. Secondly, there needs to be enough time to get to know the partner to build trust. To reach flow, we need to first experience the Newtonian clock-time to understand the basic structure, and progress into Bersgonian event-time to allow for flexibility. As famous swing dancer Dawn Hampton said in her workshop at Lindyfest: "If you've come here to learn steps, then you're in the wrong room. I want you to feel the dancing. Now we have so many different things happening in dance. I want you to just *feel* them." (HSDSswing, 2010, 01:34).

7   Spanish arm

3   American sp

3   American sp

1   Basic turn

6   Windmill

2   Follow

10   Chicken walk

PART TWO

7 Other Dancers' Scores

While conducting my experiments, I was aware that the way I feel dance is personal. My own experience may not transcend with others, my notations could be interpreted differently and my memorising methods suit me. So what tools do other dancers use to learn and memorise dance?

As discussed earlier, time perception in dance can be divided into two approaches: strict and precise or fluid and flexible. After talking to some dancers from the Swing in Rhythm dance school, it was clear that some are 'numbers people' - relying on the eight-count to learn steps - and some prefer articulating the movements through scatting. Teachers themselves prefer scatting, as it not only widens the spectrum within the given time signature, but also helps play around with rhythm and visualise the intent of the movement through onomatopoeias. A sharp 'boom' would create a different movement than a smooth 'ooh-pa'.

Earanee being a teacher herself shares her thoughts on scatting: "The way that a particular movement sounds is going to be different for different people. [...] If I'm teaching with somebody else and we want to scat a rhythm of something that were teaching, each of us will have a different way of articulating that. So yeah, I think there's a

ROCK STEP

TRI PLE STEP

STEP STEP

TRI PLE STEP

T A   D A

DUBI   D A

T A   D A

DUBI   D A

difficulty because so much of it is genuinely an intangible kind of feeling that is experienced. And how to put that in words, or sounds or visuals is quite challenging." (Appendix 2)

Musicality plays a large role in dancing, as dancers interpret the music and their bodies become the instruments. Although jazz is a free and improvised music style, it still has a blueprint: a thirty-two-bar form (or AABA form) and syncopated rhythms, putting the stress on the off-beat. Scatting allows dancers to interpret this musicality and its playfulness. Counting beats is limited to only keeping track of time, and does not express the atmosphere of a movement. Nevertheless, some students struggle to use a different method than their preferred structured count blueprint. It's easier for them to learn and memorise steps using this technique.

Experiment #5: Scatting Through Typography is a small example that typographically transposes the techniques in articulating swing rhythm. The length of the words match the length of time proportionally. Movement terms are used mostly with beginners to help them learn the action corresponding to the sound (Figure 23), whereas scatting is used with more advanced dancers to articulate the intention and feel of a movement (Figure 24).
Spatial awareness, which is used to understand the nature of the movement, is another aspect that people have different perspectives on. Some students visualise the steps from a bird's-eye view, some from the dancer's perspective and some from a third-party perspective. Geometry is often used to describe the shapes of the step and the direction of the movement. This structure helps to process what a step should look like.

Experiment #6: Comparing Notes is a collection of scoring systems from several dancers, scaling from beginner students to advanced teachers, from swing communities in South Holland[1]. These personal notes and

scores help them learn and memorise steps. Figure 25 was created by Joeri de Man at an early stage of learning Lindy hop. It is a scoring system to understand the correlation of footwork and rhythm. He presented the footwork position frame by frame. He represented time by numbering feet, as well as defining at what moment of the rhythm the foot position should take place. Figure 26 is Fil Kostanecki's notes during an advanced workshop. He annotated what was taught using swing terminology. He underlined details that were important to him, such as an arm movement happening between count four and five. He supported a step with a diagram to clarify the spatial awareness. Figure 27 is a choreography set by Joseph Openy. He developed this set a few months into learning Lindy hop, to ease himself into social dancing. It was a way to relieve himself from performance pressure. He added that he noticed that his dance partners were less nervous if the dance started with a couple of the basic steps.

The examples show how varied notation methods can be. Each individual annotates differently as they focus on elements that are important to them. Normalising scores to create a universal method is questionable, as these are personal interpretations. Cunningham's interpretive scores were designed for the performer to have their own and unreproducible experience. If that performance were a social dance, both dancers would have a different experience, although they are communicating and embracing it together.

The other
'Basic Step'

∘D
weight on
that foot

6 5   4   3   8

1   2   the   step   Rock   step

Rock   step   tri -   ple

step   tri -   ple   step

Marcu & Anita - Workshops @ Rotterdam - 29-17

{Lindy Blue +}

1) Electric Slide
   ↳ W/o music
   ↳ Fast slow
2) Swing-Outs
   ↳ Indicate on 2   ↳ Can be multi-directional
   ↳ Step back on 5
   + ↳ Swing Swings (S. Swing Love!)
3)

4) Texas Tommy
   ↳ On 4 → Use the head, less waist
   ↳ Use space
   ↳ Use the arm (4 and 5)
5) Lead → Counter-clock spin
        F
       ↓
      ⟲L↘
      F ↘
        ↘L
        E   Tip: Lead into
                                  yourself,
                                 "small bounce

6)

Swing (Social) Plan

1) Basic steps x2

2) tuck turn

3) change of places.

4) frankie 6's.

5 walk to the beach.

27

HOW TO SPEAK
HOW TO SPEAK
HOW TO SPEAK
HOW TO SPEAK

'DANCE'
'DANCE'

"HOW TO SPEAK

'DANCE'

HOW TO SPEAK

'DANCE
DANCE'

8 Dance as a Language

With previous experiments I questioned whether it is possible, and attempted, to quantify and visually represent different elements in dance. Yet with time it became clear that social dancing has another element: the intangible connection between the dancers. Before taking on the task of translating this dialogue, it first needs to be clear what this dialogue is.

Anthropologist Judith Lynne Hanna compares the similarities between dance and verbal language. Both have vocabulary and grammar. In dance, the vocabulary is locomotion and gesture. Grammar, being the rules of a certain language, is comparable to the tradition of a dance which connects the movement vocabulary together. Both have semantics, where verbal language strings together sequences of words, and dance strings together sequences of movement. However, dance, with its multiple, symbolic, and elusive meanings, more often resembles prose. It is more difficult to communicate complex logical structures, compared to verbal language. Although both could communicate empty content (meaningless sounds or mere motion) listeners and viewers still tend to read meaning into what they hear and see (2008). Millman's recollection of Frankie Manning's dancing mentions articulation, which was not discussed by Hanna. "He didn't just move his feet and legs; rather, his entire body and even his face were involved in every action as he responded to the rush of music coming from the bandstand. All of his joints seemed to be bending constantly and articulating rhythmically, an orchestra of moving parts" (Manning and Millman, 2007, p. 15). Bearing in mind that dance is a physical interpretation of music, and that each person hears music differently, this interpretation could be seen as articulation.

A report by Stevens and McKechnie compares specifically modern dance to language, as memory, procedural knowledge and non-verbal communication are psychological processes that appear in both. They

propose that contemporary dance is a heightened form of non-verbal communication due to its richness in gesture, expression and affect (2005). Their view is very specific to movement that is performed or observed, suggesting that the non-verbal communication is between the audience and dancer; the movement articulates the emotion. As I may agree to a certain extent that dance can communicate a message, non-verbal communication in dance can be observed in a much deeper sense. As mentioned by Hanna, the viewer will tend to read into the performed message, whether it has meaning or not. The unspoken dialogue between the partners in social dances on the other hand is more genuine and less theatrical, as they are not aimed to be performed for an audience. Both parties need to listen and respond to one another.

9 A Non-verbal Conversation

When social dancing, the two dancers are in constant dialogue. One dancer being a 'lead', typically a man, the other being a 'follow', typically a woman. It should not be assumed that the lead is the driving force. Both roles are equivalently important and have the same amount of freedom to initiate steps. It's a play of listening and interpreting what your partner is suggesting. This non-verbal communication is supported by connecting points on the body: shoulders, arms, hands and back. Closed positions (connecting in all connecting points) and open positions (connected only by holding hands) (Figure 28) allow the dancers to understand the movements of their partner. Change in tension, dampening the motion or redirecting in any of the connecting points are ways to communicate a change of step.

Dawn Hampton also emphasises the need for a physical connection between the dancers: "One thing that happened with the Twist, was that people danced separately. She danced over here and he danced over there. With swing dancing there's touching. Something that people need. They need to touch, they need to feel each other." (HSDSswing, 2010, 04:59). This dialogue between dancers was not so present in my ballroom experience, despite our connecting points, because we kept to our given routine. There was little need to listen to your partners instructions, as we could anticipate every move. We understood when something was wrong with our partner, whether a mistake was made in a move or whether it was unclear what step followed. Yet beyond that, there wasn't much listening if everything was going according to the choreography. In more improvised social dancing, such as swing, there is more need to listen and react to our partner.

Visually representing non-verbal communication could be feasible if it only depended on the connecting points. Highlighting the change in tension and direction could potentially have a similar visual outcome as thermographic cameras. This, however, does not indicate whether the

Floor Steps

Although the Lindy Hop did not receive a name until 1927, elements of it were visible as early as 1924, in the Broadway and Harlem "mooch" and "sugar." In 1923 the Charleston revolutionized American dancing by freeing partners from the stylized vis-à-vis position of the fox trot and waltz. The Lindy Hop picked up where the Charleston left off, with the first swing-outs, breakaways and "shine steps" added to a basic off-beat two-step.

In its early days the Lindy flourished only in lower strata of society. Negroes were its creators and principal exponents, and Arthur Murray would no more have taught the Lindy Hop than Rachmaninoff would have given lessons in boogie-woogie. But with the renascence of swing the Lindy climbed the social scale. New steps like Susy-Q, Trucking and Jig-Walk were invented and absorbed into its expanding framework. And as they spread across the land, invading colleges and dance schools, the Lindy Hop attained respectability as a truly national dance. On these pages Gjon Mili's camera records some of its most characteristic floor steps as demonstrated by Stanley Catron and Kaye Popp, both 17, both of the Broadway musical, *Something for the Boys*.

JOCKEY IS A TEMPO-SETTER AND PRELUDE

THE TWIST, AN EARLY INVENTION, GIVES GIRL A CHANCE TO "SHINE"

JIG-WALK IS A BASIC FLOOR STEP INTRODUCED ABOUT 1930

WITH LEFT FOOT BUT DOES NOT SHIFT WEIGHT; 2) BRINGS LEFT FORWARD, PIVOTING ON RIGHT; 3) SWEEPS RIGHT AROUND BEHIND LEFT AS GIRL STEPS AWAY; 4) COMPLETES SWING-OUT

THE TRIP JIG-WALK IS A FANCY MANEUVER SUITABLE ONLY FOR CONTEST OR EXHIBITION PURPOSES. FUNDAMENTALLY IT IS AN ADAGIO VARIATION OF BASIC JIG-WALK SHOWN ABOVE

CHARLESTON REVOLUTIONIZED DANCING IN 1925

THE SHAG BECAME POPULAR IN U.S. COLLEGES IN 1930's

FIRST ELEMENT OF LINDY HOP WAS THIS SIMPLE BREAKAWAY

MOST IMPORTANT ELEMENT OF LINDY IS THE SWING-OUT. IN THIS SIMPLE VERSION, 1) THE BOY STEPS BACK

THIS IS PECKING, A BREAK FEATURING HENLIKE MOVEMENTS OF HEAD

CHARLESTON IS IMPORTANT PART OF LINDY. MODERN VERSION INVOLVES VIGOROUS KICKING FORE & AFT

connection had a positive or negative influence on the dialogue and flow of the dance. Listening attentively and responding to body cues doesn't mean that the mental, or non-physical or spiritual, connection is there. For Earanee, hearing the music in a similar, or at least a complementary way, is vital to a good connection between dancers. She tells me about her favourite partner: "He and I have always had a very very connected dance chemistry, even from when we were fairly new dancers. And a lot of that is not necessarily from hearing the same way but hearing music in a way that was complementary. So maybe we would hit different things, but we would know the thing I would do, would be complementary to what he would do. Then would also learn how to draw from each other." (Appendix 2). Understanding one another's interpretations of the music allows for a better flow in movement, but breaking that could have an enriched value.

My personal favourite moments to see between dancers, or to experience myself with a partner, are non-verbal jokes. Both partners are dancing in silence, yet one suddenly laughs as seen in Figure 29. The backbone of any joke is its notion of wit and unexpectedness. The same applies to dancing. Whenever either of the dancers creatively surprises the other and causes them to laugh, it becomes a non-verbal joke. Dancer and teacher at Swing in Utrecht Ilja Thoenes really values those moments. During my interview with him he said that if his partner has laughed and shouted out in surprise, it was a good dance (Appendix 5).

Is there anything else that make someone a good partner, despite their fluency in moves and complimentary ear for music? "Openness makes a big difference to the kind of chemistry that you can develop with someone as a dancer" Earanee explained. "People who really are attentive to their partner, and try to remain open to the possibilities, open to surprise, those kind of dancers often are able to just connect better and build better chemistry with people around them." (Appendix

2). This openness also allows for fun and creativity. Mirroring is a common phenomenon between dance partners. If one acts goofy, that could be subconsciously reciprocated by the other. On the other hand, if one is insecure and keeps to basic steps, that probably will be noticed by their partner and matched to not push them too much out of their comfort zone. "If you have two people who are [open] dancing together, that's something special, as opposed to someone who is open and someone who is closed off from their partner." Earanee added.

As each person's interpretation and articulation of music is different and the connection and dialogue between dancers is unique and unreproducible, I will not attempt to create a standardised graphical representation of experience and emotion, as it is simply impossible. This is why personal contact with dance teachers is important. They have the role of preserving that intangibility by explaining the feeling. Yet as each dancer has their own experience, when passing down the knowledge person-to-person, it is inevitable that this personal experience resonates in what and how they teach.

PART THREE

10 The Telephone Game

Having the responsibility of preserving steps and ambience of a dance without bias when teaching can be difficult. Interpretation and context can harm the process of passing down dance. Is there anything that could help with this process?

Earanee, as a teacher, explained what made Frankie such a good messenger: "A lot of people say that [he] was really really loving and really caring and wanted to share things with people, was really happy, and not protective, or defensive, he was just very open, sharing kind of person. I think him coming to the scene teaching people, not just the steps, but how to be open with each other and how to treat each other, I think that really helped him form people's understanding of what the dance is meant to be. Perhaps without those kinds of connections, it might not have had a true resurgence. It might have been more, like, something like a lot of rock and roll to me ends up looking like; a lot of moves, but not necessarily a lot of heart." (Appendix 2)

During a trip to New York I could not help but experience the original Lindy hop community, resulting in Experiment #7: Dancing Where It All Started (New York, New York!) (Appendix 6). My aim there wasn't only to dance, but also to get to know the community, their individual stories and to get a grasp of how this community may differ from my own in Rotterdam. To my surprise, it didn't feel much different to home: there was a caring and happy ambience, people drank soft drinks at the bar instead of alcohol, and there were people of all skill levels happily interacting (Figure 30). The music choices and fashion was slightly different. I asked a local whether she thought it was incredible that across the world a community can feel just the same. Without hesitation she replied: "we all speak the same language, the language of dance". It may be that, but being taught by the same sources definitely helped shape a similar community.

People such as Frankie, Al or Norma taught not only the steps but also the culture. Although the case of kizomba may seem more miscommunicated due to the misinterpretation of the ambience, it is difficult to compare the situations in which the knowledge was passed down. Swing dancers had the money, or were invited, to travel to Europe and share their skills. There is still a multitudinous exchange of teachers and students between countries. The context and purpose of spreading the knowledge was different to Angolan refugees. Cultural differences between America and Europe are also smaller than between Africa and Europe.

Although the context in swing isn't much different between locations, some elements of jazz dance and swing have changed over time. A clear example is the Charleston. The 1920s version was danced to one particular song, "The Charleston" by composer James P. Johnson, which was written for the Broadway show Runnin' Wild. In the 1930s the steps developed and were danced to any swing music that is roughly between 200 and 290 BPM. This is still the case today.
Frankie observed in his book what changed between his youth and today's swing community. "At the Savoy we sometimes did the Shim Sham[1] as a group line dance, without taps, but it was different from the swing dancers do it nowadays. [...] We only did two choruses, and it wasn't associated with any particular music. [...] Although a few people might join in, most everybody else kept dancing without paying any attention to us." (2007, p. 70). This dance actually originated in the 1920s as a tap dance, developed by Leonard Reed and Willie Bryant. Only with time it spread to the Savoy. Today it is a standardised group choreography performed in a circle or line to "'Tain't What You Do" by Jimmie Lunceford[2], due to Frankie's revised version. It could be compared to the "Macarena" or "Single Ladies". The Shim Sham is known to swing dancers around the world, and it is considered a celebratory dance at parties. It has some slight variations depending on location but

also for those who want to add some styling.

There are some people within the community who could be considered traditionalists[3]. They try to exactly capture the steps from the past, and categorise what 'is' and 'isn't' accurate. The paradox of strictly preserving steps today is that steps from the 1920s to 1940s were improvisations. As long as the dance could be instantly identified as a specific style, through steps and essence, I consider it acceptable. There are some members of the swing community that have even stronger views on traditions; some African American dancers are against white people dancing the blues. They perceive it as cultural heritage that cannot be understood, and should not be interpreted by others. This topic of cultural appropriation within dance is so vast, it goes beyond the scope of this study and deserves its separate research. With previously mentioned examples I would suggest that it seems difficult to contain a dance within a time period or location, as it is always in flux.

Earanee questions the evolution of swing into West Coast Swing. "[It] is something that diverged wholly. It's not a swing dance anymore. The dance is a swing dance, but the music is not swing. So is it a swing dance?" (Appendix 2). Another beautiful example of this takes place outside of the swing context. During the industrial revolution in England, female factory workers would feel alienated as they were subsumed by the machinery. Compared to the previous artisan working methods, there was less contact with family and friends. To soothe their boredom of monotonous tasks and inhumane production, they clog danced. Caroline Radcliffe, clog dancing historian, explains workers would tap out rhythms on the spot to the rhythms of the machines. The steps resemble the movements and sounds of machinery such as cogs, bobbins or shafts. Radcliffe explains that sharing step ideas with friends was their form of socialising, but is also how the dance progresses. It started with improving and adding to previously seen steps, yet it's

always developing. (BBC, 2017, 03:23). Interpreting the environment around us and articulating it in our own way, right here and now, is what makes dance alive and fluid.

CONCLUSION

It is possible for a dance to be shared or transmitted to another place, in another time, or to people with another cultural background, yet we need to keep the change in context in mind. It should not be expected that the dance remains the same. Translating dance in a context-free graphical form could communicate the quantifiable elements, such as direction or rhythm, but it is difficult to translate all elements into one system. Creating a universal scoring system is problematic, as each creator translates what is relevant and important to them. Rhythm was not an element that was of great importance to communicate in previous graphical notation systems, although it would create a clear blueprint to build upon. An open approach of layering the rest of the information, element by element, would create numerous possibilities in viewing the score. It becomes a more universal presentation of this information, as each person could focus on the elements of their interest and understand how they interact. Due to the structure in styles such as ballroom, it is easier to visually represent standardised moves. This cannot be said about improvisational social styles. Following Cunnningham's approach of only communicating the bare essentials of a dance, leaving the rest up to interpretation, would allow for more freedom in those cases. This flexibility in the score design and reading may be the best solution to archive the quantifiable elements in social dances.

As people have different perceptions of time in dance, this affects the way scores are read and performed. Those who have a strict sense of

time pay closer attention to counts compared to those who have a fluid sense of time and fall into flow. To reach flow, we need to first experience the Newtonian clock-time to understand the basic structure, and progress into Bergsonian event-time to allow for flexibility. Secondly, in order to attain flow in social dancing there needs to be enough time to get to know the partner in order to build trust and loosen up. To help reach a flow state, people use personal techniques to comprehend their experience with the support of their interpretation of time and spatial awareness. Some scat whilst other count as a measure of time. Some visualise the shapes of the steps and movement, either from a bird's-eye view, from their own perspective or even from a third-party perspective. These can be notated in various forms, such as sketches, routines or notes. These personal memorising techniques support that making a strict universal scoring system is questionable, as each person has their own perception, interpretation and experience.

Although dance could be compared to language due to its similarity in structure of vocabulary, grammar, semantics and articulation, perceiving it as language between performer and audience is simplistic. The audience will always read into a performance, whether it has meaning or not. There is a rich non-verbal dialogue between dancers which is impossible to score as it is beyond responding to the partners movements. Visualising connecting points does not communicate whether the connection was intended, an accident, considered good or destructive to flow. It shows that there is a dialogue, but not what it is. Openness is a quality that helps keep a good connection. Each partner interprets and articulates music differently, therefore listening and responding to unexpected movement is crucial to a flowing dialogue. This cannot be recorded as it is in somebody's head. Documenting dance should not only focus on steps, but also on the culture, ambience and dialogue. This is why there is a need of person-to-person contact to learn it from. Teachers could compare elements of a dance with

shapes or sounds to break time or cultural boundaries. They should be aware that their perceptions shape the way the style is interpreted by students. Dances continue to evolve due to time, location or cultural context. It is too difficult to control or freeze the evolution. Since dance styles are always in flux, it is difficult to contain them within a time period or location. This should be considered as a feature, not a risk. The traditionalists capturing steps that were improvisations is paradoxical and stringent. Personally, as long as the dance is easily identified through steps and essence, it is sufficient. Even the dancers' dialogue is unique and unreproducible, yet the openness within should remain. Exploring to what extent an experience such as dance can be truly captured revealed that transcribing only tangible and structured elements is not enough. Recording the culture and atmosphere would also help my personal notes in retaining the current essence of different dance styles I'm learning. Conveying a deeper connection, interpretation and perspective is vital in creating a bigger picture. Keeping those factors in mind would also allow for a better understanding of how to capture other experiences. Cultural appropriation in dance also relies on the same factors, even if the aim of the study may be different. Both topics have potential to become future research possibilities to explore the way we document life and share perspectives.

NOTES

Introduction

1. As opposed to what seems to be the most obvious answer, video is not a great means to document dance. It's commonly filmed from the audiences' perspective and fails to capture what the dancers themselves are experiencing. It is not an easy tool to learn from either. When watching steps or movement, the video needs to be paused and replayed in short clips numerous times in order to process the information and copy it.

   Additionally, filmed dances usually have a purpose, either entertainment, education or as a memento. These are prepared ahead of time, and communicate differently, depending on their essence. The archived clips that dancers use to interpret moves are all performances or choreographies. These practiced routines do not communicate the spontaneity of the dance. The dances were loud and ecstatic as they were filmed for television entertainment.

2. *The Spirit Moves,* by Mura Dehn, is a 1989 three-part documentary film attempting to preserve the development of African American social dancing styles from the turn of the century till 1980s. Part one focuses on jazz dance from late 19th century till 1950s. As Dehn only started documenting in the 1930s, she faced the problem of finding older dances performed in new venues. She recruited professional dancers

to demonstrate the older styles in a studio setting. This already hinders the purity of the content as it was taken out of context - with different people at a different time. Her narration explains some history or context of the styles, yet with the example of the Cake Walk, the politics of the style were not truly explained. In addition, due to technical limitations, the soundtrack was added after recording the visuals. The documentary features music of the same style as danced by the performers, but not necessarily the same song. This is very clear throughout, as the visuals do not match the audio, the dancers are not moving to the same beat as the music. If so much was manipulated, it does not portray the dances accurately. Cinematography as a means may preserve some choreography and it could capture the feeling, yet it is not clear to learn from and it may have a subjective view.

3. The Cake Walk was the first African American dance accepted by the white society in America. It was considered to be their own ballroom dance. Slaves dressed in suits, wearing top hats and sometimes using walking sticks, would perform this style to their masters for entertainment. The masters would create competitions for the best performance. The winner would be awarded with a cake - hence the name. Little did the masters know that this style was made to mock them and their mannerisms.

Chapter 1. History of Swing: its birth and revival

1. Swing originated from African American dance forms of slaves and plantation workers. Animal Dances, or Plantation Dances, such as the Grizzly Bear, the Turkey Trot, the Camel Walk and the Bunny Hug, became further widespread. Slaves would teach

these steps to their masters, who wanted to break loose from the slower and 'outdated' ballroom dances. They would dance them at upperclass private parties which was considered very risqué in the white community. (BBC, 2017, 5:38)

2. Thanks to the spread of popularity of rag-time music to Europe in the late 19th and early 20th century, American and African American dances were introduced by the travelling upperclass. Vernon and Irene Castle were Broadway dancers who taught and performed rag-time dances, including the Grizzly Bear, the Turkey Trot, in France and England. They moulded African American dances to suit the white European public, breaking the stigma of risqué and closed position dancing. Their impact on British dance was thanks to their 1915 silent feature film, The Whirl of Life. It was the first instructional dance film. (BBC, 2017).

3. Swing dances could be categorised into a few distinct styles, each originating from a different place in the United States. Lindy Hop started in Harlem, New York, Charleston in Charleston, South Carolina, Balboa in Newport Beach, California, and Shag in South Carolina.

4. The Savoy Ballroom was located on 596 Lenox Avenue, between 140th and 141st Streets in Harlem, New York between 1926 and 1958. It had an approximately 10,000 square feet spring loaded wooden dance floor and it could hold up to 4,000 people (Watson, 1999). It was very popular and radical as the crowd was integrated - not only being in the same venue, but interracial dancing was completely accepted. It was considered as the ballroom because it had the best musicians, and thanks to that they attracted the best dancers. Chick Webb was their house band. Other guest musicians included: Benny Goodman, Count

Basie, Billie Holiday, Ella Fitzgerald. (Manning and Millman, 2007, p.69).

Chapter 3. Graphical Dance Notation

1. In 1938, composer John Cage worked with and accompanied choreographer Bonnie Bird at the Cornish College of the Arts. Cage was interested in percussion, dance and body movement. He stated in Goal: New Music, New Dance (1939) that dance should be freed from dependence on musical structures (Cage and Gann, 2013). In 1940 he met dance student Merce Cunningham, whom became his creative and romantic partner for the rest of his life.

   Cunningham became a choreographer and used systems as a creative method. His work Root of an Unfocus (1944), was a part of Cage's solo concert. Cunningham stated that "I date my beginning from this concert" (O'Mahony, 2000). Cage's scores were completely independent of Cunningham's performance, their only consistency was that they started and ended at the same time. Cunningham used a mathematical system to divide the dance into sections that corresponded to certain square roots.

Chapter 4. Dissecting Dance into Layers

1. The score of Fontana Mix (1958) by John Cage is a system which can be used by anybody to create music. It consists of twelve papers with curved lines, ten transparent film sheets with randomly distributed dots, a transparent film sheet with a straight line and a transparent film sheet with a grid. A list of

instructions is added to understand the procedure of creating a personal score. Layering the sheets create different outcomes. The intersections of the straight line, two circular points, the grid and curved lines create values. The representation of these measurements are meant to be interpreted by the creator. These could be tone, pitch or volume.

2. Choreology (noun) is the notation of dance movement.

3. Ballroom and Latin dance styles: Cha Cha, English Waltz, Foxtrot (Slowfox), Jive, Paso Doble, Quickstep, Rumba, Samba, Tango and Viennese Waltz.

4. Dancer, musician and founder of Imperial Society of Teachers of Dancing, Victor Silvester, was a driving force in standardising the tempo of ballroom dances. In 1935 he formed a "Strict Tempo" orchestra that played recordings for ballroom dancing, which are still used to this day.

5. International teachers could be considered as mini-celebrities within the swing community. They compete in competitions and travel the world to give high-end workshops.

Chapter 6. Memory and Flow

1. Experiment #2: Jive Mix Up was developed and resulted as a performance piece at De Player on 24th March 2017 as a part of their Tetra Gamma Circulaire #3 issue in collaboration with Piet Zwart Institute. My dancing partner and I danced jive steps on stage which were articulated through an interactive web interface by the audience. Specific jive steps were announced live through a speaker after the appropriate step button was pressed by the audience on their phones. If no instruction was

given, we would stop performing. It was up to the audience to figure out when to press the buttons to keep the dancers in flow. The audience learned the scoring system using trial and error, used it, and started creating their own choreography. Becoming puppet-masters allowed them to fall into flow without dancing themselves.

2. Mihaly Csikszentmihalyi's key points that prove we have obtained it are:

- Completely involved in what we are doing - focused, concentrated
- A sense of ecstasy - of being outside everyday reality
- Great inner clarity - knowing what needs to be done and how well we are doing
- Knowing that the activity is doable - that our skills are adequate to the task
- A sense of serenity - no worries about oneself, and a feeling of growing beyond the bounderies of the ego
- Timelessness - thoroughly focused on the present, hours seem to pass by in minutes
- Intrinsic motivation - whatever produces flow becomes its own reward

Chapter 7. Other Dancers' Scores

1. The amount of people from all the swing communities from South Holland is in the hundreds. It is difficult to distinguish who falls into which community, as many dancers travel to different cities for classes, workshops and parties on a regular basis. Facebook in a popular tool used by the dancers to keep track of

events. For a comparison, the amount of Facebook page followers per community are as followed:

Hague Hoppers from The Hague: over 750
Key Town Swing from Leiden: over 400
Lindyhop in Delft from Delft: over 250
Roffa Swingt from Rotterdam: over 800

Other big communities in The Netherlands include:

AlgoRhythm from Amsterdam: over 700
Lindyhop Eindhoven from Eindhoven: 400
Sugarspin from Groningen: over 250
Swing in Utrecht from Utrecht: over 2000
Swing Shakers from Tilburg: over 600

Chapter 10. The Telephone Game

1. The Shim Sham is a 1920s tap dance. The origins are difficult to find due to disputes of the creators Leonard Reed and Willie Bryant. A characteristic step, the Tacky Annie, was also taken from Jack Wiggins. The simple routine is made up of four steps: the shim sham, pushes with a crossover, Tacky Annie and half breaks.

2. Some schools may teach the Shim Sham routine to "Tuxedo Junction" by Erskine Hawkins & His Orchestra.

3. An example of mild swing dance traditionalists are The Big Apple Lindy Hoppers, a semiprofessional troupe of swing dance performers. The group was founded in 1986 by two members

of the NYSDS. Although previously Frankie was the coach and choreographer, today they remain devoted to preserving and presenting Frankie's choreography and style. (Manning and Millman, 2007, p. 16)

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APPENDICES

Appendix 1

Experiment #2: Basic Choreology Analysis

When looking at dance mats which learn how to dance basic steps of dances, I understood why lesson lead by humans are still favoured. The step mats are too simple; they are missing the speed, tone and rhythm that are vital aspects when learning any dance.

For each ballroom and latin dance style, there is a strict set of moves. Each dance has a characteristic tone, speed and rhythm. For many dance styles the choreography needs to be performed in a particular order. What would happen if the characteristic aspects were altered?

Changing the speed causes the tone to change too. Taking the Waltz as an example, a slow, graceful and romantic English waltz, when sped up, becomes a joyful, energetic and playful Viennese waltz.
The rhythm is the back-bone of a dance style. Without it, it would be very difficult to identify a particular dance. Music chosen for dances is primarily based on the count and whether it matches the timing of the dance. It could either use a 3/4 time (1, 2, 3) or a 4/4 time (1, 2, 3, 4).

If I am able to match songs to particular dance styles, and I am able to identify a dance style by its rhythm, would I be able to convert that knowledge into simple infographics?

Task:

1. List all dance styles
2. Illustrate movement using choreology
3. Explain rhythm in words
4. Illustrate rhythm using choreology
5. Analyse differences between dances

Subtask:

6. List a few songs that (personally) suit each given dance style
7. Find average BPM (beat per minute) for each song
8. Research what the average recommended BPM is per style
9. Compare my BPM range with recommended BPM range

BPM ranges were compared with the following sources:
- Sheris Musings (Leblanc, 2011)
- Beats Per Minute Online (Beatsperminuteonline.com. n.d.)
- Hollywood Ballroom DC (Gross, 2012)

Cha Cha
one, two, cha cha cha

English Waltz
one, two, three (slowly)

Foxtrot
slow, slow, quick, quick

Jive
one, two, shu-ffle one, shu-ffle two

Paso doble
a one, two, three, four, a five, six, seven, eight

Quickstep
one, two, step-step

Rumba
and a one, two, slide
Samba
one - and a - two - and a - three - and a - four

Tango
slow, slow, a quick, quick, slow

Viennese Waltz
one, two, three (quickly)

CHA CHA		
Song	Artist	BPM
Cake by the Ocean	DNCE	119
Mercy	Duffy	130
El Chacal	Jose Conde	118
Mambo No. 5	Lou Bega	174
Smooth	Santana	116
My range		116 - 130
Range: Sheri Leblanc Musings		approximately 112 - 128
Range: Beats Per Minute Online		120 - 128
Range: Hollywood Ballroom DC		112 - 128

ENGLISH WALTZ		
Song	Artist	BPM
Moon River	Audrey Hepburn	92
La Javanaise	Madeleine Peyroux	108
Come Away With Me	Norah Jones	81
Nocturne	Secret Garden	80
My range		80 - 108

ENGLISH WALTZ		
Range: Sheri Leblanc Musings		approximately 90 - 100
Range:		84 - 90
Range: Hollywood Ballroom DC		84 - 93

FOXTROT (SLOWFOX)		
Song	Artist	BPM
Why Don't You Do Right	Dean Martin	113
James Bond Theme	Monty Norman	116
Walking My Baby Back Home	George Benson	110
Fever	Michael Bublé	128
Fly Me To The Moon	Frank Sinatra, Count Basie	120
My range		113 - 128
Range: Sheri Leblanc Musings		approximately 120
Range:		112 - 120
Range: Hollywood Ballroom DC		112 - 120

JIVE		
Song	Artist	BPM
You Make My Dreams	Hall & Oates	167
Doin' It Right	Power Blues	165
My range		165 - 167
Range: Sheri Leblanc Musings		approximately 180
Range: beatsperminuteonline.com		168 - 184
Range: Hollywood Ballroom DC		152 - 176

TANGO		
Song	Artist	BPM
La Cumparsita	Carlos Di Sarli	116
Santa Maria	Gotan Project	118
Una Música Brutal	Gotan Project	107
El Tango De Roxanne	Jose Feliciano	108
My range		107 - 118
Range: Sheri Leblanc Musings		approximately 120
Range: beatsperminuteonline.com		80 - 160
Range: Hollywood Ballroom DC		120 - 132

VIENNESE WALTZ		
Song	Artist	BPM
Waltz No. 2	Dmitri Shostakovich	187
The Blue Danube	Johann Strauss II	183
Vienna Blood Waltz	Andre Rieu	190
Sleeping Beauty	Tchaikovsky	190
La Valse d'Amelie	Yann Tiersen	192
My range		183 - 192
Range: Sheri Leblanc Musings		approximately 190
Range: beatsperminuteonline.com		174 - 180

PASO DOBLE		
Song	Artist	BPM
Cielo Andaluz		112
El Gato Montes		116
El toro de tu sueno		120
My range		112 - 120
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		120 - 124
Range: Hollywood Ballroom DC		112 - 124

QUICKSTEP		
Song	Artist	BPM
Rock It For Me	Caravan Palace	212
That Man	Caro Emerald	207
Tangled Up	Caro Emerald	202
Mr Rock & Roll	Amy Macdonald	222
It Don't Mean A Thing	Geoff Love Orchestra	199
My range		199 - 222
Range: Sheri Leblanc Musings		approximately 200
Range: beatsperminuteonline.com		200 - 208

QUICKSTEP		
Range: Hollywood Ballroom DC		192 - 208

RUMBA		
Song	Artist	BPM
Chan Chan	Buena Vista Social Club	81
Sway	Dean Martin	120
Girl From Ipanema	Joao Gilberto	128
Those Sweet Words	Norah Jones	103
My range		81 - 128
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		100 - 108
Range: Hollywood Ballroom DC		96 - 112

SAMBA		
Song	Artist	BPM
Tu Picadura	Dancelife	102
Dejarè La Puerta Abierta	Danilo	100
Bailar	Deorro ft. Elvis Crespo	128
Suavemente	Elvis Crespo	124
Lambada 3000	Kaoma, Gregor Salto	127
My range		100 - 128
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		96 - 104

SAMBA		
Range: Hollywood Ballroom DC		96 - 104

Summing up this exercise, I can conclude that it was difficult to illustrate the dances that don't have a specific 'shape' in its direction, but rather go around the room. Those dances are: foxtrot, paso doble, samba, swing and tango. Explaining the rhythm in words was the easiest as it is regularly used during beginner classes. The hardest task was to illustrate the rhythm using choreology. I had to multitask: count the beats by tapping on my thigh and say the rhythm out loud while dancing to see how they all overlap.

The second part of the task wasn't necessarily essential to analyse choreology, yet it was interesting to see how the BPMs from different dance styles compare.The cha cha and foxtrot have similar BPM, yet the tone is very different: one is youthful and playful, the other graceful and glamorous. I was surprised to see that samba has a relatively low BPM, as it is a very fast choreography filled with constantly changing positions.

Appendix 2

Research: interview with Earanee Niedzwiecki

Earanee: My name is Earanee Niedzwiecki. I am a dancer from Adelaide, Australia. I have lived and danced Lindy hop in a few different places around the world. Most recently, I've been based in Melbourne in Australia. Well actually, most recently I've been based in Luxembourg for the past two months or so, teaching a swing dance residency here with another instructor, Adam Brozowski. I have been dancing Lindy Hop for maybe a little bit over seven years, so relative to some teachers, not so long. But sorta fell madly passionately in love with it after the first lesson, and I've done a lot of travelling since then to try and explore kinda what the dance is like in a lot of different places. For me, a lot of the interests comes from seeing what happens in different communities and seeing what preferences different communities have. Visiting a city in the States and going to their local social dances for a week or something and meeting people there and seeing what their tastes and interests are. That has been my way of travelling around exploring as well as attending big events. For myself I'm very much invested in the connection that Lindy Hop can create between people. And not necessarily even thinking about it as a community, although that's kinda what ends up happening, but thinking more about sharing with others and building empathy and interest in other people.

Karina: That's a beautiful introduction. Wow! Jumping into my planned questions - thank you! I had some very simple three questions to begin with. When did you start dancing?

E: So 2010, sometime in the earlier part of the year I guess. So probably, yea maybe, I can't remember. It was around a friend's birthday, so probably would have been April I guess.

K: Have you tried, or are currently dancing other type of dance styles?

E: When I was young, very very very very young, I did jazz ballet. Unfortunately, that was not something I was able to keep doing growing up for reasons, you know, just family wise, that didn't really work out. Other than that I've done, I haven't studied anything else in length. I did a little bit of different kind of dance, but not so much probably other than swing kind of umbrella dances. I've done African dance the most, but even then, it's probably in this last year, that I have really started getting into that. And that was taking classes in Melbourne.

K: Wow, that sounds fun!

E: Yeah it's really good yeah. You really start to see some of the influences in jazz dance, like where they come from when you learn African dance. And I mean African dance again is such an umbrella term. There's a whole continent there of dance, traditional kind of dance styles and some not so traditional too. The teacher that we had in Melbourne was I believe from Ghana and he taught us dance that was sort of from his region but also he tried to give us a taste of some dances from other places in Africa too. It's also all about rhythm. It's about moving the whole body, which I think is really good, especially for swing dancers. We tend to focus on connecting with our partner and feet a lot. But African is really great just getting everything to move.

K: What makes social dancing special for you?

E: I guess I touched on it in the intro. I guess connecting with other people is why I like it the most. And I like the improvisational nature of it too. I think there's a certain.. when something is done in the moment there is a certain kind of expression and a certain freedom that you can't really get from choreographed dance. Every social dance you ever

have in your life, as a social dancer, is different. Particularly in something like Lindy Hop where, you know, we've really tried really hard not to standardise a dance, so there's quite a lot of freedom in how you choose to express yourself and what influences you can draw from. Because of course we have these fundamental steps and ideas that come from when the dance originated, but the individual is allowed to bring a lot to the dance themselves. For many of us we were influenced by the culture that we've grown up in. So whether that's people who, you know, have been dancing now for a really long time, maybe they went out in the '70s and went clubbing and they are influenced by disco. Or people on this kind of area Influenced by hip hop or contemporary dance or these other things.

E: My battery running low. Hold on a second. Yea. I will have to pause.

E: So I guess it's the freedom and that's what I like about social dancing vs. performance. I think there's a different.. You connect with the person you dance in a different way when it's improvised. You also connect with the music in a different way when it improvised.

K: That's nice. It's still something I'm learning to get it quite right. In different type of dancing I got it, but in swing I'm still getting there. It takes a while.

E: Yea, yea, yea it does.

K: It's not something you pick up in the first month of classes.

E: Yea particularly, like for a lot of people that come to this dance, maybe they know the music a little bit, but it's often quite unfamiliar to people. So, you know, if you've grown up since you were kid with soul music for example, like kind of figuring out how to move to that, it's

a little bit more, maybe you don't have a whole bunch of moves but at least kinda the feeling is there of how it works. Whereas with jazz, modern Lindy hoppers don't have much exposure to jazz, or really even thinking about moving to jazz. So yea, it's definitely, just working out how to get into the groove of it is a whole 'nother thing.

K: I'm looking at.. There are different notation systems that have been made to capture dance and this movement to the music. The music has a very successful standardised system of scores and people all accept this is the way. With dance that's not the case. Some people tried to make their own systems. There are things like the very popular in the '90s dance mats with footsteps and numbers - it's great, but it only communicates the actual location and order, but it doesn't communicate a whole range of different things. Whereas there is Labanotation. Have you seen it?

E: Maybe, but I wouldn't recognise it by it's name.

K: I have a picture right here. It is something that looks absolutely beautiful but it is overwhelming.

E: Oh my god! That is amazing!

K: It communicates direction, body parts, intention, but it also doesn't communicate certain areas. It communicates a whole range of things, but still not everything. I tried to decode it myself and learn it. It is difficult!
E: Yea ok. There's a dancer, I don't know if you've spoken to her yet. Irene, she's Greek. She's actually teaching in Luxembourg this weekend, at the same workshop Adam and I are teaching at. If I recall correctly, she does visual art, some kind of art, something. I don't know her very well. Should did some kind of project that involved this, I don't know if it's

this particular type, but it was some kind of dance language notation. So she might be a good person to talk to about this stuff because she, I don't know how much research is done, she might know some stuff about that too. Might have thought about all of this stuff.

K: Do you have your own system of capturingdance? Of remembering dances, memorising new things?

E: I don't really have a system. I would say that, for me, I think that one of the reasons I'm drawn to dance, I think, is that I'm a very visual learner. So I tend to learn by audio and by watching. I have a good sense of direction, I have a good memory for where I've been, places, that I can kind of remember what a movement looks like. And then my goal is to try to of emulate the feeling in the best way that I can. Terrible memory for anything in writing. Absolutely horrible. So for me, I think, rhythm is kind of where I try to start. I think that is often something that newer students maybe miss. Either it is something that they are not very practiced in kinda training in their mind to really kinda understand rhythm. If they are not, you know, musicians or something. A lot of people don't have that much of a sense for it, particularly Western cultures these days. I think really relying on understanding the rhythm that you are going for, informs a lot of the movement. The way that you articulate that sort of vocally, doesn't have to necessarily be about exactly when your foot hits the ground. You can also, like, skating for example. You can use that to articulate movements that are in the arms or in the legs when they are not making, when something isn't making a sound. For myself, I guess, I try to watch and learn and really internalise the rhythm that the person is kinda getting or going for, and then I use that as a kind of basis for everything else. As far as further systems, we do have video. So learning by video is the other way.

K: If you could invent any type of machine that could capture things

that are missing, what would you capture. You mentioned rhythm was an important one. Do you think there is a way to capture rhythm in any way?

E: Yea, I don't know about that. Maybe there would be some way of taking an old clip that doesn't have audio. And I don't know how anyone would ever do this, but translating the footwork into some kind of rhythm, or particular shapes, or yea, movements, whatever, into sounds, that maybe would help people to learn. But then again, I think also the way that a particular movement sounds is going to be different for different people because, I think, I mean, even with scatting I find in classes, like if I'm teaching with somebody else and we want to scat a rhythm of something that were teaching, each of us will have a different way of articulating that. So yeah, I think there's a difficulty because so much of it is genuinely, I think, an intangible kind of feeling that is experienced. And how to put that in words, or sounds or visuals is quite challenging, I think.

K: Great answer. There is one thing that is one of my favourite things in dancing and it's that non-verbal communication you have with someone. And while you're dancing, the other person does something you didn't expect. It becomes almost a non-verbal joke. Because that's what jokes are, something you don't expect and it makes you laugh. You're dancing with someone and all of a sudden, there is silence between the two dancers, although one person cracks up and laughs. It's such a sweet moment, either to experience or see someone else experience. In videos of couples dancing in competitions, Jack and Jills competitions, where you get partnered up, at the beginning people are trying to understand one another, and then you can tell their chemistry worked or how quickly someone fell into flow. Someone laughing randomly is such a sweet moment. I love experiencing it or seeing others experience it. It's such a magical and intangible thing you cannot

explain. What do you think makes chemistry between people work?

E: The dance context, uuh, fuck, I don't know. I guess, there's kind of few things that play when it comes to a social dance. I think is hearing the music in a similar or at least a complementary way. There was someone that I danced with a lot back in Adelaide that I also taught with a lot, and he and I have a very similar ear for music. In fact some of what I hear, or what I focus on in the music may be developed by dancing with him a lot too. So we would kind of hit the same things, or feel like there is a certain connectivity in that, like "Oh cool we both, you know, hear the same thing and we both managed to do the same thing at the same time and that was cool". One of my, "dancing partner', is a very loose term because we lived in very different places for most of our time dancing together. But we taught workshops, he's a dancer, kind of from Australia, New Zealand, every country, Sri Lanka, but he and I have always had a very very connected dance chemistry, even from when we were fairly new dancers. And a lot of that is not necessarily from hearing the same way but hearing music in a way that was complimentary. So maybe we would hit different things, but we would know the thing I would do, would be complementary to what he would do. Then would also learn how to draw from each other. I think also just the dynamics of that lead-follow connection that makes a bit of a difference to chemistry in a Lindy Hop context, because, as I said before, there is so much freedom in the way that we do these dances. That, you know, you have these different styles. You have the Harlem Savoy style which is Frankie Manning's way of doing Lindy hop. That kind of inspiration. Then you have, you know, more so in the old days The Hollywood kind of style of Lindy hop and the way of connecting in those two dances. There is a lot of shared similarities and people who do both of those, at least now they can find ways to connect with each other and have a perfectly successful and fun social dance. But I think, like, people who are on the opposite ends of the spectrum are less likely

to kinda have as of a connected chemistry, as maybe if they danced with someone who's got a more similar style of connecting physically and articulating the rhythm. So there's all of this kind of stuff at play, but I also think openness is just, it makes a big difference to the kind of chemistry that you can develop with someone as a dancer. People who really are attentive to their partner, and try to remain open to the possibilities, open to surprise and all this kind of stuff, like, those kind of dancers often are able to just connect better and build better chemistry with people around them. So if you have two people who are like that dancing together that's something special, as opposed to someone who is open and someone who is closed off from their partner.

K: You mentioned Frankie and it's something I have to mention in my thesis. It's one of the things that gets people who aren't dancers interested in the topic. I explain to them this is a dance style that almost died out. Its partially what archiving is about - about holding on to something. So things don't disappear. It really amazes people how it is two people who managed to, because of their time and enthusiasm, that want to spread that information and connect with people. That's something that definitely gets people from the outside of the dancing world really interested. How did it happen that is was just technically two people that brought it back? Obviously there are videos from those times and people could look back. But I think they made a big difference. Do you think swing would have made a come-back without them? Was it inevitable?

E: Hmm, that's a very interesting question. Well, I'm probably, not the best person to ask because I started dancing after Frankie passed away, so I never had the fortunate learning from him. I guess I have learned from Norma Miller and from Dawn Hampton who both are, Norma still is, both very pivotal in kinda sharing the dance and the feeling of the dance with everybody. I don't know that it wouldn't done. And this

maybe comes down to something you are trying to look into, is that, is I think without those, without Frankie, or without those connection to the way the dance was done, I don't know that people would have really been able to capture exactly the feeling, especially of social dancing because you can watch, I mean, most of the videos that are available are choreography, even from the Savoy ballroom. From what I've seen, it's mostly contests. A lot of the social dancing videos that are out there, is stuff that, you know, is basic things, tuck turns and so on, and stuff from choreographies, so it's not, not as open in what's being shared between people. A lot of the times music is faster too, it captures a specific bracket of what a dance is. I think, from what I've heard from others too, I'm sure that Adam or someone can speak more about this, but, I think someone like Frankie and someone like Dawn too, Frankie really, you can see it when you see him dance, social dance as an older person, you can really see how open he is. A lot of people say that he was really really loving and really caring and wanted to share things with people, was really happy, and not protective, or defensive, he was just very open, sharing kind of person. I think him coming to the scene teaching people, not just the steps, but how to be open with each other and how to treat each other, I think that really helped him form people's understanding of what the dance is meant to be. Perhaps without those kinds of connections, it might not have had a true resurgence. It might have been more, like, something like a lot of rock and roll to me ends up looking like - a lot of moves, but not necessarily a lot of heart.

K: Is there anything you would have wanted to ask Frankie, or would still like to ask Norma?

E: For me probably, would have been questions about the music. About his experience with the music, and maybe a little bit less about the dance, because I feel like you can read a lot of that from watching him dance. I guess I wanna know a little more about the music that was

played at the Savoy, because I'm aware from his book and other places that there was a range of tempos. Chick Webb's Band played, but there were also other bands. I'm particularly interested in the scope of the music that was social danced to and the dynamics of the ballroom, outside of the Cat's Corner and the contests. Something along those lines.

K: How do you think Frankie and Norma would have answered the question: to what extent can we archive dance?
E: I don't know. I don't think I know either one of them well enough to know what their answer would be. I think both of them would have different answers on how we can archive the dance. I think, like a lot of these kinds of, particularly a lot of the stuff comes out of African culture, African American culture, and the lot of indigenous cultures as well, is very much things being passed on verbally, or by song or by dance - word of mouth. I think, as much as we can strive to record the dance so that it can continue to be done in exactly the same way, I don't really know there's a way to do that, because much of it is feeling. And I think actually the dance today is very, in so many ways, very different to what it was. I don't think that's a bad thing, as long as there's a strong tradition of really trying to understand and connect to the music. The music is always going to keep the dance true to its origins. Whereas west coast swing for example is something that diverged wholly. It's not a swing dance anymore. The dance is a swing dance, but the music is not swing. So is it a swing dance? As long as the music and that rhythm is at the root of what we are doing, I think that actually for it to evolve over time, for it to change and adapt to people who are doing, is a good thing. It captures what the people who are doing it need.

K: I have a thing called 'Final Swing Out'. I'm going to fire short questions at you. There are no right or wrong answers. Just say the first thing that pops into your mind. Just one or two word answers. That's it.

K: Favourite song?
E: Oh my god, oh my god. Shiny Stockings, but not if I have to hear it all the time.

K: Best dance memory?
E: I had a dance with my friend, that I mentioned earlier, his name is Charith. We had a dance in Australia a year and a half ago, or so. It was like floating on a cloud. And I've heard so many good social dances. It was the most connected and joyful, rhythmic and simple, beautiful dance. That's my best memory.

K: Where is your dream place to perform?
E: I haven't done it yet so, but I'm hopefully going to at the end of the year, so it could be absolutely horrible. But I think something at the event Lindy Focus because of the kind of approach that Michael Gamble and his wife … (Jay) have to the dance and the stuff that they try to showcase in the community and build in the community. Their values are close to my values, and being a part of that would be really great.

K: Favourite dance partner?
E: Sorry everyone. Charith, Charith.

K: 40 or 250 BPM?
E: Oh 40?! Ha, either. That's so slow.

K: Favourite dance shoes?
E: All the best dance shoes I ever had were street shoes that I bought. But dance shoes, I had a really good pair of Balboa Zins.

K: Most comfortable dance shoes?
E: The boots that I bought from the street. The brand was called to Briar Vista (?). It's really good.

K: Best performance you've seen?
E: That I've seen? But it's kinda a social dance, but Dawn Hampton dancing at Herrang.

K: Which country has the best dancers?
E: Well kinda the US. I could say Sweden probably pretty happily. Lithuanians are amazing. I love Australia obviously. But the US has all of these people who we don't see in videos, who have been dancing for forever, who really get it. So the US.

K: Signature step?
E: I don't think I can answer that. I really don't know. Swing out!

Appendix 3

Experiment #3: Jive Mix Up

A jive is a faster paced dance originating from African American swing dances from the 1930s. Unlike many ballroom styles, jive is not danced anti-clockwise around the room. The steps allow the dancers to stay roughly in the same space - swaying left / right / front / back within an approximate 3m radius. Each step, like in many dances, has it's own name and is usually contained within a count of eight. Unless in competitions, the steps should be danced in their given order. This structure not only allows for a better flow and communication between the partners, but also makes it easy for teachers. Students are required to know specific steps / moves that fall into that category before passing to the next level. Being able to name these specific steps helps with the communication between teacher and pupil.

Keeping that in mind,

- What would happen if we broke down the structure / order of the dance?
- How will that effect the flow?
- How will our memory work?
- Will we be more conscious of what we are doing?
- Will I need to let my parter lead me more? More trust if less anticipation?

Task:

1. Select 6 steps from a jive
2. List them in order using names / terminology and number them 1-6
3. Roll a die and note down the outcome

4. Repeat step 3 a couple of times
5. Rewrite steps in new order using step names / terminology
6. Dance the re-constructed jive
7. Describe experience (use questions from above)

Jive first 6 steps

1. Basic Turn
2. Follow the Leader
3. American Swing
4. Bump
5. The '1-2'
6. Windmill + Spanish Arms

New order
3 - 1 - 6 - 2 - 4 - 2

American Swing
Basic Turn
Windmill + Spanish Arms
Follow the Leader
Bump
Follow the Leader

The Basic Turn, American Swing and The '1-2' are danced on one axis (left-right / horizontal), Follow the Leader and Bump are danced perpendicularly to that axis (front-back / vertical). It wasn't easy to always keep to the originally given horizontal or vertical direction, so we needed to experiment whether it was possible to switch the axes once there was a new order of the steps. With some practise, we got a hang of it, and understood that the structure was able to be modified not only by the order of the steps, but their direction too.

It was challenging to grasp a flow while dancing. Once we knew which step to dance next, the following 8 counts were easy, as we were using our procedural memory. The moment when one step ended, and a new one started, is when we noticed hiccups in our fluidity. Our brains needed to process new information: what is the new step; in which direction will it go? Stopping every 8 counts to analyse the further steps broke the flow of the dance. With time we tried to memorise two or three steps in a row to reduce the stopping of the dance, but as soon as one forgot, or remembered a little too late, that reflected on both of the dancers. We needed to communicate ahead of time what step would be next in order to continue the movement. This though still broke the flow, as we were focused on exchanging information among one another, rather than falling into rhythm and simply dancing.

There could be two possible solutions for a smoother dance:
    A) The lead dancer could have the new order written on a post-it,

which could be stuck to the forehead of the follow dancer. He would be able to anticipate the next move by reading it ahead of time off of their partner. The follow on the other hand would need to listen more to their partner's body language to anticipate the next step. Trust between the two partners would play a larger role in this scenario, then when danced in the regular order.

B) The name of the next step could be said out loud by a spectator ahead of time. This timing would be crucial, as it cannot be said too late. The spectator would have to understand when a specific step is about to end, in order to suggest the next step in time for the dancers to process that information and prepare for this upcoming step. Both dancers have a disadvantage here, as neither can guide the other, like in solution A. Both dancers need to listen to each other's body language to flow into the next step, in the same direction.

In conclusion, changing the structure of the dance style, doesn't necessarily break flow. The short moment when connecting individual steps together in a new order was when flow was interrupted. It was no longer smooth thanks to our procedural memory. Our brains needed to process a collection of information, in a short amount of time, large enough for us to be confused. We no longer danced without thinking.

Appendix 4

Experiment #4: Learning a New Dance Style

Throughout the years, I have tried many different dance styles: from ballet to hip hop. Ballroom and latin just seemed to stick with me. One of my favourite dance styles is the jive. Knowing that it originates from swing, and that there are many great styles that fall into that category, I decided that I wanted to learn the basics of swing. I managed to book a private lesson with Swing in Rhythm dance school to see my experience of learning a new dance and to see whether I can achieve flow.

There were many questions in my mind before the class started:
- How similar is it to what I already know from ballroom?
- How similar is it to a jive?
- How long will I need to learn the first level?
- Will I manage to remember the terminology?
- Will I remember the dance once I get home?
- Will I be able to fall into a flow? How long will it take?
- What will be the experience / connection with a new dance parter?
- Is swing just as addictive as they say?

Task:

1. Find new dance style to try
2. Organise private classes with an instructor
3. Note down questions that arose before the class
4. Go to dance classes unprepared (didn't look up steps, rhythm or what to wear)
5. Note down experience once the class is done
6. Conclude with relevant research and possible further research topics

The classes took place in a temporary anti-kraak studio in Rotterdam. During the first few minutes we set up the place: the speakers needed to be turned on and the music chosen from a playlist. Whilst he changed into his dancing shoes, I asked whether my sneakers were fine. He explained how sneakers with a suede sole would be better - less friction - and showed his DIY shoes. It's possible to do it on a budget. As he was busy setting up, I listened to the music and started to get a feel for the tone.

Our first contact was a little stiff. I wasn't sure what he expected or how he wanted to approach this, so I was open to anything. He started off by standing next to me facing the mirror and tapped out the rhythm. Slow, slow, quick, quick, quick - left, right, left, right, left. He continued and I copied. We repeated it until I would get a hang of it, but soon realised I was making a mistake. I was double-tapping at the end of the rhythm. My body wanted to naturally end in the position it started, but turns out the feet / tap coordination alternates every phrase - count from 1 to 4. Once he added direction into the footwork, my confusion with double-tapping instantly stopped. Did my brain categorise the steps and rhythm once a new layer of information was added to the equation?

Once that was mastered, we started dancing together. He led me up and down the room, taking few steps forward or backwards in no particular order. I really needed to anticipate his every move, whilst still trying to process the rhythm in the background. This proved to be a little difficult, and I really felt the precision in my steps, and lack of connection with the partner. I forced myself to stop thinking about what I am doing, and my footwork, rhythm, and fluidity with the partner instantly felt smoother, at ease, uninterrupted.

Once the basics were covered, he started showing me different moves, which I tried to visualise from a bird's eye view - just like in Experiment #1. I started comparing them to jive and other ballroom styles. Turns out they did not have that much in common. I stopped with the comparisons, because I figured it's a new dance. No previous knowledge will make a big difference - it may even slow me down from learning something new. The only aspect that was similar was my technique to learning a new dance: listening to the music, and trusting my partner, which helps tremendously with anticipating the lead and fluidity in movement.

To smoothen our connection, he gave me feedback to stand a little behind him. As we dance side to side I always have my whole length of my upper arm connected along his, as it's rested on his shoulder. If I stand a little behind him I could anticipate his next moves better. That tip really made a big difference. From that point onward our communication was flawless as I understood his every change of step.

It took me an hour of private lessons to learn the very basic level of swing. During the rest of the session he demonstrated new moves for me to copy, and I would write down the terminology on my phone. With my ballet experience, instructions were always formatted using names

of moves. Although I knew how to move, I would need to remember the terms. I knew that I could always search on YouTube any swing moves I would forget, simply if I had the terminology. Additionally, I was afraid I would forget the rhythm once I returned home. During class it was easy as I was copying, but I may forget if I had to perform on my own. I filmed my partners basic footwork just in case. This did come in handy in the end, as I did forget the rhythm a few hours later.

Is swing just as addictive as they say? Yes! Since the class, I have been practising every day for no longer than a minute. This keeps the newly-learned rhythm fresh in my mind, but it also makes me feel good to jump around and loosen my muscles to great jazz music.

To conclude, as I was learning the new style, at the start I focused on the rhythm, moves and direction in a mathematical structured manner. Rigid like Newtonian clock-time. After a while I started feeling the moves and rhythm without thinking what I needed to be doing. I forgot about time passing by and enjoyed the moment, smooth like Bersgonian event-time. It is difficult to fall into flow straight away. The links between neurons need to strengthen like Kandel's sea slug experiments have proven. To experience flow, we need to forget about the strict structure and allow for flexibility.

Appendix 5

Research: interview with Ilja Thoenes

Ilja: So that's actually the reason why. Maybe it's a personal preference of mine, but I also notice a lot of dancers saying to other dancers "yea, you're not doing it right". And for me, if I think about for instance the Lindy Hop, and where it all started, if you hear Frankie Manning about it "I just wanted to dance". Actually a lot of expert dancers they don't dance with beginners that often anymore because it's boring. But actually one of the most charming things I think about dancing with beginners is also that they still have unwritten pages, which they don't know. Usually they want to do it good, but they're also very shy. So usually I'd do one dance with them in which we try to do it good, and the second dance which we just have fun. One of the most important things I've learnt of the Lindy hop, that's why I like the spirit of the Lindy hop so so very much, that you never make a mistake, it's always a variation. And that for me is also the essence of dancing. It doesn't have set rules. Funny thing is, I embrace the spirit of Lindy Hop, and a lot of other improvisational dances, and at the same time I reject a few of the rules of the very same dance, because that's actually also what the dance tells me to do, just to make up your own dance. On one hand, arching dance, making them into categories, brilliant. You should because it would be a waste if people forgot that this was such a fun and awesome dance. On the other hand, at a certain point you had wars between Lindy hoppers, between different Lindy hop schools, in how the Lindy hop should be. And for me that's insane! That's actually like "no, I'm sorry, but you're wearing the wrong t-shirt right now. It should be stripes, not spots. So your shirt is wrong". While dancing is an expression of yourself. I remember when… I like to sing. I'm not a very good singer, so I don't do it often. I love to sing. but sometimes somebody tells me I'm flat. I'm singing loudly but I'm singing from

the heart, from the soul, so every time somebody says that, it really really hurts. That is a bit of the same. You're actually showing yourself if you're not following all the rules. And even if you are following the rules, yourself will always shine a bit through. So when somebody says you're doing it wrong, that really hurts, especially since it's a partner dance. So for me one of the most important things is, yes Lindy hop is a dance, but for me it's also just an example of how imagination and fun in dancing can lead to wonderful things.

Karina: I was trying to find your surname after meeting you last time. I knew that you taught in Utrecht, so I just put your first name and Utrecht and swing and I found a website. There was a quote next to your name

I: Yea yea yea, if my partner Hasn't laughed or shouted out in surprise, if she did, then it's a good dance.

K: It's a beautiful quote! I love it!
I: But that's what it is! That's the other thing. You're having a dance with another partner. I have so many partners who are well known by the rules, and I like when they know the rules very well, because that means that I get more freedom. And if I get more freedom I can go do even more crazy stuff. Like all the other teachers who are dancing with me, all the other people, they yell and they shout out in surprise. But the interesting thing about this quote, is actually it's not always... If it doesn't happen, if they didn't laugh or shout out in surprise, it's a person that danced way too much with me, but usually it's so crazy that I laugh harder, or, and that's the other thing, they usually are really really good dancers, who know all the steps, but don't accept any variations. So when I dance, and they don't accept it, they're usually doing to do their own thing, bit of a solo, and not pay any more attention to me. So I just have to hold up my arm and wait until it's over. It feels like bad sex. It

really is like "ok I'll be waiting till you're done and then I go home or something?". The interesting thing is, those are the best 'dancers', but for me, to loose communication, not accepting how the other person dances, for me it's a cardinal sin in dancing.

K: For me it's a dialogue between two people.

I: Indeed. This is also an example of when somebody follows the rules too tight. It doesn't become an improvisational dance anymore, it doesn't become a dialogue. It becomes two people showing their little solo dance in which apparently they have a connection with the hand, but that's about it. There are Jack and Jills, you know the Jack and Jills?

K: Yea, I love those!

I: I love those too! I love them absolutely! Especially since the partners don't know each other, so good luck. I've actually also been in a final for Jack and Jills - totally blew it! That was because my partner was frozen with fear. She just couldn't do anything. It was so cute! For me it was also very scary. Do you know Peter and Naomi? They're just top Lindy Hoppers of the world. Freakin' huge. Skye and Frida? You heard of those? Same level. I mean, Naomi used to dance Skye. Peter was counting me in. Six hundred people who were like (mimics anticipation).

K: Where was it?

I: In Utrecht. Nikola and Michaella, who are really great dancers, were judging you. And then you're like "I've only danced for one and a half years! What the hell is this!?" But it is glorious and it is great. I love watching others. The funny thing is, for me, there are usually three types of dancers when I see this. There is one type I already talked about. Very improvisational, who are usually not great in technique but great

at communicating with each other. Then you have the super technical, who only do everything by the book. The funny thing is they usually don't even look at each other. They are absolutely by far… that it looks most fluent, it looks most beautiful, it's perfect. It's like gloss. But it's also, for me at least, it's a showcase. It's literally a showcase. "Look I am doing this perfect and apparently I have a good follow because it goes perfectly perfect." But I have seen an Italian once, he was just looking at the audience, not looking at his partner at all. Everybody was like "Ah this is the most beautiful thing I've ever seen", because a lot of people loved it. I'm pretty sure he loved it too. But when I look at it, it looks also very pretty. It looks very pretty at a 'I'm looking at the TV' beautiful way. For me it's like you see beautiful people on TV, Johnny Depp or I don't know, and you're like "Oh my god that's a beautiful beautiful man". But if you would see Johnny Depp in reality, with bad breath in the morning, maybe you don't find that a very attractive man at all. And for me it's the same with this type of dancer. I look at it and think it's TV-beautiful. It's a beautiful picture. Then after the Italian came another - and the Italian was also a beautiful man in a beautiful suit, beautiful and tall - and he looked like a little gnome (chuckles). [Imitating gnome] "Urrg here we are, let's dance!". He had a partner, she was also like "Hello, how are you?" [in silly voice again]. And they didn't do any beautiful moves, but she went to the floor, he went to the floor. She jumped, he jumped under her. There is so much communication going on, and the moves got more complex, you saw the communication between the two. While I'm pretty sure I was in the minority, I loved their dance best by far. I knew the judges would totally let the Italian win - and they did. But for me the total winner of the evening was the guy who embraced that kind of spirit of Lindy hop of just having fun, just going totally wild. Don't get me wrong. I'm really not against learning a lot of moves, but I am against not making it an improvisational dance anymore. Of course it's improvisational because even the smooth Italian does it like "Ok I hear this, so I'm going to do that move. I hear that, so I'm going to do

that move". So it's still kind of improvisational, but within a set of rules, within a set framework. That's a priority for a lot of dancers, and I can understand that. But for me that spirit is so so important. So if you're saying you're archiving the dance, I'm also a bit afraid that later people will say "There was once a dance, Lindy Hop, yea it had a revival, but it flowed away again. It was about a hundred years ago. But wait, I'm going to watch that archive which my grandma made. Oh this is how it's supposed to be! This is the set of rules." So that's what I'm actually a bit afraid of.

K: That's something I bring up in my thesis quite early on. I first talk about the actual graphical notations and I looked at so many different types. "This one manages to convey four things, this one five, but different ones. None of them manage to capture everything into one system, because it's very difficult. But then there comes a concept of how do you communicate the culture, the essence. That's the main thing that needs to be archived. The steps is one thing, but the heart is another. How do you communicate the heart part of it? And that's pretty much my conclusion. It's impossible. It's so difficult. Of course you can, just like Frankie Manning, you can pass on knowledge person to person, and explain how it's meant to feel. You can get people to understand that yes it's goofy, yes you're meant to have this dialogue. There's so many things you can explain, but you have to allow them to interpret the feeling themselves.

I: Every since I've started dancing, especially this kind of dancing, for me the world has been divided between dancers and non-dancers. Before this I danced in discotheques for ten years, for about four to five days a week. I was always on the main stage, totally going bananas. Always communicating with the public. That's also why I think communication and improvisation is so important. I also did a lot of theatre, that also helps - about fifteen plays or something and directed three, so for me

that's the thing. What did I want to say with this again? I'm not sure anymore.

K: We were talking about essence.

I: Yes the essence of the dance. I have to think about this for one second. Yes! Dancers and non-dancers was what we were talking about. When I started Lindy hop, I was also a bit more about the rules. Yes Lindy Hop is good and the rest is bad. Salsa sucks. This sucks, that sucks. But ever since I thought about it, I also do Shag for instance now. I've done a little bit of lues. I've suddenly realised that it's all about the dance. There are different flavours but every flavour of dancing, and I'm talking about couple dancing specifically, that kind of communication is something I miss so much. There is an attraction going on which I have never found before. It has nothing to do with how smart the person is, how beautiful the person is, how well he or she smells. I'm not talking about sexual attraction. I'm really talking about regular attraction - people you like and people you don't like. And suddenly dancing is such an integral, it's the most important way to be completely naked towards each other with still having clothes on. There's a little little little door into the soul. Maybe just a tiny bit, but it's awesome. If I have a great dance with a person, well unless she's a Nazi, I will like her. Actually I know one person who is quite an extremist and she was a horrible person, and still the dances were so lovely. For me it was like "Ok, I'm not going to talk about your extremisms, but as long as we don't do that, I love you". If you have a that bit of soul which gives you the joy and which you share your joy and the thing that makes you joyess, you show not only your best side, you show your happy best soul side. To put it in rules, to put your happy best soul side in rules, for me that's like putting a brake on it. To make sure like "Yes, you can have fun, but you have to go through this narrow narrow path and it stops over there. And we're not going in the side room because left is salsa and right is tango. We're not going to do

that. We don't want that." For me actually... No, I'm still not doing salsa. Reason why I'm not doing salsa is I've been there a few times and the salsa scenes I've been to until now... I didn't like the ambiance.

K: Yea, me neither - strangely.

I: Sure I want to learn salsa, no problem. I think it's funny with the hips. I'm a Dutch guy so I don't have much hips because I never use them. But I'm ok with learning that. It's not a problem. Tango is the exact same thing. I think it's a bit dramatic, but to learn a little bit of tango, sure! They're all the same improvised dances. The funny thing is, before this I did ballroom dancing for a year. I did it when I was fourteen. I hated it.

K: Really? Ah! Did your parents force you?

I: Not really, but a bit. The reason why I hated it was because there are so many rules. And that is exactly the reason why. Suddenly I saw her teacher and asked why are we doing it like this? "Because I say so." Then I'm done because dancing is a way of expressing. The only reason I abide to rules in dancing is, because even if I did ten years of disco dancing, I couldn't dance with another partner. My creativity, I couldn't communicate that to the other partner. That's the only reason why I started doing a partner dance - to have those base rules, to be able to dance with everybody. That's also why I want to learn the other base rules, so I can dance with even more people. Still, when I dance salsa, I only knew the basics, and in between I did all kinds of Lindy hop moves, and we had a blast anyway. Yes for archiving dances, but like you say it, I'm totally convinced and happy because you're saying you also need the spirit. Yes you definitely need that spirit. Now my question to you, why can't you capture the spirit?
K: I haven't found a way, personally, to do it well. From other examples

that I've seen, when it is passed on person to person, it has extreme pros but also extreme cons. Where pros you really get that human to human interaction. You could get the most out of it. When writing it down on a piece of paper, you could interpret it differently. But the cons is that someone teaches it, I'll call it 'wrong'. Maybe the footsteps are completely correct. Kizomba is a great example of this. People were escaping the war. They went from Angola where kizomba originates from, they went to Portugal.

I: I knew that one because I know somebody from kizomba.
K: The steps are pretty much the same. Sometimes made a little bit easier, but generally the same. The essence though, completely misunderstood. Right now when you talk about kizomba in Europe people think it's the sexiest dance out there. Everyone is very keen to learn the sexiest dance. Turns out it's not the sexiest. It's meant to be sensual, not sexual. It's a dance that you dance with your family during family reunions.

I: You don't want to bang your grandmother. [Laughs]

K: Exactly! It's just that! Just how much it got changed. Of course dancers change with time. If you take them out of context if you put them in a different culture, or a different time period, it will change. Obviously Lindy hop has changed since because it's in a different time context and cultural context.
I: And in a different social society.

K: Yes. You cannot capture forever in that way. In a way that this is the correct way. That's why it would be interesting to see to what extent can we capture things, and what should be captured and what shouldn't.

I: I agree. On the other hand, If you're going to archive it, it would be

like bottling a good wine. You just put a date on it, and you can say, for instance, kizomba now is a sexual dance in Europe - because now it is. Maybe in three years we totally misread that, and then we say it's a completely different dance. It's a very modest dance we do at funerals. [Laughs]. For instance, yes? Yes I do agree, totally, with what you said, but on the other hand, if you are archiving it, for me it would be quite interesting to see like "in 2018 Lindy hop had this kind of spirit around it". Later in 2025 and I'm reading your paper, and I'm like "Ha! We were idiots back then!"

K: It's like the Wayback Machine. That archiving website?

I: Totally not! [Laughs]

K: You can put a URL of a website and it shows at what time it got archived. You can look at Google twenty years ago, ten years ago, it has snippets. You can look at the exact moment. So it's the same what you're saying. You can look at these snippets.
I: Indeed. Usually if you have an archive, if you make an archive, you're literally making a time machine. Because that is what you are doing right now. You say you cannot grab the spirit. You cannot grab the spirit of history because it's ever changing and everflowing. But you can grab this moment. This moment when you look at Lindy hop, we see a happy silly dance, which is not sensual, which is not sexual, it's just happy happy joy joy. If you look at rock and roll, it's also happy but it's a bit more rough and tough. Actually I really don't like rock and roll. I used to love it, it's awesome, but it can also hurt. I don't like dances with hurt. Which is weird because I come from punk rock and we used to have mosh pits. But nowadays I'm not sure if my partner would find it so fantastic. "Would you like to dance?" "Ahhh!" "Silence! This is my spirit!" [Laughs]. Are you still recording?

K: Yes I am. I don't know what time is it.

I: I don't know either. We don't have to be there at nine sharp.

K: No. I volunteer in half an hour or forty-five minutes so that's fine.

I: Oh it's fine. So we still have fifteen minutes. I think what you're doing is absolutely good but it was literally also "why?". Because that's the other thing I was asking you "why would you do that?" You know how many freakin' dances there are? Yeah you probably do now. And I'm pretty sure you didn't get them all.
K: Not at all.

I: So how did you manage to put borders around it to make it a bit more comprehensible? Also for yourself?

K: I narrowed it down to social dancing, which I know that there are still plenty.

I: You also got those three hundred from the Amazon river? [Laughs]

K: That's the thing. I mostly focused on swing, but once everywhere I threw in examples of other dances. Mostly because of the word count - it's terribly small. I would love to talk about so many other dance styles, but it's not possible.

I: You're saying Spain. What kind of dances do you have in Spain?

K: No, not Spain, swing.

I: Oh swing!

K: Overall swing.

I: Oh I already thought Spain, that's random.

K: No, swing. Overall swing.
I: So also the West Coast and East Coast?

K: Not even. It needs to be of relevance to me, so I did talk about ballroom because I did ballroom for about seven years. But I wanted to! I signed myself up as a fifteen year old to do it.

I: I'm very proud of you. I think it's very good that you did ballroom for seven years.

K: And I'm very happy I switched. [Laughs]

I: The scars will heal. [Laughs]. The funny thing is, I'm going to tell you a funny story about my ex-girlfriend.

K: Should I stop recording?

I: [Laughs] I really couldn't care less. Weird thing is, she also did ballroom dancing for quite some time. She was an amazing dancer. I've been to quite a few of her ballroom things, and she was awesome. I also noticed this was the first time I started to understand why dancing was so important. Even though I wasn't that attracted to her initially, she moved to beautifully. She had so perfect control over her body, all because of ballroom dancing. I was like "Oh my god, she's so sexy!". Then she went on to do salsa and bachata. She asked me to come and after hearing the music I was like "No! I don't like it." She was like "Come come please please. Dance salsa and bachata with me" and I was like "No, I don't like it. Stupid dancing with a partner - nothing for me". So

she went to do salsa and bachata on her own. I thought bachata was way too sexy, but ok, she wanted to, fair enough. At some point, among other reasons, she got fed up with me so she broke up with me. "It's the dancing, isn't it?" She said not really, but it's a shame you didn't want to dance with me. So two years later I met her again. I asked her how she was doing. She said not really good, but I do have a new boyfriend. I said congratulations. She asked me what I was doing now. I told her it that I'm doing the Lindy Hop now, and "how are you doing?" "Yeah my new boyfriend doesn't like me dancing so I quit".

K: Noo!

I: That boyfriend is such an idiot! But it's also so weird that she asked me to dance for ages and I didn't want to. We break up and two years later, actually one year after that I became a teacher. She wanted me to dance, now I'm a dance teacher and she quit.

K: That's a shame.

I: It's a shame. Actually I do believe that if we both knew that Lindy hop was an option then, we would actually still have a relationship, because our physical connection was awesome, even when we did a little bit of salsa.
K: Well the guy that doesn't allow her to dance might disappear. Things happen.

I: Well I'm feeling sorry for the guy. He doesn't recognise it. He's an idiot.

K: That's for sure.

I: That's another funny thing for me. I haven't had a real girlfriend in four years now, I think, because I am married to Lindy. This was the first time

that people say you have a passion for something. I was in love - literally in love with Lindy. I couldn't sleep, I couldn't eat because I was thinking about the dance. Every time I got up I wanted to dance. I was literally always walking in the street with a boombox and two dancing shoes in my backpack, because I could meet somebody who could also do the Lindy hop and then we could dance more and more and more. Anytime people would ask me to come out I would ask whether there was Lindy hop. "Yes there'll be Lindy hop." "Cool I'll be there in five minutes." "There is no Lindy hop" "Ok, cool. I'll be there in five minutes", but then I'd be gone again because I need to go practice. Whatever. That's something actually really interesting for me. Since you're always dancing with partners, also the physical need, and also because it's a social dance, the psychological need to have a partner, for me personally at least, has greatly diminished as well. It has something to do with the whole communication thing, because you can be in love for three minutes. It drives away the loneliness, if you do have loneliness, because I haven't had loneliness in a long time. When I had love sickness, that was a great remedy. The weird thing now is that it makes you so content, because I'm not in love anymore with Lindy. You know, after two years usually the in-love-phase...

K: The puppy love goes away.

I: Yes. The puppy love fades away, but now there is real deep genuine love. And even though I'm in a bit of a low point now in my relationship, but that's ok because we still Shag [reference to Collegiate Shag].

K: [Laughs] Ha ha!

I: See what I did there? I thought it was very funny. [Laughs] That's something I love about Lindy Hop. When I had my first down thing with the Lindy hop, no problem, I started to follow. At a certain point I had

a plateau. I didn't know how to get up anymore. I just started to follow because in Lindy Hop that's also allowed. When I had a plateau I also started stealing [dance partners during a dance] and switching, because that's also allowed. It was awesome! And there are also so many other dances, so when I do a sow dance now, I do a bit of Lindy Hop mixed with a bit of Blues. Fast song? No problem. I do a bit of Lindy hop with Charleston and Shag all in the same song. In between I'm switching everything, just to make it more insane. And that kind of improvisation, the dance floor is your world of imagination, that for me makes it so good, so glorious and so insane, that I'm very interested how you archived it. For me it's not archivable.

K: It's not. Some elements, but …

I: I think you did a Swing Out [Lindy Hop move]. I hope you archived the Swing Out. Totally the most iconic move.

K: I didn't make an actual physical archive. It's just me discussing the possibilities of archiving dance.

I: Ah! Right right right. And then this is the most important question ever, why would you make an archive?

K: Why archive dance in particular?

I: Yea. When you think of ancient times, and how they danced back then, I'm sometimes wondering with the Ancient Egyptians, somewhere in the Southern Region or maybe in the Northern Region, maybe there was a dance popular for a hundred years which was very similar to Lindy hop, just with different instruments. But they did the exact same thing with the feet or something. Or maybe not, but it had a few things of the Lindy hop. That's a reason why I would be pro archiving it, because

we have no idea what kind of dances there were. What did they do back then? I'm pretty sure they didn't just do "wooga wooga" or very ceremonial dances. I'm pretty sure dancing is something which was born thousands and thousands of years ago.

K: It's normal to move to music, to move to rhythms. You hear things and you react.

I: Weird thing is it's a human thing, right? Other mammals don't have that in that regard.

K: I don't know.

I: That's something I'm actually very curious about now. I know that a lot of animals don't have it. For instance the snake that is dancing, indeed that's not dancing. That's being hypnotised. But humans do have that, and you can't tell me that it is something that we've only been doing since the Middle Ages because that's the oldest dances we know. I'm pretty sure before that they also went totally bananas with the boogie woogie. I'm very curious to see the Ancient Greeks do the boogie woogie now.

K: That would be cool.

I: They probably also did dances wild and weird that are awesome dances. All the dancers are human imagination. And that's the funny thing about archiving stuff, is that, at least for me, you have a moment of that imagination. But for some people to view them as the rules, now that we're talking about it and I'm thinking more about it, how weird that actually is. "I want to copy this exactly. I don't want to expand it. No. This is how it's supposed to be." That's so weird. Don't you find it weird? I find it weird. I think, and this is something I say to a lot of people, you

need to know the rules, so you can break them. I think for dancing that is more true than for anything else. You just need the few handlebars in which you can better yourself, in order to let go again. I had a discussion with somebody who didn't want to do a partner dance. They said they didn't want to do partner dance with anybody because they don't want their imagination to stop. I couldn't understand that as well. I have noticed that sometimes your imagination isn't big enough because the other person also has an imagination. And two people having a grand imagination without any any rule, that's total anarchy. It's fun and it's cool, it's funny, but you both are speaking in a completely different language. Then it's very nice to have something like 'English', in this case Lindy hop, to at least have a few base rules. But next to those base rules you can go totally loose. On one hand, we need to copy it one to one, and I totally don't agree with that. But on the other, the ones who are only using their imagination. I have tried that for ten years and I got frustrating as well. In that case, the funny thing is, I asked you at the beginning of this, why are you archiving, because it is just a moment of notice. Maybe you should archive that moment of notice. That's the only thing you need. That little little ground rule, with just the feeling at that exact point, because that makes it perfect. Or else you'll have a holy Bible, which makes it extremist and for me not fun anymore. But also not too little because we have to start all over again with thinking of our own dances - which can also be fun, but I tried it for ten years. Kinda hard to do. Let's face it, Lindy Hop was not an original dance. The original Lindy hop also came from a lot of other dances they did before that. Ok now I'm really done with taking. I hope you have something from my story.

Appendix 6

Experiment #7: Dancing Where It All Started

29th December 2017

As swing originated in Harlem, and so many of the finest swing dancers come from America, I wanted to find out what it'll be like to join a dance event - or 'social' in swing jargon - in New York City. What differs from back home? What stays the same? Is the culture any different? Are they all much better dancers? Will it be clear I'm an outsider in the community? After a quick search, I found a website of the NY swing community with a list of all upcoming events. Some locations, like Jazz 41, sounded fun in the description on Facebook, but after looking it up, it seemed as if not many people go there, and the crowd is quite a bit older. The name 'YSBD' popped up a few times on people's comments on Facebook, so I decided to search for that. It's a dance school 'You Should Be Dancing'. Thanks to the magic of Facebook I found out that Adam Brozowski, an international teacher I had the pleasure to have a workshop with, liked that page and checked in that location. That was a good enough sign for me - ready to party.

The event was at the dance school itself. At first that didn't excite me too much, until I remembered that the swing community rents out a room and has socials at Cuartito Azul, a tango dance school, once a month. Those socials are always so cozy, that if it would be similar, I shouldn't worry that it would feel like dancing in a practice studio - full lights on, mirrors everywhere, no cosy vibe, just gym.

Upon arrival I was very excited. I couldn't believe that I was actually going to dance with some locals. The vibe in the room seemed a little calm - there weren't many people there - but I had a feeling it would

get busy and warm up. I paid my $7 entrance fee, changed out of my layer-upon-layer winter survival kit and said hello to the first person sitting next to me. My aim there wasn't only to dance, but also to get to know the community, their their individual stories, to get a grasp of how this community may differ from the one in The Netherlands that I am familiar with. Dennis is a sweet, elderly, black American man that seemed like dancing was his second nature. In Holland, when getting to know new people, the first two things that are exchanged are names and dancing experience. I was too afraid to ask Dennis about his dancing background, as I was afraid his answer could possibly be the obvious one - he got brought up with it. He did seem more in his 60s or early 70s though, so from hindsight he definitely was born after the birth of Swing. He introduced me a little to the local culture and how men are the ones who usually ask for the dance. In Holland it really is a 50/50. I asked him whether he knew many people in the room, as I really felt like an outsider at that moment, and he said that he recognises many, but doesn't interact with them outside the socials. That sounds about the same in Holland, although we did recently create a small group of people I spend time with outside of classes and socials. Before sharing a dance or two with Dennis I was a little afraid of my (lack of) skill compared to his, but we had a good time. There was a good connection, we smiled and sometimes laughed throughout. Simple, but sweet. I thanked him and straight away got asked by someone else for a dance.

I forgot this man's name. His posture and body connection caught my eye straight away the moment we got into 'formation' to start dancing. I thought maybe it's a local thing, maybe he will surpass me with something crazy. Have we been doing it wrong all along in Holland? Not really, turns out he's a beginner. Just before the social he had a one hour workshop in Lindy hop and that's all. I was impressed with how much he already picked up within an hour. He knew two or three simple steps,

but he did them fairly well. Sometimes he would mess up his rhythm and we would take a short break of a few counts, and get back into it. I don't mind dancing with beginners - it makes me focus on the basics and not take the easy steps for granted. He asked about my experience and whether I could teach him some other move. I thought deeply about which one wouldn't be too difficult to learn, nor to teach, and a move that would come in handy for him. Tuck-turn it is! It took us a few trials to get it right, but by the end of the song he got it. We practised it for another song, mixing it with other steps he already knew.

I took a short break and sat down on the benches on the side for a moment. Immediately I introduced myself to the lady next to me. Jodi and I clicked right away. She told me about her twenty year dance experience and how she tried it all. She recommended I look into Samba de Gafieira. It's meant to be a fun mix between swing and latin - the two dance styles I love the most! After going to get a Cola from the small bar that was in the room I asked Jodi whether people drink alcohol at these, or any other Swing events. She told me how venues would cancel Swing socials just because it wasn't profitable for them, as many just drink water. I burst with excitement, explaining how it is just the same in Holland. At that moment, when glancing around the room, it hit me - the atmosphere, the vibe, the culture, it's just the same back home. Isn't it incredible that across the world a community can feel just the same? "It's because we're all speaking the same language" Jodi said, "the language of dance".

I danced with a few more people that night, don't remember all the names though. There was a broad shouldered man in red shirt that was a great dancer. He was a good lead who listened and let me improvise. We shared a laugh here and there, overall good dance. An older white man told me he only comes to socials and doesn't take classes. He is a good dancer, but we didn't have a connection. With another man there was also no connection, possibly because he had a repertoire of

three to four moves, only spins, so I got dizzy. I danced with a very good dancer from London who came to New York for business. He came to the social to have some fun between working. He, just like me, searched and found a swing social online. He really put in his heart and soul in his steps. Just like Christina, a lady I talked to in-between dancing, said, "you need to be committed to every step". He did, and that's why he looked, and is a great dancer. Best connection was with Art and Thomas - we just had a good time. Good connection, easy to listen and respond to one another.

Olivia caught my eye earlier that night. She looked like she was floating on a cloud; always with a big smile on her face. Whoever she danced with, she was present and enjoying every moment. I managed to talk to her by the end of the night. She told me that she comes down to NY to visit her family a few times a year. She said that the vibe of the communities is the same anywhere she goes. There were two things I realised were clearly different between the two communities: fashion and music. In Holland many people put a tiny bit of effort to dress up for socials, whether a shirt and nice pants, a dress or 40s styled skirt. That night in Manhattan people mostly wore casual wear. Maybe it was due to the weather, or it wasn't part of their culture. With regards to music, in Holland there is a lot more classics, such as Count Basie, Benny Goodman and Duke Ellington, whereas during this social in Manhattan the music was slightly more rock n' roll or slightly more country. I hardly recognised any of the songs. The only music we shared a dancing passion for was some sweet Ella Fitzgerald.
I was already slowly preparing to leave, and there was an announcement about upcoming workshops and I heard someone shout "birthday circle". I was happily shocked to find out that not only the concept, but even the term is the same as back home. A birthday circle is when the birthday boy / girl dances in the middle and people around them try to steel a dance from them. Suddenly one of the leads I danced

with earlier asked me to come to the middle of the circle too. I didn't understand what was going on. Turns out that they also get anyone visiting to join in the circle too. There was a woman from Spain and another from Israel that joined in too. It was a sweet addition to the tradition that I know. I will definitely share it with the Dutch community.

ACKNOWLEDGEMENTS

(colophon)

Back It Up

To what extent can we archive social dance?

Karina Dukalska

INTRODUCTION

Dance has always been a part of my life. From a young age I've tried many styles, from ballet to hip hop. Ballroom seemed to resonate with me the most for a long time. There was something about the variety in styles and structure that allowed me to get into character whilst maintaining a distinction between the dances. A few years ago I had a strong brain reset and had problems with my memory. I struggled to take in new dance steps during class and to put the ballroom structure that I already knew back into place. I wanted to find a way to write it all down, capture the memory, for now and for future reference.

As a graphic designer, I aim to communicate data in an easy and universal manner. Initially, the concept was to create context-free transmissions of dance, no matter the place, culture or time. The graphical representation could be intuitive enough for others to read and possibly to learn from. Before I knew it I was sucked into the world of swing culture, thanks to its history and community, and the focus broadened beyond footwork.

This research is a synthesis of examples and experiments to approach the question: to what extent can we archive social dance? A series of experiments supported by psychological theory, personal graphical approaches and interviews with dancers create a collected view on the matter of documenting social dance and the means in which we could do it.

From a dancer's perspective, video on its own is a bad medium to view and learn a dance from[1]. It's usually filmed from the audience perspective, not to mention the annoyance of watching in small clips and constantly rewinding to understand the steps. Mura Dehn attempted to preserve African American social dancing styles from the turn of the century till the 1980s in her 1989 three-part documentary film The Spirit Moves[2]. The content feels subjective; professionals performed choreographed steps, the audio was manipulated and her foreign narration did not portray cultural meanings such as the political purpose of the Cake Walk[3]. This did not show the true, nor whole picture of the recorded dances.

Photography, film and social media help our craving to document our lives, share treasured moments and hold on to these archived memories, yet they also do not portray the full picture. Although technology may have its limitations in this aspect for now, it is developing and is pushing the boundaries of what is possible. Advances in virtual and augmented reality promise the ability of capturing life, yet there is still a vast gap to explore to what extent an experience can truly be captured. My curiosity lies specifically in why an experience such as dance is difficult to capture.
The research is divided into three segments. Part One looks at preserved social dances, analyses previous graphical notation systems and suggests how these could be developed. Part Two investigates how the brain processes dance with regards to time perception, memory and

flow, and how that shapes perception. Part Three compares dance to language and discusses what non-verbal communication among social dancers is, and how difference in perception could harm the process of passing down dance person-to-person.

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DANCE

1 History of Swing: Its Birth and Revival

Swing dance is an umbrella term for a few different social dance forms which developed in the United States by African Americans[1] in the mid 1920s, reaching their peak in the '30s and '40s. They are danced to jazz music[2], which due to its free and improvised nature thanks to syncopation, created an open blueprint for dances to play with. These improvised social dances fall into a few common styles: Lindy hop, Charleston, Balboa and Shag[3]. They did not have strict rules or steps, yet each style can be identified by its tempo, vibe and rhythm. Lindy hop is goofy, with open positions and turns. Charleston is energetic and has fast kicking steps. Balboa is sweet, has a close connection and has subtle small steps to fast music. Shag, similarly to Balboa, is fast, but has more expressive footwork and a silly vibe.

Lindy hop, being one of the most famous swing dances, began in Harlem at the Savoy Ballroom[4] (Figure 1). It was a way for people to escape the thought of war and let loose, socialise and laugh. Famous dancer Frankie Manning said, "These were the depression years (which didn't make that much difference to my family since we were poor anyway) and dancing was an outlet for people because there wasn't much else they could do. We all stayed in Harlem, but you could find someplace to step out every night of the week. Going to a ballroom became our social life." (Manning and Millman, 2007, p. 67). With time, politics, social tension and financial instability started calming down. Therefore, people focused on work, family and rebuilding the economy. There was less time for dancing in ballrooms in the evenings, and swing died out. It also evolved into other dance styles, such as rock and roll and hip hop.

In the mid 1980s there were a few dancers from the Whitney Lindy Hoppers, a popular dance group who performed at the Savoy during its craze, who started teaching swing to the youth around the world, despite their old age. The dancers we can thank the most are Frankie

Manning, Norma Miller, Dawn Hampton, Al Minns and Leon James. Minns travelled to Stockholm in 1984 to teach the dance to The Rhythm Hot Shots dance company, who until then, used old archived clips to interpret Lindy hop moves. Nowadays, the Swedes are seen as one of the better swing dancers, together with the Americans. From then on, the swing hype started spreading beyond classes, as it was visible in pop culture too: a movie called Swing Kids (1993) and an iconic Gap commercial (1998). These dancers travelled the world and shared the joy and culture, passing the knowledge person-to-person (Figure 2). The students who mastered it went on to becoming teachers themselves. Millman recalls seeing Frankie Manning for the first time sometime in the 80s: "It was a dance of great beauty and grace, intensely musical, with roots that delved deep into African American culture, but Frankie's subtlety was beyond me at the time. My eyes and ears had become so attuned to white-washed, commercialized versions of the Lindy hop as depicted on television, on Broadway, and in films that I couldn't appreciate the real thing." (Manning and Millman, 2007, p.15). So, although the dance had a revival thanks to the teachers who were at the time and place of its origin, it was still taken out of context.

1

2 The Case of Kizomba

In comparison to swing, kizomba (Figure 3) is a more extreme version of an out-of-context shift in dance, with regards to both steps and ambience. Currently, it's a vastly growing in popularity social dance originating from Angola. Its popularity in Europe and America can be explained by the fact that it's seen as a very sexual dance. Because of the Angolan Civil War, many Angolans fled to Europe and decided to share their native dance style. Singer C4 Pedro, who is also known as the king of kizomba, criticises: "Some Angolans decided to become teachers and they didn't teach exactly the same kizomba as we do in Angola. It's easier." (BBC, 2017). Angolan dance teacher Freezy Bruce explained: "If you go on the internet you'll see many videos about kizomba, but mostly people don't know exactly what is kizomba. There are a lot of people dancing something else that is not kizomba. Kizomba is mostly social dancing. You can dance with your son, a father can dance with his daughter. People need to understand the difference. It's really sensual, not sexual." (BBC, 2017). This shows the flaw of passing down the knowledge person-to-person. The physical steps may have been similar, but not passing down the culture of the dance created a large misinterpretation of the dance itself. Although only twenty to thirty years have gone by, kizomba's essence has changed profusely.

It makes you wonder, do we really need that personal connection and contact to pass down dance, knowing it may have disadvantages, or could we manage if we self-taught ourselves from archived content? These preserved forms should ideally be context-free transmissions of dance. Their aim is to translate dance to another person, in another context or time.

3 Graphical Dance Notation

Dance is an intangible experience that is difficult to be quantified. Despite the challenge, many have attempted creating graphical notation systems. Experiment #1: Previous Notations is an analysis of famous dance notation systems. These allow for a better understanding of which elements of dance could be to transcribed graphically.

Favier

The first Western attempts to graphically notate dance was in 17th and 18th century France. Choreographer Jean Favier notated a Baroque masquerade, *Le Mariage de la Grosse Cathos* (Figure 4), in 1688. The notation consists of three aligned five-line music staves. The first one is dedicated to music notes. The second directs the movements of the left dancer on stage, whereas the third directs the movement of the right dancer on stage. The instructions for the dancers are focused on their footwork: d for *droit* (right) or g for *gauche* (left).

Favier's main focus was to communicate footwork, yet it lacks an explanation of body movement itself and the direction in space. Also, hypothetically, the movement staves being aligned to the music stave should allow the reader to interpret how the rhythm of the dance matches the melody of the music. However, the dance notation does not explain what happens with the feet: do they stomp, clap, shuffle or glide? This lack of information makes it difficult to decode a rhythm, as the silent steps, such as sliding, could cause breaks in the rhythm.

Marche

pour 9. hautbois, 8. Danseurs, et 9 Musiciens.

41

Lorin

King Louis XIV sent André Lorin to England to introduce English country dance to the French court. Lorin adapted the steps to suit the French dance style. The manuscripts *Livre de contredance présenté au Roy* (c. 1685) (Figure 5) and *Livre de contredance du Roy* (1688) (Figure 6) differ only in presenting spatial awareness. Both use letters directly below the music stave representing steps, similarly to Favier. Although, there is an accompanying diagram showing the movement in space. The former from a bird's-eye view, the latter from a third person's perspective. Despite Lorin's notations showing music, steps and a diagram of direction in space, it does not portray rhythm, nor the progression through space according to the music measure. He used two different notation systems – music staves and an accompanying diagram – to communicate the necessary dance elements.

Contre dance pour Sa Majesté

Contredançe du Roy.

La Dame 1. Et le Caualier 3. partent tous deux du pied droit pour faire vn tour ensemble suiuant la demonstration cy dessous lequel tour est composé d'etrois pas de bouurée et d'vn couppé assemblé. A la premiere mesure de l'air jls se presentent la main droite par vne petite jnclination, A la 2.e jls la joignent. Et a la fin de la 3.e jls la quittent pour retourner à leur place, aprés quoy la Dame fait vn petit saut deuant le caualier 1. Et le Caualier 3. ne saute pas.

Le Caualier 1. qui demeure posé le visage en dedans sans rien faire pendant que la Dame 1. et le Caualier 3. dansent ensemble fait aussi vn petit saut dans le meme temps que sa Dame, ce qui se rencontre justement au milieu de la 4.e mesure.

Le Caualier et la Dame 2. Et la Dame 3. restent aussi posés le visage en dedans sans rien faire.

| 1 | 2 | 3 | 4 |

Beauchamp–Feuillet

Louis XIV also commissioned Pierre Beauchamp to create a dance notation system in the 1680s, which was later described in detail and published by Raoul-Auger Feuillet in *Recueil de Dances* (1700) (Figure 7) and *Choregraphie* (1701) (Figure 8). The Beauchamp–Feuillet system is the most known Baroque notation today. In the first example, the score starts with introducing the dance rhythm type, Bourée, followed by a music stave. In the centre of the page, the dance title, *la Bourée d'Achille*, is accompanied with a bird's-eye view diagram showing the spatial path of the dancers, which is notated measure by measure. It does not require great in-depth knowledge of the score to understand the concept of the dance. The Beauchamp–Feuillet system was more successful than others, as it managed to communicate the most detail such as music, rhythm, and spatial paths for both male and female dancers. Although it is the most complex Baroque notation system, it does not communicate arm movement well. The arm movement symbol was developed (Figure 9), but rarely used. It is not clear when the dancers hold, or let go of each others' hands.

la Bourée d'Achille.

Supplément de pas.

demy coupé, en suite tortillé un talon, en suite les deux pointes et en suite un talon pour se rendre en la 3.e position.

Contre-temps tortillé, en suite tortillé l'autre pied s'cavoir la pointe et en suite le talan pour se rendre en la 3.e position.

le premier pas chase le second en sautant, et le second chase le 3.e en pas tombé

le premier pas chase le second en sautant sans plier ou en ne pliant que le moins qu'il est possible et le second chase le 3.e en pas tombé.

pas de menuet en avant a un seul mouvement

le même en ariere

pas de menuet en avant a deux mouvemens quan a pole ale boemi sonne.

le même en ariere

le menuet en fleuret

le même en ariere

le menuet a trois mouvemens en avant.

le même en ariere

le menuet a trois mouvement de costé par deriere.

le même desus et desous.

le menuet en fleuret de côté.

Le contre Temps du menuet en avant.

le contre du menuet temps en ariere

pas qui communement se fait dans le menuet

Autre.

autre de côté.

Des Ports de Bras, & de leurs Mouvemens.

QUoy que les Ports de Bras dépendent plus du goût du Danceur que des Regles qu'on en pourroit donner, je ne laisse pourtant pas que d'en mettre icy quelques Exemples, où l'on voira par des caracteres démonstratifs les differens mouvemens que les bras peuvent faire en dançant, au moyen desquels caracteres on pourra aisément marquer dans les dances chaque port de bras qui doit accompagner chaque pas.

On connoîtra la figure du bras par les figures A B C, sçavoir A marque l'épaule ou haut du bras, B marque le coude ou milieu du bras, & C marque le poignet ou extremité du bras.

EXEMPLES.

Le Bras étendu.   Le Poignet plié.   Le Bras plié.   Le Bras tout-à-fait devant soy en hauteur.

Comme on doit placer les Bras sur un Chemin.

ON distinguera les endroits où on va en avant & en arriere, d'avec ceux où on va de côté.

Ceux où on va en avant ou en arriere, on marquera les bras au deux côtez du Chemin, dont celuy qui sera du côté droit sera le bras droit, & celuy qui sera au côté gauche sera le bras gauche, & aux endroits où on va de côté, on les marquera tous deux audessus ou audessous, observant toujours que celuy qui est à droit est le bras droit, & celuy qui est à gauche est le bras gauche.

EXEMPLES.

Les deux bras ouverts   Le bras gauche ouvert & le droit plié du coude.   Le bras gauche ouvert & le droit tout-à-fait fermé.   Les deux bras ouverts.   Le bras gauche ouvert & le droit fermé du coude.   Le bras droit ouvert & le gauche tout-à-fait fermé.

G ij

Benesh

Jumping to Western modern history, British mathematician Rudolf Benesh composed Benesh Movement Notation (Figure 10) in the 1940s. His wife, who danced at the Sadler's Wells ballet, struggled with dance notation. The figurative representations of the human body is written in a five line stave, so it can be aligned with music. It concentrates on body parts and movement, with each stave representing a location: the top of head, shoulders, waist, knees and floor, as shown in figure 11. (Benesh and Benesh, 1977). As Benesh Movement Notation was an attempt to visualise the already existing strict ballet structure, it didn't need to be versatile. There is a finite selection of classical ballet steps with specific names, and the foot positions already have a standardised numerical system (one to five). The ability to notate footwork and body movement translates the posture relative to time, yet this notation system does not take spatial direction into account. This needs to be interpreted by the dancer or choreographer.

10

Top of Head

Shoulders

Waist

Knees

Floor

in front sign

head sign

level sign

behind sign

direction sign

11

Cunningham

At the same time in America, music, dance and performance were explored in avant-garde art. Composer John Cage[1] worked with dancer Merce Cunningham from 1944 till Cage's death in 1992. Unlike other notation systems, each piece he created looked graphically different. It was the technique of creating notation systems that interested them the most. Cunningham based his method on geometry, mathematical structures and chance, which allowed for a wide range of outcomes. He explained his approach in creating his 1952 piece *Suite By Chance* (Figure 12), "The individual sequences, and the length of time, and the directions in space were discovered by tossing coins" (O'Mahony, 2000). Scores for *Rune* (Figure 13) explore space in layers. Cage wrote that the score "sometimes restricts the performers to particular notes, and at other times allows them freedom of choice in terms of all the aspects of sound" (Merce Cunningham Trust, 2018). Space Patterns for *Summerspace* (Figure 14) transcribes dancers' "sudden bursts of speed and suspensions, zigzagging every which way, like flying creatures" to portray a summer's day (Merce Cunningham Trust, 2018). All of his pieces are meant to be read and performed in a manner that are unreproducible. With each score, Cunningham's aim was to capture the fundamental instructions for the dance, intentionally leaving everything else to interpretation.

12

13

Labanotation

The most famous notation system today is the Labanotation. It was
described in *Schrifttanz* (Written Dance) in 1928 by Rudolf Laban
(Figure 15). It manages to incorporate direction, body part movement,
duration and dynamics of the movement. His abstract scores are read
bottom to top on a three line vertical stave. The shape of the block
symbols point to the directions of action (Figure 16 and 17). Rhythm
and duration are indicated by the length of the movement symbol
(Hutchinson Guest, 1984). His focus on analysing human movement
from a very technical perspective allowed for his method to be used not
only in dance, but also in physiotherapy, robotics and human movement
simulations. Due to its detail, The Dance Notation Bureau has been
notating dances using the Labanotation since 1940 (Venable, 1991).
Although Labanotation managed to convey the most information from
a dance in a graphical form, his score method is not commonly used by
dancers. This could be due to its complexity. Hutchinson Guest suggests
"while a familiar comment is that Labanotation does not look like dance,
the designs are readily recognized by those who have learned to read
them, just as patterns created by musical notes are readily recognized
by musicians" (1984). We could overcome this struggle of learning a
complex notation system if there were something more intuitive.

148

147

146

145

ONQJD   BHIPK   HEGC   F

145-6   X = moment of fall   147-150

Dance which is captured in a written form could allow for another type of retrieval of data. Future dancers would be able to read it and reconstruct it. However, currently this seems to be harder than it sounds. There are three main hurdles with this documentation process. Firstly, unlike music, dance doesn't have an accepted universal score system. Secondly, there are many aspects such as direction, speed, intent, rhythm, not to mention the body movement itself, which make it difficult to convert data collectively into one graph or system. Lastly, each notation focuses on different elements, such as music, direction or footwork. This may be because of personal interest – Benesh for example – or out of necessity to focus on some elements more than others. Each score managed to tackle translating some aspects of a dance, yet none have managed to simply convey all elements into one notation system.

4 Dissecting Dance into Layers

Action

Tap your hand againts your thigh on stressed syllable

Fontana Mix (Figure 18) by John Cage is a scoring system for a performance composition. It offers many outcomes mainly thanks to the concept of layering. Each layer represents a different score, and when placed on top of one another, create a unique performance[1]. If it is difficult to translate dance into one scoring system, could it be possible to break dance down into different elements, such as direction, movement, rhythm and spatial-awareness, and score each in a different layer?

Stop Action

GRAPH·E·

To understand the difficulty in creating choreology[2], I attempted to visualise the difference in all ten of the ballroom and latin styles[3] I used to practice. Experiment #2: Basic Choreology Analysis (Appendix 1) looks at what happens if dance styles are dissected into different elements. The analysis was based on four tasks: the general movement of each dance was expressed using illustrations (Figure 19), the rhythm was explained using words as well as in my own graphical system and the beats per minute (BPM) of the appropriate music was compared. Each dance has a standardised[4] characteristic tone, speed and rhythm. I tested what would happen if the distinctive aspects were altered. Breaking the dances down into direction, speed and rhythm showed how changing one influences another. The speed can change the tone, but the rhythm must stay the same for the dance style to maintain identifiable.

Note to self

Some dances have similar shape, yet are completely different due to rhythm. I attempted to communicate that graphically (Figure 20). Illustrating rhythm proved to be harder than predicted, as I had to multitask: counting beats by tapping on my thigh and saying the rhythm out loud while dancing, to see how they overlap. It was difficult to process and capture so much information at a time.

CHA CHA

ENGLISH
WALTZ

FOXTROT

JIVE

PASO DOBLE

QUICKSTEP

RUMBA

SAMBA

TANGO

VIENNESE
WALTZ

None of the mentioned historical graphical notations communicate rhythm well. Personally I find rhythm to be the starting point of learning a dance. Professional dancer and international teacher[5] Earanee Niedzwiecki told me in an interview that "relying on understanding the rhythm that you are going for, informs a lot of the movement [...]. I try to watch and learn and really internalise the rhythm that the person is getting or going for, and then I use that as a basis for everything else." (Appendix 2).

Evolving from Experiment #2: Basic Choreology Analysis (Appendix 1), I have expanded my solution for capturing rhythm (Figure 21). As music is the blueprint for dance, rhythm scores can be presented on a timeline. With each horizontal line, more information is added to understand how rhythm matches the music. If a song is slower, the dots representing the BPM would be further apart. That would stretch the representations of all count, rhythm and footwork. The footwork shown below is for Lindy hop, which phonetically is taught as a 'rock-step, triple-step, step-step, triple-step' rhythm. The system can also be used for dances with different rhythms.

1 - 2 - 3 - 2 - 4 - 5 - 6 - 7 - 2 - 8

rhythm of dance placed on count.

116

BPM
indicates
tempo/
possible style

116

L R LRL R L&RLR

footwork L/R
as follow

don't need # that long.
count of 8 is enough.
line continues to show flow/
repetitiveness.

116

116   SWING

92   ENGLISH WALTZ

120   RUMBA

116   ← FOXTROT

repeat after
6 counts

116

Lindy Hop notation to Benny Goodman's 'Don't Be That Way'

seconds

BPM
162

8-count

count to
BPM
162

rhythm

footwork
to rhythm

● right
● left

•

BEYOND STEPS
AND COUNTS

BEYOND

STEPS

AND COUNTS

-

BEYOND STEPS AND COUNTS

BEYOND

STEPS AND

COUNT
COUNTS

5 Time Perception in Dance

Although breaking dance down into separate elements may help understand its structure better, there are other elements that come into play when learning a new dance. Notation doesn't cover time perception, which is relevant to how the brain processes dance and how we read scores.

Previous psychological theory research on time perspective and cultural diversity has left me wanting to explore more of Robert Levine's clock-time and event-time in relation to dance. Clock-time is a way to perceive time as the clock directs it, whereas event-time is a perception of when participants *feel* an event should start or end (Levine, 1998). Levine travelled around the world for research and saw clear patterns in preference between cultures for either one or the other time perception.

This binary division in understanding time can be also found in Robert Wiener's view on Newtonian and Bergsonian time (Wiener, 1965). He explains this contrast using astronomy and meteorology. Newtonian time, just like astronomy, is strict and mathematical. Wiener describes, "the positions, velocities, and masses of the bodies of the solar system are extremely well known at any time" (Wiener, 1965, p. 32). Newton used this time perception for engineering and space, not as a social human system. Bergsonian time on the other hand, like meteorology, is flexible and more adaptable to human experiences. Wiener continues, "the number of particles concerned is so enormous that an accurate record of their initial position and velocities is utterly impossible" (Wiener, 1965, p. 33). Bergson emphasised the difference between Newton's reversible time in physics (where if the movement of the planets was rewound, nothing would change) and Gibbsian irreversible time in evolution and biology (where rewinding would always cause something new). When analysing Levine's and Wiener's work, both mention two contrasting perceptions of time: one concrete and mathematical, the other adjustable and human.

Newtonian time shows many similarities to Levine's clock-time due to its strict, mathematical and rigid approach. Wiener explained Newtonian time as "the planets are either very nearly rigid bodies, or where they are not, their internal forces are at any rate of a relatively slight significance. [...] The space in which they move is almost perfectly free from impending matter" (Wiener, 1965, p. 32). The strict and set structure is fixed and definite, just like reading the time from a clock. Neither of the two cases can be altered by external factors, and both cases could be described as mechanical, structured, strict and concrete.

Bergsonian time, just like Levine's event-time, shows flexibility and duration. Wiener suggests "the term 'cloud', 'temperature', 'turbulence' etc., are all terms referring not to one single physical situation but to a distribution of possible situations of which only one actual case is realised" (Wiener, 1965, p. 33). Levine's event-time is based on a fluid social decision that has no strict duration and cannot be predicted mathematically. Both can be altered by external factors, and both cases could be described as human, social, flowing and continuous.
Time perception in dance also has two opposing sides: tempo, count and rhythm are strict and precise; not analysing the steps and flowing with the music is fluid and uninterrupted. These contrasting perceptions in time within dance are very alike to Newtonian clock-time and Bergsonian event-time. During my ballroom and latin dancing classes I saw two types of dancers; those who worry about the steps and/or count, and those who flow. How does our brain and method of falling into flow shape our perception of dance?

6 Memory and Flow

For a broader understanding of processing information, I have looked into neurology and memory in Opening Skinner's Box (Slater, 2005). In 1953, Dr. Scoville discovered that memory has a specific location in the brain, the hippocampus, and is not scattered around as thought before. Patient Henry Mollison was still able to brush his teeth after his hippocampus was removed, but wasn't able to create new memories. Dr. Brenda Milner continued research on Henry and was able to identify procedural, or unconscious memory. Dr. Eric Kandel at the same time tested how information travels through neurons of sea slugs. He was able to prove that every time a task is repeated, the stronger the webwork of carrying that task becomes, the stronger the memory, the stronger and smoother the electrochemical conversation between those particular synapses in the brain becomes. This would explain falling into a flow, whether for athletes, musicians or dancers. The more a task is practiced, the stronger the memory, the smoother the task becomes.

What if I were to challenge my flow and memory when dancing? Experiment #3: Jive Mix Up[1] (Appendix 3) aimed to see how much the fluidity of a dance was disturbed when the order of the choreography was changed. My dancing partner and I deconstructed and reordered a choreology we knew very well; the jive. Ten jive steps were listed and numbered accordingly. Dice were rolled and the outcome was noted down (Figure 22), corresponding to the numbered steps. The randomly created new order was danced and we analysed our performance. I was aware that the links between my neurons would need rewiring, but to what extent would it interrupt the fluidity? As predicted, it was challenging to grasp a flow. Once we knew which step to dance next, the following few counts were easy, as we were using our procedural memory. The moment when one step ended and a new one started, we noticed hiccups in our fluidity. Our brains needed to process new information: what is the new step and in which direction will it go? Memory shows to be vital in maintaining flow. There was too much to

think about at once. Yet how much was too much?

Psychologist Mihaly Csikszentmihalyi is famous for his research on flow states[2]. He explained how our nervous system is incapable of processing more than about 110 bits of information per second (2009). That would explain how new dancers cannot fall into flow when trying to think about the rhythm, tempo, direction and body movement all at the same time. Csikszentmihalyi continued with explaining how our brains need to feel high levels of challenge and high levels of skill in order to be stimulated enough to reach flow.

Flow in dancing is also dependent on the communication with a partner. Anticipation and trust in a partner are just as important as high levels of challenge and high levels of skill since it is done together. In Experiment #4: Learning a New Dance Style (Appendix 4) I have taken up a challenge to learn the basics of the swing in an hour private session and try to achieve flow with a new partner. To start, I focused on the rhythm, moves and direction in a mathematical structured manner. Rigid like Newtonian clock-time. After a while of getting to know my partner, I started feeling the moves and rhythm without thinking about what I needed to be doing. I forgot about time passing by and enjoyed the moment, smooth like Bersgonian event-time. It is difficult to fall into flow straight away. Firstly, the links between neurons need to strengthen like Kandel's sea slug experiments have proven. Secondly, there needs to be enough time to get to know the partner to build trust. To reach flow, we need to first experience the Newtonian clock-time to understand the basic structure, and progress into Bersgonian event-time to allow for flexibility. As famous swing dancer Dawn Hampton said in her workshop at Lindyfest: "If you've come here to learn steps, then you're in the wrong room. I want you to feel the dancing. Now we have so many different things happening in dance. I want you to just *feel* them." (HSDSswing, 2010, 01:34).

7   Spanish arn

3   American sp

3   American sp

1   Basic turn

6   Windmill

2   Follow

10   Chicken walk

7 Other Dancers' Scores

While conducting my experiments, I was aware that the way I feel dance is personal. My own experience may not transcend with others, my notations could be interpreted differently and my memorising methods suit me. So what tools do other dancers use to learn and memorise dance?

As discussed earlier, time perception in dance can be divided into two approaches: strict and precise or fluid and flexible. After talking to some dancers from the Swing in Rhythm dance school, it was clear that some are 'numbers people' - relying on the eight-count to learn steps - and some prefer articulating the movements through scatting. Teachers themselves prefer scatting, as it not only widens the spectrum within the given time signature, but also helps play around with rhythm and visualise the intent of the movement through onomatopoeias. A sharp 'boom' would create a different movement than a smooth 'ooh-pa'.

Earanee being a teacher herself shares her thoughts on scatting: "The way that a particular movement sounds is going to be different for different people. [...] If I'm teaching with somebody else and we want to scat a rhythm of something that were teaching, each of us will have a different way of articulating that. So yeah, I think there's a

ROCK STEP

TRIPLE STEP

STEP STEP

TRIPLE STEP

TA   DA

DUBI   DA

TA   DA

DUBI   DA

difficulty because so much of it is genuinely an intangible kind of feeling that is experienced. And how to put that in words, or sounds or visuals is quite challenging." (Appendix 2)

Musicality plays a large role in dancing, as dancers interpret the music and their bodies become the instruments. Although jazz is a free and improvised music style, it still has a blueprint: a thirty-two-bar form (or AABA form) and syncopated rhythms, putting the stress on the off-beat. Scatting allows dancers to interpret this musicality and its playfulness. Counting beats is limited to only keeping track of time, and does not express the atmosphere of a movement. Nevertheless, some students struggle to use a different method than their preferred structured count blueprint. It's easier for them to learn and memorise steps using this technique.

Experiment #5: Scatting Through Typography is a small example that typographically transposes the techniques in articulating swing rhythm. The length of the words match the length of time proportionally. Movement terms are used mostly with beginners to help them learn the action corresponding to the sound (Figure 23), whereas scatting is used with more advanced dancers to articulate the intention and feel of a movement (Figure 24).
Spatial awareness, which is used to understand the nature of the movement, is another aspect that people have different perspectives on. Some students visualise the steps from a bird's-eye view, some from the dancer's perspective and some from a third-party perspective. Geometry is often used to describe the shapes of the step and the direction of the movement. This structure helps to process what a step should look like.

Experiment #6: Comparing Notes is a collection of scoring systems from several dancers, scaling from beginner students to advanced teachers, from swing communities in South Holland[1]. These personal notes and

scores help them learn and memorise steps. Figure 25 was created by Joeri de Man at an early stage of learning Lindy hop. It is a scoring system to understand the correlation of footwork and rhythm. He presented the footwork position frame by frame. He represented time by numbering feet, as well as defining at what moment of the rhythm the foot position should take place. Figure 26 is Fil Kostanecki's notes during an advanced workshop. He annotated what was taught using swing terminology. He underlined details that were important to him, such as an arm movement happening between count four and five. He supported a step with a diagram to clarify the spatial awareness. Figure 27 is a choreography set by Joseph Openy. He developed this set a few months into learning Lindy hop, to ease himself into social dancing. It was a way to relieve himself from performance pressure. He added that he noticed that his dance partners were less nervous if the dance started with a couple of the basic steps.

The examples show how varied notation methods can be. Each individual annotates differently as they focus on elements that are important to them. Normalising scores to create a universal method is questionable, as these are personal interpretations. Cunningham's interpretive scores were designed for the performer to have their own and unreproducible experience. If that performance were a social dance, both dancers would have a different experience, although they are communicating and embracing it together.

The other
Basic Steps M

weight on
that foot

1   2   3

step   rock   step

1   2   3

rock   step

tri-   -ple   step

step   tri-   -ple   step

1   2   3   4

step   rock   step

8   3   4

rock   the   step

Marco & Anita - Workshops @ Rotterdam - 29-17

{Lindy Blue +}

1) Electric Slide
  ↳ w/o music
  ↳ Fast slow
2) Swing-Outs
  ↳ Indicate on 2   ↳ Can be multi-directional
  ↳ Step back on 5
  + ↳ Swing Songs (S. Swing Lover)
3)

4) Texas Tommy
  ↳ On 4 → Use the hand, less waist
  ↳ Use space
  ↳ Use the arm (4 and 5)
5) Lead → Counter-clock spin
         F   Tip: Lead into
       ↱L↴   yourself,
       F↴   "small bounce
         L
         E
6)

Swing (Social) Plan

1) Baoic steps x 2

2) tuck turn

3) change of places.

4) frankie 6's.

5 walk to the beach.

27

HOW TO SPEAK

HOW TO SPEAK

HOW TO SPEAK

DANCE

DANCE

"HOW TO SPEAK

'DANCE'

'HOW TO SPEAK

DANCE
DANCE'

8 Dance as a Language

With previous experiments I questioned whether it is possible, and attempted, to quantify and visually represent different elements in dance. Yet with time it became clear that social dancing has another element: the intangible connection between the dancers. Before taking on the task of translating this dialogue, it first needs to be clear what this dialogue is.

Anthropologist Judith Lynne Hanna compares the similarities between dance and verbal language. Both have vocabulary and grammar. In dance, the vocabulary is locomotion and gesture. Grammar, being the rules of a certain language, is comparable to the tradition of a dance which connects the movement vocabulary together. Both have semantics, where verbal language strings together sequences of words, and dance strings together sequences of movement. However, dance, with its multiple, symbolic, and elusive meanings, more often resembles prose. It is more difficult to communicate complex logical structures, compared to verbal language. Although both could communicate empty content (meaningless sounds or mere motion) listeners and viewers still tend to read meaning into what they hear and see (2008). Millman's recollection of Frankie Manning's dancing mentions articulation, which was not discussed by Hanna. "He didn't just move his feet and legs; rather, his entire body and even his face were involved in every action as he responded to the rush of music coming from the bandstand. All of his joints seemed to be bending constantly and articulating rhythmically, an orchestra of moving parts" (Manning and Millman, 2007, p. 15). Bearing in mind that dance is a physical interpretation of music, and that each person hears music differently, this interpretation could be seen as articulation.

A report by Stevens and McKechnie compares specifically modern dance to language, as memory, procedural knowledge and non-verbal communication are psychological processes that appear in both. They

propose that contemporary dance is a heightened form of non-verbal communication due to its richness in gesture, expression and affect (2005). Their view is very specific to movement that is performed or observed, suggesting that the non-verbal communication is between the audience and dancer; the movement articulates the emotion. As I may agree to a certain extent that dance can communicate a message, non-verbal communication in dance can be observed in a much deeper sense. As mentioned by Hanna, the viewer will tend to read into the performed message, whether it has meaning or not. The unspoken dialogue between the partners in social dances on the other hand is more genuine and less theatrical, as they are not aimed to be performed for an audience. Both parties need to listen and respond to one another.

9 A Non-verbal Conversation

When social dancing, the two dancers are in constant dialogue. One dancer being a 'lead', typically a man, the other being a 'follow', typically a woman. It should not be assumed that the lead is the driving force. Both roles are equivalently important and have the same amount of freedom to initiate steps. It's a play of listening and interpreting what your partner is suggesting. This non-verbal communication is supported by connecting points on the body: shoulders, arms, hands and back. Closed positions (connecting in all connecting points) and open positions (connected only by holding hands) (Figure 28) allow the dancers to understand the movements of their partner. Change in tension, dampening the motion or redirecting in any of the connecting points are ways to communicate a change of step.

Dawn Hampton also emphasises the need for a physical connection between the dancers: "One thing that happened with the Twist, was that people danced separately. She danced over here and he danced over there. With swing dancing there's touching. Something that people need. They need to touch, they need to feel each other." (HSDSswing, 2010, 04:59). This dialogue between dancers was not so present in my ballroom experience, despite our connecting points, because we kept to our given routine. There was little need to listen to your partners instructions, as we could anticipate every move. We understood when something was wrong with our partner, whether a mistake was made in a move or whether it was unclear what step followed. Yet beyond that, there wasn't much listening if everything was going according to the choreography. In more improvised social dancing, such as swing, there is more need to listen and react to our partner.

Visually representing non-verbal communication could be feasible if it only depended on the connecting points. Highlighting the change in tension and direction could potentially have a similar visual outcome as thermographic cameras. This, however, does not indicate whether the

Floor Steps

Although the Lindy Hop did not receive a name until 1927, elements of it were visible as early as 1924, in the Broadway and Harlem "mooch" and "sugar." In 1925 the Charleston revolutionized American dancing by freeing partners from the stylized vis-à-vis position of the fox trot and waltz. The Lindy Hop picked up where the Charleston left off, with the first swing-outs, breakaways and "shine steps" added to a basic off-beat two-step.

In its early days the Lindy flourished only in lower strata of society. Negroes were its creators and principal exponents, and Arthur Murray would no more have taught the Lindy Hop than Rachmaninoff would have given lessons in boogie-woogie. But with the renascence of swing the Lindy climbed the social scale. New steps like Susy-Q, Trucking and Jig-Walk were invented and absorbed into its expanding framework. And as they spread across the land, invading colleges and dance schools, the Lindy Hop attained respectability as a truly national dance. On these pages Gjon Mili's camera records some of its most characteristic floor steps as demonstrated by Stanley Catron and Kaye Popp, both 17, both of the Broadway musical, *Something for the Boys*.

JOCKEY IS A TEMPO-SETTER AND PRELUDE

THE TWIST, AN EARLY INVENTION, GIVES GIRL A CHANCE TO "SHINE"

WITH LEFT FOOT BUT DOES NOT SHIFT WEIGHT; 2) BRINGS LEFT FORWARD, PIVOTING ON RIGHT; 3) SWEEPS RIGHT AROUND BEHIND LEFT AS GIRL STEPS AWAY; 4) COMPLETES SWING-OUT

JIG-WALK IS A BASIC FLOOR STEP INTRODUCED ABOUT 1930

THE TRIP JIG-WALK IS A FANCY MANEUVER SUITABLE ONLY FOR CONTEST OR EXHIBITION PURPOSES. FUNDAMENTALLY IT IS AN ADAGIO VARIATION OF BASIC JIG-WALK SHOWN ABOVE

CHARLESTON REVOLUTIONIZED DANCING IN 1925

THE SHAG BECAME POPULAR IN U.S. COLLEGES IN 1930'S

FIRST ELEMENT OF LINDY HOP WAS THIS SIMPLE BREAKAWAY

MOST IMPORTANT ELEMENT OF LINDY IS THE SWING-OUT. IN THIS SIMPLE VERSION, 1) THE BOY STEPS BACK

THIS IS PECKING, A BREAK FEATURING HENLIKE MOVEMENTS OF HEAD

CHARLESTON IS IMPORTANT PART OF LINDY. MODERN VERSION INVOLVES VIGOROUS KICKING FORE & AFT

connection had a positive or negative influence on the dialogue and flow of the dance. Listening attentively and responding to body cues doesn't mean that the mental, or non-physical or spiritual, connection is there. For Earanee, hearing the music in a similar, or at least a complementary way, is vital to a good connection between dancers. She tells me about her favourite partner: "He and I have always had a very very connected dance chemistry, even from when we were fairly new dancers. And a lot of that is not necessarily from hearing the same way but hearing music in a way that was complementary. So maybe we would hit different things, but we would know the thing I would do, would be complementary to what he would do. Then would also learn how to draw from each other." (Appendix 2). Understanding one another's interpretations of the music allows for a better flow in movement, but breaking that could have an enriched value.

My personal favourite moments to see between dancers, or to experience myself with a partner, are non-verbal jokes. Both partners are dancing in silence, yet one suddenly laughs as seen in Figure 29. The backbone of any joke is its notion of wit and unexpectedness. The same applies to dancing. Whenever either of the dancers creatively surprises the other and causes them to laugh, it becomes a non-verbal joke. Dancer and teacher at Swing in Utrecht Ilja Thoenes really values those moments. During my interview with him he said that if his partner has laughed and shouted out in surprise, it was a good dance (Appendix 5).

Is there anything else that make someone a good partner, despite their fluency in moves and complimentary ear for music? "Openness makes a big difference to the kind of chemistry that you can develop with someone as a dancer" Earanee explained. "People who really are attentive to their partner, and try to remain open to the possibilities, open to surprise, those kind of dancers often are able to just connect better and build better chemistry with people around them." (Appendix

2). This openness also allows for fun and creativity. Mirroring is a common phenomenon between dance partners. If one acts goofy, that could be subconsciously reciprocated by the other. On the other hand, if one is insecure and keeps to basic steps, that probably will be noticed by their partner and matched to not push them too much out of their comfort zone. "If you have two people who are [open] dancing together, that's something special, as opposed to someone who is open and someone who is closed off from their partner." Earanee added.

As each person's interpretation and articulation of music is different and the connection and dialogue between dancers is unique and unreproducible, I will not attempt to create a standardised graphical representation of experience and emotion, as it is simply impossible. This is why personal contact with dance teachers is important. They have the role of preserving that intangibility by explaining the feeling. Yet as each dancer has their own experience, when passing down the knowledge person-to-person, it is inevitable that this personal experience resonates in what and how they teach.

PART THREE

10 The Telephone Game

Having the responsibility of preserving steps and ambience of a dance without bias when teaching can be difficult. Interpretation and context can harm the process of passing down dance. Is there anything that could help with this process?

Earanee, as a teacher, explained what made Frankie such a good messenger: "A lot of people say that [he] was really really loving and really caring and wanted to share things with people, was really happy, and not protective, or defensive, he was just very open, sharing kind of person. I think him coming to the scene teaching people, not just the steps, but how to be open with each other and how to treat each other, I think that really helped him form people's understanding of what the dance is meant to be. Perhaps without those kinds of connections, it might not have had a true resurgence. It might have been more, like, something like a lot of rock and roll to me ends up looking like; a lot of moves, but not necessarily a lot of heart." (Appendix 2)

During a trip to New York I could not help but experience the original Lindy hop community, resulting in Experiment #7: Dancing Where It All Started (New York, New York!) (Appendix 6). My aim there wasn't only to dance, but also to get to know the community, their individual stories and to get a grasp of how this community may differ from my own in Rotterdam. To my surprise, it didn't feel much different to home: there was a caring and happy ambience, people drank soft drinks at the bar instead of alcohol, and there were people of all skill levels happily interacting (Figure 30). The music choices and fashion was slightly different. I asked a local whether she thought it was incredible that across the world a community can feel just the same. Without hesitation she replied: "we all speak the same language, the language of dance". It may be that, but being taught by the same sources definitely helped shape a similar community.

People such as Frankie, Al or Norma taught not only the steps but also the culture. Although the case of kizomba may seem more miscommunicated due to the misinterpretation of the ambience, it is difficult to compare the situations in which the knowledge was passed down. Swing dancers had the money, or were invited, to travel to Europe and share their skills. There is still a multitudinous exchange of teachers and students between countries. The context and purpose of spreading the knowledge was different to Angolan refugees. Cultural differences between America and Europe are also smaller than between Africa and Europe.

Although the context in swing isn't much different between locations, some elements of jazz dance and swing have changed over time. A clear example is the Charleston. The 1920s version was danced to one particular song, "The Charleston" by composer James P. Johnson, which was written for the Broadway show Runnin' Wild. In the 1930s the steps developed and were danced to any swing music that is roughly between 200 and 290 BPM. This is still the case today.
Frankie observed in his book what changed between his youth and today's swing community. "At the Savoy we sometimes did the Shim Sham[1] as a group line dance, without taps, but it was different from the swing dancers do it nowadays. [...] We only did two choruses, and it wasn't associated with any particular music. [...] Although a few people might join in, most everybody else kept dancing without paying any attention to us." (2007, p. 70). This dance actually originated in the 1920s as a tap dance, developed by Leonard Reed and Willie Bryant. Only with time it spread to the Savoy. Today it is a standardised group choreography performed in a circle or line to "'Tain't What You Do" by Jimmie Lunceford[2], due to Frankie's revised version. It could be compared to the "Macarena" or "Single Ladies". The Shim Sham is known to swing dancers around the world, and it is considered a celebratory dance at parties. It has some slight variations depending on location but

also for those who want to add some styling.

There are some people within the community who could be considered traditionalists[3]. They try to exactly capture the steps from the past, and categorise what 'is' and 'isn't' accurate. The paradox of strictly preserving steps today is that steps from the 1920s to 1940s were improvisations. As long as the dance could be instantly identified as a specific style, through steps and essence, I consider it acceptable. There are some members of the swing community that have even stronger views on traditions; some African American dancers are against white people dancing the blues. They perceive it as cultural heritage that cannot be understood, and should not be interpreted by others. This topic of cultural appropriation within dance is so vast, it goes beyond the scope of this study and deserves its separate research. With previously mentioned examples I would suggest that it seems difficult to contain a dance within a time period or location, as it is always in flux.

Earanee questions the evolution of swing into West Coast Swing. "[It] is something that diverged wholly. It's not a swing dance anymore. The dance is a swing dance, but the music is not swing. So is it a swing dance?" (Appendix 2). Another beautiful example of this takes place outside of the swing context. During the industrial revolution in England, female factory workers would feel alienated as they were subsumed by the machinery. Compared to the previous artisan working methods, there was less contact with family and friends. To soothe their boredom of monotonous tasks and inhumane production, they clog danced. Caroline Radcliffe, clog dancing historian, explains workers would tap out rhythms on the spot to the rhythms of the machines. The steps resemble the movements and sounds of machinery such as cogs, bobbins or shafts. Radcliffe explains that sharing step ideas with friends was their form of socialising, but is also how the dance progresses. It started with improving and adding to previously seen steps, yet it's

always developing. (BBC, 2017, 03:23). Interpreting the environment around us and articulating it in our own way, right here and now, is what makes dance alive and fluid.

CONCLUSION

It is possible for a dance to be shared or transmitted to another place, in another time, or to people with another cultural background, yet we need to keep the change in context in mind. It should not be expected that the dance remains the same. Translating dance in a context-free graphical form could communicate the quantifiable elements, such as direction or rhythm, but it is difficult to translate all elements into one system. Creating a universal scoring system is problematic, as each creator translates what is relevant and important to them. Rhythm was not an element that was of great importance to communicate in previous graphical notation systems, although it would create a clear blueprint to build upon. An open approach of layering the rest of the information, element by element, would create numerous possibilities in viewing the score. It becomes a more universal presentation of this information, as each person could focus on the elements of their interest and understand how they interact. Due to the structure in styles such as ballroom, it is easier to visually represent standardised moves. This cannot be said about improvisational social styles. Following Cunnningham's approach of only communicating the bare essentials of a dance, leaving the rest up to interpretation, would allow for more freedom in those cases. This flexibility in the score design and reading may be the best solution to archive the quantifiable elements in social dances.

As people have different perceptions of time in dance, this affects the way scores are read and performed. Those who have a strict sense of

time pay closer attention to counts compared to those who have a fluid sense of time and fall into flow. To reach flow, we need to first experience the Newtonian clock-time to understand the basic structure, and progress into Bergsonian event-time to allow for flexibility. Secondly, in order to attain flow in social dancing there needs to be enough time to get to know the partner in order to build trust and loosen up. To help reach a flow state, people use personal techniques to comprehend their experience with the support of their interpretation of time and spatial awareness. Some scat whilst other count as a measure of time. Some visualise the shapes of the steps and movement, either from a bird's-eye view, from their own perspective or even from a third-party perspective. These can be notated in various forms, such as sketches, routines or notes. These personal memorising techniques support that making a strict universal scoring system is questionable, as each person has their own perception, interpretation and experience.

Although dance could be compared to language due to its similarity in structure of vocabulary, grammar, semantics and articulation, perceiving it as language between performer and audience is simplistic. The audience will always read into a performance, whether it has meaning or not. There is a rich non-verbal dialogue between dancers which is impossible to score as it is beyond responding to the partners movements. Visualising connecting points does not communicate whether the connection was intended, an accident, considered good or destructive to flow. It shows that there is a dialogue, but not what it is. Openness is a quality that helps keep a good connection. Each partner interprets and articulates music differently, therefore listening and responding to unexpected movement is crucial to a flowing dialogue. This cannot be recorded as it is in somebody's head. Documenting dance should not only focus on steps, but also on the culture, ambience and dialogue. This is why there is a need of person-to-person contact to learn it from. Teachers could compare elements of a dance with

shapes or sounds to break time or cultural boundaries. They should be aware that their perceptions shape the way the style is interpreted by students. Dances continue to evolve due to time, location or cultural context. It is too difficult to control or freeze the evolution. Since dance styles are always in flux, it is difficult to contain them within a time period or location. This should be considered as a feature, not a risk. The traditionalists capturing steps that were improvisations is paradoxical and stringent. Personally, as long as the dance is easily identified through steps and essence, it is sufficient. Even the dancers' dialogue is unique and unreproducible, yet the openness within should remain. Exploring to what extent an experience such as dance can be truly captured revealed that transcribing only tangible and structured elements is not enough. Recording the culture and atmosphere would also help my personal notes in retaining the current essence of different dance styles I'm learning. Conveying a deeper connection, interpretation and perspective is vital in creating a bigger picture. Keeping those factors in mind would also allow for a better understanding of how to capture other experiences. Cultural appropriation in dance also relies on the same factors, even if the aim of the study may be different. Both topics have potential to become future research possibilities to explore the way we document life and share perspectives.

NOTES

Introduction

1. As opposed to what seems to be the most obvious answer, video is not a great means to document dance. It's commonly filmed from the audiences' perspective and fails to capture what the dancers themselves are experiencing. It is not an easy tool to learn from either. When watching steps or movement, the video needs to be paused and replayed in short clips numerous times in order to process the information and copy it.

   Additionally, filmed dances usually have a purpose, either entertainment, education or as a memento. These are prepared ahead of time, and communicate differently, depending on their essence. The archived clips that dancers use to interpret moves are all performances or choreographies. These practiced routines do not communicate the spontaneity of the dance. The dances were loud and ecstatic as they were filmed for television entertainment.

2. *The Spirit Moves,* by Mura Dehn, is a 1989 three-part documentary film attempting to preserve the development of African American social dancing styles from the turn of the century till 1980s. Part one focuses on jazz dance from late 19th century till 1950s. As Dehn only started documenting in the 1930s, she faced the problem of finding older dances performed in new venues. She recruited professional dancers

to demonstrate the older styles in a studio setting. This already hinders the purity of the content as it was taken out of context - with different people at a different time. Her narration explains some history or context of the styles, yet with the example of the Cake Walk, the politics of the style were not truly explained. In addition, due to technical limitations, the soundtrack was added after recording the visuals. The documentary features music of the same style as danced by the performers, but not necessarily the same song. This is very clear throughout, as the visuals do not match the audio, the dancers are not moving to the same beat as the music. If so much was manipulated, it does not portray the dances accurately. Cinematography as a means may preserve some choreography and it could capture the feeling, yet it is not clear to learn from and it may have a subjective view.

3. The Cake Walk was the first African American dance accepted by the white society in America. It was considered to be their own ballroom dance. Slaves dressed in suits, wearing top hats and sometimes using walking sticks, would perform this style to their masters for entertainment. The masters would create competitions for the best performance. The winner would be awarded with a cake - hence the name. Little did the masters know that this style was made to mock them and their mannerisms.

Chapter 1. History of Swing: its birth and revival

1. Swing originated from African American dance forms of slaves and plantation workers. Animal Dances, or Plantation Dances, such as the Grizzly Bear, the Turkey Trot, the Camel Walk and the Bunny Hug, became further widespread. Slaves would teach

these steps to their masters, who wanted to break loose from the slower and 'outdated' ballroom dances. They would dance them at upperclass private parties which was considered very risqué in the white community. (BBC, 2017, 5:38)

2. Thanks to the spread of popularity of rag-time music to Europe in the late 19th and early 20th century, American and African American dances were introduced by the travelling upperclass. Vernon and Irene Castle were Broadway dancers who taught and performed rag-time dances, including the Grizzly Bear, the Turkey Trot, in France and England. They moulded African American dances to suit the white European public, breaking the stigma of risqué and closed position dancing. Their impact on British dance was thanks to their 1915 silent feature film, The Whirl of Life. It was the first instructional dance film. (BBC, 2017).

3. Swing dances could be categorised into a few distinct styles, each originating from a different place in the United States. Lindy Hop started in Harlem, New York, Charleston in Charleston, South Carolina, Balboa in Newport Beach, California, and Shag in South Carolina.

4. The Savoy Ballroom was located on 596 Lenox Avenue, between 140th and 141st Streets in Harlem, New York between 1926 and 1958. It had an approximately 10,000 square feet spring loaded wooden dance floor and it could hold up to 4,000 people (Watson, 1999). It was very popular and radical as the crowd was integrated - not only being in the same venue, but interracial dancing was completely accepted. It was considered as the ballroom because it had the best musicians, and thanks to that they attracted the best dancers. Chick Webb was their house band. Other guest musicians included: Benny Goodman, Count

Basie, Billie Holiday, Ella Fitzgerald. (Manning and Millman, 2007, p.69).

Chapter 3. Graphical Dance Notation

1. In 1938, composer John Cage worked with and accompanied choreographer Bonnie Bird at the Cornish College of the Arts. Cage was interested in percussion, dance and body movement. He stated in Goal: New Music, New Dance (1939) that dance should be freed from dependence on musical structures (Cage and Gann, 2013). In 1940 he met dance student Merce Cunningham, whom became his creative and romantic partner for the rest of his life.

   Cunningham became a choreographer and used systems as a creative method. His work Root of an Unfocus (1944), was a part of Cage's solo concert. Cunningham stated that "I date my beginning from this concert" (O'Mahony, 2000). Cage's scores were completely independent of Cunningham's performance, their only consistency was that they started and ended at the same time. Cunningham used a mathematical system to divide the dance into sections that corresponded to certain square roots.

Chapter 4. Dissecting Dance into Layers

1. The score of Fontana Mix (1958) by John Cage is a system which can be used by anybody to create music. It consists of twelve papers with curved lines, ten transparent film sheets with randomly distributed dots, a transparent film sheet with a straight line and a transparent film sheet with a grid. A list of

instructions is added to understand the procedure of creating a personal score. Layering the sheets create different outcomes. The intersections of the straight line, two circular points, the grid and curved lines create values. The representation of these measurements are meant to be interpreted by the creator. These could be tone, pitch or volume.

2. Choreology (noun) is the notation of dance movement.

3. Ballroom and Latin dance styles: Cha Cha, English Waltz, Foxtrot (Slowfox), Jive, Paso Doble, Quickstep, Rumba, Samba, Tango and Viennese Waltz.

4. Dancer, musician and founder of Imperial Society of Teachers of Dancing, Victor Silvester, was a driving force in standardising the tempo of ballroom dances. In 1935 he formed a "Strict Tempo" orchestra that played recordings for ballroom dancing, which are still used to this day.

5. International teachers could be considered as mini-celebrities within the swing community. They compete in competitions and travel the world to give high-end workshops.

Chapter 6. Memory and Flow

1. Experiment #2: Jive Mix Up was developed and resulted as a performance piece at De Player on 24th March 2017 as a part of their Tetra Gamma Circulaire #3 issue in collaboration with Piet Zwart Institute. My dancing partner and I danced jive steps on stage which were articulated through an interactive web interface by the audience. Specific jive steps were announced live through a speaker after the appropriate step button was pressed by the audience on their phones. If no instruction was

given, we would stop performing. It was up to the audience to figure out when to press the buttons to keep the dancers in flow. The audience learned the scoring system using trial and error, used it, and started creating their own choreography. Becoming puppet-masters allowed them to fall into flow without dancing themselves.

2. Mihaly Csikszentmihalyi's key points that prove we have obtained it are:

- Completely involved in what we are doing - focused, concentrated
- A sense of ecstasy - of being outside everyday reality
- Great inner clarity - knowing what needs to be done and how well we are doing
- Knowing that the activity is doable - that our skills are adequate to the task
- A sense of serenity - no worries about oneself, and a feeling of growing beyond the bounderies of the ego
- Timelessness - thoroughly focused on the present, hours seem to pass by in minutes
- Intrinsic motivation - whatever produces flow becomes its own reward

Chapter 7. Other Dancers' Scores

1. The amount of people from all the swing communities from South Holland is in the hundreds. It is difficult to distinguish who falls into which community, as many dancers travel to different cities for classes, workshops and parties on a regular basis. Facebook in a popular tool used by the dancers to keep track of

events. For a comparison, the amount of Facebook page followers per community are as followed:

Hague Hoppers from The Hague: over 750
Key Town Swing from Leiden: over 400
Lindyhop in Delft from Delft: over 250
Roffa Swingt from Rotterdam: over 800

Other big communities in The Netherlands include:

AlgoRhythm from Amsterdam: over 700
Lindyhop Eindhoven from Eindhoven: 400
Sugarspin from Groningen: over 250
Swing in Utrecht from Utrecht: over 2000
Swing Shakers from Tilburg: over 600

Chapter 10. The Telephone Game

1. The Shim Sham is a 1920s tap dance. The origins are difficult to find due to disputes of the creators Leonard Reed and Willie Bryant. A characteristic step, the Tacky Annie, was also taken from Jack Wiggins. The simple routine is made up of four steps: the shim sham, pushes with a crossover, Tacky Annie and half breaks.

2. Some schools may teach the Shim Sham routine to "Tuxedo Junction" by Erskine Hawkins & His Orchestra.

3. An example of mild swing dance traditionalists are The Big Apple Lindy Hoppers, a semiprofessional troupe of swing dance performers. The group was founded in 1986 by two members

of the NYSDS. Although previously Frankie was the coach and choreographer, today they remain devoted to preserving and presenting Frankie's choreography and style. (Manning and Millman, 2007, p. 16)

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IMAGERY

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APPENDICES

Appendix 1

Experiment #2: Basic Choreology Analysis

When looking at dance mats which learn how to dance basic steps of dances, I understood why lesson lead by humans are still favoured. The step mats are too simple; they are missing the speed, tone and rhythm that are vital aspects when learning any dance.

For each ballroom and latin dance style, there is a strict set of moves. Each dance has a characteristic tone, speed and rhythm. For many dance styles the choreography needs to be performed in a particular order. What would happen if the characteristic aspects were altered?

Changing the speed causes the tone to change too. Taking the Waltz as an example, a slow, graceful and romantic English waltz, when sped up, becomes a joyful, energetic and playful Viennese waltz.
The rhythm is the back-bone of a dance style. Without it, it would be very difficult to identify a particular dance. Music chosen for dances is primarily based on the count and whether it matches the timing of the dance. It could either use a 3/4 time (1, 2, 3) or a 4/4 time (1, 2, 3, 4).

If I am able to match songs to particular dance styles, and I am able to identify a dance style by its rhythm, would I be able to convert that knowledge into simple infographics?

Task:

1. List all dance styles
2. Illustrate movement using choreology
3. Explain rhythm in words
4. Illustrate rhythm using choreology
5. Analyse differences between dances

Subtask:

6. List a few songs that (personally) suit each given dance style
7. Find average BPM (beat per minute) for each song
8. Research what the average recommended BPM is per style
9. Compare my BPM range with recommended BPM range

BPM ranges were compared with the following sources:
- Sheris Musings (Leblanc, 2011)
- Beats Per Minute Online (Beatsperminuteonline.com. n.d.)
- Hollywood Ballroom DC (Gross, 2012)

Cha Cha
one, two, cha cha cha

English Waltz
one, two, three (slowly)

Foxtrot
slow, slow, quick, quick

Jive
one, two, shu-ffle one, shu-ffle two

Paso doble
a one, two, three, four, a five, six, seven, eight

Quickstep
one, two, step-step

Rumba
and a one, two, slide
Samba
one - and a - two - and a - three - and a - four

Tango
slow, slow, a quick, quick, slow

Viennese Waltz
one, two, three (quickly)

CHA CHA		
Song	Artist	BPM
Cake by the Ocean	DNCE	119
Mercy	Duffy	130
El Chacal	Jose Conde	118
Mambo No. 5	Lou Bega	174
Smooth	Santana	116
My range		116 - 130
Range: Sheri Leblanc Musings		approximately 112 - 128
Range: Beats Per Minute Online		120 - 128
Range: Hollywood Ballroom DC		112 - 128

ENGLISH WALTZ		
Song	Artist	BPM
Moon River	Audrey Hepburn	92
La Javanaise	Madeleine Peyroux	108
Come Away With Me	Norah Jones	81
Nocturne	Secret Garden	80
My range		80 - 108

ENGLISH WALTZ		
Range: Sheri Leblanc Musings		approximately 90 - 100
Range:		84 - 90
Range: Hollywood Ballroom DC		84 - 93

FOXTROT (SLOWFOX)		
Song	Artist	BPM
Why Don't You Do Right	Dean Martin	113
James Bond Theme	Monty Norman	116
Walking My Baby Back Home	George Benson	110
Fever	Michael Bublé	128
Fly Me To The Moon	Frank Sinatra, Count Basie	120
My range		113 - 128
Range: Sheri Leblanc Musings		approximately 120
Range:		112 - 120
Range: Hollywood Ballroom DC		112 - 120

JIVE		
Song	Artist	BPM
You Make My Dreams	Hall & Oates	167
Doin' It Right	Power Blues	165
My range		165 - 167
Range: Sheri Leblanc Musings		approximately 180
Range: beatsperminuteonline.com		168 - 184
Range: Hollywood Ballroom DC		152 - 176

TANGO		
Song	Artist	BPM
La Cumparsita	Carlos Di Sarli	116
Santa Maria	Gotan Project	118
Una Música Brutal	Gotan Project	107
El Tango De Roxanne	Jose Feliciano	108
My range		107 - 118
Range: Sheri Leblanc Musings		approximately 120
Range: beatsperminuteonline.com		80 - 160
Range: Hollywood Ballroom DC		120 - 132

VIENNESE WALTZ		
Song	Artist	BPM
Waltz No. 2	Dmitri Shostakovich	187
The Blue Danube	Johann Strauss II	183
Vienna Blood Waltz	Andre Rieu	190
Sleeping Beauty	Tchaikovsky	190
La Valse d'Amelie	Yann Tiersen	192
My range		183 - 192
Range: Sheri Leblanc Musings		approximately 190
Range: beatsperminuteonline.com		174 - 180

PASO DOBLE		
Song	Artist	BPM
Cielo Andaluz		112
El Gato Montes		116
El toro de tu sueno		120
My range		112 - 120
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		120 - 124
Range: Hollywood Ballroom DC		112 - 124

QUICKSTEP		
Song	Artist	BPM
Rock It For Me	Caravan Palace	212
That Man	Caro Emerald	207
Tangled Up	Caro Emerald	202
Mr Rock & Roll	Amy Macdonald	222
It Don't Mean A Thing	Geoff Love Orchestra	199
My range		199 - 222
Range: Sheri Leblanc Musings		approximately 200
Range: beatsperminuteonline.com		200 - 208

QUICKSTEP		
Range: Hollywood Ballroom DC		192 - 208

RUMBA		
Song	Artist	BPM
Chan Chan	Buena Vista Social Club	81
Sway	Dean Martin	120
Girl From Ipanema	Joao Gilberto	128
Those Sweet Words	Norah Jones	103
My range		81 - 128
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		100 - 108
Range: Hollywood Ballroom DC		96 - 112

SAMBA		
Song	Artist	BPM
Tu Picadura	Dancelife	102
Dejarè La Puerta Abierta	Danilo	100
Bailar	Deorro ft. Elvis Crespo	128
Suavemente	Elvis Crespo	124
Lambada 3000	Kaoma, Gregor Salto	127
My range		100 - 128
Range: Sheri Leblanc Musings		-
Range: beatsperminuteonline.com		96 - 104

SAMBA		
Range: Hollywood Ballroom DC		96 - 104

Summing up this exercise, I can conclude that it was difficult to illustrate the dances that don't have a specific 'shape' in its direction, but rather go around the room. Those dances are: foxtrot, paso doble, samba, swing and tango. Explaining the rhythm in words was the easiest as it is regularly used during beginner classes. The hardest task was to illustrate the rhythm using choreology. I had to multitask: count the beats by tapping on my thigh and say the rhythm out loud while dancing to see how they all overlap.

The second part of the task wasn't necessarily essential to analyse choreology, yet it was interesting to see how the BPMs from different dance styles compare.The cha cha and foxtrot have similar BPM, yet the tone is very different: one is youthful and playful, the other graceful and glamorous. I was surprised to see that samba has a relatively low BPM, as it is a very fast choreography filled with constantly changing positions.

Appendix 2

Research: interview with Earanee Niedzwiecki

Earanee: My name is Earanee Niedzwiecki. I am a dancer from Adelaide, Australia. I have lived and danced Lindy hop in a few different places around the world. Most recently, I've been based in Melbourne in Australia. Well actually, most recently I've been based in Luxembourg for the past two months or so, teaching a swing dance residency here with another instructor, Adam Brozowski. I have been dancing Lindy Hop for maybe a little bit over seven years, so relative to some teachers, not so long. But sorta fell madly passionately in love with it after the first lesson, and I've done a lot of travelling since then to try and explore kinda what the dance is like in a lot of different places. For me, a lot of the interests comes from seeing what happens in different communities and seeing what preferences different communities have. Visiting a city in the States and going to their local social dances for a week or something and meeting people there and seeing what their tastes and interests are. That has been my way of travelling around exploring as well as attending big events. For myself I'm very much invested in the connection that Lindy Hop can create between people. And not necessarily even thinking about it as a community, although that's kinda what ends up happening, but thinking more about sharing with others and building empathy and interest in other people.

Karina: That's a beautiful introduction. Wow! Jumping into my planned questions - thank you! I had some very simple three questions to begin with. When did you start dancing?

E: So 2010, sometime in the earlier part of the year I guess. So probably, yea maybe, I can't remember. It was around a friend's birthday, so probably would have been April I guess.

K: Have you tried, or are currently dancing other type of dance styles?

E: When I was young, very very very very young, I did jazz ballet. Unfortunately, that was not something I was able to keep doing growing up for reasons, you know, just family wise, that didn't really work out. Other than that I've done, I haven't studied anything else in length. I did a little bit of different kind of dance, but not so much probably other than swing kind of umbrella dances. I've done African dance the most, but even then, it's probably in this last year, that I have really started getting into that. And that was taking classes in Melbourne.

K: Wow, that sounds fun!

E: Yeah it's really good yeah. You really start to see some of the influences in jazz dance, like where they come from when you learn African dance. And I mean African dance again is such an umbrella term. There's a whole continent there of dance, traditional kind of dance styles and some not so traditional too. The teacher that we had in Melbourne was I believe from Ghana and he taught us dance that was sort of from his region but also he tried to give us a taste of some dances from other places in Africa too. It's also all about rhythm. It's about moving the whole body, which I think is really good, especially for swing dancers. We tend to focus on connecting with our partner and feet a lot. But African is really great just getting everything to move.

K: What makes social dancing special for you?

E: I guess I touched on it in the intro. I guess connecting with other people is why I like it the most. And I like the improvisational nature of it too. I think there's a certain.. when something is done in the moment there is a certain kind of expression and a certain freedom that you can't really get from choreographed dance. Every social dance you ever

have in your life, as a social dancer, is different. Particularly in something like Lindy Hop where, you know, we've really tried really hard not to standardise a dance, so there's quite a lot of freedom in how you choose to express yourself and what influences you can draw from. Because of course we have these fundamental steps and ideas that come from when the dance originated, but the individual is allowed to bring a lot to the dance themselves. For many of us we were influenced by the culture that we've grown up in. So whether that's people who, you know, have been dancing now for a really long time, maybe they went out in the '70s and went clubbing and they are influenced by disco. Or people on this kind of area Influenced by hip hop or contemporary dance or these other things.

E: My battery running low. Hold on a second. Yea. I will have to pause.

E: So I guess it's the freedom and that's what I like about social dancing vs. performance. I think there's a different.. You connect with the person you dance in a different way when it's improvised. You also connect with the music in a different way when it improvised.

K: That's nice. It's still something I'm learning to get it quite right. In different type of dancing I got it, but in swing I'm still getting there. It takes a while.

E: Yea, yea, yea it does.

K: It's not something you pick up in the first month of classes.

E: Yea particularly, like for a lot of people that come to this dance, maybe they know the music a little bit, but it's often quite unfamiliar to people. So, you know, if you've grown up since you were kid with soul music for example, like kind of figuring out how to move to that, it's

a little bit more, maybe you don't have a whole bunch of moves but at least kinda the feeling is there of how it works. Whereas with jazz, modern Lindy hoppers don't have much exposure to jazz, or really even thinking about moving to jazz. So yea, it's definitely, just working out how to get into the groove of it is a whole 'nother thing.

K: I'm looking at.. There are different notation systems that have been made to capture dance and this movement to the music. The music has a very successful standardised system of scores and people all accept this is the way. With dance that's not the case. Some people tried to make their own systems. There are things like the very popular in the '90s dance mats with footsteps and numbers - it's great, but it only communicates the actual location and order, but it doesn't communicate a whole range of different things. Whereas there is Labanotation. Have you seen it?

E: Maybe, but I wouldn't recognise it by it's name.

K: I have a picture right here. It is something that looks absolutely beautiful but it is overwhelming.

E: Oh my god! That is amazing!

K: It communicates direction, body parts, intention, but it also doesn't communicate certain areas. It communicates a whole range of things, but still not everything. I tried to decode it myself and learn it. It is difficult!

E: Yea ok. There's a dancer, I don't know if you've spoken to her yet. Irene, she's Greek. She's actually teaching in Luxembourg this weekend, at the same workshop Adam and I are teaching at. If I recall correctly, she does visual art, some kind of art, something. I don't know her very well. Should did some kind of project that involved this, I don't know if it's

this particular type, but it was some kind of dance language notation. So she might be a good person to talk to about this stuff because she, I don't know how much research is done, she might know some stuff about that too. Might have thought about all of this stuff.

K: Do you have your own system of capturingdance? Of remembering dances, memorising new things?

E: I don't really have a system. I would say that, for me, I think that one of the reasons I'm drawn to dance, I think, is that I'm a very visual learner. So I tend to learn by audio and by watching. I have a good sense of direction, I have a good memory for where I've been, places, that I can kind of remember what a movement looks like. And then my goal is to try to of emulate the feeling in the best way that I can. Terrible memory for anything in writing. Absolutely horrible. So for me, I think, rhythm is kind of where I try to start. I think that is often something that newer students maybe miss. Either it is something that they are not very practiced in kinda training in their mind to really kinda understand rhythm. If they are not, you know, musicians or something. A lot of people don't have that much of a sense for it, particularly Western cultures these days. I think really relying on understanding the rhythm that you are going for, informs a lot of the movement. The way that you articulate that sort of vocally, doesn't have to necessarily be about exactly when your foot hits the ground. You can also, like, skating for example. You can use that to articulate movements that are in the arms or in the legs when they are not making, when something isn't making a sound. For myself, I guess, I try to watch and learn and really internalise the rhythm that the person is kinda getting or going for, and then I use that as a kind of basis for everything else. As far as further systems, we do have video. So learning by video is the other way.

K: If you could invent any type of machine that could capture things

that are missing, what would you capture. You mentioned rhythm was an important one. Do you think there is a way to capture rhythm in any way?

E: Yea, I don't know about that. Maybe there would be some way of taking an old clip that doesn't have audio. And I don't know how anyone would ever do this, but translating the footwork into some kind of rhythm, or particular shapes, or yea, movements, whatever, into sounds, that maybe would help people to learn. But then again, I think also the way that a particular movement sounds is going to be different for different people because, I think, I mean, even with scatting I find in classes, like if I'm teaching with somebody else and we want to scat a rhythm of something that were teaching, each of us will have a different way of articulating that. So yeah, I think there's a difficulty because so much of it is genuinely, I think, an intangible kind of feeling that is experienced. And how to put that in words, or sounds or visuals is quite challenging, I think.

K: Great answer. There is one thing that is one of my favourite things in dancing and it's that non-verbal communication you have with someone. And while you're dancing, the other person does something you didn't expect. It becomes almost a non-verbal joke. Because that's what jokes are, something you don't expect and it makes you laugh. You're dancing with someone and all of a sudden, there is silence between the two dancers, although one person cracks up and laughs. It's such a sweet moment, either to experience or see someone else experience. In videos of couples dancing in competitions, Jack and Jills competitions, where you get partnered up, at the beginning people are trying to understand one another, and then you can tell their chemistry worked or how quickly someone fell into flow. Someone laughing randomly is such a sweet moment. I love experiencing it or seeing others experience it. It's such a magical and intangible thing you cannot

explain. What do you think makes chemistry between people work?

E: The dance context, uuh, fuck, I don't know. I guess, there's kind of few things that play when it comes to a social dance. I think is hearing the music in a similar or at least a complementary way. There was someone that I danced with a lot back in Adelaide that I also taught with a lot, and he and I have a very similar ear for music. In fact some of what I hear, or what I focus on in the music may be developed by dancing with him a lot too. So we would kind of hit the same things, or feel like there is a certain connectivity in that, like "Oh cool we both, you know, hear the same thing and we both managed to do the same thing at the same time and that was cool". One of my, "dancing partner', is a very loose term because we lived in very different places for most of our time dancing together. But we taught workshops, he's a dancer, kind of from Australia, New Zealand, every country, Sri Lanka, but he and I have always had a very very connected dance chemistry, even from when we were fairly new dancers. And a lot of that is not necessarily from hearing the same way but hearing music in a way that was complimentary. So maybe we would hit different things, but we would know the thing I would do, would be complementary to what he would do. Then would also learn how to draw from each other. I think also just the dynamics of that lead-follow connection that makes a bit of a difference to chemistry in a Lindy Hop context, because, as I said before, there is so much freedom in the way that we do these dances. That, you know, you have these different styles. You have the Harlem Savoy style which is Frankie Manning's way of doing Lindy hop. That kind of inspiration. Then you have, you know, more so in the old days The Hollywood kind of style of Lindy hop and the way of connecting in those two dances. There is a lot of shared similarities and people who do both of those, at least now they can find ways to connect with each other and have a perfectly successful and fun social dance. But I think, like, people who are on the opposite ends of the spectrum are less likely

to kinda have as of a connected chemistry, as maybe if they danced with someone who's got a more similar style of connecting physically and articulating the rhythm. So there's all of this kind of stuff at play, but I also think openness is just, it makes a big difference to the kind of chemistry that you can develop with someone as a dancer. People who really are attentive to their partner, and try to remain open to the possibilities, open to surprise and all this kind of stuff, like, those kind of dancers often are able to just connect better and build better chemistry with people around them. So if you have two people who are like that dancing together that's something special, as opposed to someone who is open and someone who is closed off from their partner.

K: You mentioned Frankie and it's something I have to mention in my thesis. It's one of the things that gets people who aren't dancers interested in the topic. I explain to them this is a dance style that almost died out. Its partially what archiving is about - about holding on to something. So things don't disappear. It really amazes people how it is two people who managed to, because of their time and enthusiasm, that want to spread that information and connect with people. That's something that definitely gets people from the outside of the dancing world really interested. How did it happen that is was just technically two people that brought it back? Obviously there are videos from those times and people could look back. But I think they made a big difference. Do you think swing would have made a come-back without them? Was it inevitable?

E: Hmm, that's a very interesting question. Well, I'm probably, not the best person to ask because I started dancing after Frankie passed away, so I never had the fortunate learning from him. I guess I have learned from Norma Miller and from Dawn Hampton who both are, Norma still is, both very pivotal in kinda sharing the dance and the feeling of the dance with everybody. I don't know that it wouldn't done. And this

maybe comes down to something you are trying to look into, is that, is I think without those, without Frankie, or without those connection to the way the dance was done, I don't know that people would have really been able to capture exactly the feeling, especially of social dancing because you can watch, I mean, most of the videos that are available are choreography, even from the Savoy ballroom. From what I've seen, it's mostly contests. A lot of the social dancing videos that are out there, is stuff that, you know, is basic things, tuck turns and so on, and stuff from choreographies, so it's not, not as open in what's being shared between people. A lot of the times music is faster too, it captures a specific bracket of what a dance is. I think, from what I've heard from others too, I'm sure that Adam or someone can speak more about this, but, I think someone like Frankie and someone like Dawn too, Frankie really, you can see it when you see him dance, social dance as an older person, you can really see how open he is. A lot of people say that he was really really loving and really caring and wanted to share things with people, was really happy, and not protective, or defensive, he was just very open, sharing kind of person. I think him coming to the scene teaching people, not just the steps, but how to be open with each other and how to treat each other, I think that really helped him form people's understanding of what the dance is meant to be. Perhaps without those kinds of connections, it might not have had a true resurgence. It might have been more, like, something like a lot of rock and roll to me ends up looking like - a lot of moves, but not necessarily a lot of heart.

K: Is there anything you would have wanted to ask Frankie, or would still like to ask Norma?

E: For me probably, would have been questions about the music. About his experience with the music, and maybe a little bit less about the dance, because I feel like you can read a lot of that from watching him dance. I guess I wanna know a little more about the music that was

played at the Savoy, because I'm aware from his book and other places that there was a range of tempos. Chick Webb's Band played, but there were also other bands. I'm particularly interested in the scope of the music that was social danced to and the dynamics of the ballroom, outside of the Cat's Corner and the contests. Something along those lines.

K: How do you think Frankie and Norma would have answered the question: to what extent can we archive dance?
E: I don't know. I don't think I know either one of them well enough to know what their answer would be. I think both of them would have different answers on how we can archive the dance. I think, like a lot of these kinds of, particularly a lot of the stuff comes out of African culture, African American culture, and the lot of indigenous cultures as well, is very much things being passed on verbally, or by song or by dance - word of mouth. I think, as much as we can strive to record the dance so that it can continue to be done in exactly the same way, I don't really know there's a way to do that, because much of it is feeling. And I think actually the dance today is very, in so many ways, very different to what it was. I don't think that's a bad thing, as long as there's a strong tradition of really trying to understand and connect to the music. The music is always going to keep the dance true to its origins. Whereas west coast swing for example is something that diverged wholly. It's not a swing dance anymore. The dance is a swing dance, but the music is not swing. So is it a swing dance? As long as the music and that rhythm is at the root of what we are doing, I think that actually for it to evolve over time, for it to change and adapt to people who are doing, is a good thing. It captures what the people who are doing it need.

K: I have a thing called 'Final Swing Out'. I'm going to fire short questions at you. There are no right or wrong answers. Just say the first thing that pops into your mind. Just one or two word answers. That's it.

K: Favourite song?

E: Oh my god, oh my god. Shiny Stockings, but not if I have to hear it all the time.

K: Best dance memory?

E: I had a dance with my friend, that I mentioned earlier, his name is Charith. We had a dance in Australia a year and a half ago, or so. It was like floating on a cloud. And I've heard so many good social dances. It was the most connected and joyful, rhythmic and simple, beautiful dance. That's my best memory.

K: Where is your dream place to perform?

E: I haven't done it yet so, but I'm hopefully going to at the end of the year, so it could be absolutely horrible. But I think something at the event Lindy Focus because of the kind of approach that Michael Gamble and his wife ... (Jay) have to the dance and the stuff that they try to showcase in the community and build in the community. Their values are close to my values, and being a part of that would be really great.

K: Favourite dance partner?

E: Sorry everyone. Charith, Charith.

K: 40 or 250 BPM?

E: Oh 40?! Ha, either. That's so slow.

K: Favourite dance shoes?

E: All the best dance shoes I ever had were street shoes that I bought. But dance shoes, I had a really good pair of Balboa Zins.

K: Most comfortable dance shoes?

E: The boots that I bought from the street. The brand was called to Briar Vista (?). It's really good.

K: Best performance you've seen?

E: That I've seen? But it's kinda a social dance, but Dawn Hampton dancing at Herrang.

K: Which country has the best dancers?

E: Well kinda the US. I could say Sweden probably pretty happily. Lithuanians are amazing. I love Australia obviously. But the US has all of these people who we don't see in videos, who have been dancing for forever, who really get it. So the US.

K: Signature step?

E: I don't think I can answer that. I really don't know. Swing out!

Appendix 3

Experiment #3: Jive Mix Up

A jive is a faster paced dance originating from African American swing dances from the 1930s. Unlike many ballroom styles, jive is not danced anti-clockwise around the room. The steps allow the dancers to stay roughly in the same space - swaying left / right / front / back within an approximate 3m radius. Each step, like in many dances, has it's own name and is usually contained within a count of eight. Unless in competitions, the steps should be danced in their given order. This structure not only allows for a better flow and communication between the partners, but also makes it easy for teachers. Students are required to know specific steps / moves that fall into that category before passing to the next level. Being able to name these specific steps helps with the communication between teacher and pupil.

Keeping that in mind,

- What would happen if we broke down the structure / order of the dance?
- How will that effect the flow?
- How will our memory work?
- Will we be more conscious of what we are doing?
- Will I need to let my parter lead me more? More trust if less anticipation?

Task:

1. Select 6 steps from a jive
2. List them in order using names / terminology and number them 1-6
3. Roll a die and note down the outcome

4. Repeat step 3 a couple of times
5. Rewrite steps in new order using step names / terminology
6. Dance the re-constructed jive
7. Describe experience (use questions from above)

Jive first 6 steps

7. Basic Turn
8. Follow the Leader
9. American Swing
10. Bump
11. The '1-2'
12. Windmill + Spanish Arms

New order
3 - 1 - 6 - 2 - 4 - 2

American Swing
Basic Turn
Windmill + Spanish Arms
Follow the Leader
Bump
Follow the Leader

The Basic Turn, American Swing and The '1-2' are danced on one axis (left-right / horizontal), Follow the Leader and Bump are danced perpendicularly to that axis (front-back / vertical). It wasn't easy to always keep to the originally given horizontal or vertical direction, so we needed to experiment whether it was possible to switch the axes once there was a new order of the steps. With some practise, we got a hang of it, and understood that the structure was able to be modified not only by the order of the steps, but their direction too.

It was challenging to grasp a flow while dancing. Once we knew which step to dance next, the following 8 counts were easy, as we were using our procedural memory. The moment when one step ended, and a new one started, is when we noticed hiccups in our fluidity. Our brains needed to process new information: what is the new step; in which direction will it go? Stopping every 8 counts to analyse the further steps broke the flow of the dance. With time we tried to memorise two or three steps in a row to reduce the stopping of the dance, but as soon as one forgot, or remembered a little too late, that reflected on both of the dancers. We needed to communicate ahead of time what step would be next in order to continue the movement. This though still broke the flow, as we were focused on exchanging information among one another, rather than falling into rhythm and simply dancing.

There could be two possible solutions for a smoother dance:
    A) The lead dancer could have the new order written on a post-it,

which could be stuck to the forehead of the follow dancer. He would be able to anticipate the next move by reading it ahead of time off of their partner. The follow on the other hand would need to listen more to their partner's body language to anticipate the next step. Trust between the two partners would play a larger role in this scenario, then when danced in the regular order.

B) The name of the next step could be said out loud by a spectator ahead of time. This timing would be crucial, as it cannot be said too late. The spectator would have to understand when a specific step is about to end, in order to suggest the next step in time for the dancers to process that information and prepare for this upcoming step. Both dancers have a disadvantage here, as neither can guide the other, like in solution A. Both dancers need to listen to each other's body language to flow into the next step, in the same direction.

In conclusion, changing the structure of the dance style, doesn't necessarily break flow. The short moment when connecting individual steps together in a new order was when flow was interrupted. It was no longer smooth thanks to our procedural memory. Our brains needed to process a collection of information, in a short amount of time, large enough for us to be confused. We no longer danced without thinking.

Appendix 4

Experiment #4: Learning a New Dance Style

Throughout the years, I have tried many different dance styles: from ballet to hip hop. Ballroom and latin just seemed to stick with me. One of my favourite dance styles is the jive. Knowing that it originates from swing, and that there are many great styles that fall into that category, I decided that I wanted to learn the basics of swing. I managed to book a private lesson with Swing in Rhythm dance school to see my experience of learning a new dance and to see whether I can achieve flow.

There were many questions in my mind before the class started:
- How similar is it to what I already know from ballroom?
- How similar is it to a jive?
- How long will I need to learn the first level?
- Will I manage to remember the terminology?
- Will I remember the dance once I get home?
- Will I be able to fall into a flow? How long will it take?
- What will be the experience / connection with a new dance parter?
- Is swing just as addictive as they say?

Task:

7. Find new dance style to try
8. Organise private classes with an instructor
9. Note down questions that arose before the class
10. Go to dance classes unprepared (didn't look up steps, rhythm or what to wear)
11. Note down experience once the class is done
12. Conclude with relevant research and possible further research topics

The classes took place in a temporary anti-kraak studio in Rotterdam. During the first few minutes we set up the place: the speakers needed to be turned on and the music chosen from a playlist. Whilst he changed into his dancing shoes, I asked whether my sneakers were fine. He explained how sneakers with a suede sole would be better - less friction - and showed his DIY shoes. It's possible to do it on a budget. As he was busy setting up, I listened to the music and started to get a feel for the tone.

Our first contact was a little stiff. I wasn't sure what he expected or how he wanted to approach this, so I was open to anything. He started off by standing next to me facing the mirror and tapped out the rhythm. Slow, slow, quick, quick, quick - left, right, left, right, left. He continued and I copied. We repeated it until I would get a hang of it, but soon realised I was making a mistake. I was double-tapping at the end of the rhythm. My body wanted to naturally end in the position it started, but turns out the feet / tap coordination alternates every phrase - count from 1 to 4. Once he added direction into the footwork, my confusion with double-tapping instantly stopped. Did my brain categorise the steps and rhythm once a new layer of information was added to the equation?

Once that was mastered, we started dancing together. He led me up and down the room, taking few steps forward or backwards in no particular order. I really needed to anticipate his every move, whilst still trying to process the rhythm in the background. This proved to be a little difficult, and I really felt the precision in my steps, and lack of connection with the partner. I forced myself to stop thinking about what I am doing, and my footwork, rhythm, and fluidity with the partner instantly felt smoother, at ease, uninterrupted.

Once the basics were covered, he started showing me different moves, which I tried to visualise from a bird's eye view - just like in Experiment #1. I started comparing them to jive and other ballroom styles. Turns out they did not have that much in common. I stopped with the comparisons, because I figured it's a new dance. No previous knowledge will make a big difference - it may even slow me down from learning something new. The only aspect that was similar was my technique to learning a new dance: listening to the music, and trusting my partner, which helps tremendously with anticipating the lead and fluidity in movement.

To smoothen our connection, he gave me feedback to stand a little behind him. As we dance side to side I always have my whole length of my upper arm connected along his, as it's rested on his shoulder. If I stand a little behind him I could anticipate his next moves better. That tip really made a big difference. From that point onward our communication was flawless as I understood his every change of step.

It took me an hour of private lessons to learn the very basic level of swing. During the rest of the session he demonstrated new moves for me to copy, and I would write down the terminology on my phone. With my ballet experience, instructions were always formatted using names

of moves. Although I knew how to move, I would need to remember the terms. I knew that I could always search on YouTube any swing moves I would forget, simply if I had the terminology. Additionally, I was afraid I would forget the rhythm once I returned home. During class it was easy as I was copying, but I may forget if I had to perform on my own. I filmed my partners basic footwork just in case. This did come in handy in the end, as I did forget the rhythm a few hours later.

Is swing just as addictive as they say? Yes! Since the class, I have been practising every day for no longer than a minute. This keeps the newly-learned rhythm fresh in my mind, but it also makes me feel good to jump around and loosen my muscles to great jazz music.

To conclude, as I was learning the new style, at the start I focused on the rhythm, moves and direction in a mathematical structured manner. Rigid like Newtonian clock-time. After a while I started feeling the moves and rhythm without thinking what I needed to be doing. I forgot about time passing by and enjoyed the moment, smooth like Bersgonian event-time. It is difficult to fall into flow straight away. The links between neurons need to strengthen like Kandel's sea slug experiments have proven. To experience flow, we need to forget about the strict structure and allow for flexibility.

Appendix 5

Research: interview with Ilja Thoenes

Ilja: So that's actually the reason why. Maybe it's a personal preference of mine, but I also notice a lot of dancers saying to other dancers "yea, you're not doing it right". And for me, if I think about for instance the Lindy Hop, and where it all started, if you hear Frankie Manning about it "I just wanted to dance". Actually a lot of expert dancers they don't dance with beginners that often anymore because it's boring. But actually one of the most charming things I think about dancing with beginners is also that they still have unwritten pages, which they don't know. Usually they want to do it good, but they're also very shy. So usually I'd do one dance with them in which we try to do it good, and the second dance which we just have fun. One of the most important things I've learnt of the Lindy hop, that's why I like the spirit of the Lindy hop so so very much, that you never make a mistake, it's always a variation. And that for me is also the essence of dancing. It doesn't have set rules. Funny thing is, I embrace the spirit of Lindy Hop, and a lot of other improvisational dances, and at the same time I reject a few of the rules of the very same dance, because that's actually also what the dance tells me to do, just to make up your own dance. On one hand, arching dance, making them into categories, brilliant. You should because it would be a waste if people forgot that this was such a fun and awesome dance. On the other hand, at a certain point you had wars between Lindy hoppers, between different Lindy hop schools, in how the Lindy hop should be. And for me that's insane! That's actually like "no, I'm sorry, but you're wearing the wrong t-shirt right now. It should be stripes, not spots. So your shirt is wrong". While dancing is an expression of yourself. I remember when… I like to sing. I'm not a very good singer, so I don't do it often. I love to sing. but sometimes somebody tells me I'm flat. I'm singing loudly but I'm singing from

the heart, from the soul, so every time somebody says that, it really really hurts. That is a bit of the same. You're actually showing yourself if you're not following all the rules. And even if you are following the rules, yourself will always shine a bit through. So when somebody says you're doing it wrong, that really hurts, especially since it's a partner dance. So for me one of the most important things is, yes Lindy hop is a dance, but for me it's also just an example of how imagination and fun in dancing can lead to wonderful things.

Karina: I was trying to find your surname after meeting you last time. I knew that you taught in Utrecht, so I just put your first name and Utrecht and swing and I found a website. There was a quote next to your name

I: Yea yea yea, if my partner Hasn't laughed or shouted out in surprise, if she did, then it's a good dance.

K: It's a beautiful quote! I love it!
I: But that's what it is! That's the other thing. You're having a dance with another partner. I have so many partners who are well known by the rules, and I like when they know the rules very well, because that means that I get more freedom. And if I get more freedom I can go do even more crazy stuff. Like all the other teachers who are dancing with me, all the other people, they yell and they shout out in surprise. But the interesting thing about this quote, is actually it's not always... If it doesn't happen, if they didn't laugh or shout out in surprise, it's a person that danced way too much with me, but usually it's so crazy that I laugh harder, or, and that's the other thing, they usually are really really good dancers, who know all the steps, but don't accept any variations. So when I dance, and they don't accept it, they're usually doing to do their own thing, bit of a solo, and not pay any more attention to me. So I just have to hold up my arm and wait until it's over. It feels like bad sex. It

really is like "ok I'll be waiting till you're done and then I go home or something?". The interesting thing is, those are the best 'dancers', but for me, to loose communication, not accepting how the other person dances, for me it's a cardinal sin in dancing.

K: For me it's a dialogue between two people.

I: Indeed. This is also an example of when somebody follows the rules too tight. It doesn't become an improvisational dance anymore, it doesn't become a dialogue. It becomes two people showing their little solo dance in which apparently they have a connection with the hand, but that's about it. There are Jack and Jills, you know the Jack and Jills?

K: Yea, I love those!

I: I love those too! I love them absolutely! Especially since the partners don't know each other, so good luck. I've actually also been in a final for Jack and Jills - totally blew it! That was because my partner was frozen with fear. She just couldn't do anything. It was so cute! For me it was also very scary. Do you know Peter and Naomi? They're just top Lindy Hoppers of the world. Freakin' huge. Skye and Frida? You heard of those? Same level. I mean, Naomi used to dance Skye. Peter was counting me in. Six hundred people who were like (mimics anticipation).

K: Where was it?

I: In Utrecht. Nikola and Michaella, who are really great dancers, were judging you. And then you're like "I've only danced for one and a half years! What the hell is this!?" But it is glorious and it is great. I love watching others. The funny thing is, for me, there are usually three types of dancers when I see this. There is one type I already talked about. Very improvisational, who are usually not great in technique but great

at communicating with each other. Then you have the super technical, who only do everything by the book. The funny thing is they usually don't even look at each other. They are absolutely by far... that it looks most fluent, it looks most beautiful, it's perfect. It's like gloss. But it's also, for me at least, it's a showcase. It's literally a showcase. "Look I am doing this perfect and apparently I have a good follow because it goes perfectly perfect." But I have seen an Italian once, he was just looking at the audience, not looking at his partner at all. Everybody was like "Ah this is the most beautiful thing I've ever seen", because a lot of people loved it. I'm pretty sure he loved it too. But when I look at it, it looks also very pretty. It looks very pretty at a 'I'm looking at the TV' beautiful way. For me it's like you see beautiful people on TV, Johnny Depp or I don't know, and you're like "Oh my god that's a beautiful beautiful man". But if you would see Johnny Depp in reality, with bad breath in the morning, maybe you don't find that a very attractive man at all. And for me it's the same with this type of dancer. I look at it and think it's TV-beautiful. It's a beautiful picture. Then after the Italian came another - and the Italian was also a beautiful man in a beautiful suit, beautiful and tall - and he looked like a little gnome (chuckles). [Imitating gnome] "Urrg here we are, let's dance!". He had a partner, she was also like "Hello, how are you?" [in silly voice again]. And they didn't do any beautiful moves, but she went to the floor, he went to the floor. She jumped, he jumped under her. There is so much communication going on, and the moves got more complex, you saw the communication between the two. While I'm pretty sure I was in the minority, I loved their dance best by far. I knew the judges would totally let the Italian win - and they did. But for me the total winner of the evening was the guy who embraced that kind of spirit of Lindy hop of just having fun, just going totally wild. Don't get me wrong. I'm really not against learning a lot of moves, but I am against not making it an improvisational dance anymore. Of course it's improvisational because even the smooth Italian does it like "Ok I hear this, so I'm going to do that move. I hear that, so I'm going to do

that move". So it's still kind of improvisational, but within a set of rules, within a set framework. That's a priority for a lot of dancers, and I can understand that. But for me that spirit is so so important. So if you're saying you're archiving the dance, I'm also a bit afraid that later people will say "There was once a dance, Lindy Hop, yea it had a revival, but it flowed away again. It was about a hundred years ago. But wait, I'm going to watch that archive which my grandma made. Oh this is how it's supposed to be! This is the set of rules." So that's what I'm actually a bit afraid of.

K: That's something I bring up in my thesis quite early on. I first talk about the actual graphical notations and I looked at so many different types. "This one manages to convey four things, this one five, but different ones. None of them manage to capture everything into one system, because it's very difficult. But then there comes a concept of how do you communicate the culture, the essence. That's the main thing that needs to be archived. The steps is one thing, but the heart is another. How do you communicate the heart part of it? And that's pretty much my conclusion. It's impossible. It's so difficult. Of course you can, just like Frankie Manning, you can pass on knowledge person to person, and explain how it's meant to feel. You can get people to understand that yes it's goofy, yes you're meant to have this dialogue. There's so many things you can explain, but you have to allow them to interpret the feeling themselves.

I: Every since I've started dancing, especially this kind of dancing, for me the world has been divided between dancers and non-dancers. Before this I danced in discotheques for ten years, for about four to five days a week. I was always on the main stage, totally going bananas. Always communicating with the public. That's also why I think communication and improvisation is so important. I also did a lot of theatre, that also helps - about fifteen plays or something and directed three, so for me

that's the thing. What did I want to say with this again? I'm not sure anymore.

K: We were talking about essence.

I: Yes the essence of the dance. I have to think about this for one second. Yes! Dancers and non-dancers was what we were talking about. When I started Lindy hop, I was also a bit more about the rules. Yes Lindy Hop is good and the rest is bad. Salsa sucks. This sucks, that sucks. But ever since I thought about it, I also do Shag for instance now. I've done a little bit of lues. I've suddenly realised that it's all about the dance. There are different flavours but every flavour of dancing, and I'm talking about couple dancing specifically, that kind of communication is something I miss so much. There is an attraction going on which I have never found before. It has nothing to do with how smart the person is, how beautiful the person is, how well he or she smells. I'm not talking about sexual attraction. I'm really talking about regular attraction - people you like and people you don't like. And suddenly dancing is such an integral, it's the most important way to be completely naked towards each other with still having clothes on. There's a little little little door into the soul. Maybe just a tiny bit, but it's awesome. If I have a great dance with a person, well unless she's a Nazi, I will like her. Actually I know one person who is quite an extremist and she was a horrible person, and still the dances were so lovely. For me it was like "Ok, I'm not going to talk about your extremisms, but as long as we don't do that, I love you". If you have a that bit of soul which gives you the joy and which you share your joy and the thing that makes you joyess, you show not only your best side, you show your happy best soul side. To put it in rules, to put your happy best soul side in rules, for me that's like putting a brake on it. To make sure like "Yes, you can have fun, but you have to go through this narrow narrow path and it stops over there. And we're not going in the side room because left is salsa and right is tango. We're not going to do

that. We don't want that." For me actually... No, I'm still not doing salsa. Reason why I'm not doing salsa is I've been there a few times and the salsa scenes I've been to until now... I didn't like the ambiance.

K: Yea, me neither - strangely.

I: Sure I want to learn salsa, no problem. I think it's funny with the hips. I'm a Dutch guy so I don't have much hips because I never use them. But I'm ok with learning that. It's not a problem. Tango is the exact same thing. I think it's a bit dramatic, but to learn a little bit of tango, sure! They're all the same improvised dances. The funny thing is, before this I did ballroom dancing for a year. I did it when I was fourteen. I hated it.

K: Really? Ah! Did your parents force you?

I: Not really, but a bit. The reason why I hated it was because there are so many rules. And that is exactly the reason why. Suddenly I saw her teacher and asked why are we doing it like this? "Because I say so." Then I'm done because dancing is a way of expressing. The only reason I abide to rules in dancing is, because even if I did ten years of disco dancing, I couldn't dance with another partner. My creativity, I couldn't communicate that to the other partner. That's the only reason why I started doing a partner dance - to have those base rules, to be able to dance with everybody. That's also why I want to learn the other base rules, so I can dance with even more people. Still, when I dance salsa, I only knew the basics, and in between I did all kinds of Lindy hop moves, and we had a blast anyway. Yes for archiving dances, but like you say it, I'm totally convinced and happy because you're saying you also need the spirit. Yes you definitely need that spirit. Now my question to you, why can't you capture the spirit?
K: I haven't found a way, personally, to do it well. From other examples

that I've seen, when it is passed on person to person, it has extreme pros but also extreme cons. Where pros you really get that human to human interaction. You could get the most out of it. When writing it down on a piece of paper, you could interpret it differently. But the cons is that someone teaches it, I'll call it 'wrong'. Maybe the footsteps are completely correct. Kizomba is a great example of this. People were escaping the war. They went from Angola where kizomba originates from, they went to Portugal.

I: I knew that one because I know somebody from kizomba.
K: The steps are pretty much the same. Sometimes made a little bit easier, but generally the same. The essence though, completely misunderstood. Right now when you talk about kizomba in Europe people think it's the sexiest dance out there. Everyone is very keen to learn the sexiest dance. Turns out it's not the sexiest. It's meant to be sensual, not sexual. It's a dance that you dance with your family during family reunions.

I: You don't want to bang your grandmother. [Laughs]

K: Exactly! It's just that! Just how much it got changed. Of course dancers change with time. If you take them out of context if you put them in a different culture, or a different time period, it will change. Obviously Lindy hop has changed since because it's in a different time context and cultural context.
I: And in a different social society.

K: Yes. You cannot capture forever in that way. In a way that this is the correct way. That's why it would be interesting to see to what extent can we capture things, and what should be captured and what shouldn't.

I: I agree. On the other hand, If you're going to archive it, it would be

like bottling a good wine. You just put a date on it, and you can say, for instance, kizomba now is a sexual dance in Europe - because now it is. Maybe in three years we totally misread that, and then we say it's a completely different dance. It's a very modest dance we do at funerals. [Laughs]. For instance, yes? Yes I do agree, totally, with what you said, but on the other hand, if you are archiving it, for me it would be quite interesting to see like "in 2018 Lindy hop had this kind of spirit around it". Later in 2025 and I'm reading your paper, and I'm like "Ha! We were idiots back then!"

K: It's like the Wayback Machine. That archiving website?

I: Totally not! [Laughs]

K: You can put a URL of a website and it shows at what time it got archived. You can look at Google twenty years ago, ten years ago, it has snippets. You can look at the exact moment. So it's the same what you're saying. You can look at these snippets.
I: Indeed. Usually if you have an archive, if you make an archive, you're literally making a time machine. Because that is what you are doing right now. You say you cannot grab the spirit. You cannot grab the spirit of history because it's ever changing and everflowing. But you can grab this moment. This moment when you look at Lindy hop, we see a happy silly dance, which is not sensual, which is not sexual, it's just happy happy joy joy. If you look at rock and roll, it's also happy but it's a bit more rough and tough. Actually I really don't like rock and roll. I used to love it, it's awesome, but it can also hurt. I don't like dances with hurt. Which is weird because I come from punk rock and we used to have mosh pits. But nowadays I'm not sure if my partner would find it so fantastic. "Would you like to dance?" "Ahhh!" "Silence! This is my spirit!" [Laughs]. Are you still recording?

K: Yes I am. I don't know what time is it.

I: I don't know either. We don't have to be there at nine sharp.

K: No. I volunteer in half an hour or forty-five minutes so that's fine.

I: Oh it's fine. So we still have fifteen minutes. I think what you're doing is absolutely good but it was literally also "why?". Because that's the other thing I was asking you "why would you do that?" You know how many freakin' dances there are? Yeah you probably do now. And I'm pretty sure you didn't get them all.
K: Not at all.

I: So how did you manage to put borders around it to make it a bit more comprehensible? Also for yourself?

K: I narrowed it down to social dancing, which I know that there are still plenty.

I: You also got those three hundred from the Amazon river? [Laughs]

K: That's the thing. I mostly focused on swing, but once everywhere I threw in examples of other dances. Mostly because of the word count - it's terribly small. I would love to talk about so many other dance styles, but it's not possible.

I: You're saying Spain. What kind of dances do you have in Spain?

K: No, not Spain, swing.

I: Oh swing!

K: Overall swing.

I: Oh I already thought Spain, that's random.

K: No, swing. Overall swing.
I: So also the West Coast and East Coast?

K: Not even. It needs to be of relevance to me, so I did talk about ballroom because I did ballroom for about seven years. But I wanted to! I signed myself up as a fifteen year old to do it.

I: I'm very proud of you. I think it's very good that you did ballroom for seven years.

K: And I'm very happy I switched. [Laughs]

I: The scars will heal. [Laughs]. The funny thing is, I'm going to tell you a funny story about my ex-girlfriend.

K: Should I stop recording?

I: [Laughs] I really couldn't care less. Weird thing is, she also did ballroom dancing for quite some time. She was an amazing dancer. I've been to quite a few of her ballroom things, and she was awesome. I also noticed this was the first time I started to understand why dancing was so important. Even though I wasn't that attracted to her initially, she moved to beautifully. She had so perfect control over her body, all because of ballroom dancing. I was like "Oh my god, she's so sexy!". Then she went on to do salsa and bachata. She asked me to come and after hearing the music I was like "No! I don't like it." She was like "Come come please please. Dance salsa and bachata with me" and I was like "No, I don't like it. Stupid dancing with a partner - nothing for me". So

she went to do salsa and bachata on her own. I thought bachata was way too sexy, but ok, she wanted to, fair enough. At some point, among other reasons, she got fed up with me so she broke up with me. "It's the dancing, isn't it?" She said not really, but it's a shame you didn't want to dance with me. So two years later I met her again. I asked her how she was doing. She said not really good, but I do have a new boyfriend. I said congratulations. She asked me what I was doing now. I told her it that I'm doing the Lindy Hop now, and "how are you doing?" "Yeah my new boyfriend doesn't like me dancing so I quit".

K: Noo!

I: That boyfriend is such an idiot! But it's also so weird that she asked me to dance for ages and I didn't want to. We break up and two years later, actually one year after that I became a teacher. She wanted me to dance, now I'm a dance teacher and she quit.

K: That's a shame.

I: It's a shame. Actually I do believe that if we both knew that Lindy hop was an option then, we would actually still have a relationship, because our physical connection was awesome, even when we did a little bit of salsa.
K: Well the guy that doesn't allow her to dance might disappear. Things happen.

I: Well I'm feeling sorry for the guy. He doesn't recognise it. He's an idiot.

K: That's for sure.

I: That's another funny thing for me. I haven't had a real girlfriend in four years now, I think, because I am married to Lindy. This was the first time

that people say you have a passion for something. I was in love - literally in love with Lindy. I couldn't sleep, I couldn't eat because I was thinking about the dance. Every time I got up I wanted to dance. I was literally always walking in the street with a boombox and two dancing shoes in my backpack, because I could meet somebody who could also do the Lindy hop and then we could dance more and more and more. Anytime people would ask me to come out I would ask whether there was Lindy hop. "Yes there'll be Lindy hop." "Cool I'll be there in five minutes." "There is no Lindy hop" "Ok, cool. I'll be there in five minutes", but then I'd be gone again because I need to go practice. Whatever. That's something actually really interesting for me. Since you're always dancing with partners, also the physical need, and also because it's a social dance, the psychological need to have a partner, for me personally at least, has greatly diminished as well. It has something to do with the whole communication thing, because you can be in love for three minutes. It drives away the loneliness, if you do have loneliness, because I haven't had loneliness in a long time. When I had love sickness, that was a great remedy. The weird thing now is that it makes you so content, because I'm not in love anymore with Lindy. You know, after two years usually the in-love-phase...

K: The puppy love goes away.

I: Yes. The puppy love fades away, but now there is real deep genuine love. And even though I'm in a bit of a low point now in my relationship, but that's ok because we still Shag [reference to Collegiate Shag].

K: [Laughs] Ha ha!

I: See what I did there? I thought it was very funny. [Laughs] That's something I love about Lindy Hop. When I had my first down thing with the Lindy hop, no problem, I started to follow. At a certain point I had

a plateau. I didn't know how to get up anymore. I just started to follow because in Lindy Hop that's also allowed. When I had a plateau I also started stealing [dance partners during a dance] and switching, because that's also allowed. It was awesome! And there are also so many other dances, so when I do a sow dance now, I do a bit of Lindy Hop mixed with a bit of Blues. Fast song? No problem. I do a bit of Lindy hop with Charleston and Shag all in the same song. In between I'm switching everything, just to make it more insane. And that kind of improvisation, the dance floor is your world of imagination, that for me makes it so good, so glorious and so insane, that I'm very interested how you archived it. For me it's not archivable.

K: It's not. Some elements, but …

I: I think you did a Swing Out [Lindy Hop move]. I hope you archived the Swing Out. Totally the most iconic move.

K: I didn't make an actual physical archive. It's just me discussing the possibilities of archiving dance.

I: Ah! Right right right. And then this is the most important question ever, why would you make an archive?

K: Why archive dance in particular?

I: Yea. When you think of ancient times, and how they danced back then, I'm sometimes wondering with the Ancient Egyptians, somewhere in the Southern Region or maybe in the Northern Region, maybe there was a dance popular for a hundred years which was very similar to Lindy hop, just with different instruments. But they did the exact same thing with the feet or something. Or maybe not, but it had a few things of the Lindy hop. That's a reason why I would be pro archiving it, because

we have no idea what kind of dances there were. What did they do back then? I'm pretty sure they didn't just do "wooga wooga" or very ceremonial dances. I'm pretty sure dancing is something which was born thousands and thousands of years ago.

K: It's normal to move to music, to move to rhythms. You hear things and you react.

I: Weird thing is it's a human thing, right? Other mammals don't have that in that regard.

K: I don't know.

I: That's something I'm actually very curious about now. I know that a lot of animals don't have it. For instance the snake that is dancing, indeed that's not dancing. That's being hypnotised. But humans do have that, and you can't tell me that it is something that we've only been doing since the Middle Ages because that's the oldest dances we know. I'm pretty sure before that they also went totally bananas with the boogie woogie. I'm very curious to see the Ancient Greeks do the boogie woogie now.

K: That would be cool.

I: They probably also did dances wild and weird that are awesome dances. All the dancers are human imagination. And that's the funny thing about archiving stuff, is that, at least for me, you have a moment of that imagination. But for some people to view them as the rules, now that we're talking about it and I'm thinking more about it, how weird that actually is. "I want to copy this exactly. I don't want to expand it. No. This is how it's supposed to be." That's so weird. Don't you find it weird? I find it weird. I think, and this is something I say to a lot of people, you

need to know the rules, so you can break them. I think for dancing that is more true than for anything else. You just need the few handlebars in which you can better yourself, in order to let go again. I had a discussion with somebody who didn't want to do a partner dance. They said they didn't want to do partner dance with anybody because they don't want their imagination to stop. I couldn't understand that as well. I have noticed that sometimes your imagination isn't big enough because the other person also has an imagination. And two people having a grand imagination without any any rule, that's total anarchy. It's fun and it's cool, it's funny, but you both are speaking in a completely different language. Then it's very nice to have something like 'English', in this case Lindy hop, to at least have a few base rules. But next to those base rules you can go totally loose. On one hand, we need to copy it one to one, and I totally don't agree with that. But on the other, the ones who are only using their imagination. I have tried that for ten years and I got frustrating as well. In that case, the funny thing is, I asked you at the beginning of this, why are you archiving, because it is just a moment of notice. Maybe you should archive that moment of notice. That's the only thing you need. That little little ground rule, with just the feeling at that exact point, because that makes it perfect. Or else you'll have a holy Bible, which makes it extremist and for me not fun anymore. But also not too little because we have to start all over again with thinking of our own dances - which can also be fun, but I tried it for ten years. Kinda hard to do. Let's face it, Lindy Hop was not an original dance. The original Lindy hop also came from a lot of other dances they did before that. Ok now I'm really done with taking. I hope you have something from my story.

Appendix 6

Experiment #7: Dancing Where It All Started

29th December 2017

As swing originated in Harlem, and so many of the finest swing dancers come from America, I wanted to find out what it'll be like to join a dance event - or 'social' in swing jargon - in New York City. What differs from back home? What stays the same? Is the culture any different? Are they all much better dancers? Will it be clear I'm an outsider in the community? After a quick search, I found a website of the NY swing community with a list of all upcoming events. Some locations, like Jazz 41, sounded fun in the description on Facebook, but after looking it up, it seemed as if not many people go there, and the crowd is quite a bit older. The name 'YSBD' popped up a few times on people's comments on Facebook, so I decided to search for that. It's a dance school 'You Should Be Dancing'. Thanks to the magic of Facebook I found out that Adam Brozowski, an international teacher I had the pleasure to have a workshop with, liked that page and checked in that location. That was a good enough sign for me - ready to party.

The event was at the dance school itself. At first that didn't excite me too much, until I remembered that the swing community rents out a room and has socials at Cuartito Azul, a tango dance school, once a month. Those socials are always so cozy, that if it would be similar, I shouldn't worry that it would feel like dancing in a practice studio - full lights on, mirrors everywhere, no cosy vibe, just gym.

Upon arrival I was very excited. I couldn't believe that I was actually going to dance with some locals. The vibe in the room seemed a little calm - there weren't many people there - but I had a feeling it would

get busy and warm up. I paid my $7 entrance fee, changed out of my layer-upon-layer winter survival kit and said hello to the first person sitting next to me. My aim there wasn't only to dance, but also to get to know the community, their their individual stories, to get a grasp of how this community may differ from the one in The Netherlands that I am familiar with. Dennis is a sweet, elderly, black American man that seemed like dancing was his second nature. In Holland, when getting to know new people, the first two things that are exchanged are names and dancing experience. I was too afraid to ask Dennis about his dancing background, as I was afraid his answer could possibly be the obvious one - he got brought up with it. He did seem more in his 60s or early 70s though, so from hindsight he definitely was born after the birth of Swing. He introduced me a little to the local culture and how men are the ones who usually ask for the dance. In Holland it really is a 50/50. I asked him whether he knew many people in the room, as I really felt like an outsider at that moment, and he said that he recognises many, but doesn't interact with them outside the socials. That sounds about the same in Holland, although we did recently create a small group of people I spend time with outside of classes and socials. Before sharing a dance or two with Dennis I was a little afraid of my (lack of) skill compared to his, but we had a good time. There was a good connection, we smiled and sometimes laughed throughout. Simple, but sweet. I thanked him and straight away got asked by someone else for a dance.

I forgot this man's name. His posture and body connection caught my eye straight away the moment we got into 'formation' to start dancing. I thought maybe it's a local thing, maybe he will surpass me with something crazy. Have we been doing it wrong all along in Holland? Not really, turns out he's a beginner. Just before the social he had a one hour workshop in Lindy hop and that's all. I was impressed with how much he already picked up within an hour. He knew two or three simple steps,

but he did them fairly well. Sometimes he would mess up his rhythm and we would take a short break of a few counts, and get back into it. I don't mind dancing with beginners - it makes me focus on the basics and not take the easy steps for granted. He asked about my experience and whether I could teach him some other move. I thought deeply about which one wouldn't be too difficult to learn, nor to teach, and a move that would come in handy for him. Tuck-turn it is! It took us a few trials to get it right, but by the end of the song he got it. We practised it for another song, mixing it with other steps he already knew.
I took a short break and sat down on the benches on the side for a moment. Immediately I introduced myself to the lady next to me. Jodi and I clicked right away. She told me about her twenty year dance experience and how she tried it all. She recommended I look into Samba de Gafieira. It's meant to be a fun mix between swing and latin - the two dance styles I love the most! After going to get a Cola from the small bar that was in the room I asked Jodi whether people drink alcohol at these, or any other Swing events. She told me how venues would cancel Swing socials just because it wasn't profitable for them, as many just drink water. I burst with excitement, explaining how it is just the same in Holland. At that moment, when glancing around the room, it hit me - the atmosphere, the vibe, the culture, it's just the same back home. Isn't it incredible that across the world a community can feel just the same? "It's because we're all speaking the same language" Jodi said, "the language of dance".

I danced with a few more people that night, don't remember all the names though. There was a broad shouldered man in red shirt that was a great dancer. He was a good lead who listened and let me improvise. We shared a laugh here and there, overall good dance. An older white man told me he only comes to socials and doesn't take classes. He is a good dancer, but we didn't have a connection. With another man there was also no connection, possibly because he had a repertoire of

three to four moves, only spins, so I got dizzy. I danced with a very good dancer from London who came to New York for business. He came to the social to have some fun between working. He, just like me, searched and found a swing social online. He really put in his heart and soul in his steps. Just like Christina, a lady I talked to in-between dancing, said, "you need to be committed to every step". He did, and that's why he looked, and is a great dancer. Best connection was with Art and Thomas - we just had a good time. Good connection, easy to listen and respond to one another.

Olivia caught my eye earlier that night. She looked like she was floating on a cloud; always with a big smile on her face. Whoever she danced with, she was present and enjoying every moment. I managed to talk to her by the end of the night. She told me that she comes down to NY to visit her family a few times a year. She said that the vibe of the communities is the same anywhere she goes. There were two things I realised were clearly different between the two communities: fashion and music. In Holland many people put a tiny bit of effort to dress up for socials, whether a shirt and nice pants, a dress or 40s styled skirt. That night in Manhattan people mostly wore casual wear. Maybe it was due to the weather, or it wasn't part of their culture. With regards to music, in Holland there is a lot more classics, such as Count Basie, Benny Goodman and Duke Ellington, whereas during this social in Manhattan the music was slightly more rock n' roll or slightly more country. I hardly recognised any of the songs. The only music we shared a dancing passion for was some sweet Ella Fitzgerald.
I was already slowly preparing to leave, and there was an announcement about upcoming workshops and I heard someone shout "birthday circle". I was happily shocked to find out that not only the concept, but even the term is the same as back home. A birthday circle is when the birthday boy / girl dances in the middle and people around them try to steel a dance from them. Suddenly one of the leads I danced

with earlier asked me to come to the middle of the circle too. I didn't understand what was going on. Turns out that they also get anyone visiting to join in the circle too. There was a woman from Spain and another from Israel that joined in too. It was a sweet addition to the tradition that I know. I will definitely share it with the Dutch community.

ACKNOWLEDGEMENTS

(colophon)